UNITED STATES
INTERNATIONAL TRADE COMMISSION

In the Matter of: CRYSTALLINE SILICON PHOTOVOLTAIC CELLS (WHETHER OR NOT PARTIALLY OR FULLY ASSEMBLED INTO OTHER PRODUCTS)

Investigation No.: TA-201-75

REVISED & CORRECTED

Pages: 1 - 422
Place: Washington, D.C.
Date: Tuesday, August 15, 2017

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UNITED STATES OF AMERICA

BEFORE THE

INTERNATIONAL TRADE COMMISSION

IN THE MATTER OF: ) Investigation No.:
CRystalline Silicon photovoltaic ) TA-201-75
Cells (whether or not partially or )
fully assembled into other products)

Main Hearing Room (Room 101)
U.S. International Trade
Commission
500 E Street, SW
Washington, DC
Tuesday, August 15, 2017

The meeting commenced pursuant to notice at 9:30
a.m., before the Commissioners of the United States
International Trade Commission, the Honorable Rhonda K.
Schmidtlein, Chairman, presiding.
APPEARANCES:

On behalf of the International Trade Commission:

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Chairman Rhonda K. Schmidtlein (presiding)
Vice Chairman David S. Johanson
Commissioner Irving A. Williamson
Commissioner Meredith M. Broadbent

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The Honorable David Tomassoni, State Senator, Minnesota State Senate
The Honorable Jason Saine, State Representative, North Carolina House of Representatives
The Honorable Bucky Johnson, Mayor of the City of Norcross, Georgia
The Honorable Lauren McDonald, Commissioner, Georgia Public Service Commission
Luke Clippinger, Delegate, Maryland House of Delegates
Al Christopher, Director, Division of Energy, Virginia Department of Mines, Minerals and Energy
Embassy Witnesses:

Embassy of the Republic of Korea
Washington, DC

The Honorable Chang K. Kim, Minister Counsellor for Trade, Industry & Energy

Embassy of the Republic of Indonesia
Washington, DC

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Opening Remarks:
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Respondents (Matthew R. Nicely, Hughes Hubbard)

In Support of the Petition:
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Dave McCarty, Chief Operating Officer, Itek Energy
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Seth Kaplan, President, International Economic Research
LLC
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    Ed Fenster, Co-Founder and Executive Chairman, Sunrun Inc.  
    Dan Shugar, Founder and CEO, NEXTracker  
    Craig Cornelius, Senior Vice President, Renewables, NRG Energy Inc.  
    Bastel Wardak, President, California Solar Systems, Inc.  
    Thomas J. Prusa, Professor and Chair, Department of Economics, Rutgers University  
    Amy Grace, Head of North America Research, Bloomberg New Energy Finance  
    James P. Dougan, Vice President, Economic Consulting Services, LLC
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LG Electronics, Inc.
Hyundai Heavy Industries Green Energy Co., Ltd.
(collectively, "KOPIA")

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Stephen Hahm, VP of Energy Business, LG Electronic USA

Kevin Kim, Head of Solar Business, LG Electronics USA
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Bo Gyung Kim-Lauren, Senior Counsel, LG Electronics USA
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Andres Munro, General Counsel Hanwha
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Daniel J. Gerkin - Of Counsel
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Heliene Inc. (collectively, the "Canadian Industry")

Vincent Ambrose, General Manager for North America,
Canadian Solar, Inc.

Paolo Maccario, General Manager and Chief Operating
Officer, Silfab Solar, Inc

Martin Pochtaruk, President, Heliene Inc.

Robert A. Rogowsky, Ph.D., Professor and Program Chair
of Trade and Economic Diplomacy at the Monterey Institute of
International Studies

Jonathan T. Stoel, Craig A. Lewis, Michael Jacobsen and
Mary Van Houten - Of Counsel

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Arthur Haubenstock, General Counsel and Vice President,
Government & Regulatory, 8minutenergy

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Deep Patel, Founder and Chief Executive Officer

Non-Parties in Opposition to the Petition:
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Jio Wu, Director of International Business Development

Rebuttal/Closing Remarks:
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Respondents (Matthew R. Nicely, Hughes Hubbard & Reed LLP)
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(9:32 a.m.)

MR. BISHOP: Will the room please come to order and everybody find a seat?

CHAIRMAN SCHMIDTLEIN: Good morning. On behalf of the United States International Trade Commission, I welcome you to this hearing in Investigation Number TA-201-75 involving crystalline silicon photovoltaic cells, whether or not partially or fully assembled into other products.

The Commission instituted this investigation on May 17th, 2017 in response to a petition that was filed under Section 202 of the Trade Act of 1974. This type of investigation is often referred to as a global safeguard proceeding. And this is the first time the Commission has conducted such investigation since 2001.

A global safeguard investigation differs significantly from the anti-dumping and countervailing duty investigations that many of us are familiar with. As the name implies, rather than focusing on imports from certain countries, an investigation under Section 202 looks at the impact of imports from all sources.

Additionally, the global safeguard proceeding consists of two phases, an injury phase and if necessary a remedy phase. Today's hearing focuses solely on the issue
of injury. Specifically, the Commission must determine whether CSPV cells, whether or not partially or fully assembled into other products, are being imported into the United States in such increased quantities as to be a substantial cause of serious injury or threat thereof to the domestic industry, producing an article that is like or directly competitive with the imported article.

The statute defines the phrase "substantial cause" to mean a cause which is important and not less than any other cause. The Commission is currently scheduled to make its injury determination by September 22nd, 2017. If the Commission reaches an affirmative determination with respect to injury, or is equally divided on the question of injury, the investigation will proceed to the remedy phase, in which there will be a separate briefing opportunity and a second hearing. If necessary, the hearing to address the question of remedy will be held on October 3rd, 2017.

Section 202 F of the Act requires the Commission to submit a report to the president within 180 days after the date on which the petition was filed or by November 13th, 2017. If the Commission reaches the remedy phase, it will send one or more recommendations to the president. And it is the president who will ultimately decide whether to impose a remedy and what that remedy will be.

The structure of our hearing today will be
similar to the structure we use in anti-dumping and
countervailing duty investigations. Those in support of the
petition will appear first and have 90 minutes for direct
testimony, followed by 10 minute rounds of questions from
the Commissioners.

Those in opposition to the -- those in
opposition to the petition will appear second, again, with
90 minutes for direct testimony, followed by questions from
the Commissioners.

Before we begin with these witnesses, however,
we will have a number of state government witnesses and
embassy representatives who will present statements.
Schedules setting forth the presentation of this hearing,
notices of investigation, and transcript order forms are
available at the public distribution table. All prepared
testimony should be given to the secretary. Please do not
place testimony directly on the public distribution table.

All witnesses must be sworn in by the secretary
before presenting testimony. I understand that the parties
are aware of the time allocations. Any questions regarding
time allocations should be directed to the secretary.

Speakers are reminded not to refer in their
remarks or answers to questions to business proprietary
information. Please speak clearly into the microphone and
state your name for the record for the benefit of the court
reporter.

Finally, if you will be submitting documents that contain information you wish classified as business confidential, your request should comply with Commission Rule 201.6.

Mr. Secretary, are there any preliminary matters?

MR. BISHOP: I have a few housekeeping matters, if I may, Madam Chairman?

CHAIRMAN SCHMIDTLEIN: Yes.

MR. BISHOP: I would request that everybody please turn your phones to silence. You may put them on vibrate, but please make sure that they're silenced.

I would also say hello to our colleagues and friends over in courtroom A. We apologize that we were not able to fit you in the room, but as you can see, this is a very popular hearing and we just don't have the space for everyone. Hopefully, we will get to let you come over at some point as room permits in the room.

And I would also mention that all testimony submitted for today's hearing will be posted on our website. The copies on the tables may run out and we will not be producing more copies. So it will all be posted to our website where you can obtain that. There should be order forms for the transcript on the table if we run out. Please
let Sharon or I know or Tyrell and we'll be happy to make
some more copies of that.

And with that, Madam Chairman, I have no other
preliminary matters.

CHAIRMAN SCHMIDTLEIN: All right. Thank you.
Will you please announce our first panel of witnesses?

MR. BISHOP: Our first witness on the state
government panel of witnesses is the Honorable Paul Gazelka,
state senator, representing the Minnesota State Senate.

CHAIRMAN SCHMIDTLEIN: Welcome. You may begin
when you're ready.

STATEMENT OF THE HONORABLE PAUL GAZELKA

MR. GAZELKA: Thank you and good morning,
Commissioners. And Senator Tomassoni and I both here. We
represent both sides of the aisle, but for us, it was both
important for us to be here.

Thank you very much for this opportunity to
speak to you today concerning this important trade
investigation. As mentioned, I am the majority leader of
the Minnesota Senate and proudly represent not only the
central district of Minnesota, but the entire state of
Minnesota.

As you may already be aware, we filed a letter
with the Commissioner last week concerning the potential
application of trade restrictions on solar products from
Canada. That letter was signed by a broad bipartisan group that includes members of the Minnesota legislature, a member of the governor's Minnesota cabinet, a regional representative of 50 cities, 48 townships, and 15 schools, all of them urging you to support solar manufacturing jobs in the state of Minnesota and not apply an extraordinary measures on imports from Canada.

The solar industry's important in my state. Demand for solar energy is rapidly growing in Minnesota and I see a bright future in this industry. According to the statistics from the Solar Foundation, there were 2,872 solar jobs in Minnesota in 2016. And 1,123 of these solar installations and more than 300 are in solar manufacturing. Minnesota ranks 16th in the nation in installed solar capacity with enough solar power in 2016 to power nearly 47,000 homes. In 2016, there were 118 solar companies in my state. And the Solar Foundation estimates its solar jobs grew 90 times faster than the overall state economy in 2016.

We added an estimated 878 new solar jobs in 2016, which is a 44 percent increase over 2015, 44 percent. And solar jobs are projected to grow another 16 percent in 2017. I want to give you that background, because I think it's important for the industry in my state. And I want my colleagues -- any of my colleagues that are concerned that
this investigation does nothing to injure the vital and
growing solar industry in Minnesota.

I understand that the Commission is both
authorized and obliged pursuant to U.S. law and the NAFTA --
and NAFTA to treat imports from Canada differently. I and
respectfully urge you to do so.

Sharing a common border, the economies of
Minnesota and Canada are closely intertwined and have
enjoyed a long history of mutual cooperation and investment.
This is perhaps nowhere better illustrated than in the case
of the solar industry, where a Canadian company is in the
process of invigorating the manufacturing sector of
Minnesota's iron range. That's a struggling manufacturing
area of rural Minnesota, a part that I used to be -- used to
-- came from, predominantly mining. And this was an area
that we were hoping would get another industry in there to
create some jobs in an area that's been hurting.

I understand you'll be hearing more testimony
today related to the investments made by the Canadian
producer Heliene in Mountain Iron, Minnesota. That's
northeast Minnesota. I want to simply note that this
investment is a perfect example of the kind of cooperative
cross-border trade that should not be disrupted or damaged
by this proceeding.

To its credit, the Canadian company Heliene has
recognized the great promise of manufacturing in Minnesota and has staked its future with our state and its skilled workers. Not only has this Canadian investment saved jobs that were otherwise targeted for loss, but Heliene is now looking to expand badly needed employment in this sector and in this area in the near future.

I wonder whether this investment from Canada and others like it can be expected to continue if the Commission moves forward with restrictions on imports of vital components from Canada. And I'm concerned it won't continue if you do that.

But our interest in this proceeding extends well beyond Heliene and its welcome investment in Mountain Iron. I'm also concerned more broadly to preserve the large and growing employment throughout Minnesota's solar sector, even beyond the iron range.

As I mentioned, there are over 2,800 solar jobs in Minnesota. And solar installation jobs accounted for more than one in three. These installation jobs increased 224 percent last year as Minnesota continues to expand residential utility scale and commercial solar installations. These investments represent badly needed employment significant in rural regions that have been hit hard by the economy.

I want to encourage continued growth in this
sector. Therefore, I want also to encourage the Commission to carefully consider what impact its actions in this case may have on the continued vitality of the U.S. solar sector, not only for manufacturing, but for many thousands of related installations, distributions, and development jobs.

Once again, I want to thank you for the opportunity to speak here today. Again, I wanted to say that both Senator Tomassoni and I represent both sides of the aisle. And for me, this particular area of Minnesota needs this industry. Thank you.

MR. BISHOP: Our next witness on this panel is the honorable David Tomassini, state senator representing Minnesota State Senate.

STATEMENT OF THE HONORABLE DAVID TOMASSONI

MR. TOMASSONI: That was close. I'm used to it, though. So good morning and thank you for this opportunity to appear today to discuss the Commission's safeguard investigation. I'm David Tomassoni, Minnesota State Senator representing Senate District 6. Since 1993, I've been a member of the Minnesota legislature: eight years in the House of Representatives and the state senator for the last 17 years representing the state's 6th Senate district which is home to about 80,000 Minnesotans.

I'm here today to urge the Commission to exempt imports from Canada from the safeguards measures that are
contemplating in today's hearing. As my colleagues and I noted last week in a bipartisan letter filed with the Commission and as Senator Gazelka just pointed out, Minnesotans benefit enormously from the solar trade with Canada. Investments stemming from the Canadian solar trade had brought much needed jobs and opportunities to our region and it promises to be a continued source of growth in the years ahead.

The residents of my district in particular would suffer if the United States were to apply safeguard measures against Canadian cells or modules. Minnesota's 6th Senate district in the northern part of the state includes most of the iron range, a region that is struggling to recover from a stubborn economic downturn. The iron range is a resource based economy on the iron -- on iron ore mining and logging and is a rural manufacturing area that has an urgent need for new investment and diversification.

Not only has manufacturing migrated away from the region in recent years, but the region's historically robust mining industry has been undercut by cheap imports of metals from abroad. I always say when the steel industry has a hiccup, the iron range gets the flu. These combined forces have led to massive layoffs and persistent unemployment. The boom -- this boom and bust phenomenon is why I've worked hard alongside my colleagues in the state
government in a bipartisan manner to protect the U.S.
workers that call this region home. But truly
reinvigorating and stabilizing the economy, the iron range
will require new investments and means of economic
diversification.

The solar trade with Canada had opened doors for
such opportunities in this part of the state. The 6th
Senate district is home, for instance, to the Mountain Iron
solar manufacturing plant that my colleagues and I described
in our bipartisan letter last week.

Solar panel manufacturer Silicon Energy opened
the plant in 2011, bringing manufacturing jobs and
opportunities for growth to the region. When Silicon Energy
eventually encountered quality related problems,
Ontario-based Heliene came to the rescue, starting contract
work at the plant in 2015. Earlier this year, Heliene
assumed a lease to operate the entire Mountain Iron plant.
Not only did Heliene save the manufacturing jobs that
otherwise would have been lost, but the plant now generates
roughly double the number of the solar panels as Silicon
Energy.

Under Heliene, purchasers in the United States
have also noted that the high quality of our Minnesota
panels sets them apart from those of competitors. Given the
promise of this venture, the Minnesota Department of the
Iron Range Resources and Rehabilitation and the Minnesota Department of Employment and Economic Development are working with Heliene on a plan to invest nearly $10 million on new manufacturing equipment, plant expansion, and supplies to expand production even further this fall.

This project will immediately create 25 new jobs and eventually employing approximately 70 Minnesotans in quality high-technology jobs and producing over 100 megawatts of solar panels. My district is excited by the opportunities like this that are made possible by the important relationship with our Canadian neighbors, but the proposed safeguard measures would threaten the viability of such investments.

Indeed if prohibitive safeguard duties or quotas are imposed on the solar products from Canada, operations like Heliene's Mountain Iron facility will no longer have access to vital components and Minnesotans will suffer the consequences.

We are grateful for the Commission's work to protect U.S. manufacturers. And we could encourage the Commission to consider that imposing restrictive measures against our Canadian partners would inevitably harm workers and producers in the United States as well.

Thank you very much for the opportunity to speak to today. I would happy to answer any questions that the
CMR. BISHOP: Our next witness on this panel is the Honorable Jason Saine, State Representative from the North Carolina House of Representatives.

STATEMENT OF THE HONORABLE JASON SAINEN

MR. SAINEN: Good morning. Thank you, Madam Chairman, Mr. Vice Chairman, and Commissioners for permitting me to testify today. I'm Representative Jason Saine from Lincoln County, North Carolina. I'm the second vice chair and member of the board of directors of the American Legislative Exchange Council. I'll be the chairman of the board in 2019.

As a North Carolina state legislator, I am the senior chairman of the House Finance Committee. The finance committee is responsible to tax policy in North Carolina. And in that role, I've helped deliver over half a billion dollars in tax decreases for North Carolina's working families.

Also, as a part of my involvement on the finance committee, I've learned about the tremendous impact that solar energy's contribution to the electric grid has had on our state's most rural communities. Through private investment, approximately $9 billion was invested in clean energy development in North Carolina between 2007 and 2016. Yes, that's $9 billion with a "B".
According to RTI International, 37 percent of these solar investments occurred in what we call Tier 1 counties. That is North Carolina's 40 most economically distressed counties. My district alone has seen $30 million dollars in solar investment, including projects at our local Aldi grocery store and Lincoln charter school, where my son attends.

North Carolina's the number 2 solar state in the United States with just under 3 giga watts of solar installed to date, and more on the way, thanks to new legislation passed this year. This industry is an incredible job creator with currently over 7,000 well-paying jobs in North Carolina. These jobs have grown dramatically in the last several years, thanks to efforts that the industry is making to compete with low cost natural gas and other renewable energy sources like wind. Because solar is becoming more technologically efficient, it can compete and therefore increase its presence on the grid.

I also want to take a moment to draw your attention to a few letters that were sent to the Commission last week. A bipartisan coalition of 16 senators and 53 members of the House of Representatives signed on to letters urging the Commission to consider the negative effects of the proposed remedies to the American solar industry. It's worth noting that the delegations from North Carolina and
South Carolina were well represented in these letters as my state's industry could be one of the hardest hit from the solar job losses. North Carolina Senator Thom Tillis was the lead Republican signatory on the Senate letter. And North Carolina Senator Richard Burr even sent a letter to the Commission. These letters have been added to the record and I urge you to take a look at them.

As a policy maker, every day, I'm faced with decisions that can create trade-offs and therefore can create winners and losers in any industry. Imposing tariffs on imported modules is not the way to go about saving solar manufacturing. It is about providing a government handout to two companies that apparently couldn't provide their customers with the specific kinds of products with sufficiently high quality products they needed for their installations.

As I understand, you will hear today, if this petition is granted, it may save a few hundred cell or module manufacturing jobs, but there are many thousands of good manufacturing and installation jobs that will be lost. The point is a remedy will do more harm than good here with the only benefit going to a small number of companies that frankly don't deserve it.

I'm here before you in opposition to the proposed Section 201 safeguard case regarding solar cell and
module manufacturing in the United States. As a state policymaker and a North Carolina resident, I want to see the solar industry continue to thrive without government intervention. Thank you for your time.

MR. BISHOP: Our next witness on this panel is the Honorable Bucky Johnson, mayor of the city of Norcross, Georgia.

STATEMENT OF THE HONORABLE BUCKY JOHNSON

MR. JOHNSON: Thank you. Good morning, Madam Chairman and Commissioners. My name is Bucky Johnson and I'm the current mayor of Norcross, Georgia. I began my tenure as mayor in 2008. I've been reelected four times to that position. Prior to being mayor, I was an educator and taught at Georgia Tech most of my career. Thank you for allowing me to testify at this important hearing today.

A little background about my city and community. Norcross was founded in 1870 as a railroad town and as a summer vacation destination for those that lived in Atlanta. The population of Norcross currently is at 16,000 in six square miles. We're located in Gwinnett County, which is the fastest growing county in Georgia with a population of almost 1 million.

We're close to Atlanta and to Georgia Tech. From that proximity and relationship, Technology Park was developed by Paul Duke, a Georgia Tech graduate in 1967.
It's one of the first technology centers in the country.

As mayor, one of my favorite stories to tell until about four months ago was the story of Suniva, a company that was founded in Norcross nine years ago. Suniva was a spin-off of ATDC incubator program at Georgia Tech. Their founders chose Norcross and Technology Park because of our location, being close to Atlanta, and because of great access to human capital in our county. We have one of the best urban school systems in the country, as evidenced by two prizes in the last six years with 180,000 students in the public schools K through 12.

One of my first roles as mayor was to be part of the groundbreaking ceremony for Suniva, along with other city, county, and state officials. There's so much excitement about high tech manufacturing and high tech jobs at a time when the community was struggling with the great recession. Solar technology fits perfectly with our initiatives to be one of the top single cities in the state.

This year, Norcross was recognized by the Atlanta Regional Commission at their highest level sustainability platinum. Only one other local government in Georgia holds that designation.

Suniva quickly partnered with Gwinnett Tech using the state Quick Start program to train their new hires and began tremendous growth and produced some of the most
efficient solar cells in the world. Suniva's a shining star for our city, county and state, and won numerous awards and recognitions.

American Advanced Manufacturing is a source of pride and it's a valuable mix in a diverse economy. Suniva became part of the DNA of our city until there was a turn in the story. We were all shocked and dumbfounded when Suniva idled its manufacturing operations in April. The people that worked at Suniva lived in our community and invested in our community. The success of Suniva is vitally linked to our economy. We cannot succumb to foreign imports that undercut our American made products.

The community was devastated to learn that Suniva had to take Chapter 11 and lay off a majority of their workers. I immediately called and asked what I could do to help. As I learned of this safeguards case, I realized I could do something in a constructive way to try to bring back this vibrant, innovative business to our community.

As I become more familiar with the forces that so gravely damaged Suniva, I've sadly learned there are other communities that have experienced or fear the same impact that have happened in Norcross. The communities of Michigan, Oregon, Washington, Ohio, California, Tennessee and I could go on.
My understanding is that the solar manufacturing industry has lost thousands of jobs and over a billion dollars in capital investment by the demise of over two dozen companies nationwide over the last five years.

That is why I'm here today to implore this Commission to do all that you can do to give Suniva a fighting chance to resurrect this business and this industry for all Americans. Some might say protectionism. I say bunk. Give us a fair shot at competing with international businesses. We almost 300 jobs in Norcross and a thousand more -- thousands more have been lost across the U.S. Given a level playing field, I believe that Suniva and the solar manufacturing industry can thrive in our economy and supply some of the most innovative and sustainable products in the world.

I believe you can help write a positive ending to the story, but we're in a cliffhanger moment. I urge the Commission to enforce U.S. law and act with bold decisiveness in an expeditious manner that gives us a chance to restore this industry to viability. Your findings will be crucial to get this manufacturing industry in the U.S. back on track. On behalf of all my citizens, I thank you for your time, your wisdom, and your deliberation on this important issue. Thank you.

MR. BISHOP: Our next Witness on this Panel is
the Honorable Lauren McDonald, Commissioner with the Georgia Public Service Commission.

STATEMENT OF THE HONORABLE LAUREN MCDONALD

MR. MCDONALD: Thank you, Madame Chairman, Mr. Vice Chairman and Commissioners. As you might be able to tell from my accent and from my nickname is "Bubba", I'm from the South. More specifically I'm from Georgia where I have been blessed to serve 20 years in the State Legislature and now serving my 13th year on the Georgia Public Service Commission.

Most important is that I owned and operated two successful businesses without any government subsidies. I care deeply about Georgia electric consumers and Georgia jobs and that is why despite sharing my home state with the company that initiated this Petition, I am here before you in opposition to the proposed Section 201 safeguard case regarding solar cell and modular manufacturing in the United States.

I have been asked to testify in these proceedings because of my unique role in promoting the development of solar energy in Georgia. As a result of my efforts over the past ten years with the support of my colleagues on the Georgia Public Service Commission we have successfully added more than one gigawatts of solar energy to Georgia Power's portfolio and an additional 1.6 gigawatts scheduled to come
online by the end of 2021. This will provide clean, affordable solar energy to power over 400,000 typical residential homes.

This has been accomplished with no upward pressure on the rate payer and no state subsidies. The expansion of the solar market benefits the entire United States industry. Solar producers of cells, modules, panels and installers as well as many downstream industries. In 2016 solar energy was the largest source of new electric generation capacity with approximately 40 percent of such capacity.

But more importantly the growth in the solar energy benefits electric consumers. Those benefits are immediate and lasting because solar energy provides clean, reliable and renewable energy at low prices. These attractive prices help hold down rates in the near term and are a hedge against the price vitality of traditional fuel sources for the next 20-30 years. There is no fuel cost with solar.

We continue this progress without additional government intervention in the market. The sky is the limit provided that we do not take actions that harm the industry. If the requested remedies are imposed, solar energy growth will draw to a standstill. That outcome will have a corresponding negative impact on jobs, economic development,
property tax revenue and investment in rural communities. It will also deprive consumers of the benefit of competitively-priced solar projects.

Thanks to the growth in solar development, particularly the explosive growth in the utilities sector, we are seeing tens of thousands of new jobs. These jobs pay well. On the other hand, the numbers of employees producing silicone solar cells in the United States is comparatively tiny less than a thousand jobs. Solar is important to the Georgia economy. There are 200 solar companies in Georgia that have worked to install over 1500 megawatts and counting making Georgia the number 8 state in the United States.

There are over four thousand Georgians employed in the solar workplace. We have completed solar installations with at least 30 megawatts at each of our five Georgia military bases with a sixth installation of 139 megawatts and 510,000 solar panels under contract at Robbins Air Force Base at Warner Robbins, Georgia. The DOD mandates to have renewables as a part of the energy mix of military bases.

A tariff on solar panels in my opinion would likely result in the termination of this project and the loss of about 2-3 billion in solar investments in jobs in our state. Competitive forces and technology improvements have driven declines in the cost of solar projects. The
economic case for solar has been demonstrated in my state. We wouldn't be building solar if it increased cost to ratepayers.

Solar energy prices are lower than ever and consumers win because the savings directly affects their utility bills. Solar is now competing with natural gas in many regions. Fuel from the sun is free, natural gas is a commodity. Each year solar technologies are becoming cheaper and more efficient bringing the greater benefits to Georgia economy and rate payers.

Any tariffs imposed with distort the market, threatening tens of thousands of well-paying American jobs and harming the economic viability of Georgia's future solar projects. Many solar manufacturing companies have risen to the challenge of competing and are not looking to the government for protection. Instead, they are innovating and investing in research and development.

The companies that filed in the section 201 Petition represent a majority of the marketplace. They are here because their products are not economic and their business model is not competitive. Thank you for your time.

I am happy to respond to any questions after this hearing and I ask one favor. I have a very important vote at ten o'clock at the Georgia Public Service Commission and I need to step into that room and make a phone call and cast that
vote, Madam Chair. Thank you.

MR. BISHOP: Our next Witness is the Honorable Luke Clippinger, Delegate with the Maryland House of Delegates.

STATEMENT OF DELEGATE LUKE CLIPPINGER

MR. CLIPPINGER: Good morning, Madam Chairman, Mr. Vice Chair and Commissioners. I'm Luke Clippinger. I am a member of the Maryland House of Delegates, representing the 46th Legislative District which includes South and Southeast Baltimore City. We have the National Aquarium, the Inner Harbor and a 125,000 of the most wonderful people in the world.

I want to thank the Commission for permitting me to submit testimony today regarding this proceeding. I've served as a member of the House of Delegates since January of 2011 and I'm presently a member of the Economic Matters Committee and the Public Utilities Subcommittee which oversees energy legislation.

My colleagues and I have worked on and successfully passed legislation to increase the amount of renewable energy deployed in our state and have successfully grown the solar industry to more than 5400 workers as a direct result. This petition threatens nearly half of that workforce. I'm submitting my opposition to the proposed Section 201 case regarding solar cell and module
manufacturing to ensure the continued development of solar energy in Maryland.

As a legislator, I have supported and sponsored legislation that expands access to renewable energy. In 2015 I was the lead sponsor of Maryland's Community Solar Pilot Program, which will add almost 200 megawatts of capacity and create opportunities for low and moderate income Marylanders, not only to construct new solar arrays but also to benefit from lower energy costs. The pilot just got underway a couple weeks ago.

There are many project development and financing risks associated with community solar projects making them particularly sensitive to any cost shifts including cost shifts that might come from this case. My opposition to this Section 201 case is not to say that I do not support domestic solar manufacturing, in fact, I'd like to see more of it in Maryland. However, this isn't the right way to bring more investment jobs to our state.

Killing off project demand will stifle opportunities for development and the production of necessary components for new solar arrays. Any tariffs imposed would distort the market, threatening hundreds of thousands of well-paying American jobs across the country and thousands of jobs in Maryland harming economic viability as well of Maryland's future solar projects.
I thank the Commission for your time.

MR. BISHOP: Our final Witness on this Panel is Al Christopher, the Director of the Division of Energy with the Virginia Department of Mines, Minerals and Energy.

STATEMENT OF AL CHRISTOPHER

MR. CHRISTOPHER: Good morning and thank you, Madam Chairman, Mr. Vice Chairman.

MR. BISHOP: Pull your mic a little bit closer if you would please.

MR. CHRISTOPHER: And Commissioners for allowing me to submit testimony regarding this case. The Honorable Todd P. Haymore, Secretary of Commerce and Trade for the Commonwealth of Virginia submitted this testimony that I will now read. He could not be here today.

For the last three years the Commonwealth has worked diligently to create and grow a solar industry in Virginia. Through a combination of policy and partnerships we have enabled the industry in Virginia and established the foundation for long-term industry growth. Virginia now ranks in the top 20 in the nation for solar jobs with 3,236 jobs, a 65 percent increase from 2015.

Clean energy sector revenue in Virginia has grown four-fold in the past three years under Governor McAuliffe to 2 billion dollars. While these numbers are impressive, we see this as just the early stages of strong industry
growth patterns. Virginia welcomes the idea of a stronger
domestic solar supply market and has actively pursued
potential manufacturers but our observation is that in
order for the rapid growth and demand to be fulfilled we
must in the meantime rely on international markets.
Disrupting this supply chain would hinder
industry growth, adversely impact demand and further delay
the growth of the domestic manufacturing industry. To
ensure the continued development of solar energy we oppose
the proposed section 201 safeguard case regarding solar cell
and module manufacturing in the United States.
Solar projects in Virginia not only represent
direct economic development opportunities but are a vital
marketing tool in attracting the growing number of companies
seeking renewable energy options when deciding where to make
investments. Given this growing component of economic
development, it is essential that consumers and businesses
have access to affordable, reliable and diverse energy
resources. This platform is part of the
Governor's "all of the above" energy approach and key to
fulfilling the energy policy of the Commonwealth. In
Virginia there are no state-based subsidy programs leaving
solar to basically compete directly with natural gas and
other fuel sources. We must continue to diversify our fuel
mix, ensure the availability of low-cost reliable power and
not further disadvantage solar in an already competitive energy supply market. Thank you.

MR. BISHOP: Madam Chairman that concludes direct testimony from this Panel.

CHAIRMAN SCHMIDTLEIN: Okay, thank you very much. I'd like to thank all of you for being here today. It's not often that we have State Government Witnesses appear at the hearing but we do very much appreciate you taking time out of your busy schedules to come and share your views with us. I'd also like to thank you for your public service in your particular states. I will turn to my colleagues. Do any of you have questions for any of the witnesses?

COMMISSIONER BROADBENT: Yes, I just had one question.

CHAIRMAN SCHMIDTLEIN: Commissioner Broadbent?

COMMISSIONER BROADBENT: Mr. Saine, you mentioned that you thought the Petitioners didn't really deserve the protection and if you could just expand on that a little bit.

REP. SAINÉ: The explanation being that you know, we support free markets. We support competition and propping up one industry over another as I mentioned in my remarks we do pick winners and losers. We try to minimize that as best we can as policy makers.

And so with the proposal I just feel like and we
(my colleagues) feel like that really puts us at a
disadvantage in support of very small portion by propping up
one particular part of the industry instead of allowing
things to compete and travel along a natural path.

COMMISSIONER BROADBENT: Okay, thank you very
much.

CHAIRMAN SCHMIDTLEIN: Does anybody else want to
comment?

(No response.)

CHAIRMAN SCHMIDTLEIN: Thank you very much.

Commissioner Williamson?

COMMISSIONER WILLIAMSON: Thank you. I also
appreciate your testimony. I just want to raise one
question that several of you talked about the number of
solar manufacturing jobs and you mentioned other jobs and
you also mentioned installation but it seemed like when
adding up the numbers there are a lot of other jobs that you
talk about when we talk about solar energy. So I was
wondering if somebody can briefly maybe describe what those
other jobs are?

SENATOR TOMASSONI: May I touch on it. I'm David
Tomassoni. So are you talking about the other jobs outside
of the solar industry that are --

COMMISSIONER WILLIAMSON: No, I'm talking about
the jobs that, solar manufacturing jobs. The sales and
modules. The installers. But I forgot whose numbers they were but it seemed like there were a thousand other jobs that they didn't describe and I was just curious as to what those jobs are.

SENATOR TOMASSIONI: I wasn't the one who said it but I can tell you this, that this is similar to the mining industry in Minnesota where the spinoff jobs are a big deal. So the direct manufacturing jobs are in my area for example, in the mining industry, there is about 4,000 direct jobs but the spinoff jobs are 2/1 and 3/1 and I believe this industry is exactly the same in the fact that the installers are probably the key jobs and maybe even more than the actual manufacturing jobs. But without the manufacturing jobs you don't get the installation jobs either.

REP. SAINÉ: Mr. Commission if I may add to that. Any time you see lowering of energy cost across the grid, having readily available energy at a lower cost does incredibly increase the opportunities for manufacturing and job recruitment in my State. We have seen that time and time again and one of the reasons that we are able to be competitive, that along with a good tax policy, has helped us to recruit a number of businesses to our state and to grow. I appreciate your question, thank you.

COMMISSIONER WILLIAMSON: Senator Gazelka are you, you said there were 2,800 solar jobs in Minnesota,
about 1,100 of these in solar installation and about 300 in solar manufacturing. I was trying to figure out where the other maybe 1,500 were?

SENATOR GAZELKA: Commissioner, I'm not going to have a direct answer on that for your today. When I came to testify, it's interesting I think somebody said all of the above for fuels and in my growing process I wasn't fully favorable toward wind and solar and now that I see that for example wind and natural gas is an incredible combination and now solar is coming up and I don't want to discourage that continued growth of solar, if it has the same path that wind did. That it can be very successful for our country and so I wanted to come here and offer my support.

Then secondarily I came because this particular region of Minnesota was primarily mining and that continues to struggle dramatically and here was a company from Canada that resurrected a failing solar business and actually made it successful and so that's why I wanted to be here.

COMMISSIONER WILLIAMSON: Okay, I want to thank you for all of those answers and I probably will be exploring this question with the parties later.

CHAIRMAN SCHMIDTLEIN: Vice Chairman Johanson?

VICE CHAIRMAN JOHANSON: Thank you, Chairman Schmidtlein. I had no questions. I simple wanted to thank you all for coming here today. I realize that some of you
came a long way. In addition, I grew up about two miles from the Texas State Capitol in Austin and I know how important the functions of state government are. So I appreciate your public service. Thanks again.

CHAIRMAN SCHMIDTLEIN: Alright, thank you very much. So with that we will dismiss this panel and move to our next panel, which are Embassy Representatives.

MR. BISHOP: If our Embassy Representatives will please come forward and be seated.

(Long pause for seating)

Our first witness for this Panel is the Honorable Chang K. Kim, Minister Counselor for Trade, Industry and Energy with the Embassy of the Republic of Korea.

STATEMENT OF THE HONORABLE CHANG K. KIM

MINISTER KIM: Thank you, Madam Chairman, Vice Chairman and Commissioners. Good morning. My name is Chiang Kim. I am Minister Counselor for Trade, Industry and Energy at the Embassy of Korea in Washington, DC. I appreciate this opportunity to offer some comments about this very important investigation.

The Korean Government would like to emphasize that safeguard measures should be taken with caution. Such measures are imposed against the fair trade and that is why they are considered extraordinary remedies. In support of free trade, Korean Government is concerned about increasing
protections in International Trade. It is important that our members of WTO restrain from taking protectionist measures.

Article 4.2b of the WTO Safeguards Agreement clearly stipulates that unless there is causal link between the increase in imports of the product concerned and serious injury or threats thereof then it is not permissible to impose safeguard measures. We will also note that this case will be the first time the United States considers safeguards since entering the first of the course FTA. The proper interpretation of these obligations will be critically important in this proceeding.

The Article 10.5 of the course FTA stipulates that "a party taking appropriate safeguard measures may -- imports of the originating party if such imports are not substantial cause of serious injury or threat thereof."

Section 341a of the Course FT Implementation Act specifically provides of the Commission's chair report to the President whether imports of the Korean article are substantial cause of serious injury or threat thereof.

U.S. Statute defines substantial cause as a cause which is important and not less than any other cause. This standout has two parts and both must be met. First, increased imports from Korean must be of value and at prices that can be reasonably considered to be important.
Second, even if the imports from Korea are important, they must also be a cause of serious injury or threat thereof. Not less than any other cause. Unless both of these elements have been met the Commission should make a negative determination for Korea.

In this case, imports from Korea do not meet either of these two elements of statutory standard. The volume of imports from Korea was quite low for most of the periods being investigated. When imports from Korea increased in 2016, these imports were to the utility segment of the market and were products the domestic industry could not supply.

Korean imports also have higher prices than other imports. These key facts show that Korean Imports were less important than other causes and were not themselves a substantial cause. The Korean Government fully understands the difficult step that the solar industry may have experienced but those difficulties along do not justify safeguard measures. Since safeguard measures are taken against first-rate, the standards are higher and careful decision is made. The Korean Government believes no safeguard measures are justified in this case. Furthermore if the United States takes a global safeguard measures against the global imports the Korean Government respectfully asks the Commission to make negative
Thank you for your time and attention.

MR. BISHOP: Our next witness on this Panel is Reza Pahlevi Chairul, Commercial Attaché with the Embassy of the Republic of Indonesia.

STATEMENT OF REZA PAHLEVI CHAIRUL

MR. PAHLEVI CHAIRUL: Chairman Schmidtlein, Vice Chairman and Members of Commission -- good morning. I am Reza Pahlevi Chairul, Commercial Attaché at the Embassy of the Republic of Indonesia and on behalf of the Government of Indonesia thank you for the opportunity to speak today regarding the U.S. safeguards investigations of CSPV cells. Respectfully, my government and the solar model companies we represent such as Peteska Energy in Indonesia oppose any finding of serious injury or threat of serious injury from increased imports. Together we urge the Commission to exclude any Subject Imports from Indonesia as a developing country from any remedy recommendation. According to article 9.1 of the agreement on safeguards, safeguards measures shall not be applied against product originating from a developing country members as long as its share of Subject Imports does not exceed three percent. Based on U.S. Imports statistics, imports from Indonesia were less than three percent for the entire Period.
of Investigations.

We understand that imports statistics include non-Subject Imports and therefore the present day share is likely less than based on the report of this investigation. I understand that the developing country exception of Article 9.1 of the Agreement on Safeguard is not quantified in U.S. Law. However, Section 203 of the -- requires the precedent to consider international obligations if any measure is taken.

If this investigations proceeds to the remedy stage I urge the Commission to recommend that the precedent exclude product from Indonesia as required by the agreement on safeguards. The Commission should also be aware that the models that they base on energy in Indonesia sold to the United States were priced higher than the Petition recommended remedy of 0.78 cents per watt minimum price.

These models were also sold to the off-grid market for mostly personal use which is very different than Petitioners' chosen markets. For additional information please see the written submission of Sky Energy Indonesia attached to the Government of Indonesia August 8th prehearing injury brief.

In summary, I respectfully request that the Commission make a negative determination at the injury phase of these investigations or automatically I respectfully
request that the Commission exclude imports from Indonesia from any proposed remedy. Thank you.

MR. BISHOP: Our next witness on this panel is Sibylle Zitko, Senior Legal Advisor with the delegation of the European Union to the United States of America.

STATEMENT OF SIBYLLE ZITKO

MS. ZITKO: Good morning Madam Chairwoman, Mr. Chairman, Commissioners. My name is Sibylle Zitko. I am the senior --

MR. BISHOP: Could you pull your mic a little bit closer please.

MS. ZITKO: Okay. My name is Sibylle Zitko. I'm the Senior Legal Advisor at the Delegation of the European Union here in Washington. On behalf of the European Commission, I would like to thank the United States International Trade Commission for the opportunity to participate in this hearing today.

At the outset, the European Commission would like to recall that because of its very restrictive nature, the safeguard instrument should only be used in exceptional circumstances. After analysis of the public version of the petition and the prehearing report, we believe that the strict criteria required under the WTO Safeguard Agreement for the imposition of safeguard measures are not met in this case.
The European Commission has identified a range of concerns in its prehearing submission of 8 August, of which I would like to highlight the following today. First regarding access to data. We recall that Article 3.2 of the WTO Safeguard Agreement requires meaningful, non-confidential summaries of confidential data to be provided, so as to allow interested parties to have a clear understanding of the claims, in order to be able to exercise their rights of defense.

In the present case, however, the lack of almost any data on imports or on the prices of domestic products do not allow for a meaningful analysis and make a price comparison in the public version of the petition very difficult to follow. Second regarding increase in imports. Under Article 19 of the GATT, safeguard measures may be taken only if the increase in imports is a result of an unforeseen development.

In the present case, however, the increase in import volumes appears to be rather gradual and justified by a considerable increase in U.S. consumption. Moreover, in 2012 and 2015, the U.S. imposed anti-dumping measures on China and Taiwan, causing a partial replacement of imports from those two countries by imports from other sources.

Third regarding import prices. The Petitioner alleges that import prices decrease and are below the
domestic industry's prices. However, it appears that any price decreases are in fact mainly due to the decrease in raw material prices, as confirmed by the majority of U.S. producers in the prehearing report.

Fourth, regarding injury and causal link. The injury standard in the safeguard investigation is serious injury, which is a more demanding standard than material injury in anti-dumping or CVD investigations. In the case before us, the domestic industry increased its production sales capacity and capacity utilization over the period of analysis.

As regards to its financial situation, the domestic industry was last making already since 2012 and before the increase in imports. The situation improved significantly in 2015, despite the increase in imports of 83 percent in the same year. This shows that there is no correlation between the increase in imports and the difficulties experienced by the domestic industry, which we believe must have been caused by other factors such as inefficiency.

Information provided shows that the domestic industry has been producing at a capacity utilization rate of less than 50 percent throughout the period of analysis that is even before the increase in imports. Nevertheless, they made new investments to increase capacity, 34 percent
in 2016, thus worsening its already precarious situation.

Fifth, regarding public interest. Article 3.1 of the WTO Safeguard Agreement provides that use of importers and users need to be taken into account in order to assess whether the application of measures would be in the public interest. It is important to recall that any safeguard measure would affect not only low price imports from Asian countries, which account for almost 76 percent of total value of U.S. imports in 2016, and which have been identified by the Petitioners as the main reason for their losses.

But a safeguard measure would also cause collateral damage to imports under fair conditions, including from the EU, which are not responsible for any injury suffered by the domestic industry. Since U.S. consumption has increased by almost 400 percent over the period of analysis, and the domestic industry could only cover around ten percent of the demand, any safeguard measure imposed would affect more than 90 percent of the market, unduly increasing prices for U.S. imports, importers and downstream users, limit the product choice and most likely lead to shortages on the U.S. market.

In conclusion, the domestic industry does not appear to be suffering any injury caused by an increase in imports. We believe there are other factors responsible for
its poor economic performance, some of which may be
self-inflicted through inefficiencies, bad investments and
other reasons. Thus, the European Commission would like to
reiterate that the criteria for the imposition of safeguard
measures are clearly not met in this case, and thus the
investigation should in our view be terminated.

These comments are without prejudice to any
further comments that the European Commission may want to
submit at a later stage, in particular in response to any
new evidence and information which may become available on
the record. Thank you very much for your attention.

MR. BISHOP: Our next witness is Reynaldo
Linhares Colares, Second Secretary with the Embassy of
Brazil.

STATEMENT OF REYNALDO LINHARES COLARES

MR. COLARES: Thank you Madam Chair and
distinguished members of the Commission. Thank you for the
opportunity given to the Brazilian government to testify in
this case. My name is Reynaldo Colares, Second Secretary to
Brazilian Embassy, and Brazilian government would like to
highlight the relevant aspects that in its view should be
considered by the USA investigating authority in the ongoing
safeguard investigation.

The government of Brazil requests that the
contents of this document be presented as statements of the
Brazilian government in the process. The Brazilian government would like to underscore that Article 9.1 of the Agreement on Safeguards states that safeguard measures shall not be applied against a product originating in the developing country member, as long as its share of imports of the product concerns an importing member does not exceed three percent, provided that developing country members with less than three percent import share collectively account for not more than nine percent of total imports of the product concerned.

Estimates based on the U.S. ITC interactive tariff and trade -- indicate that the Brazilian exports of the product under investigation to the U.S., despite having reached 4,057,566 U.S. dollars in the period from January 2012 to December 2016, accounted for only 0.01 percent of the total value imported by the USA in the same period.

Considering only the year 2016, imports originating in Brazil accounted for only .004 percent of the total value imported. The notice of initiation does not disclose any statistics of the U.S. imports of the product under investigation by country of origin. Without data in this regard, it is impossible for Brazil to verify the compliance with Article 9.1 of the Agreement on Safeguards.

As a way to ensure more transparency in the process, the government of Brazil understands that the
investigating authority in the USA should fully disclose the
data concerning imports from developing countries, and
should explicitly indicate countries that will not be
subjected to the possible application of safeguard measures.

As I already pointed out, the investigating
authority in the USA should disclose the data concerning
imports of the product under investigation by country of
origin, so as to ensure compliance with Article 9.1 of the
Agreement on Safeguards. Therefore, in the case that
imports from Brazil represent themselves less than three
percent of the total U.S. imports and less than nine percent
when added to the imports from other developing countries in
the same situation, imports from Brazil should be excluded
from any provisional or final duty that may be applied.

The Government of Brazil therefore
respectfully requests that the arguments here presented be
taken into consideration by the U.S. authorities and be
fully addressed in the process. Brazil is certain that the
U.S. authorities are aware of the high injury standards that
should apply in a safeguard investigation, and is confident
that these standards, including transparency of data and the
rights of participation of interested parties will be
observed throughout the investigation. Thank you very much.

MR. BISHOP: Our next witness on this panel
Aristeo Lopez, Legal Advisor in the Commercial and NAFTA
Office of the Secretary of Economy with the Embassy of Mexico.

STATEMENT OF ARISTEO LOPEZ

MR. LOPEZ: Thank you. Good morning Chairman and members of the Commission. The government of Mexico appreciates the opportunity to express its view on this investigation in relation to Mexico's submission filed on August 8, 2017. I will address the following points.

First, as we describe in our prehearing brief, Mexico did not receive a written notice of initial determination of this investigation pursuant to Article 8.024 of the NAFTA.

Second, based on the record, in our view the Petitioners should not have been considered as representative of the domestic industry. Third, according to the petition, the initial determination and the ITC prehearing report, the scope of the investigation excludes several different products. However, there is an explanation on the methodology used to exclude imports of those products in order to conduct an analysis on the imports.

In the absence of such explanation, it cannot be distinguished the product under consideration from those excluded from the investigation, as can be seen from the entire description of the subheadings under investigation.

Fourth, regarding the injury analysis as confirmed by their
report, the domestic production capacity and production of
cells and models increased from 2012 to 2016.

In addition, according with the National Solar
Job Census 2016, employment grew 53 percent from 2012 to
2016. Therefore, it cannot be concluded that imports
injured U.S. production.

Fifth, imports of CSPV cells and models are
not substantial cause of serious injury. Mexico's import
share in terms of volume is less than three percent of total
U.S. imports, and Mexican imports are not among the top five
suppliers to the U.S. Rather, any such injury could easily
be attributed to all the reasons as described in our
submission.

Sixth, there is no analysis in the record to
sustain that as a result of unforeseen developments and the
effects of obligation, including tariff concessions, imports
of CSPV cells and models into the U.S. have increased in
such quantities and under such condition as to cause or
threaten to cause serious injury to the domestic industry,
as established by Article 19.1(a) of GATT.

Finally, as it was mentioned by a Mexican
exporter in this investigation, in the event that the
Commission makes an affirmative injury determination, it
should determine that according with Article 8.02 of NAFTA
and 19 U.S. Code Section 3371(a), Mexican exports considered
individually did not account for a substantial share of
total imports, and did not contribute importantly to the
serious injury and threat thereof. Thank you very much.

MR. BISHOP: Our next witness on this panel is
Carrie Goodge O'Brien, Counselor of Trade Policy with the
Embassy of Canada.

STATEMENT OF CARRIE GOODGE O'BRIEN

MS. O'BRIEN: Good morning Chairwoman, Vice
Chairman and Commissioners.

MR. BISHOP: Pull your mic a little bit closer
if you would please.

MS. O'BRIEN: Sure. The Government of Canada
appreciates the opportunity to present its views to the
Commission in this case. Both the Governments of Canada and
Ontario share the concerns of industry and stakeholders on
both side of the border and duties that are applied as a
result of this investigation. It would have negative
commercial implications for the North American solar
industry, adversely impacting its ability to compete
globally.

Trade between Canada and the United States
depends on a high degree of cross-border integration, which
allows for complex supply chains and industry collaboration
supporting a competitive and innovative North American
economy. The Canadian and U.S. solar supply chains are
integrated and complement one another.

For example, when U.S. solar manufacturing plants cannot meet domestic demand, Canada's solar sector has been a supportive supply chain partner to the U.S. solar sector. The imposition of duties on solar products would risk undermining this important relationship, negatively impacting both Canadian and U.S. industry and consumers.

Canada would also like to address an important legal issue, that of the special provisions of NAFTA that apply to U.S. safeguard investigations, to ensure that they are fully respected and properly interpreted. Here, we have two main points. The first, that imports from Canada must be excluded from any safeguard measure if they do not account for a substantial share of total subject imports, and they do not in this case.

Second, the appropriate NAFTA rules of origin must be applied in order to determine which imports are to be considered originating in Canada. Under U.S. law, the Commission must determine whether imports from a NAFTA country account for a substantial share of total imports.

An affirmative determination concerning substantial share with respect to Canada can only be made if Canada ranks among the top five suppliers of the product under investigation. If Canada is not ranked in the top five supplying countries, the Commission must find that
imports of solar cells and modules from Canada do not account for a substantial share of total imports, and the President must exclude Canadian imports from any resulting safeguard measure.

All available import data show that Canada does not rank within the top five supplying countries. Therefore, under NAFTA rules and U.S. law, imports from Canada cannot be considered to account for a substantial share of total imports.

Our second point relates to the applicable rules of origin for Canadian products. Specifically, solar modules manufactured in Canada using imported cells must be considered to be of Canadian origin. Under NAFTA and U.S. law, there are specific rules for determining whether an imported good is considered to originate in a NAFTA country. While the Petitioners point to other rules of origin applicable in the context of anti-dumping investigations, nothing in U.S. law nor in NAFTA provides for their application in global safeguard investigations.

Rather, the applicable rules of origin are clear, unambiguous and binding. For solar cells and modules, no change in tariff classification is required for these goods to be considered as originating in Canada. In addition, as indicated in our prehearing brief, U.S. Customs and Border Protection has previously ruled that solar
modules manufactured in a NAFTA country from imported cells are correctly designated to be of NAFTA origin.

In conclusion, in accordance with U.S. law and NAFTA rules, we respectfully ask the Commission to conclude that there is no justification for including imports from Canada if the Commission makes an affirmative injury determination, and we also ask that the Commission find that solar modules produced in Canada from non-originating cells be considered as originating in Canada for the purposes of this investigation. I thank the Commission for permitting me to testify today.

MR. BISHOP: Our final witness on this panel is Chien Chi Chao, Economic Officer with the Taipei Economic and Cultural Representative Office.

STATEMENT OF CHIEN CHI CHAO

MR. CHAO: Thank you, good morning Madam Chair and Commissioners.

MR. BISHOP: Could you pull your mic just a little bit closer please. Thank you.

MR. CHAO: Sure. Good morning and distinguished Commissioner. Thank you for the opportunity to testify today. My name is Chien Chi Chao. I am an economic officer with the Taipei Economic and Cultural Representative Office in United States, representing the government of Taiwan with the support of the Taiwan Photovoltaic
Industry Association. Taiwan, in support of the brief submitted by the Solar Energy Industry Association, will highlight two issues from our pre-hearing injury brief, and respectfully refers the Commission to that brief for elaboration of these points.

First, cell imports have no adverse effect on the domestic industry. The nature of the domestic industry evidences that such imports are necessary. As Petitioners and the Commission recognize, most cells produced in the United States are internally consumed, leaving very few domestically produced cells available for commercial sale. Meanwhile, domestic demand for cells has outgrown domestic supply of the same. Thus, even without imports domestic cell producers would not be able to meet the growing domestic demand for cells.

U.S. module producers who do not manufacture their own cells needs imports in order to be competitive. In particular, they need high efficiency cells. The utility segment has driven U.S. demand for solar cells and modules. Yet domestic producers have failed to meet this demand. And irrespective of market segments, U.S. producers and purchasers have indicated that, as with cells more generally, there is an insufficient supply of domestically produced high efficiency cells, to the degree that such supply exists at
all. Imports of high efficiency cells cannot be adversely affecting the same producers that need them.

Second, Taiwan has provided the U.S. market with its needed supply of CSPV products, especially high efficiency cells. Although the industry produces both cells and modules, most of Taiwan's solar exports to the United States are of cells. As indicated in our brief, direct shipments of modules from Taiwan are negligible, and Taiwanese producers focus on cells because this is what the U.S. downstream module market relies on for the production of their modules or panels.

Indeed, in case the Commission rules that the U.S. industry has suffered serious injury, this cannot be attributed to Taiwanese imports. To the contrary, Taiwanese producers, especially cells manufacturers, help the U.S. producers to remain competitive by supplying the high efficiency cells that they need.

Moreover, as the data shows, after the imposition of the anti-dumping order in 2015, Taiwanese cell imports to the U.S. have substantially declined. I thank you for your time. Thank you.

COMMISSIONER SCHMIDTLEIN: All right. Thank you very much. I'd like to thank all of the witnesses for being here today. We do appreciate your time and you coming to share your views with us. I have one question for the
representative from the Mexican Embassy, and that has to do with the identification of Mexican producers of cells.

        Apparently, we are aware that there is one producer of cells in Mexico, the I-3 group. Are you aware if there are any other producers of cells in Mexico?

        MR. LOPEZ: Yes. I mean I think there are some other producers. Yes, but I don't have specific detail about that, the specific companies.

        COMMISSIONER SCHMIDTLEIN: Okay. Would you be willing to provide that information to the Commission post-hearing?

        MR. LOPEZ: On other Mexican --

        COMMISSIONER SCHMIDTLEIN: Producers of cells?

        MR. LOPEZ: Producers. I mean I'll do my best to get that information.

        COMMISSIONER SCHMIDTLEIN: Okay, okay. We would appreciate it. Of course like the quality of our decision depends on the completeness of the record that we have before us. We also did not receive a questionnaire response from the I-3 group in Mexico. I'm wondering if you would be willing to encourage them to submit and respond to the ITC's request for a questionnaire response.

        MR. LOPEZ: Yes ma'am, and we'll do our best to get that.

        COMMISSIONER SCHMIDTLEIN: Okay. I appreciate
that. Thank you. Do Commissioners have any questions for this panel? All right. Thank you very much. I will dismiss you now.

MR. BISHOP: Madam Chairman, we will now turn to opening remarks. Opening remarks on behalf of Petitioners will be given by Matthew J. McConkey of Mayer Brown.

Mr. McConkey, you have five minutes.

OPENING REMARKS OF MATTHEW J. MCCONKEY

MR. McCONKEY: So good morning. We are here today to discuss the 201 Global Safeguard Petition filed by Domestic Producers of CSPV Cells and Nodules. But I am going to start with a little short history lesson.

So this safeguard concept was recognized back in the early 1930s when the United States acknowledged that if it was going to liberalize its trade policies, that U.S. producers could be harmed by a resulting increase in imports. Indeed, even if foreign exporters did not necessarily unfairly trade their products, as global trade increased the U.S. recognized that domestic companies could need some flexibility to adjust to new levels of imports.

Accordingly, the United States began to enter into trade agreements that included escape clause or safeguard mechanisms to provide this type of relief.

Thereafter, Article 19 of the GATT included an escape clause provision.
In 1974, Section 201 of the Trade Act of '74 became U.S. law, the law called Global Safeguards. Since Section 201 has gone into force, there have been relatively few cases, especially when compared to Title 7. Why? Because the need to demonstrate that the increased quantities of imports are a substantial cause of serious injury.

Indeed, we recognize that's a fairly high bar, especially when compared to Title 7 cases. However, if there's ever been a 201 case where a finding of serious injury is warranted, it is this one.

Of the two co-petitioners in this case, my client Suniva is in Chapter 11. SolarWorld's parent is in bankruptcy. But this is not just about Suniva and SolarWorld. Far from it.

The Commission's own prehearing staff report at Table III-3 provides a chart identifying domestic CSPV Cell and module producers that have gone out of business in the last five years.

As that table puts into stark relief, the United States is literally strewn with the carcasses of shuttered solar manufacturing facilities. We'll see in those who appear today in opposition to this 201 would like those looking at this case to focus on the Petitioners only. It's not just about those two companies who happen to last the
longest. It's about all of those companies and their
workers who are out of business.

The data set forth in the Commission's staff
report reveals a domestic industry that is literally on the
precipice of being extinguished. U.S. module manufacturers
suffered net losses exceeding a billion dollars over a
five-year period.

Levels of R&D investments assigned to cell
operations declined throughout the period. Ten of thirteen
U.S. producers reported imports had undermined investments.

Even as U.S. demand for solar products increased
from 2012 to 2016, foreign suppliers, including those from
China, Korea, Canada, and Malaysia, began capturing an even
larger share of the U.S. market.

But then we saw module prices drop by a third in
the second half of 2016, during a year when all imports
increased by 50 percent from the previous year. Again, all
of this is against the backdrop of increasing global
overcapacity that outstripped growing demand, massive
domestic closures and bankruptcies, and nearly a five-fold
surge of imports. A five-fold surge of imports is hardly
"gradual."

If this isn't serious injury, then that concept
has no meaning. So this leaves us with causation.

Arguments have been raised even earlier this
morning and in the last of the prehearing briefs that Suniva and SolarWorld somehow brought their financial problems on themselves. Not only are these arguments factually false, they're offensive. Really?

The almost 30 members of the domestic industry who have gone out of business in the last five years, as well as Suniva and SolarWorld, all of them made bad business decisions or substandard product? While the Chinese, Koreans, Canadians, Malaysians were all brilliant business strategists? Please.

Finally, before we get into the substantive portion of today's testimony, since the filing of this Petition, those opposed have been frenetic in the media about the impact of the 201 Petition's suggested remedies would have on installers and others in the solar value chain.

I urge the Commission, and more importantly those that are here in opposition to this Petition, to remember the only issue present today is that of injury to the domestic manufacturing industry. We will get to remedy later this fall.

Thanks.

MR. BISHOP: Opening remarks on behalf of Respondents will be given by Matthew R. Nicely of Hughes Hubbard & Reed.
Mr. Nicely, you have five minutes.

OPENING REMARKS OF MATTHEW R. NICELY

MR. NICELY: Good morning. I am Matt Nicely. I represent the Solar Industry Association, an American trade association of over 800 members.

SEIA and its members oppose this Petition and urge the Commission to vote negative in the injury phase of this investigation. The broad solar industry that SIA represents is made up of over 260,000 workers, a number of whom are here today because their livelihoods are at stake.

One out of every 50 new jobs created last year in the United States was a solar job. Solar is an American success story whose future remains bright. Its continued success could be destroyed by the misguided actions of the two Petitioners and their small group of supporters whose workers represent less than one percent of all those that work for this dynamic American industry.

Indeed, this group represents a very small minority of U.S. solar manufacturing jobs. The Petitioners make it seem like this is a simple case. Imports increased. The industry performed poorly. So they think they deserve relief.

But of course it's not nearly this simple. The standard for relief under Section 201 is much higher than the Commission faces in ABCD cases like those against the
CSVP products from China and Taiwan. In a safeguard case, rather than merely having to find that imports contributed to the industry's material injury, here you must find that the increased imports were the substantial cause of the industry's serious injury.

The words that Congress and the members to the WTO used here are critical. You must (a) find that the industry experienced much more severe injury than was required under ABCD law; and (b) the measure--you must measure whether the increase in imports were no less important than any other cause of injury.

We do not agree with the Petitioners that this industry is seriously injured. And even if it is so injured, we have demonstrated that increased imports are not among the most important reasons for that injury.

Let me highlight a few points for you to consider as you listen to the Petitioners' presentation this morning.

In the ABCD solar cases, the record showed that the domestic industry was on the decline during the periods investigated. Here the record shows that the domestic industry was on the rise during the POI.

Capacity increased during the POI, as did production, as did commercial shipments. Meanwhile, the industry's costs fell dramatically as everyone in the industry expected them to. This has caused demand for cells
and modules to soar. New entrants are building plants in
response. Have some companies failed? Yes. But that's the
core nature of a high-tech industry.

You must innovate to keep up and deliver quality, reliable products at scale. The Petitioners have failed badly and their failure has nothing to do with imports.

Listen later today to our witnesses who will tell you about how Suniva's ion implant cell technology was a commercial failure; how Suniva shipped its cells to other countries to assemble into modules because its own module assembling facility in Michigan was poorly designed; how Suniva and SolarWorld both failed to take advantage of opportunities to sell to some of the largest residential solar developers in the country; how both companies failed to meet basic delivery and product quality standards, leading to a loss of repeat business. And, how SolarWorld had the opportunity to sell American-made 72-cell modules to utility-scale developers but filled those orders with imports instead, because they clearly don't have the capacity to meet U.S. demand for those products.

Our witnesses will explain how the Commission's questionnaire data and economic modeling also support our position. That imports are not among the most important causes of any injury is proven, among other things, by the following:
The domestic producers did not have the capacity to meet booming demand created by cost-reducing technology advances. Most of the increase in imports occurred in the utility-scale segment where domestic producers largely do not participate. And, there is no predominant underselling.

That the two Petitioners would even bring this case demonstrates their poor business judgment and their hubris. They seek a public remedy for their own private failings. If successful, they will undermine the hard work and innovation that is making solar a viable alternative to conventional energy sources.

The Commission can and should prevent this ill-advised case from proceeding and allow this clean energy source to thrive along with the thousands of jobs it creates.

We look forward to spending the day with you.

MR. BISHOP: Would the members of the panel in support of the Petition please come forward and be seated. If there are any members in Courtroom A, would you please come over to the main hearing room. Thank you.

(Panel is seated.)

CHAIRMAN SCHMIDTLEIN: Good morning. Before we get started with Petitioners' panel, I just wanted to acknowledge that we are aware that there are people who were not able to get in to the building this morning, and my
understanding is that we are trying to accommodate them with opening our third courtroom upstairs.

So I'm not sure exactly what the status of that is, but I do apologize for that. I think there were a number of members of SEIA who were not able to get in, and so we hope that we are able to get courtroom C open with a video feed and get those people inside. So I just wanted to make a note of that.

Mr. Secretary, do you have a preliminary matter?

MR. BISHOP: Madam Chairman, I would note that the panel in support of the Petition have been seated. All of these witnesses have been sworn.

CHAIRMAN SCHMIDTLEIN: Alright, thank you very much. And you all may begin when you're ready.

STATEMENT OF TIMOTHY C. BRIGHTBILL

MR. BRIGHTBILL: Thank you, Chairman Schmidtlein, Vice Chairman Johanson, Commissioners Williamson and Broadbent, and staff. I am Tim Brightbill for Wiley Rein on behalf of SolarWorld and the domestic industry.

Today we will review the standards under safeguards law, the domestic industry, the legal standard we face, the conditions of competition for this industry, and then imports, serious industry, and threat.

As the Commission is well aware, the domestic industry in this case has been largely wiped out by the
global import surge. And even one of the two Petitioners has been forced out of business. And nearly 30 solar cell and modular producers have been forced to close since 2012. SolarWorld, based in Oregon, more than 40 years of experience, once had 1,300 workers. Today it has only 300 workers. Suniva declared bankruptcy and was forced to close earlier this year.

You have already heard the preposterous claim that the domestic industry brought this injury on itself; that they, the victims, are responsible. And you'll hear it more this afternoon. So please keep these facts in mind when you hear those unfounded allegations:

SolarWorld, most recommended and carried by U.S. installers, highest quality standards, leading sustainable solar manufacturer, A+ rating Better Business Bureau, 2016 Manufacturer of The Year.

The same is true for Suniva. It has been widely recognized as a leader not only in renewable energy but in manufacturing as a whole. That is, until it was forced into bankruptcy earlier this year. 2016 Georgia Manufacturer of the Year; Renewable Energy Exporter of the Year; and so on.

The vast majority of the domestic industry is no longer in existence--closed, bankrupt, shut down. All of these companies, all of these jobs, all of this innovation and R&D and knowhow, is now gone.
Did all of these companies somehow bring about their own demise? Of course not. What is the real cause? It is obvious. And this does not capture the negative upstream and downstream effects of all of these closures.

The legal standard has already been outlined. You must determine whether imports have increased in such quantities as to be a substantial cause of serious injury to a domestic industry or a threat thereof.

All of the factors outlined here are present in this case. We agree that safeguard measures should only be used in extraordinary cases. This is such an extraordinary case. And I would also point out—and everyone in this room should understand—we didn't want to bring this trade case. We were forced to bring this trade case by the conditions in the market.

What are those conditions?

We'll start with demand conditions. Demand in the United States grew strongly during the Period of Investigation. Solar installations increased by 350 percent during the period. The United States is now the second largest solar market in the world behind only China.

U.S. producers, importers, and purchasers all reported increasing demand. Demand in other major markets has been stagnant, even in China is leveling off. The major and defining supply condition is global overcapacity, a
situation that this Commission has seen time and time again
but rarely to this degree.

Global capacity has expanded dramatically. There
is massive global overcapacity among many producers. In
addition, we would point out that many foreign producers
have production operations in multiple countries and are
able to shift that production and those exports rapidly from
country to country.

Here are a few stories confirming what the
Commission's data already clearly show. In fact, there is
universal agreement in this industry on what happened here.

So you have IHS Technology, Solar industry
renewed oversupply and shakeout. The first half of 2016 has
seen unprecedented levels of PV installations driven by
China. It will be China that causes a dramatic slump in
global demand in the second half of the year. As China
pulls back, prices are expected to plummet. Huge
expansions of production capacity will add to the
oversupply.

Here from Bloomberg: Looming glut eroding panel
prices. Solar manufacturers that are ramping up production
face a looming glut of panels. Oversupply appears to be
business as usual in the solar industry.

Here are two charts also from Bloomberg New
Energy Finance that show why the injury in the Commission's
data is actually under-stated to some degree.

First, on the left Total Global Capacity is considerably greater than the Commission's data shows due to many foreign producers who failed to respond to your questions.

The second chart on the right. The second half of 2016 was particularly bad as over-capacity and the price collapse crushed the bottom line of U.S. producers. This serious injury continued and accelerated in 2017.

One more headline from again Bloomberg: No new China to save the day as solar faces glut. The solar module industry is careening toward one of the worst supply gluts in its history--this was written last September. The sheer scale of the over-supply may still be lost on many in the industry. This will feel familiar to anyone who was in the solar business earlier this decade.

Now turning to the Commission's data. Imports increased nearly 500 percent during the period. By quantity, it was 492 percent. Because of the collapse in prices, the value of imports increased by, quote, "only 270 percent." There were triple digit increases for several of the largest suppliers. Some countries that had never exported CSPV products to the United States became major suppliers almost overnight.

This chart demonstrates that the import surge is
not just about China or one or two countries, and it also confirms the rapidity of potential surges. The smallest percentage increase on this chart is over 100 percent for Japan. The percentage increase for imports from Thailand and Vietnam is literally off the charts.

As this chart shows, despite amazing growth in U.S. solar installations with solar demand being strong, imports captured practically all of the increase in demand during the POI.

The domestic industry's already weak market share also fell during this period. This led to the destruction of the U.S. industry. Nearly 30 production facilities closed. SolarWorld and Suniva both closed facilities. Massive net and operating losses, and layoffs.

Across the period, import prices collapsed. Overall, cell prices fell by 60 percent during the period. Module prices declined by almost 60 percent. And this is reflected in the pricing product data as well, as you see.

This chart shows how the two antidumping cases brought some stability to pricing in 2014 and 2015. They had an effect for a while. However, despite growing demand, prices for domestic modules plunged again in 2016 as a result of the global import surge.

The domestic industry has suffered serious injury. The statutory indicators are all present.
Significant idling of facilities, as we've discussed. Inability to make a profit. A total operating loss over the period of $865 million. That is an abysmal negative -44 percent in 2016. Negative forty-four percent.

Employment in the industry fell till 2015, increased in 2016, but then when Suniva shut down and with SolarWorld's layoffs, the industry has lost employment from 2012 to 2017.

As a reminder, the harm was nationwide. And these are all real jobs lost. And for each of these companies, as the Minnesota Senator testified, there are additional upstream and downstream effects as well. And without the manufacturing, you lose the spinoff jobs. That's what you heard earlier today.

This is not just a case of innovation and technology destruction. This is real harm. The global import surge captured practically all of increased demand. Imports were a substantial and the substantial cause of serious injury. The domestic industry lost market share, and you have all the other factors as well.

The alternative causes do not explain the domestic industry's losses. Grid parity does not explain the sharp decline in prices. The Commission has made all of these causation findings before in Solar One and Solar Two and should do so again here.
Again, demand increased sharply over the period. So changes in government incentives cannot explain the industry's poor performance. And prices were decoupled from raw material costs during the period.

The Commission must make a separate determination relating to NAFTA countries determining whether they represent a substantial portion of total imports and whether they contributed importantly to serious injury or threat.

Mexico was a top five supplier of modules every year since 2012, and producers in both NAFTA countries can quickly and easily shift production to other--from other facilities that they own into Canada and Mexico if they are excluded.

Canadian imports are up 86 percent since 2012. Mexican imports are up 77 percent. Both of these are faster than the global rate of increase.

With regard to Free Trade Agreement countries, particularly Korea and Singapore, again there is a need for a separate finding on these countries which can be reported to the President, and the President can then decide whether to include these or not.

Korea was the third largest source of imports in 2016. The public data shows Singapore imports up 400 percent, Korean imports up 800 percent during the Period, and the business proprietary data is even greater.
This Commission is well aware of how country switching and duty evasion occur. Our FTA partners such as Korea and Singapore should not be excluded from any injury or remedy determination.

Imports also threaten the domestic industry with serious injury. The U.S. industry has suffered declining market share, large losses, extensive global overcapacity, and foreign producers can rapidly shift exports.

While serious injury is readily apparent, every statutory factor relating to threat is also apparent. And in particular when you consider FTA and developing countries, the threat analysis is important.

So this case satisfies all of the criteria for a finding of serious injury in terms of increase, serious injury, and a clear relationship between those two. This is nothing short of an American manufacturing catastrophe caused by subject imports.

Thank you. And with that we will now turn to testimony from our witnesses, beginning with Juergen Stein from SolarWorld Americas.

STATEMENT OF JUERGEN STEIN

MR. STEIN: Good morning. My name is Juergen Stein. I'm the CEO of SolarWorld Americas. We are the largest solar manufacturer in North America and we have more than forty years of experience in the industry. We are a
value-based company that makes great solar products, creates American jobs and advances American innovation. We believe in our products, our employees, our customers, intellectual property rights and fair trade. SolarWorld is proud to be a pioneer in this industry, producing products that protect our environment under conditions which are safe for employees and for the planet.

Until this month, I was also a member of the management board of our corporate parent, SolarWorld AG, one of the world's oldest producers of solar products. I appreciate the opportunity to appear before you today to discuss the dangerous situation in our industry. Quite simply, we need the Commission's help to save solar manufacturing in the United States.

This isn't the first time SolarWorld has come before the Commission. Since 2012, SolarWorld has twice sought relief from dumped and subsidized imports from China and Taiwan. Both times the Commission made an affirmative determination and we greatly appreciate the hard work of the Commission and its staff on these cases. Both times we expected the relief to give us the breathing space we needed to respond to unfair import competition. In fact, they did have a positive impact and helped us to survive to today.

But here we are again. Rather than the long-lasting and meaningful relief we expected, global
exports continued to increase. So, what happened? The answer is, in brief, the continued build-up of global overcapacity, combined with Chinese producers' efforts to evade the previous anti-dumping and countervailing duty orders. This has resulted in an overwhelming surge of global imports into the United States, and with it, the collapse in prices. As a result, the domestic solar manufacturing industry has been driven to the brink. Relief under Section 201 is our last hope.

This should be boom times for the domestic industry. The United States is installing solar energy at an impressive and even breathtaking rate. Between 2012 and 2016, solar installations in the United States increased by nearly 350% from 3.4 gigawatt to 14.8 gigawatt. In fact, installation has nearly doubled just from 2015 to '16. Last year, solar facilities were the single largest source of additions to U.S. electrical generating capacity.

We are in the midst of a solar green technology revolution. And this is the situation that those of us in the solar industry dreamed about for years. SolarWorld Americas had prepared carefully for this explosion in demand, spending in total more than one billion dollars to establish and regularly expand and upgrade our production facilities, and we were posed to take advantage of the growth in the U.S. market.
Two of the Commissioners and several of the staff have had the opportunity to tour our facilities in Hillsboro, Oregon, and have seen these investments in action. Among other steps, we added a new 72-cell module production line, set up an extensive installer program and invested in cutting-edge mono-crystalline capability. To assure consumers that solar power is an intelligent, sustainable and safe investment, we were the first company in the industry to offer a 25-year, and then a 30-year warranty on our products.

We have done everything possible to establish ourselves as the industry leader in the United States. As a member of SolarWorld Americas board, I helped drive this positive development for years. And when I was offered the opportunity to become the CEO and President of SolarWorld Americas, I didn't hesitate to accept the position and move my family from Germany to Oregon earlier this year.

Of course, imports have been present in the U.S. market for years. SolarWorld and the rest of the American industry were fully prepared to compete with fairly traded imports, as well as other domestic sources. But we could have never prepared ourselves for the surge of cheap imports that have resulted from global overcapacity.

Since 2012, global manufacturing capacity for cells and modules has almost doubled. This expansion was
far beyond the increase in global demand. While some of this new capacity is the result of market forces, much of it represents investment both in China and in other countries by Chinese producers which are heavily subsidized by the Chinese government. The purpose of these investments was not to respond to new local demand, but to add production in other countries to avoid paying the duties on Chinese imports in the United States, as well as minimum prices in Europe.

While many investments were made to expand cell and module capacity in Vietnam, Thailand, Malaysia, Korea and Singapore, by some of the world's largest solar producers, none were made in the United States. As you've seen in many other industries, whenever there is a global overcapacity, the United States becomes the market of first and last resort. The same is true with solar products.

Between 2012 and 2016, while U.S. installations increased by 350%, imports by quantity great by 500%. Countries that have shipped almost no products to the United States in the past, became major suppliers virtually overnight. As a result, the domestic industry, despite modest increases in production, did not benefit from growing U.S. demand and saw its market share fall sharply.

Global overcapacity and the surge in U.S. imports led to a total collapse in U.S. solar prices,
particularly starting in the middle of last year. Because of the extreme overcapacity, global prices became totally decoupled from raw material costs, as producers tried desperately to keep all their new capacities in production. Solar cell and module prices fell in 2016, even as the price of polysilicon, the most valuable raw material within a cell, were rising.

This is an unsustainable situation and what I would call the circle of death. Prices fall and then companies must fill their capacity and even expand to lower their cost of production. And this additional production must then be sold at an increasingly lower price to compete, resulting in staggering losses.

The impact of the American solar industry has been severe. I don't have time to read the list of nearly thirty American solar producers who have gone out of business. At a time when demand for our product is booming, there's exactly one currently active producer of both solar cells and modules left in the United States, SolarWorld. We are one supplier with a capacity of 2% to 3% of the U.S. demand.

And even we are operating well below our capacity. We have had to lay off hundreds of employees since mid-last year, including 360 workers just last month. This has been by far the hardest thing that I have had to do.
as SolarWorld's CEO. We had to let go many workers who had
been with the company for many years. These job losses
should not be happening in an industry where demand is so
strong and good profit margins are a given in the overall
value chain.

Of course, SolarWorld's current financial
situation is distressing. I should note that the damage
isn't limited to the United States. Our corporate parents,
SolarWorld AG, filed for bankruptcy in May, 2017.
Unfortunately, even one of the oldest and most respected
solar producers in the world can't compete with the Chinese
government and the global race to the bottom.

The United States is the second largest market
for solar products in the world. We are already seeing the
enormous benefits solar power can bring in terms of
environmental protection and energy independence. The
American solar industry is technologically advanced with the
most productive workers in the world, yet because of the
over-expansion of global capacity, and with that, the surge
of imports, our industry has been pushed to the brink.

Unless you act promptly and decisively, the
United States may find itself with no solar manufacturing
sector left at all. I am sure that our industry survival is
key to U.S. competitiveness in high technology industries.

The sun is the cheapest source of energy. It's
for free. And it is expected to shine for the next 100 million years. The United States led the solar revolution. By allowing our manufacturing sector to disappear, we are giving away our knowledge on how to use this source and our technology to other countries. The next generations of renewable energy products should not just be installed here in the United States. They should be invented and made here as well. Thank you.

STATEMENT OF MATT CARD

MR. CARD: Good morning. My name is Matt Card and I'm the Executive Vice President of Commercial Operations for Suniva, the Georgia and Michigan-based manufacturer of solar cells and modules and one of the two co-petitioners in this investigation. I'm one of Suniva's first twenty employees and have been with the company nine years this month.

Over the last nine years, I've been responsible for the sales, marketing and government affairs functions of the company. I appear before the Commission today to provide insight into the dramatic challenges that U.S. solar manufacturers have faced as our domestic industry has come under intense assault from imports over the last several years. Today's solar technology traces its roots to research and development that originated in the United States.
The U.S. blazed the path forward for this important generation of energy technology, and yet, as we sit here today, the U.S. manufacturing industry is in a fight for our very existence. The irony of these proceedings is not lost on me. In October, 1955, the first successful trial of a solar panel developed and made by Bell Laboratories in the United States, was conducted in Georgia. And now, sixty-two years later, a Georgia manufacturer asks for your help in saving a beleaguered U.S. industry.

It's not an understatement to say that the actions of this Commission will determine whether or not the U.S. solar manufacturing industry becomes extinct. Another victim of an intentional strategy by foreign entities to rob the United States of its manufacturing expertise, and with it, the important research and development work that has for so long made the United States the world's leader in emerging technologies. What you see here by the co-petitioners represents effectively 90%+ of the remaining U.S. solar manufacturing industry. We speak with a unified voice about the grave damage that has befallen and continues to befall U.S. manufacturers.

Of the group that you will hear from the petitioners today, you'll hear from Suniva. Suniva's currently in Chapter 11 bankruptcy and has had to lay off
the majority of our workforce. SolarWorld's parent has
filed for insolvency and the company now stands alone in the
U.S. and have had to lay off roughly 40% of its U.S. staff.

Beam Reach, who you'll also hear from, filed
bankruptcy in late 2016 and is currently under liquidation.
Itek Energy, who still survives, will share with you the
intense pressure and damage being caused to its business by
imports.

Sadly though, the stories of these companies
mirrors the stories of over thirty U.S. solar module, cell
and materials manufacturers over the last five years. Over
thirty companies that represent well over a billion dollars
of capital investment and thousands of jobs, all now gone
from the U.S. manufacturing landscape.

We all believe it is vital to American interests
that this manufacturing industry survives. If, as a
country, we lose this industry, then we lose much more than
the jobs associated with manufacturing. We also lose the
R&D leadership that allowed this technology to be birthed in
the first place. As a country, we will have ceded
manufacturing of what everyone agrees that's a meaningful
source of electrical generation to China and its proxies in
Southeast Asia and other global outposts.

The implications of this are significant. As we
continue to stress the needs of energy independence as a
country, the U.S. in fact will have no control over its own
destiny when it comes to power generation from the sun. How
much or how little solar energy the United States produces
and at what price will be completely in the hands of foreign
governments.

Over the course of its ten-year life, Suniva's been a true American success story and sadly now a
cautionary tale, which has become the norm in U.S. solar manufacturing. Suniva was founded in 2007 as a result of
private investment, license and technology first developed
at one of the country's leading photovoltaic research
universities, the Georgia Institute of Technology, Georgia Tech.

However, today, global overcapacity continues to
grow and with more and more product being pushed into the
United States at lower and lower prices. Indeed, price has
now become the dominant driver of purchasing decisions. No
matter what else you hear today, price has become the
dominant driver. At wildly distorted prices that have
distorted the U.S. market due to massive and growing global
overcapacity.

It's important to note, even those that oppose
this action, acknowledge this point. For example, in a June
30th, 2017, New York Times article, SEIA, the installers and
developers trade association, who you will hear from quite a
bit today, stated, "We are competing on price and price alone. If you change the underpinnings of that, it undermines what we're doing." Well, price competitiveness is certainly an element of a free and fair market.

The intentional continued growing of oversupply is a clear indicator of the market distortion that results. Credit Suisse has noted that in 2017, the global demand for these products is between 63 and 72 gigawatts, while global manufacturing capacity exceeds 100 gigawatts. That's the conservative estimate. Other estimates, as you saw earlier today in our openings, put this number above 140 gigawatts. 30% to 100% more supply than demand. And under this backdrop of capacity, amazingly, it's been reported by Reuters that this year, China will increase by 25% its manufacturing capacity to 60 gigawatts, almost equaling alone the world's demand. And that's not all, it's not just China. PV Tech has reported that Q1 2017 was the third highest quarter for global capacity expansion since 2014. 30% to 100% over capacity and yet we have the third fastest growth of expansion around the world.

In 2016, within the United States, this overcapacity and the related price collapse, resulted in a clear distortion of the U.S. market. Module prices in the United States fell an astonishing 33% in the second half of
the year, even as the prices of the dominant raw material, silicon, rose almost 20%. The culmination of the distortion that occurred, resulted from this overwhelming influx of oversupplied imports, was inevitable. It became economically impossible for a U.S. manufacturing counting on rational market behavior, to compete.

In late 2016, the manufacturing bloodbath continued in the United States and grew even significantly. Bankruptcies and mass layoffs continued and in April 2017, Suniva's succumbed to the relentless onslaught of these imports. We filed for Chapter 11 bankruptcy. Our co-petitioners' parents followed several weeks later. As a company, when we reached this dark day, it was not for a lack of trying to overcome a heavily tilted playing field.

Over the previous five years, we invested heavily to grow our capacity and lower our operating costs as an attempt to compete. Over the course of our life, we've raised over $200 billion in private investment and grew our cell manufacturing operations in our birthplace, Norcross, Georgia.

In 2014, we expanded our operations to include a new module manufacturing facility in Saginaw Township, Michigan, bringing hundreds of new, fulltime, well-paying, benefited jobs to a community with a rich history in manufacturing. In 2015, we made the strategic decision to
expand our cell manufacturing operations in Georgia again to
lower operating costs and to provide more products to serve
our primary markets here in the United States.

As part of this effort, we also looked to expand
our investment team, reaching out to investors globally to
invest in the growth of U.S. manufacturing. We secured
additional investment from SFC International Clean Energy,
who joined our primary U.S.-based investors, New Enterprise
Associates, Goldman Sachs and Warburg Pincus. The U.S. is,
and will continue to be, a vital market for global solar,
and we have always believed that the global industry should
be investing in the United States manufacturing worker as a
key part of a healthy ecosystem, rather than doing nothing
more than siphoning review off the U.S. installation growth
while destroying our manufacturing base.

Adding additional investors allowed us to begin
an expansion early 2016, late 2015, that would triple our
U.S. cell capacity to 450 megawatts, again to serve our home
market. This was projected to add hundreds of new research,
engineering and manufacturing jobs in our Georgia community.
Beyond our efforts to grow and invest, we also attempted to
be smart about the markets we prioritized. Customers would
pay a premium for our products, and they bought repeatedly.

Our major distribution partners, including two
of the largest electrical distributors in the world, placed
literally thousands of purchase orders for our products. Our commercial partners bought substantial quantities of our 72-cell product over multiple contracts for periods of over five-plus years. 45% of our overall cell manufacturing capacity went into 72-cell modules to serve the growing commercial and even small utility market.

It was never a question of being able to find willing buyers. An overwhelming percentage of our customers signed multiple purchase contracts over multiple years, validating their support for our product. But the comments that SEIA made about price in the June 30th New York Times article were deadly accurate. It became all about price, period. Being inundated with offers from Asian suppliers at prices that on more than one occasion would drop 5% in a week. Customers attempted to renegotiate or cancel signed supply contracts.

A frequently-used technique of these competitors, the 'Last Look.' Buyers were told to call them after they got Suniva's best and final offer, and these suppliers would beat it, no matter what. It became an insane race to the bottom. Prices reached such irrational lows that it was literally more cost-effective to not produce at all, rather than figuratively tape dollar bills to each module that goes out the door.

Buyers were still offering us projects the weeks
before and after our bankruptcy with the caveat, as long as we could be within range of the price offers they got for Southeast Asian products. But of all the tremendous successes and challenges we faced, both victories and losses, it's not the projects that mean the most to me, it's the people. We take tremendous pride in our people and how we can contribute through them to the communities that they live and work in full-time.

About 20% to 25% of our workforce were veterans, men and women that learned valuable technical skills in our military and wanted to continue building on those skills when they left the service. Another 25% to 30% of our workforce came from other manufacturing segments as they downsized. When other manufacturers closed or scaled back, we were thrilled to provide full-time high-tech manufacturing work so that these workers could continue developing their careers.

I recall when literally hundreds of people showed up to apply for manufacturing jobs at our still-under-construction factory in Michigan, months before it opened, because they were thrilled to see full-time manufacturing growth, after years of debilitating manufacturing job losses in that region. These were the victories that made all the challenges most worthwhile.

And even this year, as the toll of the drum-beat
of global overcapacity continued to depress prices beyond rational levels, and it became growingly obvious that Suniva could not sustain in these conditions, the words of encouragement I received from the very workers we were forced to lay off were huge sources of strength.

Rather than dwell on loss, these same workers time and again told me, "Please fight for our jobs. Make people understand, making things in America matters. We want to come back." As an American manufacturer, we always took pride in being the best at what we did. In innovating, our founder was one of the top five research scientists on the planet. He held over forty individual patents. As a company, we developed a patent portfolio of over 150 patents.

In building a quality product, our history warranty claim rate was below 0.05%, 5/100ths of 1% of warranty claims in a quality issue. We believe that in a rational market, that these values would allow us to compete. But our story was not unique, nor was our fate.

Over the last five years, almost thirty other U.S. cell module and materials manufacturers aspired to the same vision and sadly, thousands of U.S. manufacturer workers found out that this market is distorted, and lost their jobs. It's been tilted by foreign entities and governments that have invested over $40 billion to create a
subsidized, overcapacitized and still growing manufacturing base that's continually distorted this market here at home.

This process is not fun for me. There is nothing enjoyable about engaging in this. People have accused this of being an action of first resort. This is an action of last resort. I would much rather be working with Suniva's sales force actively pursuing new business. I would much rather be discussing the next phase of our expansion plan to grow manufacturing and create more jobs in Georgia and in Michigan.

I'm not a lawyer. I'm not a politician. I'm not a banker. I'm a business professional. My instinct is to build, to grow, to create. With that said, I'm reminded daily that this is a discussion that matters. This is not, as some would have you believe, an isolated example of an incompetent, failed company out to bring down an industry. We feel our families in this space, too. We need installers and developers to build. But we still fail. No one wants that.

But the notion that the U.S. should abandon manufacturing is absolutely misguided. A healthy U.S. ecosystem must include cell and module manufacturing. And today we are nearly extinct. Thirty manufacturers. Thousands and thousands of U.S. workers. This is not hypothetical. This is not a wild-eyed projection as a scare
tactic of what might happen. This is fact. Over thirty companies in twenty-two states in five years. Thousands of U.S. manufacturing workers. Over a billion and a half dollars of capital investment. All gone.

Our co-petitioner walks this road with us now. The others testifying today have walked this road, or see it coming. We're all that's left. We're not the only two. We're the last two. And we are in grave danger of extinction. Clearly an issue in front of you guys as a Commission is historic. And it will shape the face of U.S. manufacturing and also our nation's energy security for years to come.

You have an opportunity to make a real difference in the face of American manufacturing, and I ask that you find for the injury caused by imports that has decimated American manufacturing jobs in this industry. I thank you very much for the seriousness with which you're pursuing this investigation.

STATEMENT OF SHANE MESSER

MR. MESSER: Good morning. I am Shane, Vice President of Sales and Marketing of Solar World Americas, Inc. I have served in this capacity since 2016, but have worked in the solar industry for more than a decade now.

Given my background, I will focus my comments on Solar World's commitment to producing the highest quality
products at the most competitive prices and its record of high customer satisfaction. I will also discuss how imports and not any other alleged alternative causes are responsible for the harm to our industry over the past five years.

Solar World is widely recognized as America's solar leader. While other companies build overseas, Solar World carries out the manufacturing process right here at home from sourcing and manufacturing to assembling and hiring. We source only the highest quality components and materials from reputable and proven suppliers. Because of this commitment to excellence our solar panels and our operations consistently meet or exceed the most stringent performance and environmental standards.

Solar World was one of only several global solar producers to be recently named a top performer in the DNV GL's 2017 PV modular reliability scorecard report. This recognition by the world's largest classification society is only given to solar producers with the highest PV modular quality and long-term reliability.

Our warranty rate is so low as to be negligible. Last year, for example, we shipped nearly three million modules. Of those modules, merely .01 percent were rejected. In fact, at no point in the last five years has Solar World's rejection rate exceeded .01 percent. Just for comparison sake, many Chinese companies carry warranty
reserves on 1 percent of all sales. It takes gall, to
say the least, for anyone to claim that Solar World produces
a poor product.

Similarly, there is no merit to a claim that
Solar World has poor customer services or marketing. In
fact, this is one of our strengths. Solar World works with
nearly 5,000 U.S. solar installers across the country. Of
those 349 are authorized installers and 36 have been
designated as platinum installers. These installers work
with Solar World because we are committed to excellence in
everything that we do from product quality to customer
service to prices.

Because of this commitment, Solar World's list of
awards and accolades is extensive. In June 2016, a
comprehensive survey by independent research firm, EUPD
Research, found that more U.S. solar system installers
choose to carry Solar World's solar panels than those of any
other brand. Solar World has earned an A+ rating from the
Better Business Bureau, its top ranking, which demonstrates
that Solar World's customer service department in Oregon is
second to none.

How can anyone reasonably claim that Solar World
has suffered severe financial losses and layoffs because of
poor customer service or quality? Clearly this is not the
case. Before I joined Solar World in 2016, I worked at Sun
Power and then Bosch until they ceased their solar operations due to unfairly traded imports. I then joined Sun Edison. I tell you this for two reasons. First, I've seen firsthand how quickly imports can come in and destroy U.S. market share companies and jobs. Second, I wouldn't have joined Solar World if it provided substandard merchandise and service. The opposite is actually true. I came to Solar World because I knew it was the best.

Our competitors have also falsely claimed that the domestic industry is unable to supply the 72 cell to the utility sector. The Commission has rejected these claims in the past and should do so again. Solar World produces 72 cell modules and would be producing even more if not for surging solar cell and module imports. In fact, Solar World added a brand new 72 cell line in 2016 in order to serve growing demand in the utility sector.

However, this line, like many of Solar World's other investment, never got a chance to succeed. Our investment was immediately undercut when imports rapidly accelerated into the U.S. market last year. Similarly, Solar World's focus on mono-crystalline products is not a cause of its harm.

As the Commission found in the last solar investigation, purchasers often do not specify mono versus multi-products in their RFP. The Commission, therefore
rightly found that the record does not show that the
domestic industry's product mix explains its poor
performance. In fact, we see the market now moving strongly
to mono and PERC products. Solar World led and now Asian
manufacturers are following our technology roadmap.

The substantial cause of the dramatic decline in
the domestic industry's condition is direct and undeniable
- imports. Since 2012, the domestic industry has suffered
serious industry due to a surge of solar imports in the U.S.
market, including massive layoffs, closures and severe
production cutbacks. The domestic industry's condition,
however, worsened as imports spiked into the U.S. market in
2016. And it is not only the domestic producers that are
hurting. The entire U.S. supply chain is being harmed.

Just last week, Solar World's component
supplier, Ulbrich Solar Technologies Oregon shut its
Hillsboro plant after six years of operation, laying off 35
employees. I could give you many other examples of how our
supply chain has been hollowed out by imports further
harming U.S. manufacturing. Solar World has experienced
hard times recently and faces an urgent and dire situation
without trade relief. I've seen hundreds of my colleagues
laid off and it pains me to think that many more could be
let go if market conditions persist.

Solar World is one of the most competitive solar
producers in the world and for this reason many of our loyal customers have stuck by us. We can compete among the best, but not against surging volumes of low priced imports. On behalf of Solar World and our employees, we urge you to make an affirmative finding. Thank you.

STATEMENT OF EDWARD HARNER

MR. HARNER: Good morning and thank you for the opportunity to appear here today. I'm Edward Harner, Chief Operating Officer of Green Solar Technologies, a leader in the U.S. solar installation industry. Green Solar has been installing the highest quality American-made solar panels for our highly valued customers for many years. We are pioneers in our field and have cultivated longstanding relationships with a number of U.S. solar module producers to provide our customers with the best products at the most competitive prices.

Although based in California, we sell or operate in 19 states and growing and have worked on projects throughout the U.S. from Los Angeles, California to Raleigh, North Carolina. Green Solar and its roughly 120 employees take pride in being the best in the business. In fact, earlier this year we were named the platinum installer by Solar World for our superior installation quality, business operations, and customer service.

At Green Solar, we believe in American-made
solar energy products. Since opening our doors, Green Solar's preference has been to install U.S. produced solar modules on our residential and commercial projects. Unfortunately, this choice is no longer ours if we want to stay competitive. Because of the rapid rise in global cell and modular imports and their crushing impact on U.S. solar producers, we have had no choice but to supply increasing amounts of foreign-made panels.

In the past five years, we have seen solar system prices artificially drop 50 percent in all U.S. markets. As low priced imports continue to enter the U.S. in increasing volumes, it has become progressively harder to find markets not overrun by solar cell and modular distributors and installers whose business models are based on foreign imports.

All too often, these companies do not even identify the specific module manufacturer. Instead, they wait to get the lowest possible price on the date of installation. While these and other installers have business models that depend on the use of low-priced imports, others are gradually turning to imports out of necessity. For instance, Green Solar has a network of trusted installers that we work with to provide our customers with the best products and services possible; however, many of them are now resorting to imports to stay
competitive.

As the Commission is aware from its prior investigations, solar cells and modules are overwhelmingly purchased on the basis of price. This means that if Sun Run and Solar City are offering solar modules from countries like China, Malaysia and elsewhere at bargain basement prices, they will get the business almost every time. We compete with these companies every single day and try to respond to the constant and increasing price pressures; however, as import volumes are rising and import prices are falling, it is becoming much more difficult to do so.

Modules produced by Trina, Hanwha, C-Sun, Yingli, and other foreign producers are being used on solar projects across the U.S. with increasing frequency. While it is undeniable that Chinese, Taiwanese, Vietnam, and Malaysian exports to the U.S. market have skyrocketed in the past five years, they're not the only problem. Other countries are also contributing to the solar import crisis. As one example, we are seeing growing volumes of solar modules from Korea, which is not surprising, given that these modules are being offered in the U.S. market for significantly less than their U.S. produced counterparts.

Put simply, absent much needed trade relief, these imports trends will only worsen. On behalf of myself, my family, and Green Solar's employees, I would like to
thank the Commission for its time. Without relief, I am 
concerned that foreign producers will complete their goal of 
eliminating U.S. competition and we will be forced to 
abandon U.S. solar modules altogether to stay in business. 
We respectfully ask the Commission to help us 
prevent this from happening. Thank you for time and 
attention.

STATEMENT OF STEVEN SHEA

MR. SHEA: Good morning. My name is Steven 
Shea. Until recently, I was vice president at Beamreach 
Solar, a U.S. producers of crystalline silicon photovoltaic 
cells and modules located in California. Beamreach Solar 
did not file a response to the ITC's domestic producer 
questionnaire in this investigation because in February of 
this year Beachreach was forced into Chapter 7 bankruptcy, 
in large part, because the surge in low-cost imports. 
Consequently, I am not here as a representative of Beamreach 
itsel, but as an industry veteran with personal insight 
into the Beamreach situation.

Prior to working at Beamreach, I held a variety 
of positions in the CSPV solar cell and module industry for 
over 40 years, including positions with Solar X, BP Solar, 
and Suniva, and involving manufacturing on five continents, 
so I'm very well acquainted with the dynamics of the CSPV 
industry.
I joined Beamreach Solar in June of 2016 as Vice President of Manufacturing and Engineering and I held that position, which later expanded to cover all of Beamreach operations as well, until I was let go in late January as part of the bankruptcy. At that time, Beachreach was focused on scaling the company's manufacturing capabilities to meet growing demand for the company's new, lightweight sprint solar systems and to support the launch and commercialization of other company products in the future, including the development of an advanced, cost-effective, high efficiency solar cell to be synchronized with the second generation of the sprint product for introduction in 2018.

Beamreach itself was formed in 2005 as Soltaics with a goal of developing solar products that could break various technological and cost barriers then hindering the growth of the clean industry market as a whole -- clean energy market. In 2007, the company changed its name to Solexel and continued to develop and manufacture innovative PV products, including thin silicon wafer panels, next generation back contact cell technology, including high voltage, high efficiency cells and solar panel technologies and manufacturing processes, including what we called "Smart Onboard Module Electronics" for control of these devices.
The company developed a very strong, worldwide portfolio of more than 245 patent assets protecting these products and innovations. In 2016, the company rebranded itself as Beam Reach Solar and introduced Sprint, a highly innovative, high weight, fast-to-install integrated solar panel and racking system for low-slope rooftops primarily used for commercial and industrial installations.

In its first six months after introduction, the company signed master supply agreements for substantial amounts of this product over multiple years going forward. At the time of the bankruptcy, in February of this year, Beam Reach had a 7800 square foot facility in Milpitas, California, employing nearly a hundred workers in early 2016 and actively planning for expansion on this site before the impact of rapidly falling import prices began to be felt more urgently. However, of the year as prices continued to fall, Beam Reach reduced staff in order to conserve cash, but ultimately was forced into Chapter 7.

In short, Beamreach was an innovative American company with strategic ideas, forward thinking aspirations, strong IP portfolio and yet it is gone, as are all of its manufacturing jobs and the potential jobs for the future with it. Beam Reach, as it went to market with the new Sprint product could not keep pace with the rapid reduction in market prices driven by imports, first, from China, then
from countries like Taiwan, Vietnam, Malaysia, Korea, and others and the resulting glut of product quickly destroyed the profit margins on this product.

A second generation of the product was through the design phase, but the company ran out of cash before the update could be qualified and fully deployed. In short, Beam Reach was well established company with a truly differentiated and well designed product, strong patent portfolio; however, this flood of imports and the resulting price collapse starting in 2016 eroded Beam Reach's competitiveness in a matter of merely months.

I've spent most of my adult life developing solar technology and building solar manufacturing facilities that have created jobs throughout the world. All the jobs I helped create in the U.S. over the past 40 years are now gone. I'm an expert on manufacturing costs for these products and I'm convinced that on a level or even a nearly level playing field U.S. manufacturing in crystalline photovoltaic can be competitive with products made anywhere else in the world.

Unfortunately, I'm also convinced that without relief, the few remaining U.S. producers will go the way of Beam Reach and those jobs and potential future growth of manufacturing in this industry in this country will simply disappear. Thank you for your time.
STATEMENT OF DAVID MCCARTY

MR. MCCARTY: Good morning. I'm Dave McCarty, COO of Itek Energy, LLC, a U.S. manufacturer of CSPV modules. While Itek Energy is not a formal Petitioner in this 201 action, I wish to state publicly that Itek Energy fully supports this 201 action.

As I will discuss in more detail later, Itek Energy has suffered and continues to suffer economic injury due to imports of CSPV modules and without relief from those imports our position as a manufacture of U.S. made solar modules is threatened.

Some background on me, I started working on a manufacturing line straight out of the U.S. Navy 27 years ago. Since then, I've held a variety of positions in the U.S. manufacturing industry, so I'm well acquainted with the dynamics of the U.S. marketplace and challenges faced by high tech U.S. manufacturers.

During the course of my career, I've seen negative impacts that low-cost imports can have on U.S. manufacturing. I also know that U.S. high tech manufacturing can compete with imports given a level playing field.

Our goal and indeed our vision at Itek Energy is to develop a robust, renewable energy manufacturing base in the United States, while providing living wage jobs and
leaving the world with renewable energy manufacturing. We were founded in the U.S. We are U.S. funded and owned and we manufacture in the United States. Our model is lean, nimble facilities strategically placed to service regional markets.

We know that with a highly trained staff, industry-leading equipment, and well placed facilities, we can and will compete, head-to-head, with imports if import levels are rational. Our flagship module manufacturing facility is located less than 90 minutes north of Seattle in Bellingham, Washington where we pride ourselves on providing the world with high quality, assembled America solar modules.

We conduct a rigorous quality control process, including stringent material assessment, reoccurring electro-luminous and imaging of each module and 100 percent visual inspection at every stage of production to ensure top quality end product ready for deployment. All of our modules are completely assembled in our Bellingham or Minneapolis based facilities and we source domestically-produced components whenever possible.

Unfortunately, the reduction of U.S. PV manufacturing in the past couple of years has also severely impacted our domestic supply chain. We are losing U.S. jobs, not only in PV module manufacturing, but in all the
high tech industries that support the U.S. solar industry. With only a few U.S. PV manufacturers still operating the incapsulate suppliers, the solar glass suppliers, backsheet suppliers, and cell suppliers are also ceasing operations, making it impossible for Itek to source U.S. made materials. This chain reaction reduces our access to domestic technology and materials, ultimately reduces our long-range ability to compete with imports.

Itek started module production just about five years ago because we firmly believe that the demand for solar power in this country will continue to grow and we still believe this is true. We are committed to producing our products in the United States and there's absolutely no reason we cannot efficiently and reasonably produce excellent quality CSPV product here in the United Stated. However, in just a few years, we started production and marketplace dynamic here in the U.S. began to change.

Specifically, what has previously been manageable competition from imports became a flood, which quickly created artificially low pricing levels that are wholly unsustainable. Indeed, starting in the second quarter of 2016, due to import prices for modules in the United State plummeted. We had to cut prices drastically in response. As an innovative company positioned on the front lines to make U.S. manufacturing successful on the global
stage, we at Itek embrace fair competition. Indeed, growth in the industry requires continuous improvement in our production facilities, technologies, and practices. And at Itek Energy, we are second to none against any company anywhere in the world.

In fact, in 2017, we expanded our current manufacturing facilities to roughly 200 megawatts. This increased capacity is important to improve efficiencies and to cut costs, but the oversupply of modules globally and resulting influx into the United States has caused prices to plummet. We are committed to providing high quality U.S. jobs. We continue to invest in staff training and R&D with the goal of leading the industry with high efficiency modules.

So what has been the impact of imports on our company? Our production output dropped dramatically in 2016 compared to 2015. Our commercial shipments also dropped dramatically in 2016 compared to 2015. Our sales value in 2016 was almost half that of 2015 and our profit was two-thirds less for the same period. Because of the strain on our supply chain, we are no longer able to source enough of our components domestically to be able to claim that our product is made in America.

It has been very, very difficult to expand outside of our foundational Washington and Minnesota markets.
because the price of imported modules are artificially low across the country.

In sum, Itek Energy voluntarily appears here today to represent the interest of U.S. manufacturers seeking a rational market. This will benefit not only our workers, but the workers in the entire raw material supply chain. Without relief, the harsh reality is that the few remaining companies in the U.S. solar industry will simply disappear and with us, our nation's opportunity to compete in this essential area. Thank you.

STATEMENT OF ANDREW SZAMOSSZEGI

MR. SZAMOSSZEGI: Good afternoon. My name is Andrew Szamosszegi. I'm a principal with Capital Trade. I'll discuss serious injury and threat. Dr. Seth Kaplan will cover causation.

The domestic market for CSPV cells and modules has grown rapidly. Every year saw increasing in record installations. From 2012 to 2015, demand increased by an average of 1.4 gigawatts annually. In 2016, it increased by more than 7 gigawatts.

Slide 4 contains the statutory factors for safeguard investigations. I'll start with imports. Imports of CSPV modules rose in absolute terms in both the value and volume basis, as you can see. These numbers are staggering. The volume of imports rose by 492.4 percent over the POI.
The value of imports rose by more than 270 percent. The increase in 2015 and 2016 was driven by countries not under order. Imports also increased as a share of domestic production.

Slide 7 lists the serious injury factors: significant idling of productive facilities; inability of a significant number of firms to carry out domestic production operations at a reasonable level of profit; and significant unemployment or underemployment.

Slide 8 shows the cumulative number of closures that occurred during the POI and through July 2017. You can see that there were many closures due to the unfair trade associated with the two solar anti-dumping cases. Closures picked up in 2016 despite the record increase in demand that you saw earlier.

Slide 9 shows that the number of productive facilities declined from 33 in 2012 down to 21 facilities in July of 2017. In all, 28 facilities have closed or are in bankruptcy. In addition to closures, the remaining firms in the domestic industry are suffering from excess capacity. This prevents them from spreading their fixed costs over more products and harms their profitability. These dozens of closures and large excess capacity constitute the significant idling of productive facilities.

The second serious injury factor is inability of
a significant number of firms to carry out domestic
production operations at a reasonable level of profit. The
data indicate that domestic producers have generated only
losses. The companies' specific data on cells in Table E-2
of the confidential staff report show U.S. producers of
cells were unable to operate at a reasonable level of
profitability during the entire POI.

The public data on modules are shown in this
slide. Operating income and net income were negative in
each year. The data show a significant deterioration in
2016. These losses occurred even as domestic production
costs experienced significant declines. The industry's
operating losses were widespread as shown in Table E-3 of
the staff report.

Over the POI, there were 49 firm-specific
observations for operating income, 38 of them were negative.
Four different firms share the dubious distinction of
achieving the lowest annual operating income. The median
operating margin for domestic module producers was negative
in all five years and worse than negative 40 percent in four
of those years. It is not an exaggeration to call this
financial performance catastrophic. This type of thing is
the type of thing that one might see in a single year during
the great recession. The fact that it happened when U.S.
demand was achieving annual records is remarkable.
The next two slides examine unemployment.

Incorporating the PRWs from solar two for 2012, the data show that the number of production workers declined from 1572 in 2012 to a trough of 963 in 2014. The number of workers increased in both 2015 and '16, but at the end, were below 2012 levels. And you can see that where it followed the same general pattern.

So to summarize, all the factors indicative of serious injury are present. Imports have increased absolutely and relative to domestic production. There has been a significant idling of productive facilities. A significant number of producers have been unable to carry out domestic operations profitably, let alone at a reasonable level of profit, and there is significant unemployment and underemployment, especially in view of record demand.

The domestic industry also faces the threat of serious injury due to a persistent decline in market share, growing inventories, downward trends in profitability, increasing unemployment, the inability to maintain existing levels of capital expenditures in R&D and the continued attractiveness of the U.S. market as a focal point for the diversion of trade.

The market shares are confidential, but as you see from this graph from the prehearing report, the decline
in market share has been persistent and frankly that's
depressing. Inventories increased in absolute terms in 2015
and 2016. Importer inventories of CSPV products increased
11.8 percent year-on-year in 2016 and at the outset of 2017
were significantly higher than they were in 2014.

In fact, importer inventories were 85 percent
greater than U.S. module production in 2016. Domestic
inventories have also increased in absolute terms and
relative to sales. The profitability and employment trends
have already been discussed. As you've heard, there have
been additional closures and large employment reductions in
2017. Company-specific asset trends indicate that domestic
producers have been unable to maintain capital expenditures.

In 2016, 12 of 18 cell and module operations had
lower asset values relative to their peak. For firms with
assets above peak, asset values had increased by $100
million. For firms with assets below peak, asset values had
declined significantly more, thus, a large majority of firms
in the industry are currently not growing.

The industry's persistent net losses have also
hampered its cell expenditures in R&D, its capital
expenditures in R&D. This slide illustrates the cumulative
shortfall in net income given the domestic industry's asset
values, assuming that the industry had achieved a reasonable
rate of return on assets during the POI.
The U.S. has been a focal point of global exports in recent years. This slide shows that worldwide installations were relatively flat over the POI when U.S. and Chinese installations are excluded, thus, the U.S. market has been a focus of exports during the POI. And as shown in Suniva's brief, a very large share of the increase in capacity in countries not subject to the orders has been directed at the U.S. market. The speed at which these capacity additions can occur and recently announced expansions in the first quarter of 2017 exacerbate the threat faced by what is left of the domestic industry. For these reasons, the domestic industry is also threatened with serious injury. Thank you very much.

STATEMENT OF SETH KAPLAN

MR. KAPLAN: Good morning, Seth Kaplan, president of International Economic Research LLC, to talk about causation. To summarize, the injury suffered by U.S. producers was caused by low-priced imports, significant global overcapacity, depressed prices, which were transmitted to the U.S. market through imports.

The overcapacity stems primarily from massive expansions in China and by Chinese-owned and related companies in Malaysia, Thailand and Vietnam, but also from imports from Korea, Mexico and Canada. The new capacity is focused on exports to the United States. So how has it
worked? Well, this is a story you've seen many times at the Commission.

Massive global overcapacity, caused by subsidization or not, global price declines due to this capacity and a race to the bottom in prices. These global low prices, below cost, quite often transmitted through increased exports to the United States causing prices to decline in the United States, and resulting in the injury that was suffered as demonstrated by Mr. Szamosszegi in the earlier slides.

Let's take a look. The Commission well understands what happened here, because the relief period identified is the period after the Commission afforded relief from imports from China and Taiwan. That is the best evidence you have of what caused injury. Who's the driver of injury? You provided relief. The industry did better. The foreign producers relocated or new production facilities occurred, and now we're back to where we are again.

This is a natural experiment. You don't need a lot of theoretical work. No scientific but for analysis, although that is very useful to identify how this works as an economist. But you see here what happened after you provided relief, and after that relief was no longer effective due to the relocation of facilities.

It is obvious that imports have driven this
market. The chronic overcapacity has been documented in many different guru reports and in the Commission's own report. Some of the numbers vary, but every analyst agrees, as to do all the 10(k) producers everywhere, that there's massive global capacity.

Take a look. Here's unused global capacity from the calculations I made, and there's global installations. Two-thirds of total global installations are now sitting with excess capacity. I'll restate again, excess capacity accounts for two-thirds of the installations. Where is this production coming from? Part of it is coming from East Asia. Let's take a look in 2012. This is what happened in 2016.

'12, '16, '12, '16, massive capacity increases. '12, '16. You notice the U.S. has increased capacity slightly, but nothing compared to the new entrants and the increase in capacity of existing players and new players. Who are these people? Let's take a look. The red circles in the new capacity show that these -- many of these companies are either Chinese-owned or Chinese-related, having most of their facilities in China.

They relocated or built new facilities outside of China in these other countries, to bypass the dumping orders and CVD orders that you put in place to protect the domestic industry. There is admissions to this. The second
quote from a -- this is not overheard somewhere. These are financial filings. Some of our key competitors, including Trina Solar Limited, Jinko Solar and Canadian Solar have expanded their manufacturing facilities outside of China as a means to circumvent potentially adverse effects from anti-dumping and countervailing duties.

They were successful. There's two producers left. The rest of -- some of the remaining slides also report financial statements showing that the additional capacity is targeted to the U.S. market. Press releases say the same thing. Third party reports say the same thing. Imports are increasing and capacity was built, and that capacity was targeted to the United States, and the targeting to the United States and the overcapacity combine to produce the wreckage and devastation you see to the domestic industry today.

Let me turn to the two reports that were put in by the other economists briefly. First, Dr. Balistreri put in a report using standard ITC techniques to measure the effect of the surge in imports. What it showed is that the subject imports cost the domestic industry revenues of between 500 and 775 million dollars from 2013 to 2016. You took 2012 as the base year, a year in which the industry was actually already devastated by dumped imports, and said no, my model only looks at the increase in imports.
It's very explicit about that, very professional in stating it. But that increase from '12 to '13 through '16 cost $500 million to $775 million in domestic industry revenue, and depressed it by 45 to 70 percent. Now Dr. Balistreri was very careful in saying what his model and it didn't do. I want to point out several things it did not do that I think caused it to underestimate the effects of these imports.

First, the model talks about no losses. It was about an increase from 2012. But that was the year in which seven domestic firms already had gone bankrupt, and the industry was operating losses with $337 million, with an unheard of at the Commission negative 62 percent margin. A negative 62 percent margin.

He doesn't count the injury in that year because he's looking at growth in imports from that year. But that's kind of arbitrary, because we have a five year POI. That injury, I think, is something that the Commission should look at and the cause of that injury was the imports from the dumping cases. The models assume in one version the domestic producers chose to leave the utility sector rather than being forced out.

I ask that you ask the representatives here. They have been active participants in the utility sector. It is the most price-sensitive sector, the sector that was
dominated by import pricing, and that we were forced out of
that. The model assumes, fails to explicitly capture firm
exit due to price suppression and depression. The model
fails to recognize that the investment in the industry is
lumpy, driven by increased optimal size.

So you're in a situation now where the
industry is a semi-conductor industry and needs large
facility installations. They can't add a little more
capacity so much as to be effective to add it in large
chunks. The type of barriers created by the imports have
caused injury because of this lumpy investment pattern.

Finally, let me turn to Dr. Prusa, whose
report mildly is a mystery. First, he fails to address
profits and concentrates on prices, but injury is caused by
lost profits and the accompanying decline in capacity and
injury and unemployment. He fails to incorporate import
prices into the analysis, when plainly import prices are the
clear driver of what's going on in this market along with
their volumes.

And finally he fails to do what every
economist does when they show up at a litigation, which is to
provide their data, provide their code. The Commission
staff, the economic professionals in the Research Division,
myself and any of your personal staff cannot replicate what
Dr. Prusa did. So I think the weight of that should be
afforded to something that cannot be examined carefully.

Thank you.

MR. GALLAS: Good afternoon Madam Chairman, members of the Commission. I'm Philip Gallas, a partner at the law firm of FisherBroyles, appearing today with my client, SKC, Inc., a Covington, Georgia manufacturer of ethylene vinyl acetate EVA sheets used to make CSPB modules. SKC, which was established in 1998, continues to be a leading producer of PET films.

SKC appears today as a supporter of the safeguard trade remedy action. Ms. Emmarine Byerson, SKC's Senior Accounting and Risk Manager, will testify, and SKC's business manager, Mr. Aiden Oh and I will available for Commission and staff questions. I'll turn it over now to Ms. Byerson.

STATEMENT OF EMMARINE BYERSON

MS. BYERSON: Good afternoon. SKC appreciates the opportunity to voice our support for Suniva and Solar World, Section 201 action, and help explain our position that the U.S. PB industry has been injured by substantially increased imports for CSPB cells. Until stopping production in May of this year, SKC provided EVA sheets and back sheets used by domestic PB module makers, including Petitioners Suniva, Solar World and other U.S. companies.

Solar cell encapsulant film protects the solar
cell from outside air and moisture, gives strong adhesion to
glass or back sheet, and protect the solar light module from
the environment. SKC's production of EVA sheets satisfied
these demands, as does back sheets.

EVA produced in this Georgia plant typically
comprised around six percent of a CSPB module total
manufacturing cost, which was not an insignificant amount.
SKC's experience as a supplier of EVA to the U.S. domestic
industry illustrates the devastating impact of increased
import competition.

In 2010, to support the growing U.S. solar
panel industry, SKC Incorporated invested $50 million in a
new manufacturing plant to produce the EVA film used in the
CSPB modules. From 2011 to 2017, SKC produced the EVA film
in its Covington plant and imported back sheet material from
its parent company in Seoul, South Korea.

During this period, SKC sales of those
products increased from about 600,000 to over 22 million
before dropping to 2.5 million in 2017. We were the last
remaining U.S. producer of EVA since the STR Solar shut down
its solar film and panels factory in 2015 here in
Connecticut I believe it was. Domestic manufacturers facing
heavy import competition have sought to decrease the price
of their own inputs in order to save their market share from
products made with low cost foreign source material.
After the imposition of the AV/CVD duties, SKC received repeated inquiries from Suniva and other U.S. customers requesting whether we could possibly decrease our prices for EVA and back sheets, but at that time SKC was unable to reduce its manufacturing costs and lowered the prices enough to pass on the savings to our U.S. customers and continue to remain competitive.

Some of SKC's major customers included Suniva, Solar World, Mission Solar, Stion and other smaller PB customers in the U.S. SKC also made EVA and exported EVA to other countries, facilitated and supported by the Ex-Im Bank. In 2017, after reduction in orders from our major U.S. customers, including Mission Solar, who also had a major reduction in their labor force, SKC was finally forced to stop EVA production.

At its height, SKC's Covington facility employed between 25 and 30 employees in the production of the EVA film. The production of the EVA film in Covington's plant was supported by other U.S. suppliers and producers. For example, SKC purchased resin from a domestic manufacturer in the amount of ten million at their peak production period. Since closing the production line, SKC had to significantly reduce our payroll, reduce purchases from other local businesses. The plant shutdown has had a ripple effect on the local economy.
Companies that supplied SKC have lost business, and added in addition to the resin supplier, those supplying wooden pallets, coolers, other packaging material in order for us to assemble and ship the EVA to our customers have also shut down. Today we're urging the Commission to recognize the heavy toll that the increased import competition has already taken on the U.S. solar panel manufacturing industry.

For these reasons, it is critical that the Commission find injury and recommend a sufficient remedy that protects the U.S. domestic industry and allows suppliers like SKC and others to re-enter the market, supplying CSPB components made by U.S. workers. This will restore the entire market ecosystems, consisting of the cells, the modules, the EVA, the back sheets and other products that comprise the entire supply chain. Thank you and we will be happy to answer any questions if you have any.

STATEMENT OF FRANK YANG

MR. YANG: Good afternoon. My name is Frank Yang, and I'm the VP of Business Development and Marketing for Stion. We're a U.S. solar panel manufacturer based in Hattiesburg, Mississippi, and I helped found the company in 2006. Stion is one of two companies producing thin film solar panels in the U.S. along with First Solar, which has a
facility in Perrysburg, Ohio.

Thin film panels are made using a fully automated high volume process that is similar to flat panel TV manufacturing. Our panels are largely interchangeable with silicon panels in solar installations, and like the companies discussed earlier, we've suffered significant impact in our business from the anti-competitive measures from China and other countries.

Stion does 100 percent of its manufacturing in Mississippi, and has 170 employees with an average wage of $67,000 per year. That's over 20 percent higher than the average wage at all companies in Mississippi, and over 50 percent of our workers, including over 70 percent of our production workers are minorities. Since the company's founding in 2006, we've invested over $400 million total in the technology development, manufacturing and sales and marketing here in the U.S.

We are today I believe the only company that's building 100 percent of its product in the U.S., and we're actually 100 percent U.S. owned as well, including a significant portion by our employees. We have total production capacity of 150 megawatts and enough space on site to expand to nearly one gigawatt of production and employ greater than 1,000 people.

Of course our projected growth has been slowed
by some of the conditions discussed here earlier today. I'd like to reiterate the point brought up earlier, that U.S. manufacturing adds high skilled, high wage jobs to the U.S. economy which are very difficult to replace, especially in regions like Mississippi which are among the poorest in the nation.

The United States today has three and half million skilled manufacturing jobs versus seven million construction jobs. Many of the solar jobs you'll hear about later are in fact construction jobs which involve solar, as well as other trades and are in fact seasonal and temporary in nature.

Chinese manufacturing has of course caused severe injury to all crystalline silicon and thin film producers, as our products are largely interchangeable in projects and have become a commodity that are largely sold on price. Over 90 percent of the panels as you know are used in the U.S. are imported, and the vast majority are by Chinese and Chinese-owned companies.

I think it's worth reiterating that despite very large manufacturing scales, most of the Chinese manufacturers are unprofitable as well. They continue to underprice and incur losses using generous government backing to eliminate foreign competition. Furthermore, the restrictions on Chinese cells and their geographic
manipulation of production capacity have actually created
 stricter import/export requirements globally, making it more
difficult for us to do business all over the world, not just
in the U.S.

Today, solar panels and inverters represent
greater than 50 percent of the cost of any solar
installation, as well as the most technologically advanced
components. So I'd like to reiterate the point earlier that
full elimination of U.S. manufacturing would cause
significant energy independence and energy security
concerns.

The Chinese government, of course, has
provided hundreds of billions of dollars in manufacturing
loans, and now downstream project assistance to consume
excess panel inventory as well, and again allow
manufacturers to continue to operate at losses and eliminate
competition from other countries including the U.S.

So we would encourage ITC to consider this
information as part of the injury judgment, and I'd also
like to emphasize that similar to auto assembly and other
manufacturing industries here, or electronics manufacturing
in many of the Asian countries that have presented earlier
today, a healthy domestic solar industry needs to
incorporate viable local players in all parts of the value
chain, including panel manufacturing.
So we look forward to providing further information and working with you on this case. Thank you.

MR. BRIGHTBILL: Tim Brightbill, Wiley Rein. That concludes the testimony of this panel. Thank you for your time and attention. We'll hold what little time we have left for rebuttal and ready to answer your questions. Thank you.

CHAIRMAN SCHMIDTLEIN: All right, thank you very much. I think we will break for lunch at this point, given that it's 12:30, and we'll come back because I'm not sure how long the questioning is going to last for this first panel. So rather than take us to three o'clock in the afternoon potentially, I'd rather go to lunch now, and then after we finish the questioning with this panel, we'll take a short break before the presentation by the Respondents.

So that break will not be long enough, I think, for people to leave the building. So I would suggest you buy that extra snack now and bring it with you, since we're not sure we're going to go tonight. We're going to finish this hearing today though. So with that, let me remind you that the hearing room is not secure, so please take your papers with you, including your business confidential information, and we will reconvene at 1:30. So we stand in recess until then.

(Whereupon, at 12:30 p.m., a luncheon recess)
was taken.)
AFTERNOON SESSION

MR. BISHOP: Would everyone please begin to take a seat.

(Pause.)

Will the room please come to order.

CHAIRMAN SCHMIDTLEIN: Alright. Good afternoon.

Mr. Secretary, are there any preliminary matters?

MR. BISHOP: Madam Chairman, I would note that the panel in support of the Petition have been reseated. I would remind all witnesses that you are still under oath.

CHAIRMAN SCHMIDTLEIN: Thank you. I would like to thank all the witnesses on the panel for your testimony this morning and for your time in being here.

We will start the questioning with Commissioner Williamson this afternoon.

COMMISSIONER WILLIAMSON: Good afternoon. And I too want to thank all the witnesses for their testimony this afternoon.

I want to start right off with a question that I guess the Respondents have raised. And I guess I'll start off with SolarWorld.

Mr. Stein, could you address this question of what effect the bankruptcy of your parent has had on your operations? And also could you please, to the extent that you can in this public forum, address the implications of
the adverse judgment for breach of contract with Hemlock
Semiconductor. What effect is that having on your
operation? And what does that have to do with your
profitability in a sense, since the Respondents have, you
know, questioned whether or not the domestic producers are
really good business people?

MR. STEIN: Commissioner, thanks for that
question. Maybe to explain a little bit the situation of
SolarWorld AG--

MR. BISHOP: Could you pull your mic a little
closer, please? Thank you.

MR. STEIN: Sure. And what happened to SolarWorld
AG. It's more or less the same situation we see here in the
United States.

The European market does not behave very
differently. It was a healthy market over years with up to
20 gigawatt. Now it's down to 10 gigawatt at the moment,
but this is--

COMMISSIONER WILLIAMSON: Of production?

MR STEIN: Production is much less.

COMMISSIONER WILLIAMSON: Okay.

MR. STEIN: So the same as we see here in the
United States that we have seen many, many competitors going
out simply because the European market was flooded. Even it
was one of the starting markets as the United States, we have
seen many of our competitors left the market, had stepped
out, very, very famous names are on that list. So it's more
or less the same we see here in the United States.

    SolarWorld AG faced the same situation. A strong
restructuring plan to focus on the right technology, on the
prep technology. SolarWorld has been the first company
focusing on mono and mono PERC.

    We were the largest producer of mono PERC in the
world. SolarWorld AG and SolarWorld Americas. And now we
see that the industry is following on that path. So this
market was flooded, same as here, and we have seen that in
the last year, 2016, even with the right restructuring
program in place for SolarWorld AG, the prices were falling
and falling. And there was a time the beginning of this
year in May when SolarWorld AG had to file insolvency.

    COMMISSIONER WILLIAMSON: Okay.

    MR. STEIN: It's a very parallel development, we
have to say, we see in Europe and we face the situation in
the United States.

    COMMISSIONER WILLIAMSON: Could you also address
this question of Hemlock Semiconductor, which sounds like a
supplier, a dispute between a supplier and its customer, but
I'm not sure.

    MR. STEIN: I'm sorry? Juergen Stein from
SolarWorld, I forgot that the other time. Sorry, Hemlock
Semiconductor was one of the suppliers to a subsidiary of SolarWorld AG in Germany, SolarWorld Industry Saxon, with a long-term contract of polysilicon, long-term contracts which were done in years 2010 around several contracts on several years.

Like many other customers did with Hemlock, like many other suppliers did also with SolarWorld, so that is not one isolated contract. It was to that time, 2010, the industry made long-term contracts with poly suppliers the same, Hemlock and SolarWorld did.

The situation is that the contract was not any longer in place. SolarWorld AG could not use up all the demand, which was in the contract and so on--don't want to go into details of that contract--and SolarWorld business. At the end of the day, this dispute was between Hemlock and SolarWorld Industries Saxon, a subsidiary of SolarWorld AG. Nothing to do with SolarWorld Americas.

COMMISSIONER WILLIAMSON: Okay, and nothing in a sense to do with the profitability of the SolarWorld US operations?

MR. STEIN: No.

COMMISSIONER WILLIAMSON: Okay. That's the clarity I wanted.

MR. STEIN: Thank you.

COMMISSIONER WILLIAMSON: Okay, and it's not
affecting the operations, per se?

MR. STEIN: It's not affecting the operations of SolarWorld Americas.

COMMISSIONER WILLIAMSON: Good. Okay, thanks. I just wanted to clarify all that.

MR. BRIGHTBILL: Mr. Commissioner, Tim Brightbill, Wiley Rein. There was an insinuation that the parent company's bankruptcy was the only reason why SolarWorld joined this Petition. I can verify, and Juergen can as well, that that's incorrect. And SolarWorld Americas reached that decision after assessing the market and the damage to the industry. So it was not related to what the parent did or didn't do.

COMMISSIONER WILLIAMSON: Okay, thank you for that clarification because I should have asked that question, too.

Let's turn to Suniva, because I guess there were kind of similar questions raised as regards Suniva's bankruptcy and what role the arguments that I guess Respondents have made that certain hedge funds have said this is way for them to sort of make money out of the situation.

So I'm wondering if you could address that?

MR. CARD: Absolutely. Matt Card, Suniva. Sorry, I'll probably do that a few times, too. I appreciate that
question. There's been a tremendous amount, and quite honestly it's been quite frustrating, in the press about this. And our opponents have continued to bring that issue up, ignoring of course the first responsibility that any business has, the fiduciary responsibility to their own company.

So the notion that an investor would like to continue efforts to recoup their investment is relatively fundamental to the American economic system, and I'm a bit surprised that we continue to hear that investor is doing everything possible to recoup and grow their investment is suddenly a crime in this country. But our opponents have made that out to be.

What I do want to say is this. And I'm not going to speak for the investor SQN. They are fully capable of speaking for themselves.

Having not been a direct party to the interchange, I can only go on what others have told me. But I don't believe that, as has been portrayed by our opponents, is the exact way that that situation has rolled out.

They did in fact communicate a letter in response to a question to that very thing. And they went from there. We've had nothing but support from this process from all of our investors. And so I've been very, very pleased with the
response they've given us. This has not been a situation of hostage taking or trying to extort anybody. It's been trying to rebuild an American company, and they've been very, very supportive of that.

COMMISSIONER WILLIAMSON: Thank you.

MR. McCONKEY: If I may--this is Mack McConkey, representing Suniva from Mayer Brown. This issue is a little silly. And you know what? We were hired well before Suniva went into Chapter 11 to bring this 201. It's completely disconnected. This is not that issue.

COMMISSIONER WILLIAMSON: Okay. What about--has Suniva ever--what is the relationship, or has it ever had a relationship with a producer, exporter or importer of CSPV cells or modules from China? And I guess related to that, what is the current relationship between Suniva and its parent Shunfeng?

MR. CARD: Fair enough. We had common investors with Suntech of China, but there was no direct relationship or actually even commercial relationship between Suntech or Suniva. Shunfeng Wind Energy International had a investment into Wu Shi Suntech, a Chinese manufacturer. They also had an investment into Suniva. They also had an investment into 13 other, I believe is the correct number, 13 to 15 other renewable energy assets around the globe.

So in the broadest sense we are cousins,
siblings, something of that nature, but we're distant cousins. We've not collaborated on product, not with design. It's not been a factor in that.

You asked the question specifically about what is Shunfeng's role in this process now. Suniva right now is under control of the U.S. Bankruptcy Court. Our share structure is well known. About 60 percent of our shares are owned by Shunfeng. The rest are owned by others. But what's important to note in the bankruptcy documentation is that now a full 70 percent of Suniva's ownership is controlled in warrants, executable at any time, by our financiers, the combination which we just talked about, but others as well.

So Shun Fang has largely washed their hands of this. As my counsel mentioned, it's ludicrous as it's been proposed in the press that suddenly eight days after bankruptcy a 550-page petition suddenly magically makes its way into the Commission.

I think my counsel was incredibly good, but they're not that good. This was started well in advance of that process, and it was started obviously with direct knowledge of our ownership.

COMMISSIONER WILLIAMSON: Okay, thank you. All my ten minutes have been used up, but I wanted to get these things out of the way and I'll have more questions later.
Thank you.

CHAIRMAN SCHMIDTLEIN: I'm sorry. Commissioner Broadbent.

COMMISSIONER BROADBENT: So, Mr. Card, Shunfeng supports the Petition?

MR. CARD: We've had no effective contact with Shunfeng since not long after the Petition was filed. Shunfeng was in control. Shunfeng's acting president was in control on the day the Petition was filed. But as our bankruptcy representatives will tell you, the board of directors or Shunfeng's management have had, I believe, no contact, though I can't speak with 100 percent certainty of that, with the bankruptcy court or our bankruptcy officials in any matter, whether it be the 201 or the bankruptcy since early April.

COMMISSIONER BROADBENT: But during the time when all the deliberations were going on on whether the Petition was to be filed, Shunfeng was supportive? They have 60 percent ownership, right?

MR. CARD: Yes, ma'am.

COMMISSIONER BROADBENT: And it's just you haven't talked to them since the bankruptcy--

MR. CARD: Yes, ma'am.

COMMISSIONER BROADBENT: --proceeding kicked in.

Okay.
Alright, Mr. Stein, I was sort of intrigued by the European Commission testimony on the first panel. I don't know if you were here to hear them, but they were kind of admonishing the U.S. not to take particular safeguard actions and so forth.

Can you explain to us how the Europeans handle their price undertaking with the Chinese to alleviate what you think are similar problems in both markets?

MR. STEIN: Juergen Stein, SolarWorld. I'm not sure if I'm the expert to explain how the European works, and what the intent of the European Union at the moment is for--on their reaction on their undertaking--

COMMISSIONER BROADBENT: Okay.

MR. STEIN: --which is a place we can of course provide some more informations after that, and add that. But I'm not the expert to speak about that one.

COMMISSIONER BROADBENT: Mr. Brightbill, did you have any comments?

MR. BRIGHTBILL: Just generally. The European Union faced the same--faced unfair trade behavior from China, imposed minimum import price which was unfortunately--had some issues with it and was not largely successful.

Many EU manufacturers have continued to face pressure from that. There have been active circumvention cases filed by the domestic producers there concerned about
circumvention of the minimum import price. And a number of Chinese companies have dropped out of the minimum price agreement and they're no longer subject to it.

So there were trade measures taken there similar to the ones taken here for solar trade case one and two. They've been not terribly effective, and certainly that is part of a main contributor to the bankruptcy of SolarWorld AG.

COMMISSIONER BROADBENT: Okay. Did their experience sort of inform your remedy recommendation?

MR. BRIGHTBILL: Tim Brightbill, Wiley Rein. We have not--SolarWorld has not yet recommended a remedy. We will do so at the appropriate time. And we're talking to a lot of parties about that. We'll also put forward an adjustment plan and consult with USTR on it. So right now we're considering the full range of remedies, and we will work with our co-petitioners on that, and we'll work with others in the industry to ensure that the remedy is effective for domestic producers, and also effective for the broader solar industry as a whole.

COMMISSIONER BROADBENT: Well that's interesting. What would you recommend might help the broader solar industry?

MR. BRIGHTBILL: Well today you've heard a lot of concerns about solar industry, writ large, solar installers
and so forth. Our goal is to put a remedy in place that
assists U.S. manufacturing. Helps them adjust to this
temporary import surge, or--it's been long lasting, but
import surge from around the world. And one that is
responsible and continues to encourage solar growth in the
United States.

Demand is strong here. We value manufacturing
jobs. We value all jobs in the solar industry. We're the
leaders of this industry. So when we recommend a remedy in
an adjustment plan, we'll take all of that into place.

Certainly part of what we'll be doing is looking
for a way to rebuild manufacturing here in the United States
and the entire supply chain.

COMMISSIONER BROADBENT: Mr. Card, do you agree
with those comments?

MR. CARD: What I would agree with, and obviously
a tremendous amount has been made of the remedy suggestions
that Suniva has made--I'm sorry, Matt Card, Suniva--a
tremendous amount has been made about the remedies that have
been suggested.

The remedies that were developed were under
careful consideration both with our board of directors, our
management team, other advisors from our own law firm, and
in cooperation with our co-petitioner.

One of the statements I made in my opening
remarks was that our co-petitioner and ourselves speak with a unified voice. We represent 90-plus percent of the remaining industry, and we've developed I think a tremendously productive and transparent relationship.

I am interested in a solution that solves the U.S. manufacturing issue and allows the U.S. installation market to continue to grow. Like I also said, we're not out to kill the industry. Our families get fed the same way the install community's families get fed, with all of us growing.

And so we are very open to a solution that works for all parties. I can only speak from the lens through which we view the world, and we view the world as a manufacturer. So far there's been a tremendous amount of dialogue openly about the grave injury, but so far no other party on any side of this issue has come forward with any remedy suggestion other than ours.

For me to speculate on others is effectively just a discussion with myself. No other party has suggested anything at this point.

COMMISSIONER BROADBENT: Okay. This is for Mayer Brown. In our fact sheet on the impact of Section 201 remedy on employment in U.S. Solar Industry, you estimate that U.S. solar cells and module manufacturing employment would increase between 3700 and 4500 workers--thousands,
excuse me, 45,500 workers.

These job increases are substantial compared to just general employment levels and the employment we're trying to encourage. What would occur on the ground that would result in this job growth? I know the model is getting you there, but I'm just trying to envision what's going to happen.

MR. PAYNE: Warren Payne, Mayer Brown. Thank you for the question. The assumptions that go into those job estimates are that there is new investment in cell and module production capacity that would raise U.S. cell capacity to 3 gigawatts per year, and module capacity to 2.6 gigawatts per year.

The model does get us there. As I said, it's a relatively straightforward application of the Department of Commerce model. So we use their parameter estimates, and use their data, and the results are that the U.S. industry scaling up to that level results in that rate and quantity of jobs.

COMMISSIONER BROADBENT: And that could happen in four years? That number of jobs in four years?

MR. PAYNE: Warren Payne, Mayer Brown. Yeah. I think what you heard in the earlier presentation today is that the industry has the ability to scale up rapidly. And I think it would be instructive for Mr. Card to talk about
their experience in standing up new facilities.

MR. CARD: Matt Card, Suniva. We do have fairly
significant experience in bringing up primarily cell
manufacturing facilities. We did it initially in 2008, if
I'm doing my math correctly. We then expanded shortly
thereafter that. And then last year in two thousand--
starting at the end of 2015 through 2016, we expanded
again.

All of those facilities were brought up in less
than 11 months. What's notable is the last expansion we did
we also did while maintaining operations. Not to say that's
a perfect process, but it's certainly a much more complex
process to keep a factory running while you even expand upon
it.

So in a pure greenfield development, we're very
confident that cell manufacturing can be brought up, and
we've seen the same thing written in other trade press, in
aggressively six months and, you know, maybe less
aggressively, under a year.

COMMISSIONER BROADBENT: Okay. Back to Mr. Payne.
Are you saying that these employment increases would be just
an integrated cell and module producers, or independent
module assemblers?

MR. PAYNE: Warren Payne, Mayer Brown. Those job
estimates are based on the full value stream of the
manufacturing process. So it's cell. It's module. And it's all the upstream suppliers, silicon, glass, aluminum, et cetera. All those estimates and assumptions about what the upstream impact is come directly out of the Department of Commerce model. They're not ours. They're actually hardwired into the Department of Commerce analysis.

COMMISSIONER BROADBENT: Say that again about the DOC analysis?

MR. PAYNE: The estimates about the impact on the upstream industry, how many jobs would come from the upstream industry, glass, aluminum, et cetera, those are all taken--those are all parameter estimates and assumptions that come out of the Department of Commerce model. They're not ours. So we just take them as the Department of Commerce provides them.

COMMISSIONER BROADBENT: Okay, so these are jobs beyond the solar--the solar industry writ large, really. These are aluminum--

MR. PAYNE: The full value chain of the solar industry.

COMMISSIONER BROADBENT: Okay. Alright--

MR. BRIGHTBILL: Commissioner, Tim Brightbill, Wiley Rein. You asked how quickly things could ramp up and could it be done in four years. I think the evidence, or the best evidence is what's happened in Asia and so many
other countries where they've ramped up in year or less. And certainly SolarWorld and others would have the same ability here in the United States. And bringing their existing capacity back online would happen even faster.

COMMISSIONER BROADBENT: Okay, thank you. My time has expired.

CHAIRMAN SCHMIDTLEIN: Okay, thank you. I want to start with a question about the theory of the case for the Petitioners, I guess. And you point back to the Solar 2 decision, I think you quoted a couple of times in your briefs with regard to the arguments in grid parity and incentives.

But I want to focus on the fact that in that decision the Commission did not find significant price depression or suppression. The basis of that decision was that there was significant under-selling and a lack of market share that led to material injury.

So my question to you in this case, and recognizing that a safeguard case is different. Obviously the standards are different, but there's also no requirement that the Commission look at those pricing factors that are in Title 7. But of course in trying to establish whether or not there's causation, we're looking at are imports causing prices to go down and so forth. So my question is:
Are you arguing that imports are causing prices to drop in the United States? And if you are, how do you distinguish—what has happened, I guess, since the decision in February of 2015 where we did not find that imports were causing prices to be depressed in the United States? What has changed? And are you arguing that something has changed in the last two-and-a-half years, or year-and-a-half I guess?

MR. BRIGHTBILL: So, Chairman, Tim Brightbill, Wiley Rein. I can start and others can join in.

Under Section 201 we're not required to show this as part of the legal standard to find serious injury, and that global imports are a substantial cause of that. However, price effects are obviously extremely important to injury and threat and to understand what's going on in the market. That's why the Commission and the staff gathered under-selling data which showed the very compelling majority of under-selling in the market even more when you measure it by volume.

We think that the combination of events that happened since Solar 2, the additional over-capacity that came on, the fact that the U.S. industry started to recover and then fell off when there was a complete price collapse in the second half of 2016, is something that the Commission should look at and factor in as a condition of competition.
So we made quite clear what happened in this market: additional over-capacity, added in third countries, and that combined with China's reduction of its feed-in tariff right around June of 2016, led directly to a price collapse, including a price collapse here in the United States. Here again, and Matt can testify to the severity of that. So there was price depression as a result of the over-capacity and the import surge which intensified in 2016.

Imports have to surge in a way that's rapid, sharp, sudden, and significant. We have that. And it did cause price effects even though we don't have to prove that to win this case.

CHAIRMAN SCHMIDTLEIN: Um-hmm.

MR. STEIN: Juergen Stein, SolarWorld. To underline the view of the SolarWorld Company, what we have seen, Trade Case One was not very successful just against the Chinese cells because it was very easy to build up a new supply chain with all the cells coming out of Taiwan.

But after the Trade Case Two, it took much longer that we saw any kind of work-around solutions there. It took much longer, that additional capacity from China would build up in other countries outside of China and Taiwan. So it was more than the 12 months to get everything started.

And that resulted for us in recovery 2014 and
being positive in 2015, and also being positive in 2016. But then all the volume came to the market mainly because we
have seen that before the feed-in tariff policy in China
was changed in the second half of 2016, the demand in China
went down. And all that volume came on the global market,
and all that volume came into Europe and the United States.

So it's clear for me that this is the
over-capacity which led to the falling prices in the second
half of 2016, nothing else.

MR. McCONKEY: Matthew McConkey from Mayer Brown.
I just want to echo that. Some things did change after 2015.
I think after the second Order went into place you saw the
Chinese open up facilities throughout other parts of the
world, which Seth Kaplan's chart showed with his dots, and
that increased capacity flooded into the United States.

So there was a huge increase in imports five
times we saw in the second part of 2016. And that drove
down prices. The impact of that has been the significant
cause of the injury suffered by these guys.

And so I'd like to turn it over to Matt Card of
Suniva here for a minute to explain how the price
depressions worked in the POI.

MR. CARD: Matt Card, Suniva. As fortune would
have it, I have a very specific example for you and it
tracks basically from January of 2016 through February of
In late 2015, a large customer of ours, repeat customer of ours, approached us about a utility-scale project, 13 megawatts of, actually between 13 and 14 megawatts of project in the Upper Midwest. Without boring you with all the details, we largely got to a verbal—to a point of verbal agreement, at which point the partner asked for a contract on roughly January 26.

The agreed-upon price was 66.5 cents per watt. In that same time, and evidence would indicate, they asked for help in discussing with the state in which the project was located because they saw some value obviously in having an American manufacturer for this, and they said that they would do the deal. And I believe I quote. "At that price no matter if there is a downturn."

Now I've been in sales a long, long time, and the only deal that's a true deal is actually if it's a payment. A signed contract just needs—it could be a litigated deal, but nonetheless we don't take that for granted that that's a deal, but we had moved to a contract discussion.

As utility-scale projects tend to go, there's a high degree of variability and other outputs that affect those. And so what was a 'we need to move immediately project' continued to go through the various issues of permitting, and financing, and things that happen.
Fastforward that process from a 'we'd like to
discuss a contract' in early February of '16 at 66.5 cents,
to roughly November 30th of '16 where we heard again from
the customer, the same customer that said you have the
product at that price no matter the downturn, and I quote,
"we have a tier one lined up at 48 cents. Would you like to
renegotiate?"

We worked very, very hard and got to the very
limits of where we could be, but that deal was not done.
Then on 2/16 of 2017 after we were close enough for process
at 48 cents, we heard again from the customer. They had a
supplier from Southeast Asia now lined up at 38 cents.

They said, we'll recognize the work you put in
over the last year and we'll give you the project at 40
cents. Forty cents at that point was well below our ability
to operate. The best we could do was actually operating at
what I would call an acceptable loss was a price of 41.5
cents per watt.

On February 22nd, I got a note from my sales rep
that we lost the project at 41.5. They took the lower
price. So in the course of 12 months, we saw prices go from
66-1/2 cents to 38 cents. We were retraded twice by a
partner that offered, by their own words, that price no
matter the downturn. Words don't mean what they used to, I
guess, but nonetheless there's an example.
Also, much has been made out of, I heard in the opening comments again, and frankly if offends me. I don't mean to make this emotional, but it absolutely offends me when I hear statements about Suniva or SolarWorld abandoning a market. They didn't make a product for a market? This was a utility sale product and we fought completely aggressively for a year, with a good partner, a partner we had done business with before.

CHAIRMAN SCHMIDTLEIN: Well I appreciate that. That actually leads into another question I had, which was the participation by U.S. producers in the utility segment, which has obviously been made a big point of the Respondents' argument, and I guess if you want to go ahead and address that I was going to ask that question:

To what extent does Suniva and SolarWorld and any of the other producers that have since gone out of business, participate in the utility market. And if you could talk about in particular the types of modules that you're supplying, if you do participate in that market.


CHAIRMAN SCHMIDTLEIN: Well --

MR. CARD: Yeah.

CHAIRMAN SCHMIDTLEIN: -- and if you could make it relatively brief?

MR. CARD: Sure.
CHAIRMAN SCHMIDTLEIN: It will come back to us.

MR. CARD: Yes, ma'am. We --

CHAIRMAN SCHMIDTLEIN: Sorry, we'll come back to it, don't worry.

MR. CARD: I'm sure you will.

CHAIRMAN SCHMIDTLEIN: Yeah.

MR. CARD: We focused on all three markets: commercial, residential, and utility. Now that's true. As a capacity order level, we're not a qualified player to go after a 200 megawatt project. As a business, you have to be smart about the markets you pursue. There's issues such as concentration risk. How much do you -- how many eggs do you want all in one basket? And project size plays into that.

We have a long history of participating in all those markets. I mentioned the 13.5 megawatt project. At the same time, we did do another project with that customer at 7 megawatts. The year and a half before, we did 14 megawatts with Solar City on the island of Kauai. So there were utility scale projects that had variables that were favorable to a manufacturer of our size and our product capabilities and power that we absolutely pursued.

Much has been made of this notion of a 72 cell product and we didn't play in that space. About 40 to 45 percent of our overall production of our cells went into 72 cell products. Another 40 to 45 percent of those products
went into a residential product, basically a black product with a black back sheet that looks nicer on roofs. So I vigorously dispute the notion that there were markets we chose not to play in. I would absolutely support a comment that there were markets we were pushed out of. And I just gave you a -- an example of that.

CHAIRMAN SCHMIDTLEIN: Okay, all right, I will stop there and go for Vice Chairman Johanson. Thank you.

VICE CHAIRMAN JOHANSON: Thank you, Chairman Schmidtlein. And I would like to begin by thanking today's witnesses and their counsel for being here. The Commission benefits significantly from your testimony.

I would like to begin by discussing briefly the Section 201 statute. The last safeguard investigations were initiated in 2001. I was nominated to the International Trade Commission a decade later in 2011. I was excited about my nomination and decided to spend the anticipated several months between my nomination and confirmation preparing for my possible new job.

Back in 2011, I made it a point to spend portions of my evenings and weekends studying the U.S. laws that pertained to the ITC. And there are lots of them, more than you may think. I spent a fairly significant amount of time reading the statutes, underlining portions of them, highlighting sections, and writing notes in the margins. I
was pretty diligent in 2011.

But my diligence only went so far. The only statute that I didn't read was Section 201. And don't worry, I've read it since that time. From what I recall, my thinking in 2011 was that while Section 201 is still on the books, the chance of it being used again was slim at best.

I don't think that I was alone in thinking this. This appeared to be the conventional thinking of the trade bar. Moreover for some 16 years, no Section 201 petitions were filed with the exception of one in 2016, which was promptly withdrawn. The 16 year gap demonstrates that at least for a while, the conventional thinking was correct.

I'm not contesting the ability of the domestic industry to use this law, but I'm curious, what inspired Suniva and then Solar World to revive the use of the dormant Section 201 global safeguard law?

MR. MCCONKEY: Matthew McConkey for Mayer Brown.

I'll take the first statement here. And I don't want to be a smart Alec. Whack-a-mole, right? Client came to us and said we're getting killed, right, by imports of this product coming into the United States. What do we do? They didn't know about 201, right? They came to us and said these are the facts. Let's look into it.

We pulled up the books and we're looking where is this product coming from? We started seeing the import
increases. And they're dramatic from a variety of different
countries. And obviously, and I'll let, you know, I'm a --
you know, if you're a hammer, nail or whatever. I'm
thinking, yes, let's look at dumping cases. Well, we're
gone through this country and we add this country, and then
we say this country. But you know what? That's been done.
That was done.

And we saw how quickly that companies and
countries and were able to circumvent that. And we did
another ADCVD case, we would get through that case. And you
would see us a year and a half later with another slew of
countries. We'd be chasing this product all around the
world.

MR. BRIGHTBILL: Tim Brightbill, Wiley Rein. A
couple of things. First of all, I think the steel 201,
while successful for the domestic industry in the limited
amount of time it was in place, took a beating at the World
Trade Organization. And so I think there was some hesitancy
for a while to return to that until the United States could
demonstrate that it could meet those tests and explain its
rationale to the World Trade Organization, which has been
done now in the China safeguard context, the 421, which was
upheld by the appellate body. So I think that that's one
reason for renewed confidence.

And then I think the other point is the same one
that Matthew just made, that Solar World is an example of
how the dumping laws were not working to address this
problem, even as the first trade case was played out,
Solar I, production was being shifted. And the first trade
case was being circumvented. And Chinese producers were
openly boasting about they had -- how they were able to
shift and avoid the dumping and countervailing duties.

It took a little longer after trade case 2.
Solar World was profitable for a time, but then we saw the
spread to so many different countries of overcapacity and
pricing pressures, that we had no choice but to look at this
as a viable remedy and the one that will work.

I'd also point out that many other countries,
even though the United States has not made use of it, other
countries do use the safeguards law and often because of the
same kinds of concerns of imports coming from many different
sources. Thank you.

VICE CHAIRMAN JOHANSON: Yes, Mr. Kaplan?

MR. KAPLAN: Yes, I'd like to refer you to a
couple slides to look at the economic side of it. The first
one would be slide 25 on my presentation with Mr.
Szamosszegi. It's on there twice and it's both in the
injury and causation side.

And you could see what happened during the
relief period. And then the surge again or there was some
temporary relief from the orders and how severe things were
during the dumping period. And given the fact that these
facilities could relocate in months, not years. And the
witnesses will answer questions about building a new
facility or modules or cells in such a short period of time.
The dumping actions didn't seem to work well.

There were sequential cases in steel, where you
had big facilities and you didn't have imports and you had
bring two or three cases, but then the world was covered.
It wasn't a matter of the facilities moving.

The other slide is slide 18 on Mr. Brightbill's
presentation. And that's -- that slide shows what happens
to prices. And it also addresses a bit of what Commissioner
Schmidtlein had discussed in an earlier question. But if
you have 18 before you, you could see how prices fell, then
stabilized for a while, and then collapsed again.

And so, it shows what happens when capacity
moves from one place to another, why the dumping laws don't
work. And I also I think for Commissioner Schmidtlein, why
you would find price depression in the context of this
investigation, given the recent period compared to
potentially a difference in facts from the previous
investigation.

So I hope I wrapped all those things -- three
things around in the economics of this is that the 201 seems
VICE CHAIRMAN JOHANSON: Thank you for your responses. I appreciate them.

Could you please respond to SEIA's assertion at page 41 of their pre-hearing brief that as the increase in imports was largely due to petitioner's own imports and did not interfere with U.S. producers' utilization of their production capacity, imports cannot have been in such increased quantities as to cause or threaten to cause serious injury to the domestic industry?

MR. BRIGHTBILL: Tim Brightbill, Wiley Rein. If the assertion is that the imports were due to petitioner's own imports, that makes no sense whatsoever. The global import surge we saw, it's true petitioners did import and did import some quantities, but that pales in comparison to what we saw come in from around the world during the period of investigation. So there's no support for that premise that somehow petitioner's imports are responsible for this. The substantial cause of serious injury is the imports from all of the countries we've named, the global imports.

VICE CHAIRMAN JOHANSON: Thank you, Mr. Brightbill. Could you all please respond to the arguments of the China Chamber of Commerce for Import and Export of Machinery and Electronic Products at page 17 in which they
state that increased production and capacity in China is reasonable given strong and growing demand in China and in third countries. You all of course in your brief have something to the opposite of that. I just wonder if you could discuss this a bit further because you all seem to have diametrically opposed views of this situation?

MR. STEIN: Juergen Stein from Solar World. Maybe I start after that. I mean, what we have seen on the global market, start with that, it's a growing market. It's up to 80 gigawatt, but there are two engines, two engine at the end of the day who really made that. One is Chinese, which grew up to 35 gigawatt. The other market is the U.S., the United States, which grew up to 15 gigawatt.

Yes, there is market in the meantime in the last two to three years the Chinese market was developed. And there is a market. But if we see which companies at the end of the day really succeeded out of that was not the U.S. manufacturing sector, because that was shrinking. The Chinese manufacturing sector was growing, but growing way above the demand this country has, way above the 35 gigawatt. They are now going, as we heard before, towards the 60 gigawatt. We see that on other countries, which are here of interests like Malaysia, Korea, Singapore, Thailand, Philippines. All these markets are very small. A lot of this volume all smaller than market of Georgia, the demand.
So therefore, they have huge capacities, but no demand of the country behind that.

MR. SZAMOSSZEGI: If I can just hop in. My name is Andrew Szamosszegi from Capital Trade. Demand, and you saw from our slide, increased from 2012 to 2016 globally. And that demand increase was strong, but that was largely caused by increases in the United States and China, which grew strongly especially in 2016.

In other markets, you had some that were rising, and then some that were falling during the 2012 to 2016 period. So in the rest of the world, you actually saw an increase and a decline, an increase and a decline, slight increase overall. But the large increase in global demand was demand in the U.S. and in China.

MR. BRIGHTBILL: Tim Brightbill, Wiley Rein. Just briefly, there's no better evidence of the overcapacity than your own pre-hearing report, both for China and for all countries which shows that overcapacity is well in excess of demand. It's just a question of how much. And as I said earlier, the Commission's data is understated because you didn't get full responses from many countries around the world.

VICE CHAIRMAN JOHANSON: Thank you, Mr. Brightbill and others. My time has expired.

CHAIRMAN SCHMIDTLEIN: Commissioner Williamson?
COMMISSIONER WILLIAMSON: Thank you.

Mr. Stein, I'll let you go back to finishing the question about the efforts to sell to the utilities. I think you had some things you wanted to say on that?

MR. STEIN: Oh, yeah, thank you very much that I have the chance to respond to that. Juergen Stein from Solar World. On the utility part, I want to make it very short on that one. We want to be in that market. We always wanted to be in that market. And you see it that we made a big investment in our new module line for 72 cell product, which is a product mainly for the utility market. So put a double digit million dollars into that to expand our capacity exactly for that market. So we were bidding in that market. We were bidding on the projects. We were bankable to the time 2016, first half of 2017, but we were always priced out. We were always put out of that market. Even we addressed it. We wanted to be there and we made commitments to that market.

MR. MESSER: Shane Messer --

COMMISSIONER WILLIAMSON: Sure.

MR. MESSER: -- Solar World here, Commissioner Williams and -- Williamson, I'm sorry. And Commissioner Schmidtleiners (sic), earlier you asked about the same conversation.
72 cell is the predominant module in the U.S. for utility scale. And so just in 2016, we had multiple projects in utility. We had one customer that bought over 100 megawatts for us for several different projects. And more than half of our volume in 2016 was 72 cell product.

So the assertion by the opponents that we were not playing in the 72 cell game, the utility scale game, is absolutely false. By the end -- second half, then we had been forced out just based on volume that was coming into the U.S. and what it did to pricing.

COMMISSIONER WILLIAMSON: Okay. I -- the respondents might say you were late to the game, but so I guess the question, how long has this 72 cell been sort of the standard for the utilities versus maybe 60 cell for the residential market. And was there -- early on, did you make a choice or you see what I'm -- in other words, the respondents are kind of saying you're -- if the 72 cell was the market of the utilities you weren't in that game originally, but I'm not sure that's correct, but --

MR. BRIGHTBILL: Tim Brightbill, Wiley Rein.

Without giving too much away, Solar World's own questionnaire response shows that it was active in the utility market throughout the period and trying to sell even more.

So which is why it went to this -- out of the 72
cell capability. So it's -- I'd also say the utility market
is the most price sensitive. And so, most susceptible to
dumping and subsidies from the Solar 1, Solar 2 period or
just from a surge of imports.

COMMISSIONER WILLIAMSON: Okay. Thanks.
MR. CARD: Commissioner, Matt Card, Suniva.
COMMISSIONER WILLIAMSON: Sure.
MR. CARD: Suniva's making at various volumes a
72 cell product for five years. So I'm not sure late to the
game would be a characterization. We've been at it longer
than many of the installers in this industry have been
building solar farms. They were still building houses and
restaurants and shopping centers as part of the construction
when we were building 72 cell modules. So I'm not sure I
would agree with the assertion that we're late to the game.

COMMISSIONER WILLIAMSON: Okay. All right.
Fair. Is there much difference between -- in terms of
building a 60 cell versus a 72 cell module in terms of
either capability or appointment or stuff like that or?
MR. STEIN: Juergen Stein from Solar World.
It's not a big difference at the end of the day if you look
at the product. We have at the end of the day two more
lines with cells. And it looks very similar. And if you
have a very flexible production line, you could probably
adjust that very easily. If you have a lot of manual steps,
it's even easier, which is not the case in the United States. We want to produce competitive level, we have to have a high degree of automization. We have to get the productivity out of that through the automization, we have to have the higher yields which also is done by the automization. So therefore, once you have automatized the production equipment to one product, it's a bigger thing to change it to 72. So if you already get the competitive cost position, you should have dedicated lines for 60 and 72 lines. But in general, as I said, not that much difference of the product itself.

COMMISSIONER WILLIAMSON: Okay.

MR. CARD: Matt Card, Suniva. What I would add to that, and everything Juergen just said is correct, but I would emphasize to the Commission that the fundamental input to those products, and we characterized the market really by three products, a 72 cell product, a 60 cell product, and what I would call a 60 cell black product, a residential product that's black framed and looks better on houses. The fundamental input to all three of products is the same solar cell. You can make a decision to scale or descale anyone of those products based on what -- what's most effective for your market at the time.

COMMISSIONER WILLIAMSON: Okay, okay thank you. Let me turn to a different line of questioning. I'm sorry.
Ms. Byerson, could you -- well, I didn't get the -- I wouldn't sure. How long has your company been in business? And did it always -- was it always in the EVA business or was it -- it moved from something else into that and --

MS. BYERSON: No. Excuse me, we have been in business since 1998 --

COMMISSIONER WILLIAMSON: Uh-huh.

MS. BYERSON: -- in Covington, Georgia, producing PET films for the U.S. and domestic market.

We have about 300 people, employees there. In 2011, 2010, 2011 time frame, we wanted to expand. And we did the additional $50 million investment in our EVA plant to support the solar industry. And as I explained, we did recently as of May of this year decide to shut it down completely because of the overall industry.

COMMISSIONER WILLIAMSON: Okay. Are there any other industries you might say that really kind of -- and the supplier side that got started because the solar industry sort of ramped up?

MS. BYERSON: I can't say indirectly. And maybe Mr. Oh can help us. I know we purchased quite a bit of resin, which was a different type of resin that we used to make the film that we normally purchase for our PET. Those are different type of resin that we had to purchase. But coming, you know, package and cores and pallets, we already
purchased those material for our PET. But other than that
supply chain, I can't say whether it was other industries
impact it.

COMMISSIONER WILLIAMSON: Okay. Okay. Thank
you.

MS. BYERSON: Uh-huh.

COMMISSIONER WILLIAMSON: Good.

MS. BYERSON: Thank you.

COMMISSIONER WILLIAMSON: Let me -- Mr. Harner,
Green Solar Technologies. As an installer, you sort of
hinted that there wasn't -- there was a reason to want to
have domestic suppliers. And I was wondering if you might
want to expand on that. Now couldn't the installation
industry exist with all imported components? Is there
something wrong with that?

MR. HARNER: Thank you, Edward Harner, Green
Solar Technologies. Well, first of all, we're proud of
supporting American manufacturing. And it's really a
question of quality and warranties, because the length of
the warranties in solar is about 25 years. And we found
that when we use panels that might becoming from Thailand,
Vietnam, to be able to exercise those warranties becomes
more difficult. And customers, if one panel goes out and
we don't really have panels to replace them very quickly,
then the customers will come and blame us because we're the
ones who installed them, even if the warranties are with the manufacturer.

That's why we feel more comfortable with American products. You know, they're easier to get on the phone. And both of these companies we've installed. And whenever there's a warranty issue, it gets taken care of immediately. So it's a business decision as well.

COMMISSIONER WILLIAMSON: Okay. Okay. Thank you.

MR. MCCARTY: Excuse me, David McCarty.

COMMISSIONER WILLIAMSON: Sure.

MR. MCCARTY: Itek Energy.

COMMISSIONER WILLIAMSON: Sure.

MR. MCCARTY: Our experience with suppliers in both the U.S. and abroad is that on the material supply chain. SKC is one of our former suppliers out of the U.S. And we find the quality to be equal or better with what we could source domestically. And that's why we chose the same strategy that Mr. Harner has.

COMMISSIONER WILLIAMSON: Okay. Okay. Thank you for those answers. Go to the next round.

CHAIRMAN SCHMIDTLEIN: Thank you. Commissioner Broadbent?

COMMISSIONER BROADBENT: Thanks. I need to sort of understand a little bit more of the dynamics of the
residential, commercial versus the utility market. Can someone describe to me the procurement process, how it's different for utilities as compared to the residential and commercial projects?

MR. CARD: Matt Card, Suniva. I'll take a first attempt at this.

COMMISSIONER BROADBENT: Thanks.

MR. CARD: It's a function of latency and time and volume. The utility scale market, while a certainly very large segment of the market, is characterized by comparatively fewer number of developers doing comparatively much larger numbers of projects. As with the example I mentioned, the volatility and variability in the selection process can vary greatly. The notion of latency can sometimes be measured in months and years as opposed to days and weeks.

Residential would be the other end of that spectrum, which is a very, very large numbers of suppliers. I mean, excuse me of ultimately installers, literally thousands down to where I'm not sure we even know how many there are in the country. It come down to literally guys and a truck who also do roofing, who also do whatever. A huge portion of that market is served through traditional distributors that have traditionally supported for decades small construction. So electrical distributors like
GexPro, like Sonepar, like CED, they've become very, very big in solar distribution. They are experts at what I would call breaking and kitting and preparing all the other items that go into these sort of installations.

A substantial amount of products of the residential space are ultimately sold to independent firms that are serviced via distributors. Suniva's sales strategy for residential was to work through the distributors because the cost of acquiring all those individually is huge. The customer acquisition costs of those guys are fantastic and are large. And working with the distributor is -- was a very cost effective method of reaching a very, very large number of customers.

Commercial and industrial is kind of a middle ground. Not as many individual installers as potentially residential. More installers than say utility. Bigger projects than residential. Smaller projects than utility and commercial industrial can be both what I would call a rooftop project. Or it could be a limited scope ground mount project near a facility or something of that nature.

So the way you sell and service those markets are three very different approaches. One, it has to be generated around very high transaction volume, i.e. residential. The other's characterized by a very long sales cycle at the other end utility.
MR. MESSER: Commissioner Broadbent, Shane Messer, Solar World. You asked specifically about utility scale in terms of procurement.

COMMISSIONER BROADBENT: Yeah.

MR. MESSER: So it varies depending on -- there are some members of CA that are here that are large manufacturers and also developers. So they can develop a project combined with a utility. There are also developers that just go and develop projects in order to sell product, sell electricity into the utility. So there's developers involved, then a construction company becomes involved.

So the construction company, -- for example, is a large scale construction company that gets hired to then go build the utility-scale project. Depending on where the developer sits in their preference of module if they have one will depend on where the module, the equipment becomes a part of the deal. Typically, the general contractor then will source the product, unless it was spec'd when the system was designed.

We have, for instance, Petua project in Nevada, 14.2 megawatts, which has been finished recently, where Circ Energy was the developer. Hunt Electric out of Utah was the general contractor and we supplied modules for the product. Does that help?

COMMISSIONER BROADBENT: Which of the three
folks that procures modules are the most price sensitive? I mean are we talking commercial, utility, residential? Where are they most price-sensitive?

MR. MESSER: Utility scale.

COMMISSIONER BROADBENT: Utility scale.

MR. MESSER: Yes ma'am.

COMMISSIONER BROADBENT: Even though -- and then when you said "latency," tell me what you meant by latency?

MR. CARD: When I said latency, the time between when a project is first envisioned, the time modules are actually procured or developed. It could be a very sophisticated process that runs months.

COMMISSIONER BROADBENT: Okay, it takes a long time. But then the pricing that the utilities are looking, a long latency utility project would -- when would they lock down the price for their modules?

MR. CARD: I think that's a very appropriate question to ask some of the people you'll hear from this afternoon, because frankly it depends. There have been a tremendous amount of situations where the end customer buys, the utility that's ultimately buying the power, may renegotiate that up until the very last moment.

There are quite a few other situations where that price is locked down well in advance. So when there's
still the attempt to drive the module price down, even
though the PPA, the power purchase agreement may have
already been signed, that's profit straight to the
developer's pocket. It doesn't affect their bottom line.

COMMISSIONER BROADBENT: Okay.

MR. STEIN: Juergen Stein from Solar World.

Maybe I can add something that I said before.

COMMISSIONER BROADBENT: Please.

MR. STEIN: At the end of the day, we talk
about three different markets with different
characteristics. But the product going into these three
markets is exactly the same, maybe a differentiation of 60
or 72. But it's exactly the same. So all the three
segments are in the same situation. The result we're
discussing here today for all three segments are the same.

There is overcapacity. They are flooding more
volume into these markets than the demand is, and with that
in all three markets the pricing is going down and it's
quite transparent, the pricing in our industry. So there is
no big difference between those three marks. At the end of
the day, they suffer all because of the same situation of
the overcapacity.

COMMISSIONER BROADBENT: So they're all buying
roughly at the same price, as that price goes down?

MR. STEIN: More or less it's a quite open
market to see pricing in the world, and there are statistics about pricing. So yes, at the end of the day all looking on the same product and working with the same pricing.

COMMISSIONER BROADBENT: Okay. I had one question. Are most of these products, I mean most of these projects connected to the grid or are they off or are some of them off grid?

MR. CARD: Matt Card, Suniva. I can't say with 100 percent certainty, but I can say to the best of my recollection near 100 percent or virtually 100 percent of our projects over the life of our country have been on grid projects. They've ultimately been connected to the grid, either behind the meter or on a roof feeding into the grid. But they're not a stand-alone off grid project. That's typically a different sort of panel.

COMMISSIONER BROADBENT: And who supplies those panels?

MR. CARD: Many of the same manufacturers. They also will have those product offerings. We have not historically participated in an off grid project.

COMMISSIONER BROADBENT: How about Solar World?

MR. MESSER: We've made off grid product, yes, but it's been a fraction. It is such a very small niche of the solar industry.
COMMISSIONER BROADBENT: So sorry. But for the overall installed solar capacity, how much is off grid roughly?

MR. MESSER: I wouldn't want to begin to quote numbers. I would just be making them up. We can get that to you.

COMMISSIONER BROADBENT: But just it's very small, okay.

MR. MESSER: Very, very.

COMMISSIONER BROADBENT: Okay, and with all the worries about the grid, that's not going up at all?

MR. CARD: Matt Card, Suniva. Off grid is more characterized by developing markets than it is necessarily the U.S. As soon as I said we haven't done one, one of our very first projects in 2008 were off grid projects for cell towers in India. They happened to use a standard panel, but we powered 2,000 I believe is the number of cell towers to replace a diesel generation set.

So they put in solar panels to power the actual working cell towers. You see a lot of applications like that. But the dominant application in the U.S. connects to the grid.

COMMISSIONER BROADBENT: Okay, great. Did you --

MR. MESSER: No. I was going to say there are
places inside the U.S. that do focus on the off the grid.

But again, it's a very, very small percentage and mostly I
would lovingly refer to them as preppers, where that's their
mind-set is to become independent from the grid. But it is
a very small portion.

COMMISSIONER BROADBENT: Okay, all right.

Let's see. This is on another topic, in addition to a
number of exits from the industry, there have been a number
of new entrants to CSPV product industry over the past five
years. What factors are causing these new entrants into the
industry?

MR. SZAMOSSZEGI: Andrew Szamosszegi, Capital
Trade. I think demand has been growing. There were orders
in place. There's excitement in the United States about
manufacturing in the green space. So I think that there are
also a lot of scientists who have backgrounds in this area,
who want to try starting a firm and helping to build the
firm.

I think there's been some access to capital.

People want to invest in it, and so companies have
gotten into the space, other companies have gotten out of
the space. Some companies have gotten in and not done so
well. So it's been tough because they face the same
problems that the firms here today have faced, which is
rising import volumes, declining prices in the market and
then they've had trouble earning money as well.

COMMISSIONER BROADBENT: Okay, thank you. My time has expired, unless anyone else wants to --

CHAIRMAN SCHMIDTLEIN: Okay, thank you. Mr. Stein, coming back to the question about the participation in the utility segment, and I know you answered -- you gave a fuller answer to Commissioner Williamson as well as you, Mr. Card. Could you put on the record evidence of bids that you've submitted for utility projects post-hearing?

MR. STEIN: Yes, we can. Juergen Stein, Solar World. Yes, we can do that absolutely post-hearing.

CHAIRMAN SCHMIDTLEIN: Okay, and Mr. Card, would that be possible for you?

MR. CARD: I believe so, but I'll be happy to share the documentation behind the example I gave you.

CHAIRMAN SCHMIDTLEIN: Okay, that would be great. All right. So I want to understand a little bit more about how prices are set in this market, and what impacts them. This is I think a large point for the Respondents, that here, you know, they make the argument about grid parity, raw materials and the incentive programs at the federal, state and local level, which I mentioned.

So what I want to understand, and I'm not sure if this is first a question for the lawyers is -- and maybe somebody, a witness on the panel can answer this. Absent
imports, in your view do these other factors impact the
price of modules in the U.S.? In other words, I know you're
making the argument right now and I've read the brief that
when you look at the price of polysilicon it fluctuates, and
you don't see a correlation with the price of modules in the
United States, so forth and so on.

So my question for you is are you saying that
those factors never impact the price of modules here in the
United States, and I'm focused on those three?

MR. BRIGHTBILL: Tim Brightbill, Wiley Rein.

I can start. No. I mean certainly these other factors play
some limited role. If raw material prices come crashing
down, that will have an impact. If there are federal
incentives or state incentives, that will have an impact,
and I would say there's very limited effect given the
interest in solar of other energy sources.

Our main point is that if you track the trends
in these three areas, there's no correlation between what's
happened with solar pricing and what's happened with natural
gas prices, what's happened with raw material and
polysilicon prices, and what's happened with government
incentives. The Commission and the staff looked very
carefully, gathered a great deal of evidence which is in the
prehearing report, to support all of those points and they
did in the prior investigations too.
They found polysilicon costs were increasing
and other raw material costs steady to increasing, while
solar prices were crashing in 2016, and the same for the
other factors as well.

CHAIRMAN SCHMIDTLEIN: So maybe one of the
witnesses can speak to this. Are purchasers aware of the
price of polysilicon? How is it that raw material costs are
translated in this -- into the price of modules when you're
negotiating sales?

MR. STEIN: For sure in a healthy market
evironment, raw material costs have to have an impact on
the prices of the finished goods. Aluminum frames on the
module are fluctuating with aluminum on the stock market, on
the materials stock exchange.

So the same for silver paste. You're not
getting it cheaper because everything is different. It's
just following that market. But it's totally decoupled at
the moment from the module prices. That doesn't work with
polysilicon indexes. This doesn't work with silver indices.
This doesn't work with aluminum or name it.

So there is -- the buyers, our customers,
understand that there are raw materials in which are maybe
-- which are definitely not showing the trend we have seen
of pricing in 2016, but the pricing of cells and modules in
other raw materials is decoupled. That's the situation.
MR. SHEA: Steve Shea. Yeah, the buyers are certainly aware of the prices of raw materials. For example some of the commodities such as silver paste for screen printing is priced according to the commodity price of silver. But fluctuations in those values, particularly over the last 18 months, have been trivial compared with the variation in pricing at the product level.

So the price of the product has gone down in 2016 in some cases by 50 percent, whereas the underlying cost to produce the product has either not gone down as much or in fact has gone up. As Juergen says, the price of the raw material, silicon particularly, stabilized in 2015 and actually went up probably 20 percent in 2016 without really impacting the overall cost of the product at all.

MR. BRIGHTBILL: Tim Brightbill, Wiley Rein. Yeah. Poly silicon prices are very transparent, and I would just ask Shane whether he has any ability to increase prices 20 percent because polysilicon prices go up.

MR. MESSER: Shane Messer, Solar World. So yes, the buyers are becoming very sophisticated. So all of the data that is now available in the solar industry, we see that polysilicon prices go up.

However, the pricing is reported by Greentech Media, Bloomberg, a number of different sources inside the industry and utility scale, large commercial, they are all
in receipt of that information as their project is getting closer. So the pricing in the market does inform their direction to try to renegotiate all the way to the very end.

CHAIRMAN SCHMIDTLEIN: Okay. Dr. Kaplan.

DR. KAPLAN: I just want to point out that the decoupling has had the effect of causing so many firms in the United States to go bankrupt and close. But this just isn't a U.S. phenomenon. The record will show all the foreign firms that have also gone bankrupt or closed because of this decoupling, and the inability to operate without some kind of permanent source of financing or refinancing.

Some of the firms that you see survived that are in Asia, and have appeared before you have gone bankrupt and then have been recapitalized again by state banks in China. So I think the decoupling, you know, is a worldwide phenomenon, and given the large amount of excess capacity and the large amount of imports, it's the decoupling of prices abroad that's forced the decoupling in the United States, and particularly in the utilities sector.

That project that was just discussed is a great example. The U.S. has to respond to foreign prices. The foreign prices are decoupled, and the consumer just cares about getting the lowest price irregardless of what the costs of production are.

CHAIRMAN SCHMIDTLEIN: And how long has that
been occurring, that there has been a decoupling?

    MR. KAPLAN: Well, the overcapacity and the
fact that firms have been going bankrupt has been going on
for years. There was some stabilization in the United
States that prevented the transmission of these foreign
prices and overcapacity by the dumping orders you put in
place, and you can see that in your pricing series and the
profitability of the domestic industry.

    But once these new facilities were built or
firms relocated, then the overcapacity and the prices that
it caused were again transmitted to the United States, and
that's why we're here. The reason we're here has been
said in a dumping context and in a 201 context, is the speed
at which these facilities could be relocated.

    As the witnesses have testified, it's a matter
of months, not a matter of years to relocate or build a new
facility.

    CHAIRMAN SCHMIDTLEIN: Thank you. That raises
another question I had. You referred to the firms that have
gone out of business, and you have a slide in your slide
deck, Slide No. 8, which is the cumulative number on a year
by year basis. This is your slide deck, Dr. Kaplan. My
question is since we've been focused on the sharp surge in
imports in 2015, how should we consider these firms that
have gone out of business prior to that? Are they relevant?
MR. KAPLAN: I would say yes for two reasons. One is they indicate that -- how competition occurs over the Period of Investigation, what low prices and import surges do. So both for your injury over the recent surge and your information about threat into the future, the past is a prelude to the future, and those closures.

They're from a legal perspective I'll let the lawyers talk, about what counts as injury and what time period you could look at. But as was said in the opening statement, it's not about these two firms. It's about an industry and you could look over a period, and in fact that list is -- I don't know if it's just the ITC list, but we'll be in touch with the staff because there were two more firms that you didn't have in there that also closed. That's how bad it's been. It's just you can't keep track of them all.

CHAIRMAN SCHMIDTLEIN: Do you all have any specific information about any of these individual firms and why they closed that you could put on the record?

MR. SHEA: Steve Shea. One of those firms was Beamreach, the one I testified to earlier.

CHAIRMAN SCHMIDTLEIN: That's correct.

MR. BRIGHTBILL: Tim Brightbill, Wiley Rein. We probably have some of that information. We'd be happy to do it in the post-hearing brief.

CHAIRMAN SCHMIDTLEIN: Okay.
MR. BRIGHTBILL: And I would say as a legal matter, the Commission should consider the shutdowns from any point in the period. That's certainly what U.S. law requires. There's just this WTO gloss of recent, sharp, sudden significance on the imports, and of course a need to find that we are seriously -- presently seriously injured, which is why we've highlighted the particular damage from 2016 and 2017.

So it's all relevant, but end of the period and even post-period, what's happened in 2017 is also extremely important to your decision.

CHAIRMAN SCHMIDTLEIN: Okay, thank you. I'm sorry. Vice Chairman Johanson.

VICE CHAIRMAN JOHANSON: Thank you Chairman Schmidtlein. I'd like to turn to the NAFTA arguments that have been presented today.

There's been -- there's quite a bit in the briefs about what the Commission should do with regard to the NAFTA countries if it goes affirmative in at least the first phase. Suniva argued in its prehearing brief at page 11 that the conversion of non-NAFTA cells into modules in Canada or Mexico is not sufficient to confer NAFTA origins to the modules.

Please respond -- hold on a second here.

Please respond to the position of Respondents that modules
assembled in Canada or Mexico from non-NAFTA cells are
deemed to originate from the NAFTA country where they were
assembled?

MR. PAYNE: Warren Payne, Mayer Brown. We'll
get into the back and forth of the changes in the NAFTA
proclamation since the implementation of NAFTA in detail in
our post-hearing. But I think for purposes of an immediate
answer to your question, I think there is some debate around
what the original rules in NAFTA permitted and required.

I think that's probably most important for
purposes of the Commission's analysis is what the statute
says. The statute in the 201 section "article." Article as
it -- our argument would be that article in the context of
the 201 statute means the like product and the like product
in this particular case is a module and cell, based on the
origin of the cell.

And as you heard discussion earlier, there is
no cell production in Canada and there is questions as to
the extent there is cell production in Mexico.

MR. McCONKEY: So Matthew McConkey, Mayer
Brown. Let me jump in with my colleague here. So that
means this product coming in from Canada for sure, and most
likely from Mexico. They're modules containing cells built
in other countries. Were the Commission not to cover those,
there's no question it would blow a hole wide open in any
type of relief we would get, because there's no question
that then Canada and Mexico would become conduits for every
cell manufacturer around the world.

MR. BRIGHTBILL: And just Tim Brightbill,
Wiley Rein. To put that in practical terms, perhaps Solar
World or Suniva could talk about the producers in Canada and
Mexico and their links to other countries, and how they
could circumvent.

MR. STEIN: What we see -- Juergen Stein,
Solar World. What we see out of Canada is the largest
supplier there, Canadian Solar, is not a Canadian company. It's
a Chinese company behind that. So at the end of the day, you
can bring imports to Canada and the same to Mexico. At the end of
the day, what I fear is what we have seen is that the supply
chain and the productions are moving around the globe.
So if we stop it from China, it moved to
Taiwan. If we stop it from Taiwan, it moved somewhere else.
If we have any places left, these production will move there
before we have not stopped any of these holes. This would
be ongoing and that is my biggest concern, that this
situation will not stop if we are not closing all these
loopholes.

VICE CHAIRMAN JOHANSON: Thank you for your
responses, and I look forward to reading whatever you all
have in the post-hearing, because this was, as you know,
discussed at length by the Respondents in their briefs, and I was kind of left scratching my head. So any further guidance would be appreciated.

What role does cost competitiveness with substitute energy sources play in solar purchasing decisions, and how important is grid parity in driving demand in this market? What other factors drive demand? One reason I'm asking this is this is just from my own personal experience, from folks I know who impose let's say solar panels on our homes.

It's not solely cost that drives their decision to do that. They want to try to do their part to improve in the environment. Could you all discuss this whole issue for a second please?

MR. STEIN: Maybe I start. Juergen Stein from Solar World and then everybody feel free to jump in. Grid parity doesn't explain what happened to our industry. This is decoupled. We are not seeing any relation to that one. Grid parity, first of all, is different to different times at different locations.

What we could not see is that there is any correlation of volume or prices of solar compared maybe to gas or oil. If we look at 2016, the year 2016 their lowest price ever, of record installations solar, there is no correlation if we compare that to other years before. So we
do not really see that correlation.

    If we go on the incentive piece you said, I mean at the end of the day the federal, mainly the ITC, takes credit. It's the most important. That stays flat. That stayed flat over the last month and years. But the volume increased dramatically. All of the other incentives on a state level was rather small up and down, so we cannot explain it with that. So solar panel incentives and grid parity do not really influence or create the demand that has been strong in the last couple of months and years.

    MR. SHEA: Yeah. Just on the subject of grid parity, you know, recognize that grid parity is not the same in all markets and in all parts of the world, right. It varies tremendously geographically, and according to regulatory issues and incentives. So for example what constitutes grid parity in Hawaii is very different than what constitutes grid parity in say New York State.

    The actual motion of the module price over the last 18 to 24 months really hasn't impacted the ability of this product to achieve grid parity in those places where it was already at grid parity. So that's not a factor really in this discussion.

    MR. SZAMOSSZEGI: Andrew Szamosszegi from Capital Trade. The notion that grid parity in the United States is affecting prices of solar panels worldwide does
not make any sense. So if prices are declining in the rest of the world, it can't be because of grid parity in the United States. It must be for some other reason.

Now I'm going to read from Sunpower's 10(k) for 2016 to see what they put in their financial documents, about what caused price declines in the latter half of 2016. "Global solar cell and panel production capacity has been materially increasing overall, and solar cell and solar panel manufacturers currently have excess capacity, particularly in China.

"Excess capacity and industry competition have resulted in the past and may continue to result in substantial downward pressure on the price of solar cells and panels." So that's what is driving the price, not grid parity in the United States. What about fossil fuel prices? This is what J.A. Solar Holding had to say in its 20(f) from 2016 at page 12:

"Historically, high oil prices is one of the key drivers for renewable energy." That makes sense, right, I mean in the long term. "With the decline of oil prices, the deployment of renewable energy may be affected, and projects in the renewable energy space may be delayed or even derailed. There are different voices on whether renewable energy will have -- will be affected and the extent of such impact, although companies in the renewable
energy sector, including us, have not, have not been materially affect, and the extent of such impact of the decline in oil prices we cannot assure you that renewable energy will not be" in the future. I'm adding in the future, "adversely affected."

So I don't think the companies and the industry that produce solar panels really believe their own argument.

VICE CHAIRMAN JOHANSON: Anyone else?

MR. BRIGHTBILL: Hi. Tim Brightbill, Wiley Rein. Your question gets at, you know, there are a lot of reasons why demand is strong. The fact is demand is strong and growing, and that's why we think relief can be provided to this industry and without harming that continued demand in the future for solar, which has made the United States the second largest market in the world.

VICE CHAIRMAN JOHANSON: Thank you for your responses. My time's about to expire, so I will end there.

COMMISSIONER WILLIAMSON: Thank you. It's been several years since Solar I and Solar II. Just briefly, grid parity. We talked about it a lot last time. But what is the definition real quick?

MR. SHEA: Yeah, just real quickly. Grid parity is the notion -- Steve Shea -- grid parity is the notion that the energy cost from renewable sources reaches
the energy cost of electricity from conventional sources.

COMMISSIONER WILLIAMSON: Thanks, I just --

another term that was used earlier, the feed in tariff from
China. What exactly is that and what role does it play
here?

MR. BRIGHTBILL: Tim Brightbill, Wiley Rein.

China, it's basically the incentive that the government of
China has to incentivize solar installation in connection to
the grid in China. In other words, the price at which it
will pay or support for electricity and China made a
dramatic change to what it would support and the amount it
would support in the middle of last year, which as all the
analysts' reports showed was a key, had an immediate impact
in throwing additional capacity from China or that was going
to be installed in China into the rest of the global market
and into the United States.

COMMISSIONER WILLIAMSON: So it cut the rate as
to how much support they were going to give?

MR. BRIGHTBILL: Exactly.

COMMISSIONER WILLIAMSON: Okay. Thanks. First

was a report that the suppliers must meet certain
bankability requirements. Can you describe those
requirements? Do you agree that there are specific tiers of
suppliers in the U.S.?

MR. CARD: This is Matt Card from Suniva. First,
thank you very much for asking that question. There has
been a tremendous amount of very insulting coverage
particularly in the weeks leading up to this, over issues of
quality and bankability and the illusions or the inferences
that Suniva and SolarWorld don't build quality products,
don't build bankable products. The notion of bankability is
a term that was defined by Bloomberg New Energy Finance
several years ago.

I happen to have that document because I thought
that question might come up and I will read to you their
definition of bankability. Bankability -- where the project
using the solar products are likely to be offered,
non-recourse debt financing by bank, the key criteria for
tiering. Bloomberg has a set of criteria that says show me
a certain number of projects of a certain size, all financed
with non-recourse debt, meaning debt that's not backed up
with any assets.

They then go on to say, Bloomberg says, "this
classification is purely a measure of acceptance and there
are many documented examples of quality issues or bankruptcy
of tier I manufacturers." They follow that up with this
statement, again these are not my words, these are
Bloomberg's. "Since a tier I ranking is not a
recommendation we advise manufacturers against spending much
energy pursuing it."
So the notion is, what Bloomberg has done is they've said for projects that require on-recourse debt and non-recourse debt is a favorite technique of developers that have essentially no assets. The project itself becomes the debt mechanism. The argument is from Bloomberg's standards which you had to produce a list of I believe six one and a half megawatt projects of over a two year period that were financed by five/six different banks with non-recourse debt.

The customers we chose to pursue as a business growing we like to have credit-worthy customers, so we looked at customers that were doing balance-sheet financing. We looked at customers like the U.S. Government. We looked at customers that were doing asset-based debt. We presented a list to Bloomberg of forty-five projects all satisfying the technical regulations and all being provided by customers financed off of balance sheet, financed off of their own, assume their own risk, weren't borrowing someone else's money and let it default if it goes away and none of those qualified because it wasn't a bank lending.

The notion of bankability is not actually a statement about quality. It is a statement about whether you can get a bank to loan you money and not have it backed up. I would argue that borrowing someone else's money and them having the risk of losing it is a little bit different than putting your own money on the table. That is just me,
but I'm a bit believer in doing what you say.

Now going to the quality issue because I think that's the heart of bankability, again I don't need to use such polarizing words but I'm flat out offended by some of the comments I read in some of the Respondents' briefs. I see a brief I believe quotes a company by the name of Depcom, to be very blunt and to try to be polite I'm sure Depcom is a nice business. I'd never heard of them until I read about them in SolarWorld and SEIA's brief.

They talk about Suniva not being a bankable product, how they have never used Suniva products. They're right. I don't know who they are and I have never sold to them. I've similarly read products or comments in the press over the last couple of weeks from Sunpower who disparages Suniva's quality. Sunpower is a competitor. They make a 100 percent product outside of this country.

We've had fairly good success selling against Sunpower. I actually should take it personally and I guess in a negative way I probably should take it as a statement of pride that they are so worried about our ability to sell against them that they choose to insult us in that manner. They are competitors I don't sell against. So we'll be happy to provide the full document.

I just read you a couple highlights of the Bloomberg standard. I think it does great job of explaining
this notion of a tier. It also does a fantastic job in
Bloomberg's own words at telling module manufacturers don't
spend a significant amount of effort getting on this list.
It does not really mean anything.

COMMISSIONER WILLIAMSON: Okay.

MR. MESSER: Shane Messer for SolarWorld. The
list he is speaking of, the Bloomberg bankability. If you
check back in history we've actually been included in that
quite regularly over the last couple of years. I mentioned
earlier one several different utility scale projects but one
particular developer we did over a 100 megawatts with so
they obviously thought we were quite bankable.

COMMISSIONER WILLIAMSON: Okay.

MR. BRIGHTBILL: Tim Brightbill, Wiley Rein, and
to the extent that SolarWorld is no longer on that list it's
clearly evidence of the serious injury that is caused by the
surge of injurious reports.

COMMISSIONER WILLIAMSON: That was going to be my
question. One, whether or not Suniva and SolarWorld were on
the list, were they tier I or tier II and what has the
bankruptcy affected being off the list?

MR. BRIGHTBILL: Tim Brightbill. It's not the
bankruptcy. It's the harm that has been caused to them so
that has caused them to again, SolarWorld has been bankable
throughout the vast majority of this period and the fact
that whether it's not on the list anymore is just a sign of serious injury.

COMMISSIONER WILLIAMSON: Because you're not getting the projects that would get you onto this? Is that basically what it is? Is that a correct characterization?

MR. BRIGHTBILL: That's it. There are some that would choose not to make that offer. Yes.

COMMISSIONER WILLIAMSON: Okay.

MR. CARD: I'm going to follow up with that with the reason why we aren't getting those projects that would qualify for the list is we are not currently manufacturing. As the example I used for you earlier, prices have driven to a level where it is not economically responsible to produce.

COMMISSIONER WILLIAMSON: Okay, thanks. That's all. I wanted to clarify that. The thing that would be helpful I guess that would be in post-hearing, how much domestic production do we have say this quarter and next quarter. Our Staff Report for the U.S. Energy goes to 2016. A lot's happened this year and I'm curious how much production is there for the year? How much production has there been in this quarter or the next quarter? Third and fourth quarter. So post-hearing this might be helpful, just sort of give us a picture of where we are right now. Thank you.

MR. BRIGHTBILL: Tim Brightbill. We will do that
in the post-hearing brief but obviously SolarWorld still is producing and could quickly ramp up and produce back up to its full capacity.

COMMISSIONER WILLIAMSON: Okay, thank you. Which would be of the legal significance of any of the existing dumping and countervailing duty orders in this safeguarding investigation? I guess the Taiwanese, do you agree with their statement that the Taiwanese are making that Taiwan cannot be contributing to any threat of injury to the U.S. because it is important to the subjects of the AD/CVD order, or the AD order?

MR. BRIGHTBILL: Tim Brightbill, Wiley Rein. I will address that in the post-hearing brief but again you're considering a global import surge and whether that global surge is a substantial cause of serious injury so we will address it with respect to individual countries in the brief. I think as Dr. Kaplan pointed out the other significance of the trade case is it shows the natural experiment that this industry was improving. When it had a respite from the dumping and the subsidies it came back. SolarWorld was profitable and then things fell apart again in 2016.

COMMISSIONER WILLIAMSON: You just can't play whack-a-mole fast enough?

MR. BRIGHTBILL: It's difficult to do. This is a
very competitive industry, production is extremely mobile
and SolarWorld has brought and won two dumping cases and
subsidy cases but a different solution is needed absolutely.

COMMISSIONER WILLIAMSON: Okay, thank you.

Commissioner Broadbent?

COMMISSIONER BROADBENT: Mr. Brightbill, what do
we do long-term about the overcapacity in China? What would
you advise the government?

MR. BRIGHTBILL: Commissioner Broadbent. That's
a great question. I know you have asked similar questions
with regards to other major industries where capacity is
dominant such as steel. There is no short-term answer to
that issue. I think the precedent in a remedy phase is
empowered to take a variety of actions that could help
address the issue just as there have been a variety of
multilateral actions on the steel front to try and address
steel overcapacity from China and elsewhere.

But because that will be a long-term process and
because of this race to the bottom or death spiral that Mr.
Stein mentioned there has to be something in place to
preserve domestic manufacturing while we figure out what to
do about the broader problem. Unfortunately it's a problem
that is getting worse. The overcapacity is getting greater
not lesser in the major market. China is flattening out and
as you saw from the headlines there are no other countries
coming in to absorb that overcapacity in the short or near-term, or long-term.

COMMISSIONER BROADBENT: I'm not sure you answered my question.

MR. BRIGHTBILL: I'm not sure I have an answer as how to address overcapacity in this market or in the steel market but --

COMMISSIONER BROADBENT: You described another problem.

MR. BRIGHTBILL: Yes. Again I think we're going to put forward an adjustment plan and we will put forward remedy recommendations and some of those will include we would like to include ways to try and address this broader problem. So we need relief while the broader problem is fixed.

COMMISSIONER BROADBENT: Was China's move to reduce their feed-in tariff in any way trying to help cool things down there and reduce some of the overcapacity?

MR. BRIGHTBILL: Tim Brightbill, Wiley Rein. I don't think it was tied to overcapacity. We could try and provide some information in the post-hearing brief or unless anyone else has any information on what the government. I don't really want to speculate on what the Government of China was doing with that change in its feed-in tariff.

COMMISSIONER BROADBENT: Mr. Card?
MR. CARD: Matt Card, Suniva. Certainly the Chinese should speak for themselves. I would argue that if their intention were to rein in overcapacity they would not have reintiated the feed-in tariff in 2017. In 2017 the feed-in tariff developed again but even still, even during the reduction of feed-in tariff if that was the message to the Chinese Government to their manufacturers, their manufacturers weren't listening.

We've heard the numbers this morning. This year China will grow their internal capacity 25 percent, 60 gigawatts. We can debate whether China's 30 or 32 or 35 but we can't debate China's not 60 gigawatts of capacity and that's where this will be. Likewise we can look at the numbers in Vietnam, Thailand, Malaysia, Singapore. Vietnam, Thailand, countries the size of Nebraska now have more solar manufacturing capacity in the United States. Their demand profile is not that and that product is coming here.

COMMISSIONER BROADBENT: Okay, so just remind me again what the Chinese did. They reduced their feed-in tariff in mid-2016 and then raised it again to the same amount?

MR. BRIGHTBILL: I'll speak in generalities because I'm not an expert in their law but I don't know whether it was reduced or suspended for the second half of 2016 but then it started over in basically a new plan year
would be the way I think about it in 2017.

COMMISSIONER BROADBENT: Okay.

MR. BRIGHTBILL: So they are re-incenting the
implementation.

MR. SHEA: If I may, Steve Shea. My
understanding is that they capped the feed-in tariff in 2016
in response to some internal conditions that I'm not aware
of and then reinstated it in 2017.

COMMISSIONER BROADBENT: Okay, so they haven't
made any public statements about trying to reduce
overcapacity?

MR. BRIGHTBILL: Not that I'm aware of and may I
say too that this end of the PV industry in general
worldwide, although we're now in the billion dollar range is
still a new and fairly small industry with an enormous
growth potential through the remainder of this century
that's grown typically, you know, double digits
year-over-year growth for the last 35 or 40 years so if
people just stop building at the pace they're building the
industry will grow into their capacity in a fairly short
period of time.

MR. STEIN: Maybe one addition --

COMMISSIONER BROADBENT: Yes.

MR. STEIN: I'll add that at the end of the day
it's the central government decision to say that we're going
to have that 30 gigawatts in the next year 33 and what we
have seen was the plan in 2016, which should be in the range
of 25 to 28 gigawatts because of the decentral state systems
at the first half of 2016, China was already at 20 gigawatts
so even it was central plan to have the 25 to 28 we have
seen that this didn't work out in 2016 so the first half was
much stronger. Then there was a decision to
say okay and now we are not allowing new projects except
then less than 10, which were coming in the second half.
That has the influence and that was my understanding of how
that works in China.

COMMISSIONER BROADBENT: Okay, alright.

Back on the earlier of the decoupling of
the raw material prices to pricing of the cells
and modules, I guess I am not looking at the Staff
Report. I'm looking at Figures 5-9 and 5-3 and
in 5-3 you see the price of Poly-6 silicon and custom wafers
falling substantially over the POI and the same happening to
the cells and the modules. I didn't know what you meant by
the decoupling. I was just not following that.

MR. BRIGHTBILL: Tim Brightbill, Wiley Rein. As
we said raw material costs do play a role but there are
clear periods within the Period of Investigation and even
shown on this chart where I mean this is just poly and
wafers but where module prices and cell prices do not move
in the same direction or with the same trends as polysilicon prices. We put those in our brief. Suniva put those in their brief so the two were not related and it became increasingly not related toward the end of the Period of Investigation.

MR. STEIN: Juergen Stein from SolarWorld. Maybe to explain what we see on the markets, here we have seen I think the chart of monowafers, there we talk about two different technologies. Mainly the one is a poly and the other is a mono technology, all uses the same polysilicon.

COMMISSIONER BROADBENT: Right.

MR. STEIN: But these are two different technologies, monowafer and this is here the chart is on wafer, monowafer and polywafer are decoupled from the polysilicon pricing so while monowafers are still on the high, high level and were rising polywafers because of the overcapacity in China and China was mainly coming out of poly products going down more or less every quarter.

So even if the same raw material goes into the wafer, these two products developed over different times and totally differently just depending on the demand and the oversupply. So on the mono side, we don't have that strong oversupply in the wafers, while poly there is so this I'm not sure if I could read that out of that chart but as an explanation between the different production steps and
the different technologies from polysilicon to the modules
there is also decoupling between these different steps and
technologies.

COMMISSIONER BROADBENT: Okay. Can you guys
discuss sort of the independent module producers and this
whole, their whole role in the supply chain and in the U.S.
Industry? My understanding is based on the availability of
cells domestically they are having a really hard time. Most
of the cells that you all produce when you are producing are
consumed internally. Basically independent module producers
are forced to rely on the international market to survive.

MR. CARD: Matt Card, Suniva. I'll answer this
first and then I think probably Dave McCarty would want to
answer as well since he is one of those. One of the driving
reasons why we expanded our cell manufacturing capacity in
Atlanta, you're correct. Many of our cells were going into
our own modules. We went through a tripling of our capacity
and part of that was to address the needs of the IPPs, the
independent module producers IMPs in the U.S. Market.

For instance, Dave's company has qualified Suniva
Cell and was prepared to start buying Suniva cells for its
modules as opposed to foreign supply until I called him and
said "Dave, we're bankrupt." There are other conversations
that I am certainly not at liberty to share in this room of
other independent module producers in the states where we
have done the same thing.

So part of our, we've tried to walk the walk if
you will and not just talk the talk. We've tried to grow
the parts where we add value to the supply chain not only
for our other business but other parts of the supply chain
here domestically.

MR. MCCARTY:  Dave McCarty, I-Tech. Exactly what
Matt is saying. We had qualified their cells currently on
our bill of material but it's not available for us to
purchase so we do purchase 100 percent of our cells that we
use from foreign supply. Same thing has happened across the
rest of the supply chain. A year ago we could source almost
everything. There was a glass supplier that was trying to
start up and they could not secure enough business to
operate at a price-competitive level.

SKC recently informed us they were no longer
producing in the United States. They mentioned Sabal Trail
which is another former supplier of ours. Olbrich which
also closed their doors in Oregon, another supplier of ours
that are forcing our entire supply chain to go offshore
increasing our cost of producing and tying up cash that
could be otherwise used for capital expenditures.

COMMISSIONER BROADBENT:  Okay, thank you. My
time has expired.

CHAIRMAN SCHMIDTLEIN:  Okay, thank you. I have a
few questions left here. Going back to the utility sector
and your participation in that sector, in your experience do
they request multi specifically or mono specifically in
their requests for bids?

MR. MESSER: Shane Messer, SolarWorld.

Typically, no. They don't. They don't come and ask for
just mono or just multi. Typically it is price-based.
There is some power comparisons that will run but they look
at the long-term power that can be produced by either
product but typically it is more price sensitive than it is
product sensitive.

CHAIRMAN SCHMIDTLEIN: So do they request a
specific number of cells per panel? In other words, 72
versus 60?

MR. MESSER: No, not by the typically by the
purchaser. The builder would want a 72 cell product that
would mean then less labor, less BOS balance of system, less
touches so that is -- ten years ago the 72-cell product
didn't really exist on the market. It's only been in the
last probably five years that it has really begun to gain
acceptance and preference in large scale installations
because of this labor savings.

CHAIRMAN SCHMIDTLEIN: So would you say that
60-cell panels compete with 72?

MR. MESSER: Shane Messer, SolarWorld. Yes. If
you look actually in Europe 60-cell is still the predominant utility scale product but then the pricing that we talked about earlier now that has come through the entire industry based on utility scale pricing, then impacts the 60-cell pricing as well.

CHAIRMAN SCHMIDTLEIN: Okay, so maybe I missed that earlier. In your view the utility pricing affects the other segments of the market.

MR. MESSER: It has. That's been over the last few years of recent occurrence, 7 or 8 years ago. Pricing inside the solar industry was segmented. You could go price a utility scale project and you could keep your residential pricing separate but over the last few years it has merged into much more transparency at all levels.

CHAIRMAN SCHMIDTLEIN: Okay, and that's because of -- how did that happen? Can you talk about that a little bit?

MR. MESSER: You know, I don't really know exactly how it happened other than it just began to happen. People would have excess inventory and then they would start talking to installers about any kind of shipments that they could get in I think was probably the impetus. But there is no one time that I can recall in the past five years that I go oh well that's when it happened; it's just begun to develop to where now it's pretty much standard.
CHAIRMAN SCHMIDTLEIN: And that's because people are talking to each other. There is not a published --

MR. MESSER: No.

CHAIRMAN SCHMIDTLEIN: Set of prices or a book of prices or anything like that like we've seen in other industries.

MR. CARD: Matt Card Suniva. I would agree with what Shane says but I would modify that slightly. I think there is a direct correlation between the interchangeability of price and the overcapacity of product. Put very simply in non-elegant terms as always with this much overcapacity there is always someone willing to sell you something for less and so you can really make an equation that if manufacturer X has 40 extra megawatts of 60-cell products that he is holding and needs to get rid of he may very well offer that at such a price point then when you do that power-price comparison.

A 60-cell product is more efficient for your utility scale project. Similarly with a 72-cell products, you're seeing them filter more and more and do things like commercial and industrial roof tops for the same factor. The larger overcapacity gets, very simple law of the jungle is there is someone else willing to go lower.

CHAIRMAN SCHMIDTLEIN: Okay.

MR. STEIN: Chairman Schmidtlein, may I come back
to the question, Juergen Stein, so we will come back to the
question of mono and poly and is that something which is
really interesting for the customer. I have to say it
cannot be interesting for the customer. At the end of the
day our products produce energy so interesting is how much
energy do I get out of a square foot? That's the
interesting question and that also influences the costs I
have to add for mounting and cabling and so on and labor
later on for assembly.

I just want to point that out that the
monotechnology which we have and which we have developed is
the smarter technology. We came up with that very early.
SolarWorld has been the first producer of Mono and then
Mono PERC which is then the even better solution which is a
kind of turbo on top of that. Suniva has the same
technology. I think everybody is in agreement right now
that Mono PERC technology is the best technology on the
market power compared to cost.

So it's not the point of maybe picking a wrong
technology. What we see here we have the best technology
and we see that many, many Asian competitors are joining as
we see that the fastest growing competitors from China,
Longi is 100 percent focusing on Mono PERC products and this
is also very successful with that. So it's not the question
of technology we have seen here. It's really the question
of the overcapacity and the products floating into the
market. I just want to make that clear on the difference of
the technologies. Thank you.

CHAIRMAN SCHMIDTLEIN: So would you say globally,
is that a small percentage that's moving to mono? Because
when you look at the pricing products, obviously you see the
imports are mostly concentrated in the multi--

MR. STEIN: Juergen Stein, SolarWorld. This is
what we see. The market in Asia came traditionally out of
multi, and that is the biggest part of the capacity we see
right now. And that is the reason that this huge capacity
flows in multi technology. Everybody who is right now
investing and looking for the smarter technology is changing
or building up new capacity mainly in mono. So that is a
trend in the market we can see.

We know that from Singapore, having 100 percent
poly, but also to go into the mono piece. We know that in
Korea a competitor is 100 percent more or less focusing on
multi and tries to get into the mono piece. So that is a
change we can see right now. But the old capacity which is
there and was built up was mainly on pony, and that flows
into our market. It's not the better technology.

CHAIRMAN SCHMIDTLEIN: Okay. Alright, thank you.

MR. CARD: Matt Card, Suniva. I'd like to add--

CHAIRMAN SCHMIDTLEIN: Sure.
MR. CARD: --one thing to what Juergen said, because an interesting dynamic has come out of this.
Juergen is exactly right. Most of the new capacity that's continuing to grow is being touted both anecdotally and in some of the things you saw today as mono/mono perc. It's created an interesting situation that I'd like to describe as you can't have your cake and eat it, too, phenomena.

One of the very interesting and confusing comments that our opposition has made historically has been companies like Suniva and SolarWorld can't compete because we've chosen mono technology and the world's on multi.

But then in this very hearing you will also hear, but they haven't innovated. So I don't know how you can say that we've either not competed because we chose leading edge technology that the market grew into, and say we did not innovate because we chose leading edge technology the market is now growing into.

It's absolutely you can't have your cake and eat it, too. To Juergen's point, we're both sitting here--Suniva's sitting with a 450 megawatt mono perc cell factory in Georgia that I very much would like to run. It's the technology that everyone on the planet is moving towards.

But you can't buy the argument that these companies fail because they're incompetent; they didn't innovate. It doesn't explain a 450 megawatt mono perc
facility that everyone else wants to move towards in that
scenario.

CHAIRMAN SCHMIDTLEIN: Okay. But that's a little
bit of a segue into my next question, which is: Can you
respond to the argument that the Respondents make that the
U.S. producers have not been injured because they were able
to increase production--U.S. shipments, capacity, capacity
utilization over the POI?

MR. BRIGHTBILL: Tim Brightbill, Wiley Rein. Just
to start, all you have to do is compare those very, very
modest increases, many of which disappear in 2016 or 2017 to
the explosion in demand of 350 percent over the last five
years, and you see it in market share.

U.S. market share was very, very, very low at the
start of the period, and it's even lower today. That's
injury. And that's serious injury. And the imports are the
substantial cause of that.

CHAIRMAN SCHMIDTLEIN: Were the U.S. producers--
would you have raised prices, given the big increase in
demand over the POI? Is that a part of your argument, that
you were unable to raise prices?

MR. BRIGHTBILL: Tim Brightbill. I'll let the
companies answer, but no one--solar is a dynamic industry,
so my sense as a trade lawyer is that prices are not
increasing. But if we had stabilized prices for a time
period, that that would be enough. And then the volume from
demand would make these companies successful and profitable.
And that's what you saw with SolarWorld. They were
profitable in 2015 and early 2016, and it wasn't by raising
prices. They weren't able to do that. They just were able
to recapture some of the market and to stabilize prices for
awhile.

MR. CARD: Matt Card, Suniva, and there's several
comments to make. But Tim's exactly right. When you asked
that question--and I apologize if you saw kind of a
quizzical look on my face. I've been selling products in
this market for nine years, and what I was literally going
through is: When's the last time you raised prices?
And in nine years, I don't think we've ever
raised prices. So that's statement number one. To Tim's
point, prices did stabilize for awhile over '15, and I would
actually tie that back to it's some of the same statements
our economists made, but it's a direct correlation to the
work this Commission's done.

When we looked at the start, investigating our
expansion, raising the funds for that expansion, starting
that expansion, over the course of 2015, prices had
stabilized. They were stabilized enough that it gave us--
and you saw the trends where people were moving towards
profitability.
What the action that occurred, was not that it was the wrong action but it wasn't necessarily the full complete set of tools. What clearly happened was a relocation period. And as we came out of that expansion that was encouraged by the successful results of your tariffs in 2014, relocation had occurred and prices plummeted again.

So the tariff action by a very what I call a surgical strike, if you would, did not kill the virus. The virus multiplied in spades, right? You went in the first gen with a multiplication of one. Your first issue was China. And then the second tariff action that was brought was a multiplier of one to Taiwan. Over the intervening months after that tariff, it was a multiplying factor of 5, of 6. It was almost like, oh, you got us in Taiwan. Let's see if you can get us now. We're going to Vietnam. We're going to Thailand. We're going to Malaysia. We're going to Singapore. We're going to streamline product through Mexico. We're going to streamline product from Canada. Don't bring antidumping against each of those guys.

So, you know, while I can't remember prices going up, I can certainly remember prices stabilizing. And it did encourage growth in the U.S. But as soon as the work-around started taking effect, if you looked at the numbers, '13 and '16 were within a couple percentage points. It was as if
they never existed.

MR. SHEA: Steve Shea. I'd just like to add that I have never seen a solar business plan that anticipated prices going up in my history.

CHAIRMAN SCHMIDTLEIN: Okay.

MR. SHEA: And all of the research and engineering that these companies go through is aimed at increasing the performance of the product and reducing the cost.

CHAIRMAN SCHMIDTLEIN: Right. That's what I assumed. It was maybe a long way of asking whether price depression was a part of your argument.

But I'll come back to you, Dr. Kaplan, in my next round, since my time has expired.

Vice Chairman Johanson.

VICE CHAIRMAN JOHANSON: Thank you, Chairman Schmidtlein.

Sticking on the issue of price, how do the price comparisons on this record support an affirmative determination? In terms of quarterly comparisons, are the data more mixed than you would have anticipated?

MR. BRIGHTBILL: Tim Brightbill, Wiley Rein. The price comparisons do support an affirmative determination. You've got under-selling in a majority of comparisons, and even greater when you measure it by volume, which you should.
I do think the pricing products are different than they were in Solar 1 and 2. The ranges of wattages were broadened a little bit, and that may account for some of the distortion.

I don't think there's any question in the market from anybody in this room that the U.S. product is being under-sold by imports and by substantial margins.

So you do see it in the data, but I think it's understated in the data compared with industry reports and other knowledge of pricing in the marketplace.

VICE CHAIRMAN JOHANSON: What should we make of the fact that foreign-origin product was priced higher in 32 out of 67 comparisons?

MR. BRIGHTBILL: Again, Tim Brightbill, Wiley Rein. I think there are--first of all, there are individual country issues there, but again I think the data, because of the pricing product ranges, is not ideal for perfect head to head comparisons which would have shown even more under-selling. But there's plenty of under-selling on this record to support an affirmative determination.

VICE CHAIRMAN JOHANSON: Yes, Mr. Szamosszegi?

MR. SZAMOSSZEGI: Andrew Szamosszegi, Capital Trade. I think the product--product one is a cell product, right? It's very thinly traded. So if you look at the numbers there, I mean the volumes are small, and there are a
lot of zeroes and things like that. It's not really indicative of competition in the module market.

We've heard testimony that there is competition between mono and multi. So the natural thing to do would be to take products with the same power characteristics and combine multi and mono. And you can do that by I think 2 and 3, and 4 and 5. And if you combine that and run your under-selling comparisons, you get 100 percent under-selling.

So I think again the record, if you take out product 1 with products 2 and 3 combined and 4 and 5 combined, you get a clear picture of under-selling and the price declines that were experienced here and overseas as well.

VICE CHAIRMAN JOHANSON: Thank you for your responses. I'm going to touch on the issue of unforeseen developments. I think that's something that we should probably have on the record.

When analyzing unforeseen developments, whose position is relevant? Should it matter whether the negotiators did not foresee the development? Whether the domestic industry did not foresee a development? Or some other entity did not foresee the development?

MR. BRIGHTBILL: Tim Brightbill, Wiley Rein. It's not defined in the law. And so I think the Commission has
some discretion there. Of course U.S. law doesn't--it was--
when the Safeguards Agreement was negotiated, it was widely
anticipated that the Safeguards Agreement trumped Article 19
and actually removed the unforeseen developments'
requirement entirely. Unfortunately, the WTO and appellate
body read that requirement back in.

We have laid out unforeseen and unforeseeable
developments in our prehearing brief, and in particular we
flagged the dramatic expansion of state-run production
capacity. And the Chinese industrial policy and state
support is an unforeseen development.

Related to that I think the response of other
countries, an uneconomic death spiral kind of response is
also unforeseen development. And the ability to shift supply
chains and relocate is also an unforeseen development.

So we can address in the posthearing brief whose
job it is to foresee or not foresee, but we think the test,
should the President require it to make a determination, or
should the Commission be asked to recommend, there are
unforeseen developments that exist in this market.

VICE CHAIRMAN JOHANSON: Thank you, Mr.
Brightbill. And that concludes my questions. Thank you all
for appearing here today.

CHAIRMAN SCHMIDTLEIN: Commissioner Williamson.
COMMISSIONER WILLIAMSON: Just a small question.
Mr. Yang, the product you make is the thin cell. Is that within the scope of this investigation?

MR. YANG: I'll defer comment on that to Wiley Rein, but I believe that technically under the scope of the investigation thin-film panels are not included because they're distinctly different technology than crystalline silicon cells.

You know, I think we did feel it was important to add the commentary, because within the framework of the solar market thin-film and crystalline panels are generally fairly interchangeable because they offer the same power generation properties and they can both be installed with fairly similar system components.

COMMISSIONER WILLIAMSON: Okay. Since you haven't had a chance before, are there any other comments you might want to make about what we've discussed that might be helpful here? We got your testimony, but I just wanted to give you the opportunity.

MR. YANG: You know, I would just reemphasize on some of the comments that were made about the market, you know, sort of the extreme importance and momentum of price. You know, I think that even as competitors to these companies we've gone head-to-head against them a lot on deals, but I would have nothing negative to say about their quality or any other aspect of their business. I think in
reality most of the purchasing decisions that are made by
the people in this room on the developer side really boil
down to price, and I think a lot of these other comments
that have been made were sort of surprisingly negative
aspersions that I think are ultimately not relevant to the
case.

I think, you know, the cause of a lot of this,
like i said, is sort of economic force from China really
driving large-scale manufacturing and over-capacity, and I
think like the crystalline producers, thin-film producers
like FirstAlert and ourselves have felt that. So I think
that's probably the overlying theme we'd like to impart to
you, is that really at the end of the day there are a lot of
different comments that have been made on both sides about
different factors in the market, different cell
technologies, but ultimately this is an issue of supply and
demand and it's an issue of price. And I think the
companies at this table, whether they're thin-film or
crystalline, have all been to some degree the victim of
over-supply and under-pricing.

COMMISSIONER WILLIAMSON: Okay. Good. Thank you.

No further questions.

CHAIRMAN SCHMIDTLEIN: Commissioner Broadbent.

COMMISSIONER BROADBENT: Yes, this is for Mr. Card
from Suniva. Earlier this morning I think Mr. Nicely
mentioned, or alleged that Suniva opted to export cells to China for module assembly that were re-imported back into the United States. And then after the AD/CVD remedies were imposed, reorganized how they were doing business.

What was going on there at the time they were exporting cells to China for module assembly?

MR. CARD: Absolutely--Matt Card, Suniva. Thank you for asking that question, because the characterization this morning was a characterization of some very untoward behavior.

What's important to understand is Suniva's heritage. Suniva developed as a cell manufacturer. When we sold our cells, if you go back to 2008-2009, we were a very good cell manufacturer. We sold most of our cells as exporters.

In 2010 we were named by Exim Bank the Export Import Bank of the United States, as its exporter of the year because our cells were used all over the world in other people's modules.

That led us to about that same time frame to begin to look at getting our own line of modules. In the early days of our module production, we in fact exported our cells to contract manufacturers in various locales, whether those were Asia, whether those were Canada, or India, or other places, to not only make their modules but to make
modules for us.

As we continued to mature our business model, we absolutely and very deliberately entered the module manufacturing business here in the United States. In 2014, we created our own module manufacturing facility in Saginaw, Michigan. It made a tremendous amount of our residential product, and we continued to utilize what we thought was a fair trade and a globalist model of continuing to engage companies both here at home and abroad by—not China at that point, but by that point all of our manufacturing was in North America, to manufacture modules.

As we continued to grow our business model, part of our business model includes, as I talked about, selling cells. We look to sell our cells to independent module producers here in the U.S. We'll look to a world that wants to participate as a fair trading partner with the U.S., and we'll continue to make our own line of modules.

So, yes, we've made modules. We've sold to foreign entities to make modules for them to sell under their brand. We've made—we've sold cells, or contracted manufacturing outside the country. We've built facilities inside the country. It's all part of a continuing, evolving business model to be competitive in the market.

MR. McCONKEY: And Matthew McConkey of Mayer
Brown. I also showed this, also, the business model that was a prior business model before they started doing their own module manufacturing, shows that not all the domestically produced CSPV cells were internally consumed, which was another allegation that had been raised.

COMMISSIONER BROADBENT: Okay. Alright, let's see what else I have here. This is on a different topic for SolarWorld and Suniva.

Yesterday, or today I guess maybe, the President signed a Presidential Memorandum asking USTR to investigate China's laws, policies, practices, and actions that may be harming American intellectual property, innovation, and technology.

Can you discuss any problems you have had with IP violations or Chinese indigenous innovation policies?

MR. BRIGHTBILL: Tim Brightbill, Wiley Rein. SolarWorld, it's well known that SolarWorld was a target of Chinese hacking in the past, and that there was an indictment of People's Liberation Army for hacking of six U.S. companies, SolarWorld Americas being one of them.

So it's a serious concern and a great concern for us. Beyond that, we should just point out it is a serious concern. We welcome the action of the Trade Representative to try and address this problem for every one company that has been--is known as a target. There are hundreds of
others in this industry and others.

COMMISSIONER BROADBENT: Suniva?

MR. CARD: Matt Card, Suniva. I'm not aware if
we've suffered the same fate that SolarWorld has suffered,
but I'll certainly find out if we've been hacked as well.
It speaks more, and it's anecdotal and it speaks to the
cavalier nature of maybe some of our competitors.

About four years ago we were alerted to a Chinese
solar manufacturer's website. They said, you should go look
at it and take a look. I went to the website and there was
a picture on the cover page that was eerily familiar. It
was a picture of our founder, Dr. Ajit Rahaki, holding a
solar cell. It happened to come from Suniva's website.
Ajit Rahaki is known as one of the three or four top PV
scientists in the world. They had superimposed a Suniva
cell in Dr. Rahaki's hands with a picture of their own and
were proudly displaying Ajit Rahaki technology on their
website.

I'm not sure whether that's intellectual property
theft or--Ajit's not a handsome man so I wouldn't say it's
photographic property theft, but it speaks to a
no-holds-barred cavalier attitude that you would go take
someone's founder, a very well known scientist, and you
would put him on your website representing them as the
founder of your product.
That was amazingly resolved without an
international incident, but...

COMMISSIONER BROADBENT: Okay, this is for
SolarWorld. According to the public warn notice, which is
in our records, SolarWorld announced massive job cuts this
summer, and I know you mentioned those, Mr. Stein, and
there's more potentially coming.

What do these cuts in employment indicate as far
as SolarWorld's future production and capacity? Is it
realistic that SolarWorld would continue to produce at
levels that we saw from 2012 to 2016, even if relief is
imposed?

MR. STEIN: Thank you for that question. Juergen
Stein, SolarWorld. We had to right-size our production. We
could not continue in that circle of death that we also fill
our production and with filling that production that we are
selling it for additional losses because the prices are even
going further down.

We simply had to do it. And with that, we also
had to right-size our working force. We did all of that,
keeping in mind that we want to re-ramp it quickly once the
market is there and once there is a price level we can
compete with.

So we made very, very sorry to choose which
departments are important for that, engineers which we need
in the future if we re-reramp. Maintenance we need to
re-ramp. Technicians, et cetera, that are still there and
that we can build on that.

So what we see right now with the workforce we
have of 300 people., we consider that as the core team we
need. We are not losing the main competence. We are not
losing the main technical skill set with that, and we can
restart and build on that team.

That was the main reason we focused on that
number. It's maybe even a little high for what we have at
the moment. But we wanted to make sure that we can re-ramp
it by end of this year or earlier if possible, and that we
are not losing the knowledge we have.

MR. CARD: Matt Card, Suniva. You didn't ask this
of us, but I feel compelled to answer the same question
given that much has been made of the fact that our factories
are currently idled.

There's been a tremendous amount in the press
that implies we're dead and never coming back. We still
employ facilities' technicians. We still have maintenance
facilities. And we went through a very deliberate idling of
the equipment with the full intent of, in the appropriately
economically rational model bringing the company back. The
investors we have in place have fully supported us with a
plan to bring the company back.
You heard Mayor Johnson here this morning. He
would not be here this morning had it not been a central
effort to him. You've seen Congressional support from
Congressman Woodall, Congressman Kiuldee. They believe, and
we earnestly believe, it is our full intent to do everything
possible to bring these factories back online and restore
manufacturing jobs as quickly as we possibly can, as the
environment unfolds.

COMMISSIONER BROADBENT: Okay. I know we're
getting to the end of our day here, and I had some more
questions on scope but I think what I'll do is just read one
of these questions into the record, and you can answer for
purposes of the record.

The scope covers cells, whether or not assembled
into products, as opposed to cells in modules defined
explicitly. I'm hoping that you can compare this scope to
that of the recent investigations on off-road tires and
aluminum extrusions which included further assembled
products, but only the in-scope components within those
products.

Is the non-cell portion of the assembled modules
included in the scope of these investigations?

MR. BRIGHTBILL: Tim Brightbill, Wiley Rein.

We'll address that and any other scope questions in the
brief. And my apologies, but Mr. Harner has to leave to
catch a flight to the West Coast, so if there's no other
questions for him, I apologize for that. We didn't
anticipate the hearing going on this long, but he'd like to
depart if that's alright.

COMMISSIONER BROADBENT: I'm done. Thank you.

CHAIRMAN SCHMIDTLEIN: I just had one additional
question which relates to the requirement that certain
suppliers be certified, or meet certain qualification
requirements. Apparently some purchasers have reported that
there are certification or qualification requirements;
Can you speak to that?

MR. STERN: Juergen Stein from SolarWorld.

Suppliers qualifications or certifications? You mean our
suppliers, or we as suppliers?

CHAIRMAN SCHMIDTLEIN: You as a supplier meeting a
certification or qualification requirement.

MR. MESSER: Shane Messer, SolarWorld. I know
that the one place that I did see it was in some finance
that we had not qualified for some financial companies.
One, for example, that I know of in order for us to qualify
to be on their approved vendor list, they requested that we
supply our bill of material. So a bill of material is
actually our intellectual property.

Backsheet, for instance, we've tested more than
60 backsheets that are available on the market, and we have
approved less than 5 to be a part of our product. We're unwilling to tell a third party who the approved suppliers are because that's part of our intellectual property.

So that would be an example of a very large financial third party financing institution that we chose not to be qualified for because they required us to release intellectual property.

I will add, too, we've got another large financial provider in the U.S. They're the largest financial provider of loans in the U.S. that has now made the 201 a condition upon us remaining in their approved vendor list. They've made it quite clear directly that if we do not drop the 201 they will remove us from their approved vendor list.

CHAIRMAN SCHMIDTLEIN: I'm sorry? Say that again?

If you don't drop it, they will remove you?

MR. MESSER: Correct. Correct.

CHAIRMAN SCHMIDTLEIN: Okay. Mr. Card?

MR. CARD: I'll add a comment. I was sitting here thinking through some of that, where that may have come up as an issue. There are various services out there that provide qualification services.

One that is fairly, I guess, popular is a company called Solar Buyer, as a service, and they allegedly will do a third-party--an independent audit and quality check.
Several different residential providers, one in specific I'm thinking about, we ran into an issue where they said if you can go through the Solar Buyer qualification process we'll add you to our approved vendor list.

Our financial issues are very well known, so we try to be very, very diligent about not wasting money. So before we went through a process of spending the money necessary to go through their qualification, we went through some preliminary levels of negotiation. We were so wildly far apart on price that it made absolutely no sense to spend the money to go through a Solar Buyer qualification just to move into a more detailed negotiation to find out that we were so wildly far apart on price.

So I certainly understand these services and we have a history of doing those. We've qualified on the California list. We've qualified on the Florida list. We've qualified through Fronhauffer. We've gone through PB Evolutions when they were there.

But as we got closer and closer to where every dollar spent mattered because, again, of this just overwhelming overcapacity of imports crushing our prices, we became very judicious about the lists that qualified for. I'd love to be on every single list, but I'm down to where spending every single dollar matters, and I'm not going to qualify something for you to then tell me hey you've got to
sell for 15 cents less, or 5 cents less, or one penny less,
or we're not doing it.

CHAIRMAN SCHMIDTLEIN: Are there tiers in this industry? Go ahead.

MR. CARD: So this ties back to the conversation we had earlier against Bloomberg, or about Bloomberg. There is a Tier One, but as Bloomberg says in their own documentation there is not a published Tier Two or Tier Three. Again, to get on Bloomberg's Tier One list, that is primarily a tool used by a term called "bankability," which simply means will banks loan you non-recourse debt.

Historically we did not focus on customers who did not have balance sheets to cover their projects. And so we did not do a tremendous amount of non-recourse debt projects.

I think SolarWorld is on certainly the bankability list, and then came off the bankability list. It's a continual struggle, but again I'll point you back to Bloomberg's words. This is not a recommendation, so we do not encourage manufacturers to spend significant effort betting onto this list.

MR. STEIN: Juergen Stein from SolarWorld. It may be needless to say, but I want to add it here. Of course we have all certifications and qualifications which are required by product or by our organization to sell products.
in that market which are normally required on a global level.

So specifications, qualification of our products, UL, ICE, we have the same for the ESOL 9000, 13,000, 14,000 for environmental aspects and so on. So all these of course we have. So if we have any such certification or qualification, it's a customer specific requirement that could happen as we have heard.

CHAIRMAN SCHMIDTLEIN: Okay. Okay, I have no further questions. Vice Chairman Johanson? No? Okay, that concludes the Commissioners' questions.

Do staff have any questions for this panel?

MR. ANDERSON: Yes, Madam Chairman, staff has a brief question.


The first part is, so what are the main applications for the six modules that you produce--residential, commercial, utility?

MR. YANG: Frank Yang, Stion. So today there are two major manufacturers of SIG's thin-film modules in the world. There's ourselves and another company in Japan called Solar Frontier. Solar Frontier is much larger than Stion and does participate in some utility-scale
applications, but I would say generally commercial and
industrial, and then secondarily residential would be the
primary applications for our product today.

      MR. DAVID: And so how are the prices for your
modules set? And what's the relationship between thin-film
prices and CSPV prices?

      MR. YANG: So typically today most of the
crystalline products that have been discussed have a higher
rated efficiency than thin-film products. So in those
cases, unless they are specific performance properties of
the thin-film that in certain environments or situations
would be better, thin-film will generally price slightly
lower than crystalline. But again, I'd re-emphasize the
message of all the testimony here, which is that there's
very little control on any of our parts over pricing and
any ability to raise or even stabilize pricing.

      MR. DAVID: So as your prices change, that affects
crystalline prices? Or if crystalline prices change, does
that affect your prices?

      MR. YANG: So today thin-film collectively is less
than 5 percent of the global market. So from a pricing
power standpoint, we're completely beholden to what happens
specifically not only in crystalline, but very specifically
what's driven by the large manufacturers. And so I think I
would second everything that's been said today, that any
time a quote is made or a bid is given, somebody will come
in with a lower price. And then somebody will come back to
us to match it.

So I think that behavior is consistent across
technologies, and also consistent across segments in the
market.

MR. DAVID: Great. Thank you very much.

MR. YANG: Thank you.

MR. ANDERSON: Thank you, Madam Chairman. No
further questions.

CHAIRMAN SCHMIDTLEIN: Alright, thank you. Do
Respondents have any questions for this panel?

MR. NICELY: Thank you, Madam Chairman. I have
one question for Mr. Card.

Earlier today you offered to this Commission a
quote made by my client, SEIA, from a June 30, 2016, New York
Times article. Are you able to share with the Commission
the full sentence as stated by SEIA's CEO, Ms. Hopper? Or
just the half of it that apparently supports your argument?

MR. CARD: We can certainly submit the full quote,
and the full article, for that matter. I don't have the
full quote in front of me.

CHAIRMAN SCHMIDTLEIN: Okay. Alright thank you.

That would be great.

Alright, that brings us to the conclusion of the
Petitioners' panel, so I will dismiss you at this point.

Thank you all again, very much.

MR. BISHOP: Will the room please come to order?

CHAIRMAN SCHMIDTLEIN: Alright, welcome back.

Mr. Nicely, you may begin when you're ready.

Mr. Secretary, any preliminary matters?

MR. BISHOP: Madam Chairman, I would note that

the panel in opposition to the petition have been seated.

All witnesses on this panel have been sworn and I would

remind all the witnesses to please state your name before

you speak. It's very difficult for the court reporter to

see who is speaking. Thank you.

CHAIRMAN SCHMIDTLEIN: Alright, thank you very

much. And with that, you may begin.

MR. NICELY: Good afternoon. I'm Matt Nicely

appearing on behalf of SEIA and coordinating today's

presentation for the Respondents.

You have before you today senior officials from

some of the largest solar companies in the business, all of

whom have many years of experience in this industry. They,

along with our economist and other counsel, will demonstrate

why the story you heard from Petitioners today does not

reflect reality and is not sufficient to justify an

affirmation finding in this case.

STATEMENT OF THOMAS WERNER
MR. WERNER: My name is Tom Werner and Madame Chairman Schmidtlein, Vice-Chairman Johanson, Commissioner Broadbent, Commissioner Williams, thank you for the opportunity to present to you today.

I am the President and CEO of Sun Power. I have been -- I just crossed my 14th year. We are the nation's second largest solar provider. We are a global market participant. We design, manufacturer and install the world's highest efficiency solar technology. We're based in Silicon Valley and we were founded over 30 years ago. We employ over a thousand people in the United States. This includes a robust R&D innovation team that directly shapes how we supply solar power components and systems around the world to the residential, commercial, and utilities scale markets.

In 2016 alone, Sun Power invested $120 million in R&D in the United States. Our customers include Campbell Soup Company, FedEx, Macy's, Stanford University, Wal-Mart, and some of the nation's largest investor-owned utilities and publicly owned utilities and over a half a million residences and small businesses.

Since 2003, I've had the privilege of being on the front lines of a dramatic energy industry evolution. During this period, solar power generation capacity has grown more than a hundredfold worldwide and cost has
decreased to the point where CSPV is now competing against other sources of energy like natural gas and thin film solar.

In 2016, the U.S. PV market hit an all-time high over 14,000 megawatts, more than doubling since 2014. At the same time, China, Germany, and Japan have all produced more solar power than the United States, making this a truly global market. Last year alone 2 percent of all new jobs were created by the solar industry and we collectively contributed $84 billion to the U.S. gross domestic product.

Although government has played a key role in the growth and evolution of solar power, I am convinced that technology innovation and competitive markets are now the key drivers. With a federal investment tax credit set to wind down, we are on a glide path to being a fully, self-sustaining industry. The solar cell I am holding in my hand is an example of Sun Power's industry leading, back context solar cell technology.

This was developed originally at Stanford University and perfected in our Silicon Valley labs. It is made using monocrystalline silicon and a unique patented architecture to deliver the highest sunlight to electricity conversion efficiency of any solar product on the market today. High efficiency delivers more energy from a given roof space or land area, which is particularly important for
residential applications where Sun Power has a leading
market share and where our systems command a significant
price premium.

While it makes more expensive in terms of
upfront costs, we're fully competitive in terms of the price
per kilowatt hour delivered over the life of the system.
Our customers willingly pay that premium for a product that
delivers better energy, long-term performance, and
reliability. In 2006, our company's founder, former
Stanford University professor, Richard Swanson, outlined the
correlation between the cost of solar power and global
shipment volume.

Swanson's law dictates that the cost of solar
declines at a predictable rate as companies innovate, adopt
these innovations at scale, and thereby, increased
production volumes. We have clear evidence of this affect
as the cost of solar power has decreased by more than 60
percent over the last five years. This trend drives a
virtuous employment, R&D investment, and further cost
declines across not only the solar panel industry and
downstream channel partners, but also in our supply chain.

In the case of Sun Power, we source almost all
silicon from partners in Michigan and Tennessee. Much of
our power electron is from Colorado and much of our metal
products from Arizona and Minnesota. In fact, we have more
than 14,000 direct and indirect workers, not including our American supply chain, across the country, as outlined in the slide you see up on the screen.

These workers would be vulnerable to solar market declines. I can say without hesitation that customers are embracing solar power because of its cost effectiveness and long-term price certainty. A determination of injury in this case risks severely distorting the market and impairing customers' ability to freely choose competing energy options.

Tariffs would adversely impact the U.S. economy, burden domestic manufacturers and suppliers of other key components, raise prices for customers, and eliminate tens of thousands of job. Tariffs would upend the marketplace, which is growing steadily in creating jobs from high tech labs in Silicon Valley to local small businesses designing and installing home solar systems in our nations' heartland.

We must continue to let free markets drive in innovation and economic opportunity for the solar sector here in the U.S. Thanks again for the opportunity and I look forward to your questions later.

STATEMENT OF AMY GRACE

MS. GRACE: Good afternoon. My name is Amy Grace and I manage the North America Research Group at Bloomberg New Energy Finance, a division of the financial
information provider, Bloomberg LP. We provide major
investors, utilities, policymakers and others with data and
insights on the energy sector, including natural gas,
renewables, such as wind and solar, and other technologies.
My team covers the U.S. and Canadian markets.

I'm here today in my role as an analyst for
Bloomberg New Energy Finance. My remarks today represent my
views alone, not the corporate position in Bloomberg LP, and
of course, they do not respect specific investment advice.

I've been asked today to testify on the
competitive dynamics of the U.S. electricity system, which
is, ultimately, the final market for the crystalline silicon
photovoltaic products at issue in this case. I will focus
my comments on how utility scale solar competes in wholesale
markets and in regulated utility resource planning.

I recognize that solar also competes at the
retail level on residential and commercial rooftops across
the country, but for my comments I will focus on the utility
scale sector, which represents approximately 60 percent of
the total photovoltaic solar market over the last five
years. I look forward to answering any questions on the
residential and commercial sector during the Q&A.

In some places in the U.S. there is demand for
new generation, either because of growth and the demand for
electricity or because of retirements of aging coal and
nuclear fleets. In these few places, utility scale solar will compete against new natural gas and wind build. Gas and wind are typically the cheapest forms of new power in much of the U.S. However, in most regions today, utility scale solar competes against existing generation in both wholesale power markets and in utility planning decisions.

Why does utility scale solar compete mostly against existing generation? For the last decade, electricity sales in the U.S. have been flat. As visible in this first slide, growth and demand for electricity, which in the past rose in tandem with GDP growth, has decoupled from this partnership due to energy efficiency and the U.S.'s transition away from manufacturing and towards a service-based economy. There is limited need for new capacity to meet electricity demand and with a few exceptions a new utility scale solar project will only be built if it is cheaper than the cost of running an existing power plant.

Over the last decade, wholesale power prices have declined by roughly two-thirds, due primarily to the collapse in price of natural gas, which has become the primary fuel for electricity generation in the U.S. As a result, natural gas fire generators typically set power prices throughout the country. This means utility scale solar must be competitive with the operating cost of an
efficient natural gas plant, roughly 20 to $30 per megawatt hour or it will not be built.

So why did the U.S. add over 14 gigawatts of solar last year, 75 percent of which was utility scale and why does Bloomberg New Energy Finance forecast the U.S. to add 52 gigawatts, as visible in the second slide, between 2018 and 2021? First, policy still matters. The Federal Investment Tax Credit remains instrumental in bolstering solar project economics. State policies mandating solar have played an equal, if not more important role historically; however, these state policies have become less important over the last couple of years as a driver for new solar build.

Less than 10 percent of our forecasted U.S. solar build is effectively locked in by solar-specific state mandates, seen here in Slide 3. Most of the solar-specific targets have already been met. Another 13 percent we expect will be driven by technology agnostic renewable mandates where solar competes head-to-head against wind and other forms of renewable energy generation.

Similarly, most of these technology agnostic renewable energy targets have also already been met. Outside of policy, utilities are building or buying solar because with the federal subsidy, it is cheaper than the operating costs of their existing generation or it is useful
as a hedge against future fuel price volatility.

In addition, corporations and large energy users from the Fortune 500s, the U.S. Military are signing contracts with the utility scale projects to offset their electricity consumption and cost effectively meet internal sustainability targets. Corporations generally do not consume the electricity generated by solar projects directly. It is sold into the wholesale market. Rather the corporation is merely providing a financial hedge to the solar project, guaranteeing a fixed price for the power it produces and accepting the risk that the wholesale power price will, over time, roughly equate to or exceed this fixed price.

As such, outside of solar mandates, the competitiveness of utility scale solar with wholesale power prices is critical. It is worth emphasizing the significant cost declines achieved by U.S. developers and their equipment suppliers over the last decade, as seen in Slide 4.

In 2006, the average price for a long-term utility scale solar contract was $224 per megawatt hour. In 2016, it was between 30 to $40 per megawatt hour. This is why utility scale solar is able to compete with other forms of electricity generation. It is now price competitive with wind and wholesale power in several parts of the country,
but just barely.

So what would happen if the Petitioners' requested tariffs were to take effect? All else equal, any increase in equipment costs for utility scaled developers, whether at the result of lower domestic subsidies or increased import tariffs would increase the price of solar electricity developers can offer and any increase in the price of solar offered to electricity purchasers, whether a utility, a financial intermediary, or a corporation would result in fewer contracts being signed and lower solar deployment.

Fundamentally, demand for solar energy is elastic. Its output, electricity, is fungible with all other forms of power generation, except where policy dictates otherwise, for example, through mandates for specifically solar or renewable energy. As mentioned previously, these mandates have mostly been fulfilled and are a small percentage of forecasts of future build. Without a policy mandate, utilities will normally build the cheapest form of power, regardless of its source. Corporations with sustainability goals will sign long-term contracts with the cheapest form of renewable resource. This is not hypothetical. New contracting activity for utility scale solar projects has essentially grounded to a halt since June.
Developers cannot reasonably guarantee competitive contract terms with their counterparties when they don't know how much they will have to pay for modules, the most expensive line items of a project's cost.

This brings me to my final point. Regardless of the ultimate impact on costs, political and legal uncertainty alone can result in less willingness to invest and a higher cost of financing.

In closing, I would like to reemphasize the competitive nature of the U.S. power market. The days of solar build being driven by solar-specific policy requirements have essentially passed. The majority of solar build in recent years has been as a result of solar power's cost competitiveness with other forms of new and existing bulk generation and rooftop solars cost competitiveness with retail energy prices.

Any increase in price in the future will negatively impact how much solar is installed in the United States as well as the companies and people that rely on access to competitively priced solar equipment for their livelihood. Thank you.

MR. NICELY: Thank you, Amy. Craig.

STATEMENT OF CRAIG CORNELIUS

MR. CORNELIUS: Thank you for the opportunity to address the Commission today. My name is Craig Cornelius
and I serve as the President of NRG Renewables. I have been with NRG since 2013 and have been in leadership roles in solar in the public and private sectors for more than a decade. NRG is one of the largest independent power producers in the United States and with over 48,000 megawatts of generation across all fuel sources is one of the largest owner-operators of renewable generation in the country.

As measured by gross generating capacity in the U.S., we are custodians of the largest utility solar fleet, the fourth largest distributed solar fleet, and the fifth largest wind fleet. Under our business model, which is similar to that of most other large owner-operators of solar, we develop and operate solar projects that sell power primarily through long-term contracts to utilities, municipalities, and commercial customers.

During the last decade, over the time prior to and during the period of investigation for this case, we saw transformational change in the U.S. electric power supply and demand, in market prices, and in fuel sources. All came as a result of the relentless progress of innovation, supply chain evolution, and cost reduction, most notably, in natural production, wind technology and construction, and solar SCPV and thin film technology, construction and operations.
The result was downward pressure on wholesale power markets nearly every year for the last eight years to today when on peak power prices in the market serviceable by solar ranged from 29 to $37 per megawatt hour. A new solar power contract signed today must offer pricing that is 60 to 70 percent lower than the average levelized cost from solar installations was in 2012.

So it was in this harsh context, one of relentless technology innovation, numerous and abundant fuel options, and relentless price deflation that the solar industry grew from a niche fuel source in 2008 to the number one new power generation capacity source last year. The single most important factor that drove solar's growth over that time across both the utility and distributed segments was the ability of solar to compete on cost with other electricity sources.

As of 2012, the U.S. utility solar was still a relatively new market. Initial projects in California and the West proved the concept of solar as a reliable source of electricity at utility scale. And in the years that followed, regulators and customers in other markets developed an interest in solar, but only so long as solar providers were able to compete with dropping power prices, offer power contracts at large scale, and build projects reliably and quickly.
Each year these bars were raised higher. Price expectations came down and scale expectations came up and these demands were imminently foreseeable to all in our market as they permeated to every customer sales conversation, every engagement with power market regulators, and every sound business planning or investment process. And yet, through investments and technology, product design scale, and business operations, U.S. utility scale solar grew from 780 megawatts in 2011 to more than 10 gigawatts in 2016.

This growth was not driven just by the need to comply with policy mandates, but most fundamentally, by the ability of solar to achieve good parity. In addition to being able to offer good price to drive this growth, we also needed to provide solutions that designed fit to purpose. For large solar projects during the POI, developers used 72 Celsius PV modules almost exclusively because these module designs enabled low cost construction methods that made projects viable.

Additionally, as initial installation cost compressed, lifetime module performance became a more significant purchasing criterion and developers elected for 72 cell modules that incorporated the latest state-of-the-art technologies to reduce cell conversion efficiency and degradation.
The only available sources of 72 cell modules with these specifications for most of the period of investigation at the scale we required were foreign. Neither of the Petitioners in this case had a product that they offered at these specifications and certainly not at the scale or quality we required. In addition to this inability to meet our essential technical requirements, there were other reasons why we and other purchasers like us were unable to purchase products from the Petitioners during the period of investigation.

We needed our suppliers to be thoroughly accepted by our financing sources. We needed them to operate at multi-gigawatt scale. We needed them to offer evolving product designs for long-term performance. We needed them to ensure on-time delivery and we needed high standards for quality.

Throughout the POI, neither Petitioner could meet any of these standards for qualification. And indeed, they were broadly recognized by our company and others like us as failing every single one of these tests. As a former federal official myself, I sympathize with the vital role you play and the important decision you need to make in this case, so I thank you for this opportunity to testify and I look forward to your questions. Thank you.

STATEMENT OF JIM LAMON
MR. LAMON: Good afternoon, Madam Chairman and Commissioners. My name is Jim Lamon. I'm the Founder and Chief Executive Officer of Depcom Power. I've got over thirty years of industry experience in the utility power industry, spanning coal plants, gas-fired plants and more recently, the last eight years, in utility-scale solar.

I've been fortunate in my career to be responsible for engineering and construction teams of some of the largest, most complex power plants in our country. My current company, Depcom Power, is headquartered in Scottsdale, Arizona and is an engineering construction company of utility-scale solar power plants.

We're also involved in project development, operations and maintenance of our customers' plants. We have approximately 100 employees in our offices in Arizona, New Jersey and California, and approximately 1,000 construction workers on our job sites across the country. That includes Connecticut, Virginia, North Carolina, Mississippi, New Mexico and the great State of Texas.

In less than four years, we've grown to over three hundred million annual revenue and growing at about a rate of about 30% annually. All of our Depcom employees are shareholders in our company. We have a "Hire Veterans First" policy and presently 27% of our staff are veterans. I myself served six years as a U.S. Army officer overseas.
and domestically in U.S. Army Airborne.

We have a "Buy American First" policy and roughly two-thirds of our content of our entire plants today come from U.S. domestic sourcing. I believe this is as much or more than any of my competitors. So choosing American products and services is simply a part of our core philosophy at Depcom. One distinct feature of utility solar power is the sheer size. For a typical residential or commercial project might be a one-off installation involving 10 to 2,000 modules, our projects typically require 50,000 to 200,000 and frequently I have repeat customers.

Understandably projects this size require module suppliers to meet strict qualifications. These include quality, reliability, and long-term service and warranty. In addition, we need large volumes for these projects. We need our suppliers to deliver on time. We need them to continually improve their efficiencies to maintain our competitive edge in the market, since we design our plants for a 30-year life and we put our service reputation on the line with each project. Modules that do not beat these high standards are simply unusable at any price.

The point is driven home in considering our experience with Suniva and SolarWorld. Neither were able to meet our criteria. Our large-scale projects are widely
known in the industry such that any supplier could readily
seek out our business. Suniva could not meet the volumes.
Just for this year alone, we'll install over 300 megawatts
easily. And our backlog and their supply doesn't reach
nearly that level. They're also not Tier 1 Bloomberg
certified, therefore are not financeable in the utility
industry. These are large projects, require tens of
millions of dollars and must be financeable.

Depcom's experience with SolarWorld was
unsatisfactory. In 2015 we procured their product for a $12
million dollar single project. In retrospect of the
projects--over fifty we've built to date--it was the worst,
relative to module performance. Depcom had to exert
oversight and pressure to get SolarWorld to deliver its
product--which were never delivered on time--a product that
we believe that was made in America, given their marketing,
but in fact, per the label on the modules, were manufactured
in Germany and Thailand.

During the project, SolarWorld informed Depcom
it could not produce the modules that we had contracted for.
Instead, they offered us a difficult choice of either
accepting a different module that we had not ordered, and
not meeting our needs or face lengthy and unacceptable
delays in delivering. Further, SolarWorld's modules
underperformed after installation, after we commissioned the
plant, resulting in a warranty claim by the project owner against SolarWorld.

Since we had procured the modules for the owner, we dedicated personnel to investigate these $12 million of underperforming modules. This cost not only our time resources, but obviously endangered our reputation. We stuck with the project, made sure in the end that it did work. As such, we would never use SolarWorld modules on any future project.

Again, in our significant fifty-plus utility solar experience with projects, these companies would not be acceptable suppliers to us at any price. And by the way, utilities have required seventy-two cells since 2009 in the utility-scale industry.

In closing, my company and the other 260,000+ solar workers are working hard every day to drive down the cost of utility-scale solar price and power in our country. Today we're more competitive than coal and nuclear, as you just heard, and we're rapidly approaching that of gas-fired plants.

So on behalf of our 260,000 fellow U.S. solar workers and manufacturers, we ask that you do not disrupt this rapidly growing low-cost power source in the industry, and in fact, we believe that this lower cost of power's in fact a manufacturing enhancer in our country goes from
automotive to data centers, they're using this power to
lower their bills today. I thank you for your time.

STATEMENT OF DAN SHUGAR

MR. SHUGAR: Good afternoon. My name's Dan
Shugar. Thank you for the opportunity, Madame Chairman, and
the other Commissioners to present. I founded NEXTracker
four years ago in 2013 and two years ago we were acquired by
Flex, which is a $25 billion company. Today I run
NEXTracker as a wholly owned subsidiary of Flex.

NEXTracker designs and manufactures structures
that enable solar panels to follow the sun during the day,
generating significantly more power. We're headquartered in
Fremont, California and manufacture and serve customers on
five continents. We've created many hundreds of jobs in our
U.S. operations in Fremont and Nashville, and also many
thousands of jobs at our U.S. manufacturing sub-suppliers
and customers.

Our top markets are the U.S., India, Mexico,
Brazil and Australia as a global company. We are global and
U.S. volume leader for these types of structures. Today
we've delivered 9 gigawatts, which is the equivalent
capacity of thirty-eight coal power plant units. In
addition to trackers, we provide solar panels to certain
customers. I've been in the solar industry since 1988 and
have served an executive capacities of solar panel
manufacturers, utilities and component manufacturers.

The key driver for this industry is innovation. And innovation has improved solar cells, as we heard Tom Werner discuss module structures and all aspects of our industry. Innovation has enabled solar to become the lowest cost source of power in much of America's sunbelt and one of the top new sources of new power. In NEXTracker's case, innovation harvests the sun more efficiently, enabled us to deliver better returns on investment to owners of power plants and become a global leader.

I would like to share some perspectives on SolarWorld. I've known its founder and CEO, Frank Asbeck, for over twenty years. SolarWorld started as an installer of solar products in Germany. About 2005, they began manufacturing crystalline solar in Germany and later the U.S. At the time, the German grid heavily subsidized solar energy, paying about forty-five cents per kilowatt hour. That's over ten times today's rate for solar at three to four cents per kilowatt hour.

SolarWorld's value peaked in 2006 when their stock hit 265 Euros per share on the Frankfurt Exchange. From that peak, the solar industry began rapidly transitioning, from a heavily subsidized market in overcast Germany to more competitive markets where systems are located in sunny areas and the economics of solar directly
compete with traditional power like coal. This is the major driver of demand. And the transition required ferocious innovation and cost reduction, and SolarWorld could not keep up.

As mentioned earlier today, SolarWorld has a judgment of over $700 million from Hemlock Semiconductor hanging over their head, which may have impacted their ability to perform. Two years ago, NEXTracker began offering a product line in the U.S. called NX Fusion, where our tracker was put together with solar panels, and as an integrated package for utility applications. To enable rapid delivery to our U.S. customers, we were looking for a domestic supplier.

SolarWorld had heavily promoted the capabilities of their Hillsboro, Oregon, factory to us. We decided to take them at their word and give SolarWorld a chance to become a significant business partner with a major new order. That turned out to be a poor decision. On September 15th of 2015 we awarded SolarWorld a $32 million purchase order for 156,000 solar panels over the coming year. The order specified 72-cell solar panels which are needed for most utility applications.

SolarWorld accepted that order, but then had a range of problems fulfilling it, starting with deliveries that were late by six weeks or more. When the panels
finally came, we discovered from the labels that they were actually made in Thailand, not Oregon. Additionally, non-conformance with technical specifications required us to modify the panels in a third-party factory before they could be delivered to the job site.

The large magnitude of operational problems SolarWorld had in fulfilling the 72-cell panel deliveries ultimately led us to cancel the balance of the order after less than 10% of the panels had been delivered. SolarWorld recognized their failings and accepted the order with no penalty after crediting us with the cost of bringing the panels to a third-party location to bring them within specification.

After this fiasco, we disqualified SolarWorld from our vendor list. This is not a picture of a company poised to succeed in the marketplace if granted, still, yet another trade remedy. In closing, please understand that NEXTracker is one of many solar industry businesses that are looking to the Commission to recognize the very special circumstances of this industry, an industry where long-term trends reflect decades of hard work and innovation to drive down costs, expand demand and enable affordable, reliable solar systems to lower the cost of power for millions of Americans and American businesses. We respectfully urge the Commission to reject the petition, which is causing great
uncertainty and damage to the U.S. solar industry. Thank you.

STATEMENT OF ED FENSTER

MR. FENSTER: My name is Ed Fenster. I'm the Executive Chairman and Co-Founder of Sunrun. Sunrun was founded in an attic ten years ago and has grown into the largest dedicated residential solar company in the United States, serving about 150,000 families in twenty-two states and here in D.C.

Sunrun achieved this growth by pioneering home solar as a service, a model in which we pay for the installation and then sell power to homeowners by the kilowatt hour from the solar system on their roof which we own and maintain. In my testimony, I will discuss unique attributes of the residential solar sector and how Suniva and SolarWorld failed to compete for Sunrun's business, notwithstanding opportunities we extended them.

Residential solar is a major source of employment. Sunrun and our installation and sales partners employ approximately 11,000 Americans and Sunrun's market share is estimated at just 13% of the residential segment. These well-paid jobs cannot be exported or automated. I'm honored to be here today representing the hard-working women and men who are committed to bringing clean energy to homes across the country.
To effectively market its services, Sunrun must offer power to homeowners at a discount to the local utility. A study we performed concluded customer interest in solar increases about three-fold when the discount we offer rises from 10% to 20%. Conversely, when regulators in Nevada eliminated the savings solar customers could enjoy, that state went overnight from being the fastest growing and fourth-largest residential market to a total wasteland with near total job losses resulting. Laying off all of our Nevada staff was heartbreaking.

Following substantial public outcry, the legislator and governor overturned the regulator's decision and growth and jobs are now returning. Sunrun's typical customer lease has an initial 20-year term. During the lease, Sunrun pays for all maintenance and repairs. As such, Sunrun must believe each new system will last for decades, despite suffering extreme heat, cold, wind, rain, vermin, plus perhaps sleet, snow and golf balls.

For instance, adding even one visit can wipe out ten cents a watt in module cost savings. Equipment failure has also measurably and significantly undermined customer satisfaction. Quality is paramount. For the same reason, lenders who fund the billions of dollars Sunrun requires, insist on rock-solid assurances our system will deliver as promised.
The loans they make are nonrecourse. So if the systems don't perform, they are unlikely to recover their investment. Nonrecourse finance is best practiced in all asset finance. Typically, lenders specify which manufacturers' module Sunrun may use, based on module reliability. Several lenders even employ full-time engineers to assess module quality.

Please review the declaration supplied by Sunrun's Director of Strategic Sourcing, Dirk Morbitzer, who created and runs Sunrun's vendor quality management program, or VQMP. And his declaration, Appendix C, is brief. Dirk explains how Sunrun objectively tests whether modules from potential suppliers meet our quality standards. For instance, Sunrun performs factory inspections and accelerated product testing designed to simulate the harsh environment and performance stresses that modules endure over their lifetime.

Despite our desire to support American manufacturers, the two petitioners in this case did not qualify under the VQMP. In 2014, Dirk invited both SolarWorld and Suniva to participate and each chose not to proceed. In part to support American manufacturers, our subsidiary that distributes equipment to other solar companies, at times carried panels from each petitioner. As detailed in Dirk's declaration, we experienced and delivery
and serious product quality problems with both companies, inflicting upon us financial and reputational harm.

For instance, SolarWorld recalled faulty panels, which is highly unusual in this industry, and misdelivery timing. In 2013 and 2014, when our distributor sourced Suniva panels for companies who wanted American-made product, in a series of similar incidents, Suniva modules were delivered labeled "Made in China". This and other problems with Suniva were so frequent that when they approached us anew about the VQMP in 2016, we declined.

Leasing companies following Sunrun's model, which typically invests more heavily in quality assurance, represented 62% of the residential market between 2012 and 2016, up from zero in 2007. The petitioners' refusal to submit to testing meant they didn't have material access to that market.

Finally, I will touch on why Sunrun believes the solar market saw declining prices and surging growth, especially beginning around 2014. Over at least the decade we've been in business, the better module and inverter manufacturers, regardless of location, innovated to increase power output, enhance quality, and lower unit costs.

Solar developers like Sunrun eliminated soft costs at a similar pace. These combined forces created the appearance that solar is a deflationary good, the type you
might wait to buy because it will be cheaper later. Hence, many buyers chose to sit out the first portion of the eight-year extension of the investment tax credit in 2008 and then surged into the market in the second half, depending on project lead time.

The volumes driven by this surge and the need to stay competitive after incentives fell, drove cost productions for Sunrun and our suppliers. Thank you very much for your consideration today.

STATEMENT OF BASTEL WARDAK

MR. WARDAK: Good afternoon. I'm Barry Wardak, Founder and President of California Solar Systems, or CSS. We are a regional, full-service integrator of solar electric projects for residential customers. We employ fifty people and install over 700 residential solar systems each year.

Today you've heard from large American companies like Sunrun, but I'm here to give my perspective as a small solar company that also opposes this case. I have first-hand experience with Suniva and I do not believe either petitioning company deserves safeguards relief. As a company specializing the residential market, I buy through distributors.

In May 2016, I switched from foreign suppliers to Suniva based on a commitment from our distributors that we would have sufficient supplies of modules that met our
requirements. We transitioned from imported products to Suniva because we wanted "Buy American." By August 2016, installations began using Suniva modules, but Suniva informed us almost immediately that it could not deliver as promised. The products we ordered were backlogged for at least the next three months.

Suniva offered to exchange to a lower wattage product line, but our residential customers demanded higher efficiency. Homeowners cannot justify putting solar panels on their roofs unless the system saves them money on the cost of electricity.

Suniva's lengthy delay was unacceptable. We decided to switch to SolarWorld, even though their modules were more expensive. We justified the premium because we could market the modules as "Made in the USA." However, we became aware of the news of the insolvency of SolarWorld's Germany parent company. We decided to diversify our suppliers in case the parent's insolvency should affect SolarWorld, Americas' ability to deliver the quantity of modules that we require.

Solar's a very competitive market. We are seeing a shrinking demand pool as 15% to 20% of solar-qualified homes in California have already gone solar. The low-hanging fruit are already taken, meaning buyers who are less price-sensitive because they have high electricity
bills and high credit scores, or are motivated by their interest in the environmental protection, convincing the other remaining 80% to 85% of customers to go solar is more difficult, as they are mostly motivated by cost and are comparing the cost of solar with other alternatives.

Competition in the residential market is therefore becoming similar to the utility sector. In order to compete, solar must reach grid parity, where the ultimate price paid for solar-driven electricity is on par with natural gas, wind and other lower-cost alternatives. Thank you for the opportunity to speak today.

STATEMENT OF JIM DOUGAN

MR. DOUGAN: Good afternoon, I'm Jim Dougan from ECS. I've prepared a set of mostly confidential slides with a few public slides interspersed which you should have in front of you now. First, when the Commission assesses petitioners' claims of lost market share, it should keep in mind how significantly CSPV demand grew over the POI and how it compared to domestic capacity.

Slide 18 compares apparent U.S. consumption to domestic cell and module capacity. The domestic industry lost market share despite significant increases in its capacity, production and shipments, simply because demand grew even more significantly. Moreover, when analyzing the domestic industry's volume indicia, it's important to
establish that its module production is constrained by its supply of cells. Module producers either produce the cells themselves or import them, as there's no commercial market for domestically-produced cells.

Slide 19 reproduces Figure 3-1 from the public staff report showing an upward trend in U.S. cell capacity production utilization over the POI. This is not the picture of a seriously injured industry.

As confidential Slide 20 shows, the picture is even more compelling when restricted to the cell producers supporting the petition.

Confidential Slide 21 shows what accounts for the difference. In assessing the probative value of module utilization, the Commission should keep these facts in mind and consider that application of any remedy in this case would have a negative effect on the production and utilization of domestic module producers relying upon imported cells.

Slide 22 reproduces Figure 3-2 from the public staff report, and shows a similar upward trend. Utilization dipped in 2016 only because of the large additions to capacity, which is a sign of industry health, not injury. Moreover, as I just mentioned, the Commission should consider the utilization rate for modules in the context of the utilization rate for cells, given how the former is
directly affected by the latter. In other words, if a producer cannot produce more cells, they cannot produce more modules. The constraint on module production is not module capacity, but rather the availability of cells.

This fact may explain the strategic decision of some producers as shown at confidential Slide 23. It is clear from this slide that U.S. producers utilization for cells affects their decision-making, and that this does not necessarily benefit the domestic industry.

The supply is not only to the domestic producers' strategy with respect to cell production, but also as shown at confidential Slide 24, how the interaction of these constraints influences domestic production overall. The Commission should analyze any increase in import volumes about being aware of this context.

Notably, while petitioners focus on the increase in module imports over the POI, they say little about the fact that the vast majority of module imports went to the utility segment. See confidential Slide 25. This is the segment in which the domestic producers did not meaningfully compete for the many reasons you heard from these industry witnesses. Therefore, the vast majority of imports and increase in imports could not have been a cause of serious injury to the domestic industry because they were directed to a segment where U.S. producers participate only a very
limited degree.

Any increase in imports directed at the nonutility segments of the market were similarly not injurious to the domestic industry. This is because domestic producers actually increased their shipments to the nonutility segments and couldn't have increased their shipments by significantly more, given one, their capacity constraints, and two, the degree to which they have made themselves unavailable to, or even alienated such a large portion of the market, as you've heard from industry witnesses on this panel.

Thus, petitioners cannot credibly claim to be seriously injured by the increase in imports to any side. The types of products sold by domestic producers and importers also demonstrate market segmentation. They were concentrated in different products than the domestic industry. As shown at confidential Slide 26, imports were primarily 72-cell modules which are the products required by the utility segment. In contrast, domestic shipments were primarily concentrated in 60-cell modules used in residential and small-scale commercial installations.

As shown at confidential Slide 27, the domestic industry's strategic decisions demonstrate that its focus was in segments other than utilities and the products required to serve them. Thus, for all the foregoing
reasons, the increase in imports over the POI could not have caused serious injury to the domestic industry.

The absence of this injury is apparent from the industry's financial data. While the data for U.S. producers' cell operations are confidential, we don't believe they show any signs of injury as shown at confidential Slide 28, which demonstrates that point.

Slide 29 shows the public financial results for the U.S. module operations. As you can see, these financial results markedly improved over the POI at the gross operating and net income labels. These are not trends that support a finding that the industry is seriously injured. The industry's results in 2016 would've been better but for the start-up of certain firms, as shown at confidential Slide 30.

This goes to petitioners' causation argument. It cannot attribute supposed injury to imports when, in reality, it's the start-up of new firms, not imports, that impacted the industry's financial results. This is especially true when the start-up of these new firms has increased the domestic industry's capacity, production, investment and employment, all goals that the petitioners presumably support.

The industry's level of capital expenditures also show these benefits, as shown at confidential Slide 31.
They show an industry with a strong outlook for the future, and a demonstrable willingness to commit capital to domestic manufacturing. Regarding pricing, I'll begin by addressing the underselling analysis. The price data show market and product segmentation similar to discussed earlier.

As shown at confidential Slide 32, the distribution of domestic and importers' sales across pricing products, so limited competitive overlap. Where U.S. producers and importers did compete, it was a near equal mix of overselling and underselling, as shown at Slide 33, showing that imports undersold in thirty-five instances and oversold in thirty-two. In its pre-hearing brief, Suniva attempted to engineer underselling where it doesn't exist. And while I don't have time to address it now, I'd be happy to answer a question later.

But in general, the petitioners want the Commission to believe it should make the same finding as in the previous two CSPV cases, as if this is already a settled issue. But it's unsupported by the evidence. The underselling data from CSPV 2 are confidential, but as shown at Slide 34, in CSPV 1, there were 35 instances of underselling and only 11 instances of overselling. The evidence in this case tells a different story, and therefore the Commission should make a different finding.

The underselling cannot be considered injurious,
especially when the majority of responding purchasers stated, they didn't purchase imports instead of domestic product on the basis of price. Specifically, though 88 of 101 responding purchasers stated that they'd purchased imported products instead of domestic products, only 31 reported that price was the primary reason for their purchase.

Importantly, as shown at confidential Slide 35, the 57 remaining purchasers represent the vast majority of purchasers by quantity over the POI. The fact that most purchasers didn't make their decision on the basis of price is corroborated by purchaser responses regarding major purchasing factors. More than twice as many purchasers rank quality and performance first as ranked price first.

These data are conclusive evidence that imports, however they were priced, did not seriously injure the domestic industry. I would like to close by making a very important conceptual point. Petitioners arguments about demand for CSPV completely ignore the economic reality of the market. As you can see from Slide 36, the global demand for solar energy increased so significantly in recent years, precisely because the price for solar cells and modules decreased so significantly.

This supply is to the U.S. market as well and accounts for the massive growth you saw back in Slide 18.
There is no significant amount of demand for CSPV independent of its price competitiveness with other established or emerging sources of energy.

As Ms. Grace testified, solar-specific policy mandates account for less than 10% of projected future build. All of the players in the industry understand this, and for petitioners to argue otherwise is misleading to the Commission. Dr. Prusa.

STATEMENT OF TOM PRUSA

DR. PRUSA: Thank you. Good afternoon.

My name is Tom Prusa. I'm a professor and the Chair of the Economics Department at Rutgers University. My statistical study directly addresses the legal requirement that imports be shown to be the most important cause of injury to the domestic industry. I do so by clarifying what caused declines in the prices during the period of investigation.

As Mr. Dougan just discussed, the domestic industry's capacity constraints make declining market share a meaningless statistic. Consequently, my inquiry into pricing gets at the heart of what should be the petitioners proof that imports were a substantial cause of serious injury experienced by the domestic industry.

I use national and state level data to estimate the impact of a variety of factors on the price of 60-cell and 72-cell modules over the period of investigation,
whether at the state or national level, whether at the residential or utility-scale level. Under no circumstances do I find the volume of imports to be the most important cause of price changes in either the 60-cell module or 72-cell module market.

Before discussing specifics of my study, I think it's worthwhile to give some background on the approach. One cannot understand pricing of CSPV modules without considering the role of technological progress. The CSPV industry has long demonstrated persistent and significant cost reductions that have resulted in nearly continuous annual price decreases over the last 40 years.

Scholars have noted that CSPV is easily the energy source that has demonstrated the most technological advancements. One of the first papers to document CSPV's remarkable technological change was Swanson in 2006. The chart shows that prices have steadily fallen as the industry has grown. From this longer run perspective, the price reductions during the period are nothing special. They are the norm for this industry.

Swanson then goes on to detail why technology costs and prices have changed so rapidly over more than four decades for the CSPV industry. There are two key take-aways from this table. First, eight of his nine factors relate to advancements that reflect external economies of scale.
These are advancements that affect all industry participants. All industry members benefit from such progress.

Second, in the rightmost column, I list changes that have occurred in each category since Swanson wrote his paper a decade ago. His insight remains true today. The pre-hearing staff report documents cost improvements for domestic cell and module producers. Much of that data is confidential, but the public data shows a similar pattern. As seen in the table on the screen, over the period, per unit total COGS decreased by an annual average of 14.7%.

The second critical factor I want to discuss is that of good parity. Let me take a minute to explain how an economist interprets good parity using the textbook graphical analysis. In the chart, I depict two cost curves. Let me call one CSPV Solar, and the other Natural Gas. As depicted, the cost of both energy sources are falling over time, but CSPV costs are falling faster than those of natural gas. Eventually the cost of CSPV reaches that of natural gas. Before that time, incentives are needed to induce customers to install solar.

As depicted, the subsidy level required to put solar on the same cost basis as natural gas declines over time. Declining support structure exerts extreme pressure on CSPV producers to maintain the projected rate of
technological advancement. If they do not, or if cost of other sources of electricity on the grid, fall faster than expected, a price gap will develop and CSPV will no longer be a viable energy option, even with government incentives.

This type of competitive pressure from other sources of energy, natural gas, wind, thin-film solar, have played a role in CSPV pricing during the period. Thin-film is an alternative source of solar power and has experienced dramatic technological change during the period of investigation. Wind has long been a cheaper renewable option.

Let me now talk about my study. I separately analyzed the residential market and the utility scale market. I did this because the record shows that residential installation is almost exclusively used 60-cell modules. And utility-scale installations almost always use 72-cell modules. As you have heard earlier from industry witnesses, this segmentation is not because of price, but rather because of specific considerations of each segment.

Limited space dominates a decision of what can go on the roof. Space is not generally a primary factor for utility-scale. Rather, minimizing other costs, like, racking, wiring, mounting, etcetera, all make 72-cell modules the preferred choice for utility scale. In each segment, I include as many costs in demand side variables as
possible, given the available data.

Now I freely admit that my study does not include all the factors that have played a role. For example, industry experts have just testified to a litany of problems both Suniva and SolarWorld have experienced over the period. Their problems detailed were not caused by imports but rather reflect dysfunctional management and supply decisions. I'm not able to model these decisions.

As a result, I likely attribute a greater role to imports than is truly warranted. Data limitations also restrict my ability to incorporate pricing effects of wind and thin-film generated electricity. This means I'm not fully capturing all grid parity effects and consequently I'm attributing some of that price impact to imports. The models estimated using a structural vector auto regression, vector arrow correction model. Now that's a mouthful.

In English, it's an econometric specification that allows the dynamic relations in groups of economic time series variable to be modeled. It allows one to distinguish cost-driven technological change to the supply curve from those driven by imports. The model also controls for doing inside changes. Changes in cost of raw materials, prices of alternative sources of energy and state subsidies. The statistical approach was pioneered by two economics who recently were awarded the Nobel Price for their research.
What did my results show? First and most important, imports are never the largest impact. The slide depicts one set of my results. In my report, I provide a series of a robustness test. And all my findings show the same thing. Imports are always dominated by one or more factors. As shown in the residential market, imports are near the bottom of the list of factors, dominated by grid parity issues and technology-drive cost changes.

The utility market results are similar. Imports are always less important than technology-driven cost changes. In summation, the empirical analysis formally rejects the claim that imports are the most important costs for declining prices over the period.

STATEMENT OF JONATHAN STOEL

MR. STOEL: Good afternoon Commissioners. My name is Jonathan Stoel, I'm a partner at Hogan Lovelis. I'm here today on behalf of Canadian Industry. Commissioners, no Canadian firm has produced solar cells during her safeguard investigation period.

Moreover, you have before you the only three firms, Heliene, Silfab Solar and Canadian Solar Solutions currently manufacturing solar modules in Canada. Two facts are readily apparent with respect to imports from Canada. The first is that Canadian imports have played a tiny role in the U.S. market, accounting for a miniscule fraction of
total imports across both the full 2012 to 2016 period of investigation and the most recent three year period.

Moreover, Canadian exports to the United States also declined sharply in the first half of 2017. The second fact is that Canadian producers have had a symbiotic relationship with the U.S. solar industry. Heliene and Silfab will describe there are no actions with both Suniva and SolarWorld.

And Canadian Solar has invested hundreds of millions of dollars in the U.S. solar industry, including through its acquisition of Recurrent Energy. These facts require the Commission, in accordance with both the NAPS Implementation Act and the NAP itself to render a negative determination with respect to Canadian imports -- even if the Commission makes an affirmative finding as to global imports.

This is because U.S. law requires the Commission to exclude Canadian imports from its injury findings if either: 1 -- Imports from Canada do not account for a substantial share of total imports or 2 -- Those imports do not contribute importantly to the serious injury or threat thereof caused by imports.

Canadian imports did not meet the first test because on the basis of any measure -- Canada has never, never ranked among the top five sources of U.S. imports. In
Furthermore, Canadian producers and exporters of solar modules have worked with their U.S. counterparts to benefit the U.S. industry and market. They thus have not contributed importantly to any alleged serious injury or threat thereof. I will be pleased to answer your questions.

STATEMENT OF PAOLO MACCARIO

MR. MACCARIO: Good afternoon Commissions, my name is Paolo Maccario. I'm the General Manager and Chief Operating Officer of Silfab Solar, a manufacturer of solar modules located in Ontario, Canada. We produce state-of-the-art solar modules containing high-efficiency cells and are proud of our high-quality, fully automated and efficient manufacturing process.

Our limited imports into the United States, like all Canadian imports, help to meet the needs of the strong and growing U.S. solar energy market.

We have worked very closely with Suniva over the past three years and we are one of the largest creditors in its bankruptcy. In 2014, we began producing Suniva-branded modules through a toll-processing arrangement. Suniva provided us with cells and we assembled those cells into modules for Suniva to import back into the United States. Suniva also sold us a very small quantity of cells for our own use and sale under our own brand to our
customers. We tried contractually to purchase many additional cells from Suniva, but they were unwilling or unable to sell us larger quantities.

In sum, our relationship accounted for us producing a majority of Suniva total module sales in 2015 and 2016. And we expanded our capacity twice, just for them.

I would like to provide some additional details. First, as you have heard most end customers require the delivery of modules, not of cells. And as you have heard before Suniva was able to produce more cells than modules in 2015 and 2016.

Accordingly, Suniva needed our help to assemble a large portion of its cells into modules in order to meet the needs of the U.S. customers.

Matt Card, who testified for Suniva, stated more than once that our modules were the best that they every sold.

Second, I know from my personal experience that Suniva struggled to develop its own module manufacturing assembly in Saginaw, Michigan. Silfab provided an easy fix to those difficulties, including being next to Michigan and providing just-in-time delivery of our modules.

Regrettably, as detailed in my confidential Declaration submitted to the Commission, our partnership
suffered from quality and volume problems with Suniva's solar cells. Notwithstanding that, we continue to do business with Suniva as its troubles mounted.

For example, as recently as early 2017, Suniva requested us to reserve additional module production capacity. But, they failed to meet their promises and our expectation. Accordingly, in the end it has been Silfab and our employees, not Suniva, that have been harmed by our relationship, thank you.

STATEMENT OF MARTIN POCHTARUK

MR. POCHTARUK: Hello, my name is Martin Pochtaruk, and I'm the President and founder of Heliene in Sault Ste. Marie, Canada. Heliene is a premium-quality manufacturer of the solar modules.

We were the first to manufacture solar modules in Canada, back in 2010. More recently, we are also manufacturing modules in Mountain Iron, Minnesota.

Our company opposes the imposition of a safeguard remedy on solar modules from Canada. Imports from Canada have not injured, nor do they threaten to injure Suniva and SolarWorld. In fact, the small Canadian solar module industry is a vital part of an integrated North American market and a source of much-needed capital, technology and know-how.

We are growing the U.S. market for solar products
to the benefit of producers on both sides of the border.
Heliene, as I said before, currently operates a solar module manufacturing facility in Iron Mountain, Minnesota. We entered the Minnesota market in 2015, initially through contract manufacturing with Silicon Energy, the prior operator of the plant to exited the industry in early 2017.

We stepped in to keep the Minnesota plant running, leasing the plant and equipment from the City of Mountain Iron. Our production in Minnesota involves the assembly of solar modules and was supported by the "Made in Minnesota" program, which seeks to attract manufacturing jobs to Minnesota.

While currently we employ 10 employees, with the investment in a new manufacturing line for solar modules we are expanding that number to 75 by the end of this year.

The demand for solar energy is growing in Minnesota with a forecast of 800 megawatts of new solar energy projects this year.

If a Section 201 remedy were implemented however, my Minnesota factory will need to be closed and our expansion, as already announced, cancelled as U.S. solar cell producers cannot meet the growing U.S. demand, requiring us to procure solar cells in the international market.

Finally, my experience with Petitioners
1 highlights the close relationships among the Canadian and
2 U.S. solar industry participants. When Heliene started its
3 module manufacturing operations in 2010, we sourced solar
4 cells from Bosch in Germany -- later acquired by SolarWorld,
5 and from Suniva in the United States. We were also
6 initially qualified, as a toll processor, to manufacture
7 modules in Canada for Bosch.
8
9 While we continued to buy solar cells from
10 SolarWorld until 2016, we dropped Suniva as a cell supplier
11 in 2013. Suniva's cell quality had become erratic due to
12 excessive fragility, and we increasingly experienced higher
13 than acceptable cell breakage.
14
15 These quality-related problems coincided with a
16 period of rapid growth at Suniva, who unable to secure
17 high-quality, mono-silicon wafers from its established
18 suppliers Suniva apparently began purchasing less-reliable
19 wafers on the spot market. This adversely impacted Suniva's
20 products, causing however, significant business problems and
21 manufacturing inefficiencies to us by Heliene.
22
23 Thank you and I will be glad to answer questions.
24
25 STATEMENT OF VINCENT AMBROSE
26
27 MR. AMBROSE: Good afternoon Commissioners. My
28 name is Vincent Ambrose, I am the General Manager for North
29 America for Canadian Solar, Incorporated. Canadian Solar is
30 a global company that is listed on the NASDAQ and its
headquarters are in Ontario, Canada.

We are committed to and invested in the U.S. solar energy market where we have over 200 employees. In 2015 we acquired Recurrent Energy, a developer of more than 1.9 gigawatts of utility-scaled projects in the U.S. for 265 million dollars.

Canadian Solar opposes the imposition of the safeguard remedy on solar modules from Canada. Our imports into the United States from Canada are small, and support the growing U.S. solar energy market. They have not contributed to serious injury to the U.S. industry.

In 2010 we opened up our sole Canadian manufacturing facility, Canadian Solar Solutions in Guelph, Ontario, to serve the large-scale utility market in Canada. We do not produce CSPV cells in the Guelph facility -- rather we principally assemble imported CSPV cells into low to medium efficiencies 72 cell modules for utility scale customers.

Ontario's feed-in tariff or FIT inspired Dr. Shawn Qu, our Founder and CEO, to invest in the Guelph facility. If FIT sought to replace coal-powered electricity in Canada and to spur investment in Ontario's renewable energy sector, Dr. Qu, a Canadian citizen, opened the Guelph facility to return jobs to Canada.

Notwithstanding that our production costs in
Canada were higher than our Asian facilities. We focused operations during 2010 through ’13 mostly on the Canadian market which grew substantially due in part to the FIT.

However, like the broader Canadian solar industry, production and production capacity at the Guelph facility declined significantly since 2013. This is principally due to Canada's curtailment of the FIT. From 2014 to the middle of 2016, Canadian Solar Solutions reoriented toward supporting our investments in other markets.

This included the United States, where we focused our limited U.S. imports from Canada on meeting unsatisfied U.S. demand for utility scale solar. For this reason we have not historically competed in the U.S. market with the Petitioners.

Over the past year we have substantially scaled back our Guelph operations due to the high Canadian production costs and we do not foresee this changing. Indeed in September, 2016 the Guelph plant terminated 130 production-related employees and the facility is shifting toward research and development. Thank you for the opportunity to speak with you.

STATEMENT OF CRAIG LEWIS

MR. LEWIS: Good afternoon Commission, my name is Craig Lewis and I am a partner with Hogan Lovells appearing
here today on behalf of the Canadian solar companies.

I would like to address two points with respect to the role of Canadian imports. First, it's vitally important that the Commission properly determine the scope of imports that are subject to any NAFTA-related exemption.

The United States, Canada and Mexico carefully negotiated the special safeguards provisions in NAFTA with a clear intention that goods originating from the respective countries would mutually benefit from the agreement's special safeguard provisions.

The terms of that agreement are now part of U.S. law and Suniva and SolarWorld cannot be permitted to nullify the benefits provided under the agreement through application of an inconsistent rule of origin.

Second, U.S. law clearly establishes not only that cells manufactured in Canada are Canadian origin but modules assembled in Canada with cells sourced outside of Canada are also Canadian origin for purposes of any safeguard proceeding.

As we described in detail in our pre-hearing Brief the NAFTA original and marketing rules establish that such modules are Canadian origin for all custom's purposes including global safeguard proceedings.

U.S. Customs and Border Protection rulings confirm this fact. The Canadian government in its
submission to the Commission has confirmed this fact,
SolarWorld concedes it in its pre-hearing Brief and Suniva
is now lobbying for amendments to the NAFTA rules to change
the result.

There could be no clearer admission that the law
as currently enforced does not support Suniva's claims on
origin. Thank you.

STATEMENT OF AARON HALL

MR. HALL: I am Aaron Hall, President of Borrego
Solar founded in 1980. Borrego Solar is one of the leading
U.S. companies providing engineering, procurement and
construction services, what is referred to as EPC services
for large-scale solar solutions.

Borrego Solar consistently ranks among the top
five largest providers of non-residential distributed
generation solar energy systems in the United States. That
makes Borrego Solar among the very largest solar module
customers for the commercial segment of the U.S. market.

Because the outcome of this trade case might have
significant adverse consequences for the market, I came to
Washington D.C. to participate in this hearing so that you,
the Commissioners, have the proper factual understanding of
the U.S. solar energy business when conducting your analysis
and rendering your determination.

I want to begin by reiterating an important fact
that you have heard before but bears repeating. The claim
by Suniva and SolarWorld that every single imported solar
module has an adverse effect on their operations is false.

It is completely false because for many customers
Suniva and SolarWorld cannot even attempt to compete for the
business because they are not qualified to do so. Suniva
and SolarWorld failed to meet our customer's qualification
standards and so cannot bid for our customer's business.

It is important to understand that for many
projects the decision as to which solar module supplier
should be chosen is often out of our hands. For many
projects our customer and their finance partners insist on
making the final decision about the solar panel supplier.

The reason is straightforward. Many of our
larger solar energy installation projects have long-term
owners who count on solar modules performing for twenty to
thirty years. It is in their financial interest to
understanding the long-term reliability and expected
performance of the modules and the system as a whole and the
ability of the supplier to perform on its contractual
obligations.

Accordingly, for many of these projects we have
to ask the supplier to provide documentation, mostly from
third party labs on expected performance of their solar
panels as well as information on their capacity, which can
be a risk factor for their ability to meet project schedule
delivery requirements.

What this means is that these larger customers
have their own list of approved solar module suppliers. I
have seen such lists for multiple larger customers. And
since I have started I have never seen SolarWorld's name or
Suniva's name on any of these lists.

In the eyes of these larger customers and their
finance partners, neither SolarWorld nor Suniva has ever had
the proper accommodation of technical specifications and
performance and supply capacity that these customers and
their financial partners demand.

Please understand that these customer and
investor generated supplier lists have nothing to do with
the unit price of the individual solar panel and rather
focus on the technical features and quality of the solar
panels and the overall reliability of the supplier.

And indeed, with our own customers, the final
unit price of the solar panel is only one part of a
complicated decision-making process that is undertaken when
deciding which solar technology and which supplier to choose
for the project.

Our customers are installing the solar energy
systems because they want to achieve long-term savings from
the solar energy. By definition, such long-term savings
incorporates total system performance. This analysis in turn depends on a host of factors including conversation efficiency, how much direct sunlight is converted to electricity, specific yield, how much electricity will be produced per kilowatt installed, module electrical degradation, including light induced integration and module physical size.

And for many of these important performance attributes the solar panels from Suniva and SolarWorld do not stand up to many of the imports. This is not just my opinion, in fact there are subjective third-party sources that evaluate these very types of performance metrics for different types of solar panels and those third party evaluation reports demonstrate that the solar panels offered by Suniva and SolarWorld simply do not have comparable performance results.

Most notably, their modules would be expected to produce less kilowatt hours per kilowatt installed. Consequently, in many cases, the project owners' independent engineers would therefore report lower production and lower financial benefit with these modules which means the price we can charge for our systems is reduced since the asset is worth less.

As I noted in my declaration that I provided as part of the KOPIA pre-hearing Brief, I echo some of the
frustration from some of the witnesses regarding their procurement experiences. In their business with us, SolarWorld failed to deliver on time, change the product we had ordered, did not communicate well throughout the process and failed to even attempt to mitigate any of the pain we the customer and our customers experienced as a result.

These issues seemed to be pervasive in the company culture and involved even their most senior management. As a result, we only consider working with SolarWorld when there is a customer mandate for American-made product.

In short, the real world experience of large commercial segment customers like Borrego Solar, disproves the claims of Suniva and SolarWorld that every solar panel is functionally equivalent to every other solar panel and therefore the unit price of the solar panel dictates the customer's purchase decision -- this is not how the market works. That concludes my statement, I look forward to questions.

STATEMENT OF JAMES DURLING

MR. DURLING: Good afternoon, my name is James Durling appearing today on behalf of KOPIA and its member companies. KOPIA wholly endorses the arguments made by the other Respondent parties. But with my testimony I would
like to address the novel issue of the Korea exclusion under
the KORUS FTA.

Although the Commission has never before
addressed the statutory provision, the language is quite
clear. The Commission must determine whether Korean imports
considered alone are themselves a substantial cause of
serious injury.

Notwithstanding SolarWorld's disingenuous
argument to the contrary, the statute unambiguously requires
the Commission to make this finding and report it to the
President. Note that Congress used the same substantial
cause standard that governs global safeguards.

The statutory definition of this key phrase shows
that substantial cause means a cause that is both important
and not less than any other cause, both parts of the test
must be met. But in this case Korean imports do not meet
either part of the standard.

At the outset I note that this analysis only
becomes necessary if the Commission has already made an
affirmative determination for global imports and I also
stress that we do not argue that other imports are in fact a
substantial cause of any injury, they are not.

Rather our point is that if it reaches the Korea
exclusion issue, the Commission must consider the Korean
imports relative to the imports from other countries to
determine if Korean imports are themselves a substantial cause.

The volume of Korean imports was not important. The volume and market share of Korean imports were modest throughout most of the period. The somewhat larger increase in 2016 can be explained by Korean imports that 1 -- went to the utility segment which the domestic industry has never competed; 2 -- represented a special technology that domestic producers could not offer and 3 -- consisted of 72 cells modules at a time the domestic industry was completely sold out of this particular product.

Together, these three factors accounted for over 95% of the volume gained by Korean imports in 2016. The prices of this limited volume of Korean imports were also not important. The average unit value of imports from Korea was consistently higher than other sources and Korean imports generally oversold domestic pricing.

Nor were the Korean imports they caused not less than any other cause. There were several other more important specific causes. Several of these causes were discussed earlier today, including the impact of bad business decisions by the domestic producers and factors other than global imports that largely explained the price declines.

But when considering Korea alone, the Commission
must also consider the role of imports from countries other than Korea. Korean imports are much less an important cause than imports from other countries from several perspectives.

First, the volume of Korean imports has been consistently much smaller than other imports. Second, the prices of Korean imports were higher than imports from other sources and the patterns of underselling were very different.

Third, we have submitted an economic model that quantifies the relative impact of Korean imports compared to imports from the rest of the world. Professor Edward Ballestere used an analytic frame more commonly used by the Commission to compare and quantify the relative impact of these two different import sources.

His baseline scenario shows the Korean imports represented only 8.5% of the total effect compared to imports from other countries. Professor Ballestere is here today to answer any questions about his report.

Finally, I note that in his testimony earlier today Dr. Kaplan misuses the Ballestere report. The Compass model in the Ballestere report did not seek to consider factors other than imports. That is what Professor Prusa did in his report.

Because Compass ignores all of the other factors besides imports, Compass cannot correctly measure the impact
of imports on the domestic industry. It exaggerates the
impact of imports.

The Ballestere reports only addressed the
relative contribution of Korean imports versus other
imports. Compass, the Compass model can appropriately
address that narrow issue -- an issue that Dr. Kaplan does
not address at all, thank you.

STATEMENT OF STEVE O'NEIL

MR. O'NEIL: Good evening Commissioners, my name
is Steve O'Neil, I'm from Montana but I am living in
Singapore where I am currently CEO of REC which standards
for Renewable Energy Corporation.

REC is actually one of the most experienced CSPV
companies in the world that was founded over 20 years ago in
Europe and we are well-known for our exceptional quality,
reliability and pioneering technologies.

We are the only PV manufacturer in Singapore and
so today I'll save you time and it is my pleasure to
represent not just REC but also the nation of Singapore
which is a small, but vital, U.S. trading partner.

Our company is a member of SEIA and we endorse
their arguments, however should you rule against SEIA the
U.S. Singapore FTA requires that the Commission make a
separate finding for Singapore.

I'll explain three special reasons why Singapore
should be exempted. Firstly, Singapore is the only CSPV exporter with whom the U.S. enjoys a consistent trade surplus in favor of America.

America's trade surplus on goods and services with Singapore was close to 20 billion dollars last year. This supports 215,000 American jobs across many industry sectors. Singapore consistently ranks as the number one nation in ease of doing business.

The unique U.S. Singapore Free Trade Agreement has not only the highest standards of IP protection which safeguards U.S. patents, manufacturing and innovation, but also strong and enforceable labor standards and environmental commitments.

Secondly, Singapore and REC provide niche high performance multi-crystalline PV products not offered by the domestic industry. By our account Singapore has a small U.S. market share of less than 4% and this share has been declining since 2015.

Our products are sold at a price premium and we supply to market segments not served by the domestic industry.

Thirdly, Singapore does not pose a circumvention risk because of Singapore's very small size, high costs and strict U.S. customs enforcement. RAC's decision in 2008 to move from Europe to Singapore was a complex two-year, 1.8
billion dollar investment.

    REC products are wholly made in Singapore in
highly automated, integrated wafer cell module operation
running at near full capacity utilization. Today it would
be nearly impossible for a new CSPV producer to transplant
production to Singapore.

    Singapore is a steadfast and reliable partner to
the U.S. and I urge the Commission to examine imports from
Singapore alone in their proper context. Thank you for your
time.

STATEMENT OF SPENCER GRIFFITH

    MR. GRIFFITH: Good afternoon, my name is Spencer
Griffith of the law firm Akin Gump. I'm here today on
behalf of the Chinese Chamber of Commerce. The Chamber's
members include a wide range of producers of solar cells and
modules in China.

    As an initial matter, Suniva's Petition in this
case is an outrageous misuse of trade laws. One of Suniva's
creditors who is financing this Petition sent a letter to
CCME offering to cut off financing for this trade case and
thus have the case terminated in exchange for CCME members
purchasing about 50 million dollars' worth of equipment from
Suniva that secured that creditor's investments.

    The U.S. trade laws are not designed or intended
to allow private parties to file a case in order to
financially benefit themselves.

Turning to the threat analysis -- the testimony that you have heard today from this expert panel of witnesses confirms that imports do not threaten to be a substantial cause of serious injury. The segmentation of the market, Petitioner's various missteps, and numerous other factors that Dr. Prusa and others have testified to including technological advancements and grid parity that are more important causes of injury than imports, all apply equally to this Commission's threat analysis as well.

In addition however, both the U.S. and global markets for solar have been and are projected to continue to grow strongly. Both GTM and the U.S. DOE project that the U.S. market will continue to grow strongly in future years and Petitioners here today have said the same thing.

Moreover, the record shows that demand globally is likewise projected to grow strongly, a point that Petitioners also agree with. The DOE estimates, for example, that global installations will continue to grow massively to up between 69 and 109 gigawatts annually by 2020.

Likewise, both the Chinese and Indian markets, which along with the U.S. are now the three largest markets in the world, are also projected to grow massively. The Chinese government target for example for 2020 is over 100
gigawatts and given current market expectations that target
is likely to be reached even sooner than 2020.

The Indian market is likewise expected to
continue to boom. The Indian government plans to have 100
gigawatts installed by 2022. In addition, imports from
China into the U.S. have been and will continue to be
constrained by the U.S. Solar 1 and Solar 2 Orders in place
against China.

The imposition of those Orders resulted in a
decline in the volume of Chinese imports entering the U.S.
and those imports are projected to plummet in 2017 and 2018
thus constraining future import volumes.

Finally, the third country trade remedy orders in
place against Chinese exports will not result in a diversion
of exports to the U.S. The EU Orders are currently subject
to an interim review by the Commission -- the European
Commission. That is expected to phase out those measures
over time.

Also, the EU Orders have been in place for some
time now, some years which means the markets have already
adjusted to the presence of those Orders.

Similarly, while a new Petition was filed
recently by India against Chinese exports, previous Indian
solar Petitions have been dismissed and given that the
Indian government plans to massively expand solar power by
2022, it is likely that this new Indian investigation will likewise not result in the imposition of duties.

In short, imports do not pose a clearly imminent threat to be a substantial cause of serious injury, thank you.

STATEMENT OF DEEP PATEL

MR. PATEL: Let it Shine, a book written by John Perlin, documents the 6,000 year story of solar energy. The book shows how today's solar revolution builds on the efforts of countless generations of innovators such as Albert Einstein, who received a Nobel Peace Prize for the photo-electric effect.

In 1931 Thomas Edison said, "I'd put my money on the sun and solar energy. What a source of power." Bell Labs in 1954 created the first silicon solar cell with the vision that silicon solar cells could eventually power the entire world.

We stand here today on the heels of a rapidly growing world-wide movement and a rich 6,000 year old history to power our lives with sunshine. The decisions made in this case is either going to keep affordable solar in the hands of the people or stifle the energy of the sun.

Hi, my name is Deep Patel. I'm the Founder and CEO of GigaWatt, a solar company I started out of my parent's garage in 2006 and grew it into a company that
employs 25 people. I'm a small business owner and there are
small business owners just like myself referred to by
industry analysts as the long-tail, a vast array of
thousands of small solar companies across the nation.

Collectively we employ a majority of the people
working in the solar industry and have an intimate
relationship with the people and the customers that are
deciding to install solar panels on their homes, businesses,
churches and schools.

Over the last ten years in this industry, sitting
at the kitchen table with my customers, I have learned a lot
of how and why people buy solar. What I have concluded is a
decision to go solar is like any other investment. The
numbers have to make financial sense.

In my pre-hearing Brief I show how the Electric
Utility Lobby in 2006 stepped up their campaign to slow down
distributed solar power across the country by changing net
metering policies and implementing unfair rate structures
designed to diminish the financial benefits of investing in
a rooftop solar system.

These policy changes have injured the entire
distributed solar industry. In conclusion, adding tariffs
to solar cells and modules will be like adding salt to a
wound to the distributed solar industry which has already
been damaged by utility net metering policy changes and
unfair rate structures.

It is estimated that up to 80,000 American jobs will be jeopardized and we would be going against the advice of a great inventor, Thomas Edison, by not putting our money on the sun and solar energy. Thank you.

MR. NICELY: Madam Chairman that concludes our presentation.

MR. BISHOP: Madam Chairman we still have a non-party in opposition to the Petition. Miss Wu would you please come forward? This is Jio Wu, Director of International Business Development with PT Sky Energy Indonesia. Miss Wu, you have three minutes for your testimony.

STATEMENT OF JIO WU

MS. WU: Okay. So good afternoon, my name is Jio Wu from PT Sky Energy Indonesia. I'm here on behalf of my company to clarify that the exports of Sky Energy Indonesia to America do not jeopardize the profit of any other U.S. PV producers.

Here come the reasons. The first -- the market share of Sky Energy in the U.S. is not big enough to be considered as competitors of U.S. PV producers. In 2016 the share above value of Sky Energy export to the U.S. was just 0.02 percent. Why it was just 0.01% in 2015 comparing to the world export to the U.S.
And by the volume the percentage was even much smaller -- less than 0.0001% in 2015. Why it was 0.0002% in 2016. Why back to 2014 the export of Sky Energy to the U.S. is just 0.

The second, the price of solar module we export from Sky Energy to the U.S. is averaged really higher than the price recommended by Suniva in their Petition under Section 201.

The third, the modules that Sky Energy export to the U.S. mainly are small size modules, below 200. It's just such as 5 watt, 10 watt, 100 watt, et cetera -- not like those big PV producer which focus on big modules. They mainly produce from 260 watt to 340 watt.

And the fourth, the client base of Sky Energy and those cells, the big PV producers in the U.S. are not the same. Sky Energy's end users are mainly in such individual users as the golf cart, the boat, vehicle, camping, and hunting to name just a few.

While all the others such as Suniva are on residential rooftop, commercial buildings, government project and utility? It is quite evident that we can tell although we are both in PV industry, we are respectively in different markets. In other words we are not a competitor at all.

The fifth, Sky Energy not only exports products
to the U.S. but we also import piles of materials and products from the U.S. companies. For instance, the solar cells of the flexible modules we make are from Sun Power which is one of the biggest and the most famous PV companies in the U.S. And another product is the solar charge controller -- that is from Focus which is also a very strong brand too in the U.S.

Sky Energy also produces their products throughout Indonesia based on a formation, the clarification we would like to propose the United States International Trade Commission to exclude Indonesia in general and especially exclude PT Sky Energy from any necessity of investigations. Thank you very much for your time, thank you.

MR. BISHOP: Madam Chairman that concludes direct testimony from this panel.

CHAIRMAN SCHMIDTLEIN: Alright thank you very much. I would like to thank all of the witnesses for being here today. And this afternoon we will start with Commissioner Broadbent.

COMMISSIONER BROADBENT: Thank you Chairman Schmidtlein. Yeah, this is a great showing of participation. I want to congratulate you all for being very organized and team focused. I think that the presentation worked really well.
Mr. Nicely, I may direct some of my questions to you and then you can indicate the folks in your group that may want to respond.

MR. NICELY: Thank you.

COMMISSIONER BROADBENT: First of all on the definition of domestic industry -- would it be appropriate for the Commission to include the stand-alone module assembly facilities within the domestic industry producing cells, whether or not further assembled?

MR. NICELY: Thank you Commissioner Broadbent.

In our view it doesn't matter one way or the other. We think that we have shown no matter how you look at the industry, if you consider what Jim Dougan presented to you, we were able to show you that there is no serious injury and that imports are not a substantial cause of any injury that you might find.

I would point out, however, that there is an obvious disconnect in what the Petitioners have presented, which is they want to make what is relevant here -- modules that are made from U.S. cells and yet they consider as part of the industry, module producers that depend upon imported cells.

Their position on this is internally inconsistent so it is something I think the Commission should consider but I don't think it has an impact on ultimately on how you
rule for us.

COMMISSIONER BROADBENT: Okay thank you. What accounts for the substantial number of module assemblers leaving the U.S. industry over the period of investigation?

MR. NICELY: Well you know, there are about 40 companies listed on that map that they presented to you. About half of them are not cell or module producers as they say, if you read their footnotes carefully.

So just to think about that for a moment and just to take advantage of your question to talk about something that they presented to you -- there are about 40,000 manufacturing jobs -- solar manufacturing jobs in the United States.

The cell and module manufacturing portion of that is relatively small. The data on the record is confidential so I can't share it with you but you can see early on in the pages of our Brief that it is a relatively small percentage of that 40 -- about 40,000 manufacturing jobs.

Manufacturing jobs in the United States are -- I think Commissioner Williamson asked earlier today what are all of those types of manufacturing jobs in the solar space -- I've got a lengthy list that we can put in our post-hearing Brief to show you.

But the racking systems, the tracking systems that Dan Shugar talked about -- there's upstream and
downstream manufacturing. But the point is -- but getting
to your question about cell and module producers, there are
a variety of reasons. We can't detail them all here.

The Petitioners have tried to make it out that it
is all because of imports. I'll suggest to you that in fact
given that there are a number of independent module
producers, that some of them have gone out of business
because of the anti-dumping and countervailing duty cases
against China and Taiwan, so that's again related to your
first question about the impact that this case has and how
you should look at that part of the industry.

But to detail for you every single case, every
single company I wouldn't be able to do that here. I am
happy to have anybody else who has any information on that
talk about it but it would be a company by company analysis.

And I think as you can tell from much of what we
have talked about, all the industry witnesses have talked
about today, there are many instances in a high tech
industry in which companies bet on the wrong technology and
they pour a lot of money and invest a lot of money into
technology that doesn't work out.

To then turn around and blame that on imports is
a bit of a stretch.

MR. POCHTARUK: Commissioner, excuse me, my name
is Martin Pochtaruk with Heliene. There's one on the list
in Minnesota by the name of Silicon Energy. They didn't go bankrupt, actually decided to wind down due to being only reliant on both Washington and Minnesota related state programs that have disappeared since.

We took that factory so that the employees were not lost and the factory is still operating.

MR. STOEL: And Commissioner Broadbent this is Jonathan Stoel from Hogan -- you heard this morning testimony from bipartisan senators from Minnesota arguing this exact point and talking about the specific facts related to Mr. Pochtaruk's investment here in the United States.

MR. DOUGAN: Commissioner Broadbent, to add on to something that Mr. Nicely said -- this is Jim Dougan from ECS, you know the Petitioners have sort of -- have a somewhat elastic definition of the industry and broaden it when it suits them to include these companies that have gone out of business or have supposedly been affected by imports. They claim in their Brief that a total of 4,800 jobs in the solar sector are lost due to these various bankruptcies and so on. 3,500 of those are in related solar technologies so not subject merchandise.

But if that is fair game to talk about I think we need to talk about the broader net growth in solar manufacturing jobs in this country. So yes, there have been
companies that have gone out of business. Maybe if they bet on bad technology, maybe they were overly reliant on particular regulatory or subsidies but between 2012 and 2016 solar manufacturing jobs at large, including all the upstream and downstream increased from 29,742 to 38,121. That's a net gain of 8,400 jobs or about a 28% growth. So if they are going to talk about the jobs that were lost for whatever reason I think we have to talk about there has been a net gain in this industry and that the statistics support that.

COMMISSIONER BROADBENT: When you say solar manufacturing -- how are you classifying the installers? Is that manufacturing or is that more of a service?

MR. NICELY: That would be considered a service. That's not part of our numbers but I will direct you to the Solar Foundation's report, the annual census that they do that is in our Brief. It is one of the exhibits, 6 or 7 I can't recall.

It details the number of jobs in each part of the solar chain -- manufacturing, installing, developing, sales, et cetera, et cetera.

MR. DOUGAN: Commissioner that's the source for the number that I just read out to you. So it is one of the first exhibits.

MR. WERNER: This is Tom Werner, I would add two
quick comments. One, insufficiently differentiated and
secondly, lack of scale.

COMMISSIONER BROADBENT: Okay, thank you very
much. Can I get some descriptions of the bidding process
for utility project? Is the bidding process in a utility
market any different than sales to the residential,
commercial markets?

MR. CORNELIUS: Sure, glad to speak to that and
in fact I think you will hear some differences from how you
have seen that process described this morning. Typically,
we specify the designs of a module that is required for a
utility solar project some three years in advance of its
starting construction.

That's often required for a combination of
purposes, one of those being the designs of the facilities
to support their applications to interconnect to the grid
and also for purposes of obtaining the permits that are
required to construct these facilities.

So as long as three years before you would
commence construction in many situations we need to have a
fairly specific view of what types of solar panels we would
employ. As we get closer to construction, approximately 12
months from construction start we commence a request for
proposals for supply.

That timetable is customarily set for the needs
to be able to prepare issue for permit drawings and to obtain financings for those projects. Six months usually is the absolute latest point before the start of construction where we can make a selection of a module. And as an example in June of this year we ordered modules for projects we will commence construction on in February of 2018. Incidentally, pricing for our utility projects is never the same if they are procured at the same time as a distributed solar project so another contention that you had heard this morning was that utility solar prices and distributed solar prices are indistinguishable. And I can also state and share data to substantiate this that the pricing that we obtain when we are in contemporaneous requests for proposals for both, utility solar and distributed solar applications -- results in different prices for those modules even if they follow the same 72 cell form factor. Lastly, to speak to some of the statements made by the Petitioners around their readiness to supply 72 cell modules for purposes of utility applications -- because of the timeline that I have described and our scale requirements which require us to procure modules at significant scale for projects that customarily reach 200 megawatts of scale or more, do not allow us to consider
suppliers for whom the supply they provide represents a significant percentage of their supply -- and that's a critical determinant of the vendors who we consider when we issue an RFP.

MR. HAUBENSTOCK: Arthur Haubenstock with 8minutenergy, just adding quickly. We are the entities that run the RFO's for procurement of utility scale cells when we are doing our utility scale projects although our contractors who actually build the projects, the EPC's, engineering, procurement, and construction projects are the ones who enter into the contracts.

We determine the RFO terms, we determine the terms of the contracts -- we pass those contracts on to our APC's. We have a screening process that we go through before we even begin to consider price. That includes quality -- that includes bankability -- that includes the capacity factor that Craig Cornelius just referred to -- those factors have all eliminated Suniva and SolarWorld from consideration before we begin to consider price.

CHAIRMAN BROADBENT: Okay thank you, my time has expired.

CHAIRMAN SCHMIDTLEIN: Okay thank you. Let me just follow-up on that just so that I can have a little bit of context. So can you give me an idea for NRG Energy how much of the market do you have with regard to the utility
projects here in the United States? Are you a big company?

MR. CORNELIUS: Yes, we have the largest portfolio of utility's solar projects in the United States today. So last year we interconnected approximately at least 750 megawatts worth of gross capacity that we now own.

CHAIRMAN SCHMIDTLEIN: In 2016?

MR. CORNELIUS: In 2016.

CHAIRMAN SCHMIDTLEIN: So can you give me a rough idea of what the percentage of the total number of projects that was in 2016, just to put it into context?

MR. CORNELIUS: The total number of discreet individual sites that made up that 740 megawatts?

CHAIRMAN SCHMIDTLEIN: I guess or you could do it on the basis of energy like you are doing, however you want to do it so that your projects present -- I would be interested in both numbers actually.

MR. CORNELIUS: Understood. Most commonly when we talk about the utility solar segment for example, we are talking about projects that are larger than 20 megawatts in size. So of the 740 megawatts that I quoted from last year one block of projects was itself in excess of 500 megawatts in gross capacity.

So and then say for example for our last major module procurement that we conducted at the end of last year, it was a 200 megawatt module order which itself is
somewhat instructive when we speak about what the causes for
price deflation are and I would be glad to get into it at a
later time.

CHAIRMAN SCHMIDTLEIN: But can you give me an
idea just overall -- maybe Mr. Nicely you have an idea,
overall in 2016 how much was installed by utilities in the
United States?

MR. CORNELIUS: So 10 gigawatts roughly speaking.

CHAIRMAN SCHMIDTLEIN: Total?

MR. CORNELIUS: Of total utility solar
installations completed last year.

CHAIRMAN SCHMIDTLEIN: Okay.

MR. CORNELIUS: Of about 15 gigawatts worth of
total projects completed. And I suspect though I am not
familiar with these exact numbers, that of those 10
gigawatts the vast majority of those were in projects that
were larger than 20 megawatts each.

CHAIRMAN SCHMIDTLEIN: Okay.

MR. CORNELIUS: And that's an important
distinction because part of what we have heard today is a
contention from the Petitioners that they were crowded out
of the utility solar market even as we have heard from one
of them that they were not qualified for large-scale
projects.

So if large-scale projects made up the bulk of
that 10 gigawatts and they themselves were in position to be
able to supply a large project like a 200 megawatt project,
then they weren't crowded out, they simply weren't in a
position to be able to supply those projects at all.

CHAIRMAN SCHMIDTLEIN: Right.

MS. GRACE: This is Amy Grace from EF. Last year
it was 10 gigawatts was the utility scale, 80 to 85% of that
was larger than 20 megawatts.

CHAIRMAN SCHMIDTLEIN: 80 to 85% you say, okay.

And in your experience when those projects are bid are they
asking specifically for a multi-crystalline or
mono-crystalline module?

MR. CORNELIUS: When we bid or play the role that
we play in the value chain typically we are offering a price
to an end-use customer such as a utility or a commercial
company. And when we do our design and estimating work, we
make assumptions about the most likely project design that
we could employ to meet that price.

And we do take into consideration individual site
characteristics. In some instances it can be supplied by
multi-crystalline silicone panels. In other instances they
cannot. So for example in the case of the 200 megawatt
project that I decided from the end of last year -- that
project really could only have been built at prevailing
capabilities with either a mono-crystalline silicon solution
or a thin film solution.

And in point of fact, despite claims to the contrary from the Petitioners we actually had a hard time finding the required availability of the mono-crystalline and silicon panels that were required to build that project and so we build it with thin film modules.

CHAIRMAN SCHMIDTLEIN: Okay so it comes down to price. They are not demanding a mono versus a multi-crystalline?

MR. CORNELIUS: Do you mean the end use customer?

CHAIRMAN SCHMIDTLEIN: Right.

MR. CORNELIUS: Who we sell power to?

CHAIRMAN SCHMIDTLEIN: Right.

MR. CORNELIUS: No for them it is a delivered reliability and price question together.

CHAIRMAN SCHMIDTLEIN: Right.

MR. CORNELIUS: And there are particular construction methods and site characteristics that will allow for some projects to be built with either mono-crystalline and silicon or multi-crystalline silicon and thin film products.

And in some instances, projects can't be built with one of those products based on available land or other characteristics. But something that is important to those customers is the reliability of supply.
CHAIRMAN SCHMIDTLEIN: Right.

MR. CORNELIUS: And for us when we make a purchase decision we do so expecting to operate a plant for 35 years.

CHAIRMAN SCHMIDTLEIN: Right.

MR. CORNELIUS: And the performance characteristics over time are a very significant consideration which I think Tom will want to address.

MR. WERNER: Yes if I could just comment.

CHAIRMAN SCHMIDTLEIN: Sure.

MR. WERNER: This is Tom Werner. So we have done cumulatively 2.2 gigawatts of utility scale solar in America. The financiers are the people --

CHAIRMAN SCHMIDTLEIN: And can you just remind me what exactly Sun Power does. I find it would be helpful when we talk about -- I would like to understand exactly what --

MR. WERNER: Absolutely.

CHAIRMAN SCHMIDTLEIN: Because I understand there are different services that are being offered and so forth so.

MR. WERNER: We make the solar cell. We make the module. We design in some cases, make the balance of system. In many cases we install and we do post-sales support, residential, commercial and utility scale.
CHAIRMAN SCHMIDTLEIN: So where are your facilities?

MR. WERNER: We have 1,000 people in America. We do research and development headquartered in Silicon Valley. We have offices all over America, Austin, Los Angeles and then throughout the world.

CHAIRMAN SCHMIDTLEIN: And so are you manufacturing cells and modules here then?

MR. WERNER: We make a small amount of cells in Silicon Valley. We just opened a 25 million dollar R&D facility that we can scale to megawatts and we make the majority overseas.

CHAIRMAN SCHMIDTLEIN: And so where do you make most of yours?

MR. WERNER: Malaysia and the Philippines.

CHAIRMAN SCHMIDTLEIN: Malaysia and the Philippines and has that always been the case or is that recent?

MR. WERNER: Originally the Philippines -- no. We started in the Philippines in 2004 and we added Malaysia in 2008.

CHAIRMAN SCHMIDTLEIN: Okay.

MR. WERNER: So you know on a utility scale the price that we are talking about is price per kilowatt hour which is the price of energy over the life of the system.
So the system is usually a 25 year life, sometimes 30 or 35 depending on the technology.

So the technology makes a huge difference because the level of degradation of the energy production over the life of the system varies by technology. Generally speaking, mono-crystalline and silicon based solar cells like Sun Power degrade less so therefore you produce more energy cumulatively over the life of the system.

Typically you get a higher terminal value for mono-crystalline as well at the end of the life of the system so the counterparty is sophisticated and they are modeling not just the original price but the cost of the energy over 25 years.

CHAIRMAN SCHMIDTLEIN: So if I'm hearing you correctly, the mono is a preferable module?

MR. WERNER: Yeah, and it wouldn't be -- I can explain why for two reasons. Monocrystalline is what it suggests. It's a single crystal. Multicrystalline is cast and therefore has grain boundaries, therefore, is less efficient, meaning it turns less photons into electrons.

 Secondly, monocrystalline tends to break less in the field. So you can imagine in the field, you have all kinds of temperature extremes. You have weather extremes. If a solar cell breaks in a multicrystalline case, you lose energy.
So monocrystalline is preferable from a reliability standpoint over time. To that, you can add the architecture of the solar cell, which is unique in the case of SunPower. The point being that the technology matters a lot for the price of energy. And I can tell you that all the utility buyers buy on cost of energy. Not a single one is modeling just an upfront cost.

CHAIRMAN SCHMIDTLEIN: Right.

MR. CORNELIUS: If I might just add one last point to what Tom had shared. Not all monocrystalline silicon solar cells are created equal. So, for example, there are a variety of new process techniques that are employed and are innovated every year that are enabled in some cases uniquely by what manufacturing tooling people have on factory floors. And for customers like us, when we make selection choices amongst module vendors, we go deep into the exact process technology they're employing as a basis for forecasting how much electricity those panels will produce over their life.

And even within the category of monocrystalline silicon cells, to give you an example in the case of the procurement I described last year, there was a 2 cents per watt difference that we were willing to pay for two otherwise similar 72 cell monocrystalline silicon panels. And the difference between those was our expectation of how
they would perform over time.

The petitioners for a variety of reasons did not
make investments of the kind that would have distinguished
their solar cells as the kind more likely to perform better
over time. And that is another consideration for companies
like ours when we make long term procurement choices.

MR. HAUBENSTOCK: Arthur Haubenstock with
8minuteenergy. Just real quickly to explain why it is so
important that that cost of energy, that's how we get paid.
We get paid according to how much energy our products
produce. And so, when we purchase cells or modules, we are
looking for how much money we are going to make over the
lifetime of the project.

CHAIRMAN SCHMIDTLEIN: Right. So you heard them
this morning state that in their view, the price of multi
and mono affect each other. Given what I've heard just now
in terms of how these things are priced out, would you agree
with that? In other words, if they're competing with -- if
they're not being demanded a particular type, but it's all
based on cost, aren't they competing with each other? And
therefore wouldn't the price affect one versus the other, I
mean, each other?

MR. WERNER: Sorry, I'll start. Tom Werner. In
the utility scale market, sticking with that, you do compete
on cost of energy. And quality and reliability have a big
deal in terms of cost of energy, because of degradation, lifetime of the system are two huge variables.

And so, yes, when the utility customer is doing the calculation of cost of energy, which they typically do independently, they will determine what factors they want to put into their models, and that will depend on the technology as Craig just said. And yes, that will depend on whether it's multi or mono in many cases.

CHAIRMAN SCHMIDTLEIN: Because you could have a bidder basing its bid on mono and another bidder basing its bid on multi for the same job, correct?

MR. WERNER: Yes. And yeah.

CHAIRMAN SCHMIDTLEIN: Right?

MR. WERNER: And I should point out at the same time, and almost more importantly, a bigger part of the cost is balance of system and installation. And so, you can also differentiate on more cost effective balance of system, lower cost mounting structures, lower cost electronics, lower cost cabling. You know, SunPower -- often cells to modules to complete solutions, because you can't -- if you stay -- don't innovate, if you just try to compete in one place, you're insufficiently innovating across an entire value chain. And so, other factors like balance of system, cost of capital, speed of install, how soon you get energy, there's a lot of other factors. But yes is the answer to
your question.

CHAIRMAN SCHMIDTLEIN: Okay, all right, my time has expired. So we will move to Vice Chairman Johanson.

VICE CHAIRMAN JOHANSON: Thank you, Chairman Schmidtlein. And I would like to thank you all of you for being here today. I know that the hour's late and we have a ways to go, but it really is very helpful for us to hear from you all. And I have to say the subject is inherently very interesting, which makes it easier at least for me to stay here late into the evening.

What are we to make of all the domestic plant closings since 2012? And a list of these plant closings can be seen in the staff report at Table III-3. This seem -- this list seems rather long. What does this tell us about the state of the domestic industry?

MR. SHUGAR: Dan Shugar from NEXTracker. If I could jump in here for a sec. When solar got hot, there was a lot of VC investment of venture capital investment in new technologies. It was really interesting. I'd be at the breakfast table every morning and my wife would say, "Hey, look at this solar company that just started and look at that company." And I kept saying like, "They'll be gone in a few years, they'll be gone, they'll be gone, they'll be gone." She's like, "Why are you so negative?"

Now I've been in the industry since 1988. And I
said, "Because that investment happened from a VC that wasn't really calibrated. It's a new module technology."

Some make it and I support ongoing R&D and new ways to make solar, but I -- we work in Fremont is our headquarters for NEXTracker. A lot of these companies were all around us. The ecosystem, I've seen the product. So there were a lot of really not fully qualified companies that got started.

As Tom Werner mentioned a few minutes ago, the predominant reason we saw the failures is you didn't have scale with a lot of these companies, where they came in. A lot were start-ups and new ideas, which should be, you know, which is a good thing, but you didn't have, you know, large companies making big sustained investments to getting their products fully qualified, getting their pipelines developed as Craig Cornelius from NRG mentioned, so that they would develop a long term sales funnel.

VICE CHAIRMAN JOHANSON: Yes, thanks -- thank you, Mr. Shugar. You mentioned that there has been -- basically a winnowing down of the domestic industry for different market reasons, but what about some of the competitors of the domestic industry? Let's state such as in China. I believe that the petitioners this morning contended that there has not been such a narrowing of producers in China. Would anyone like to respond to that?

MR. CORNELIUS: In point of fact, I'm not sure
that that's actually true. You know, I think -- I'm by no
means an expert on the Chinese solar manufacturing complex.
I would imagine in your -- somebody from Bloomberg might be
able to speak more definitively to this, but what I've seen
over 10 years' worth of evolution in the Chinese
manufacturing supply chain, including time when I've worked
here in the government and we'd had consultations with the
Chinese government there, has been a systematic effort by
the Chinese government at times to winnow producers whose
capacity was too low. And most recently, amongst the
incentive programs that the government has passed and
renewed in the last year, in the instance of one called the
top runner program, it has expressly incentivized higher
performing products that could only be made from new
technology manufacturing lines.

So whereas the picture that's painted is one of
significant total growth in manufacturing capacity in China,
I think what it misses is the fact that there has been
continuous change in the ownership of that manufacturing
capacity, that in some instances capacity that is aging and
is rarely run is quoted in those gross capacity figures, and
that the Chinese government has actually actively looked to
try to winnow its supply chain to only those most healthy
producers with the most advanced product.

MR. SHUGAR: Dan Shugar. Just to just provide
one way I like to describe the industry, which has been
helpful to people, is you can think of literally 10 or 12
years ago, it was where the automobile industry was when
Henry Ford started manufacturing model Ts. And so,
actually, there was vertical integration that happened then
between different aspects of the supply chain. And there
were many, many producers.

But what happened today, though, the industry's
at a real scale. And we're moving to scale like
continuously as one of the lowest cost ways to produce
energy. So what happened in the automobile industry is
over, you know, over that period of time, that there were
thousands of producers in the U.S., that then became, you
know, dozens of global producers.

And so, I think you can loosely say the solar
industry's gone through what the automobile industry has.
10 years ago, we sort of in the model T. And now, the --
there's a lot of ongoing consolidation.

MR. NICELY: Vice Chairman Johanson, could I
just add something, too, because -- you pointed to Table III-3,
right?

VICE CHAIRMAN JOHANSON: Correct.

MR. NICELY: And just going back to the U.S.
instead of your question about China, just to revisit it,
it's critical to note on this page the number of companies
who have opened since the beginning of the POI, not simply
to look at the number that have closed, right? And I think
this is part of Dan's point. It's a dynamic high tech
industry. Some close, because their technology didn't work
out. Others open because they have new ideas. So this
page is actually very interesting from an opening
perspective, not merely a closing perspective.

VICE CHAIRMAN JOHANSON: Thank you, Mr. Nicely.

Yes?

MR. FENSTER: Oh, I was -- this is Ed Fenster
from Sunrun. I was just going to quickly going to add also
because balance of system and labor and land costs are more
in the United States, you know, overall construction costs
here can be higher than they are internationally. And so,
many, if not most international manufacturers don't sell
product of the quality that is required for deployment in
the United States. And so, any analysis of like the
capacity of the market as relates to, you know, the utility
scale market in the U.S. or the residential market that we
participate in has to be cut for the sort of very high
quality manufacturers.

In other countries that have, you know, lower
labor costs as relates to the deployment and installation or
lower land costs, it might make more sense to purchase a
module, you know, that doesn't have the same quality
standards or in a country that has higher capital costs of 25 years from now powers of what is in the United States. So there are dynamics like that at play as well.

VICE CHAIRMAN JOHANSON: Do respondents agree with petitioners that there's overcapacity in the global market at this point in time?

MR. FENSTER: I mean, this is Ed Fenster from Sunrun again. You know, again, given the quality standards that, you know, we require in order to make money and function as a business, you know, if you were to ask a lot of the channel partners who we work with, so we have a lot of companies who build systems that we end up owning, and they do their own procurement.

For instance, there are many times in the cycle, now being an example, the end of 2015 being a particular example, where there were acute shortages that we might even had to have step in to help with at times. So I think, again, if you cut the market according to quality, you get a very different story.

MR. SHUGAR: And we operate in Brazil, Australia, India, Mexico. We're building the largest plant right now in the Western hemisphere in Mexico. 750 megawatt, one site. I disagree with the comment from one of the petitioners this morning where he said, you know, the contract's going to go to the lowest common or the lowest
People ask for best and final and then whoever has the lowest price wins. That's not what we're seeing. Pricing's actually increasing right now in India, where we've delivered over a gigawatt. It's, you know, it's a supply and demand dynamic.

The market's actually quite tight right now. Now it could change, but it changes -- it's very dynamic. So I support that comment Ed made.

MR. WERNER: Yeah, I can just verify as well, Tom Werner, that modules are in short supply. Now prices are either stabilizing or increasing. There are third party analysts, Bloomberg New Energy, PV Insights. And I bet we can provide post-hearing that publish. And you can see by third party analysts what pricing is doing. And in fact, we see stability or increasing prices, because of shortages.

MR. HALL: This is Aaron. I've been buying modules for 16 years now as well. So I think it's important to note a few things. One is that not all capacity is the same. Even if it was all fully utilized, which it is not, by the petitioners that they included, it's not the same because of the requirements that our customers have, at least in the commercial and the utility space, and even in the residential space, you have finance parties involved. You know, the quality matters. It's not easy for you to approve a new vendor, particularly an international player,
out of India or China or elsewhere.

You know, that was -- I had another point. I'll
come back.

MS. LUTZ: This is Jennifer Lutz with ECS. I
just wanted --

MR. HALL: Sorry, real quick.

MS. LUTZ: Oh, I'm sorry.

MR. HALL: The cyclical part was my point,
right? So as -- at the moment, yeah, there's a huge
shortage. We have contracts for volume, where they were
promised volume and we're not able to get that, last year
included. Some of our vendors told us, "Hey, can you take
less?"

So we call it the solar cycle. People who are
-- have been in the business for a long time and there are
booms and busts. And there are times where it's hard to get
product. And there are times when there is -- it's easier
to get product, more of a buyer's market, more of a seller's
market. It's probably more cyclical than most industries,
and that includes the point, the POI that we're discussing.

VICE CHAIRMAN JOHANSON: Is it more of a buyer's
market or a seller's market right now?

MR. HALL: At the moment, it is absolutely a
seller's market. The prices have been going quite high.
And as I mentioned, we as a buyer have contracted volumes.
And we can't -- we're fighting it tooth and nail to get our suppliers to honor what they've already promised in a contract. And we're being forced to pay more.

VICE CHAIRMAN JOHANSON: Okay, well, thank you for your responses. My time has expired.

MS. LUTZ: I just wanted to add one point, because I was listening to petitioner's testimony this morning about chronic global overcapacity. And if you look at slide 26 to the economist's presentation, in 2016, overcapacity is the lowest it's been over the period, both absolutely and as a percent of global installations. So this appears to be a problem that is getting better, not worse. And --

VICE CHAIRMAN JOHANSON: All right?

MR. GRIFFITH: Sorry, and Commissioner, Spencer Griffith of Akin Gump.

VICE CHAIRMAN JOHANSON: Yes, sorry, you're way back there. It took me a second to find you.

MR. GRIFFITH: Yeah. Yeah, one final point on this allegation of overcapacity. These capacity figures also have to be put in the context of the explosive growth in global demand that I mentioned in my remarks. Chinese market, Indian market both exploding in growth. And those growth projections are going out to 2020, 2022, et cetera. So you have to look at that growth and capacity in the
context of huge growth in demand worldwide. Thank you.

VICE CHAIRMAN JOHANSON: Petitioners contend that growth is highest in the United States. Would you contest that?

MR. GRIFFITH: I think we'll address that in post-hearing, but the growth in the Chinese and Indian markets between now and 2020 and 2022 is truly explosive.

VICE CHAIRMAN JOHANSON: Okay.

MR. GRIFFITH: And I think that would be higher than the United States.

MR. SHUGAR: All right, Dan Shugar, NEXTracker. No, the growth is not highest here. The market is big in the U.S.

VICE CHAIRMAN JOHANSON: Has it been highest here in the period of investigation?

MR. SHUGAR: It was really high toward the end of -- that was driven by the -- what was anticipated to be the expiration of the tax credit. So a lot of projects got sucked forward, but it's now for the last let's say year, this is not the highest growth market. The highest growth market by far are India, Australia, and Mexico.

VICE CHAIRMAN JOHANSON: All right. My time expired a while back, so I had better hand it over to Commissioner Williamson. Thanks for your responses, though.

COMMISSIONER WILLIAMSON: Thank you and I do
want to record appreciation to all the witnesses that -- for
coming in, presenting your testimony today.

    I kind of wish to continue that last discussion,
because I don't -- we didn't hear any of that this morning.
So you're saying that -- can you -- post-hearing, can you
document the data on where the markets are expanding? The
petitioners are also invited to offer any documentation,
because on the condition that the market is flat in these
other places. And if you all can provide some documentation
to substantiate this, you know, what is happening in terms
of in other markets.

    I'm going to ask kind of an open-ended question.
Also, I'm sorry, I also heard people were saying -- talking
about shortages are right now. Is that in the U.S. market?
MR. FENSTER: This is Ed Fenster from Sunrun.
Yes, for -- we definitely, particularly buyers trying to buy
in the spot market right now are seeing significant price
escalation and difficulty in supply from what we've heard in
the market.

MR. SHUGAR: And a number of our customers in
India, Dan Shugar from NEXTracker speaking, are having
trouble securing modules right now.

    COMMISSIONER WILLIAMSON: In India?
MR. SHUGAR: That's correct.

    COMMISSIONER WILLIAMSON: Okay.
MR. SHUGAR: Yeah.

COMMISSIONER WILLIAMSON: Well, let's get back to the U.S. market first off.

MR. SHUGAR: Sure.

COMMISSIONER WILLIAMSON: Okay, could we -- I ask petitioners this morning to sort of document what U.S. production there is going to be in 2017 in say in third and fourth quarter, given what they've been saying about how many companies are going out of business and the fact that petitioners are both in bankruptcy. I guess I'm going to ask you the same question in terms of documenting this shortage of tightness of the market. And I'd also be curious of what is the condition of domestic producers, what effect that might be having on the tightness? But if you could document that and how long is this tightness expected to last? And what, you know, what are the factors that might --

MR. DOUGAN: Chairman Williamson, Jim Dougan.

COMMISSIONER WILLIAMSON: Yeah.

MR. DOUGAN: If I can just -- and we will definitely do that, but I think one thing, you know, we're -- you're mentioning that is the reduced production of the domestic producers having an impact, but you know, you're hearing about tightness in the market from people who largely aren't buying from the domestic producers. So --
COMMISSIONER WILLIAMSON: Okay, then why is the market tight? What's going on?

MR. DOUGAN: Well, they -- we'll answer that together with their input --

COMMISSIONER WILLIAMSON: Okay.

MR. DOUGAN: -- at post-hearing.

COMMISSIONER WILLIAMSON: I was just trying to speculate to figure out what's going on.

MR. SHUGAR: What's going on is we've crossed this demand elasticity place where solar's like the cheapest stuff and it's also the lowest risk. So we're seeing the market exploding all over the world in places you wouldn't have thought of it. Honduras, you know, Peru, you know, Africa. We've got, you know, stuff going on all --

COMMISSIONER WILLIAMSON: Now understand, let's focus -- let's keep on the U.S. market at this point, other than to the extent that does say something about the availability of what's happening in other markets say anything about the supply that's going to be in the U.S. market or --

MR. HALL: Yeah, the point, I think, is that the suppliers are meeting all of the market demand globally. And therefore, meeting U.S. demand is also difficult. Does that answer your question? You asked about the U.S., why is it hard to get modules? And you don't want to talk about
the rest of the world, but the rest of the world is --

COMMISSIONER WILLIAMSON: Okay, no, to the extent that's relevant.

MR. HALL: Yes, yes, yeah.

COMMISSIONER WILLIAMSON: Okay, that's helpful.

MS. LUTZ: This is Jennifer Lutz. I think it suggests at least that the global overhanging capacity is not quite as big a deal as petitioners would have you believe.

COMMISSIONER WILLIAMSON: Okay, well, that's a fair point. Okay. Yeah, and so, yeah, substantiating that would be helpful there, too.

Second question, going back to, you know, how many companies have gone out of business. Mr. Nicely pointed out how many companies have gotten started. I was curious about all those that had gotten started, how many are still in business right now? Because the petitioners were talking is that there's practically nobody in the U.S. market. No domestic production really, much to speak of that's not threatened.

And related to that is the question that -- because you -- there have been a lot of, you know, points made about quality of domestic producers. Were any of those folks that went out of business or starting up now going to have the quality that folks want?
MR. FENSTER: Well, I think one --
COMMISSIONER WILLIAMSON: You know --
MR. FENSTER: -- residential perspective, you know, one of the recent people who are investing in production is Tesla. And I think that's a great example of Tom's earlier comment, where you know, they are working to innovate both on aesthetics, which are critical in the residential market, and on efficiency and to have a technologically and aesthetically competitive product that they expect to charge more for.

So I think there are examples like that. I think it's also the case to remember that the petitioners have defined the market to exclude companies like for Solar, which is a U.S. manufacturer, you know, which was in the S&P 500 during the period of investigation.

UNIDENTIFIED SPEAKER: Different point, just --
COMMISSIONER WILLIAMSON: On that point, they've -- explain that, please?
MR. NICELY: Meaning that thin film is not part of this --
COMMISSIONER WILLIAMSON: Okay.
MR. NICELY: -- part of this case.
COMMISSIONER WILLIAMSON: Fine, okay.
MR. NICELY: First Solar is a thin film producer --
COMMISSIONER WILLIAMSON: Okay.

MR. NICELY: -- that does quite well.

MR. SHUGAR: Tom Werner earlier mentioned scale. So when Tesla started doing this plant in Buffalo, New York, you know, they started at large scale. You know, they -- so they -- its scale is really important in getting cost down and being a meaningful producer.

COMMISSIONER WILLIAMSON: Okay. Anybody else on that?

MR. CORNELIUS: Well, I think --

COMMISSIONER WILLIAMSON: Mr. Cornelius, right?

MR. CORNELIUS: Yes, Mr. Cornelius from NRG, sorry. You know, I think when we prepare further analysis for post-hearing briefs, what you might see from us is that a larger number of the new companies that have been started in manufacturing or broadly speaking the number of companies that have been started in the solar industry generally from 2012 to today will be in other parts of the downstream industry, people who provide financing support, people who provide permitting support, people who fabricate components of tracking systems and foundations and the equipment that goes on rooftops, which as noted before, represent the vast majority of the total number of manufacturing jobs here in the United States anyway. And so, I suspect that if we look by total number, most of the new companies started have been
in that area more so than so in module companies that have started during this most recent period of time.

And I suppose that if our objective is to maximize the total number of durable domestic solar manufacturing jobs, that's a good news story, because they dramatically outnumber the total number of jobs that have historically existed in cell and module manufacturing.

MR. NICELY: Okay.

COMMISSIONER WILLIAMSON: Yeah.

MR. NICELY: Just to be clear, Commissioner Williamson, this page that Vice Chairman Johanson pointed out is a page that is focused on CSPV cells and modules. I think Craig's point is that, you know, as we've talked about earlier and during the day today, and we will continue to talk about, the number of manufacturing jobs outside of cells and modules is going -- expands, explodes with the growth in demand for solar.

COMMISSIONER WILLIAMSON: Manufacturing jobs?

MR. NICELY: Yes.

COMMISSIONER WILLIAMSON: We may --

MR. NICELY: I think you might have been out of the room when I mentioned this.

COMMISSIONER WILLIAMSON: Yeah. Yes, you said --

MR. NICELY: And --
COMMISSIONER WILLIAMSON: Yeah go ahead.

MR. NICELY: And I -- and we will give you a full list of all the types of manufacturing jobs, solar manufacturing jobs --

COMMISSIONER WILLIAMSON: Okay.

MR. NICELY: -- that are involved in this industry at large and why the number of manufacturing jobs that the petitioners, and they seem to give you the impression that they are solar manufacturing, when in fact, their percentage of total solar manufacturing is quite small. You have batteries, you have bolts, you have chemicals, you have control systems, you have BOS systems, you have glass, you have ingots, you have inverters, the list goes on and on. There are multiple -- and the racking systems and the tracking systems, as I mentioned, that's why we have Dan Shugar here. Tracking systems are a significant manufacturing -- manufactured product here in the United States.

So the point is there is a lot of production of other materials that go into solar here in the United States. In fact, 600 companies that we can tell you about, that are, you know, and only 40 or so are on that map that they talk about of companies that have closed.

COMMISSIONER WILLIAMSON: Okay. No, that's helpful. Thank you.
MR. PATEL: I'd like to add to that. So my name's Deep Patel from GigaWatt. And there's -- when you install a solar system, there's many, many components beyond the solar panels. There's many, many components beyond the solar panels that go into a solar electric system. It's comprised of hundreds of different little parts, right?

And there's one of our suppliers, they're named Quickmount PV. And they're the leading manufacturer of mounting equipment. And all residential systems need this mounting equipment. They're based out of Walnut Creek, California. They have 85 employees over there. And they're manufacturing these mounts.

And the content of these mounts are -- it's metal. It's all being sourced in the U.S. So there's a lot of other jobs other there beyond just making the panels that are, you know, further downstream that are being made by Americans right here. And a lot of that work is -- those -- there are people in workforce development that people have gotten a second chance to get, you know, retrained and get back into the job force. So --

COMMISSIONER WILLIAMSON: Okay.

MR. PATEL: -- there's many examples just like that.

COMMISSIONER WILLIAMSON: Okay. Thank you. My time is expired, so I'll -- thank you for those answers.
MR. LAMON: Mr. Williamson, if I could add just relative --

COMMISSIONER WILLIAMSON: Yeah.

MR. LAMON: -- to the labor side and the operators out there, I want to speak to them, because those are tens of thousands of jobs. My company alone has created 1,000 over the last three years. And those guys --

COMMISSIONER WILLIAMSON: By operators, you mean?

MR. LAMON: Of equipment out in the field. We're installing the forklift operators, the post driving guys, the racking type of guys that install using operated equipment.

COMMISSIONER WILLIAMSON: Okay.

MR. LAMON: Most all the labor's out there. I mean, to see some of these guys who -- and we try hard to get guys who need that upper end. As I mentioned, we're 27 percent veterans. I've also got guys from the inner city of Los Angeles. One just last week, you know, crying on the phone to me because he took his week off to close on his first home ever. He's been in the solar side now since, you know, 2010. Just one of those kind of guys that you love to embrace. That's what the solar side is doing for us out there by tens of thousands on the install side --

COMMISSIONER WILLIAMSON: Yeah, no, I --
MR. LAMON: -- in the markets.

COMMISSIONER WILLIAMSON: -- I appreciate the fact that we've created a new industry in this country. And that's -- okay, thank you.

COMMISSIONER BROADBENT: Can someone walk me through where the most technological innovation is going on right now? Where is most of the intellectual property being developed? Who's innovating the most and in what areas of the supply chain, that is going to be critical to the long-term sustainability of solar as it competes with other sources?

MR. WERNER: This is Tom Werner -- I'll take the first pass at it. So the solar industry has exploded in America. The FOREX in 2013-2016 as an example and what that's created is that in some states there's an inversion of load.

When the sun is shining there is excess electricity and so the integration of renewable energy -- low-cost renewable energy into the grid is a massive area of expansion in innovation. So it is the incorporation of software in storage, eventually demand management that is required as we look forward as the penetration of renewables goes out, there is massive opportunity in America in software, storage, in the grid integration and ancillary services.
And then one last quick comment -- in the commercial sector and in the residential sector of solar, the dominant costs for the customer acquisition cost -- and so there is a lot of really creative work being done on how to model and sell and deliver so that customers have access in a much more, much faster and much lower cost rate.

So those are grid integration broadly and customer acquisition costs are two huge areas of innovation.

MR. FENSTER: This is Ed Fenster from Sunrun and I might just add to the storage component. We are actually working with National Grid which is the largest multi-national utility on figuring out how to integrate storage into the grid. We are making great progress and I would point out that there are really only two capable manufacturers of lithium ion batteries that we can work with globally.

One of which is Tesla that operates, you know, from their Nevada factory. So it is also the case that power inversion technology which allows you to manage batteries and the power from the solar panel and the grid is seeing, you know, great advancements and certainly we are working hard to get our soft costs down as well as Tom mentioned.

But you know, in order to --

COMMISSIONER BROADBENT: Your soft costs, sorry?
MR. FENSTER: Oh sales and marketing, G&A, warehouse overhead, you know, capacity utilization for our own business and you know in order to make solar cost effective, everybody in the value chain has to pull their weight.

We need improvements from our cells, from our module manufacturers, from the inverter manufacturers, from the battery manufacturers, we are a racking company. We work on that, you know, everybody needs to innovate in order to be able to stay competitive with trends in electricity period.

MR. NICELY: And Commissioner Broadbent this is happening constantly for everyone and that's the critical piece of what Tom Prusa showed you today. If you look at -- and we can only talk about the module producers, but if you look at the cell producers it shows much the same thing, their costs declined exactly the way Mr. Swanson suggested they would over time.

And this industry that is complaining about and who brought this case, their costs went down in the same way. It is a global phenomenon that costs decline in this hi-tech industry. And so everybody is taking advantage of it. And it may not be happening with regard to polysilicon.

You heard a lot about polysilicon today but it's obviously happening with a lot of other costs because their
costs continuously have declined -- if you can go to the one that shows the -- which one is it? This one right, this is the U.S. module producers costs showing a decline that is even greater 14% almost 15% decline, even greater than the extent of the price declines.

And the price declines on average have been no different over the entire period of time that essentially 40 years that this has been studied.

COMMISSIONER BROADBENT: Okay just one small question. What is software storage -- I mean how does the software relate to the storage?

MR. WERNER: The way you store solar energy in a battery the battery performance varies significantly depending on how fast you store it, how fast you discharge it so you use software to do that.

Also, when you use the solar energy matters a lot so you can use software to determine when best to use the solar energy -- and I did want to add on innovation it is not to imply that there is not massive innovation happening in cell and module. In the cell we just opened a 25 million dollar FAB in Silicon Valley where we have upped the efficiency and reduced the number of steps so that we can have lower costs yet make more electricity.

And we are lowering the cost of the input raw material by using less of it, thinner wafers, thinner glass,
less aluminum on the edge, maybe not even aluminum -- we'll see. So there is still a lot of innovation going on in the upstream. It is just that you have to innovate because capitalism works.

MR. SHUGAR: To show the intersection of the innovation and the manufacturing are tied together to Commissioner Williamson's question -- just last week there was a big battery conference. We announced a product with Next Tracker called an X-fusion plus. We have a brand new battery technology called flow battery that is being made in the U.S., assembled in Freemont, California.

And it is only for putting together with solar systems so there is a whole new industry coming to because solar is now at the point where you can shift some of the energy off-peak so that is where a lot of innovation is happening with the software, the storage and the integration of the two.

MR. PRUSA: Commissioner Broadbent on this issue, because it relates to something that was said this morning that was very I think misrepresentative of what really happens and it relates to innovation.

This discussion that polysilicon went up price in 2016 but the price of modules went down and there seemed to be a real confusion this morning how those two things could happen simultaneously -- as we presented in our pre-hearing
Brief, the amount of polysilicon just within the last year that goes per wafer has gone down.

The efficiency of that wafer has gone up. So in fact, the cost of polysilicon per watt has gone down. Now if the Petitioners don't understand, that is the driving force then you have to be concerned about them.

If they focus on only the price of polysilicon and not all the other steps of improvement in this industry they are misrepresenting what is the cost reduction that is actually happening here.

COMMISSIONER BROADBENT: Okay, thank you. Okay SolarWorld suggested a variety of countries invested in CSPV capacity in response to the anti-dumping and countervailing duty orders on China and Taiwan. Do you agree that this was the reason?

Why did they invest in such capacity in countries that do not have a sizable home market demand for solar products? So they are talking about moving to Vietnam or Malaysia, Singapore with smaller demands.

MR. O'NEIL: This is Steve O'Neil from REC so let me respond to Singapore. We made our decision to invest in Singapore in 2008 well before any of these actions. And we chose Singapore because of its free trade status with the world. It has open access to all markets in Asia, in Europe and in the United States and of course the Singapore market
is tiny.

It is tinier than the area inside the beltway of Washington, D.C. so the market there is small. But we set up there because of the access to all global markets, your access to technology in the semi-conductor industry and the access to raw materials, the proximity to raw materials so that we could export around the world.

But all of these decisions were taken well before the ADCVD duties or any of those actions in the U.S. We took it for very economical reasons.

COMMISSIONER BROADBENT: I think on their circle diagram they are talking more about Malaysia and Vietnam.

MR. SIM: Yeah Commissioner I'm Edmund Sim, law counsel to REC Solar. If you go back to Dr. Kaplan's little dove step between 2012 and 2016 where he went back and forth, back and forth, back and forth, back and forth -- the Singapore dot was small in both slides.

COMMISSIONER BROADBENT: Right.

MR. SIM: And more importantly the Singapore dot was green on both slides and that means that there was no new capacity. So I think you know, as Steve has said, you know, this client, this company pre-dated all the dumping cases.

COMMISSIONER BROADBENT: Yeah I got it.

MR. SIM: The capacity is there, we are not the
MR. WERNER: This is Tom Werner again. There is significant price elasticity. There are sophisticated buyers of electricity. It is well-known what the cost of electricity is and so-called grid parity drives significant upside to demand. And then you pursue that with diversification -- you don't want to be overly exposed to one place of manufacturer.

We have multiple places where we make modules and we have those sites compete and then share best practices and I think that's part of what you are seeing here.

COMMISSIONER BROADBENT: Okay are you planning to make any cells in the U.S.? You do R&D, but then you make them overseas?

MR. WERNER: Yeah well when we say we do R&D we do manufacture cells now in the United States. Our latest generation -- it is harder efficiency and uses less material and less steps. We make it in small scale manufacturing but yes we make that in Silicon Valley.

In terms of longer term plans we are always looking at our options.

COMMISSIONER BROADBENT: Okay thank you very much.

CHAIRMAN SCHMIDTLEIN: Alright I sort of think we haven't talked about this yet or at least during the
questioning -- when I look at the pricing data and I listen
to the testimony with regard to the quality and reliability
problems and perhaps the technology used in the
mono-crystalline module how that can differ and so forth.

So my question is why when we look at product 5
-- and I know you don't have access to all of the
confidential information but product 5 is the 72 cell
mono-crystalline silicone module with peak power wattage
between 300 watts to 350, we see consistent underselling by
the foreign product.

And so if the U.S. product -- if there are supply
constraints, there's quality problems, you know they are not
certified, they are not bankable, they are not -- the
lenders don't like, why are the imports consistently
underselling -- especially in a market that we see demand
sky-rocketing?

MR. DOUGAN: This is Jim Dougan from ECS and I
can obviously address --

CHAIRMAN SCHMIDTLEIN: You have access to the
information?

MR. DOUGAN: I have access to it, I can't talk
about it here, we will talk about it in post-hearing. But I
think some of it you know, some of it also has to do and we
discussed this yesterday without just getting into
confidential data, we discussed some of the dynamics in the
marketplace amongst the group.

And one of the things is that is by definition, the same or a similar product right? But they are selling at a very different scale and so you -- to some degree, if you are servicing a 20 megawatt and up project and selling at very large volumes to a different kind of customer because you are selling in that case largely to a large utility customer as opposed to perhaps large scale commercial, or what they sort of euphemistically refer to as mini-utility.

You are going to see a pricing differential.

Those aren't sales that are made in competition with one another.

MR. SHUGAR: Dan Shugar, NEXTracker. I'd like to add to that. So first let me just contextualize for these mounting structures called trackers last year we had a 40% market share in the U.S. okay according to GTM.

We fulfilled hundreds of projects so we are the kind of big dog on these structures, we see all of these projects, okay. 100% of what we did last year and actually in the beginning of the company, 100% of every single project that we have supported is 72-cell. There is not a single project that uses 60-cell.

These utility jobs are 72-cell. I can go into the technical reasons for that but that's what it is, okay.
And so there were some comments this morning that there is some fungibility between those two -- it's just not the case.

And Jim Lamon from Depcom and I both testified --

CHAIRMAN SCHMIDTLEIN: Between?

MR. SHUGAR: Between 60 and 72. There were comments this morning that said that, "Oh well in some cases you could go 60-cell." We haven't seen it and we are by far the largest market share provider for the structural systems for this category.

Both Jim Lamon from Depcom and I testified earlier that we both tried to source 72-cell panels from SolarWorld and had a lot of operational problems and disqualified them as a vendor for that product, so --

MR. NICELY: And also as a reminder, both of them got products from SolarWorld that ended up not being from the United States.

MR. SHUGAR: Right and in our case it was from Taiwan.

CHAIRMAN SCHMIDTLEIN: I mean I guess Mr. Dougan has provided an answer to the question. What I am asking is why, given the quality problems, why would you see underselling by the imports? And I understand your answer that well these sales aren't actually head-to-head? I mean I think you are surmising, but I guess my question in
response to that is that we see the Petitioners losing
market share to imports.

So obviously they are competing head-to-head
somewhere?

MR. DOUGAN: One thing that is important to
understand here too about product 5 is and again this is
confidential but if you would look at my confidential slide
27 the origin of those imports is illuminating. So what you
are seeing as consistent underselling in this product I
advise you to look closely about where those imports are
coming from.

MR. CORNELIUS: If I might Madam Chairman a few
other observations, again not informed by having seen the
specific data myself but first, the binning that is sort of
an industry term of 300 to 350 watt modules is actually
quite wide.

So commonly when we specify modules in a request
for proposals the broadest difference in wattage that we
will procure is 5 or 10 watts at most. So we will go to
market and say we are buying 340 to 350 watt modules and we
typically pay more for a 350 watt module than we do a 340
watt module because we need to spend less money on wiring
and racking and installation technical labor.

It costs less money to install 10 megawatts of
350 watt modules than 10 megawatts of 340 watt modules. Now
if this pattern of underselling that you are observing occurred over the four year period from 2012 to 2016, some meaningful changes were happening in the mono-crystalline, silicon supply chain during that four year period. And I would guess that at the beginning of that period Suniva in particular, had a more advanced mono-crystalline silicon cell technology and the wattage of its panels was higher.

So it would stand to reason that for the buyers that they could access who are prepared to buy their product and consider them bankable that they paid more for a higher wattage panel from Suniva than from some foreign producer.

What's happened during the course of the last 18 months has been a change in terms of the state of the art of technology offered by those producers versus foreign producers and I would imagine that you have seen more of an equalization in the wattage of mono-crystalline and silicone products that are offered for both.

But I would imagine that some of those foreign imports were lower wattage modules that would have, for good reason, been sold at a lower price because they cost more to install.

One other point which I think is a very important one is the scale effect. So as I had mentioned before when we procure modules for distributed solar projects and large utility solar projects, there's customarily a pretty wide
gap based on the size of that order.

When we order 200 megawatts of modules at a clip instead of 5 megawatts we get a better price and there is also a requirement typically for those bigger projects to sell power at a lower electricity price and we can afford to pay less for module.

I think for most of the period of investigation the suppliers typical modular supply agreement would have been for a relatively small order quantity and what would be important to assess if you were trying to tease out underselling behavior between a foreign mono-crystalline silicone module supplier and a domestic one, is the size of the order for the like product.

So even if you are comparing a 340 watt module sale to a 340 watt module sale it would matter whether in each instance somebody selling 5 megawatts of them or 50 megawatts of them.

And even for exactly the same product it would be normal for there to be a lower price on a larger quantity sale.

MR. HALL: Madam Chairman, just real quick.

Sorry I concur with the fact that you are looking across 50 watt ranges is very misleading as Craig mentioned and as well I concur that if you are --

CHAIRMAN SCHMIDTLEIN: I assume that the lawyers
had an opportunity to comment on the pricing products as they were comprised, right? Right okay and you agreed with those pricing --

MR. NICELY: Petitioners -- we made recommendations and several of our recommendations were not accepted.

CHAIRMAN SCHMIDTLEIN: And was that one of them, that this wasn't a meaningful comparison?

MR. NICELY: I don't recall on this specific product. We suggested actually a long laundry list of pricing products and they chose only a few of them.

CHAIRMAN SCHMIDTLEIN: Okay.

MR. HALL: I was just going to add that yes also there is the scale of the project. Are you selling it to a residential, small commercial or are you selling it to a large utility volume matters?

But the last thing just to point out is that there is also some amount of a captive market for made in America product -- that results in a higher price. Some of the people who spoke today have said that they have policies or preferences and then we often experience customers who just state in their RFP public customers often -- the city of San Diego, a recent customer of ours said you must use American made product.

And obviously the DOE has a requirement when they
have military facilities which have been a lot of Sunivas' sales and I believe SolarWorld sales as well. When you have this captive market that has to buy from that small source obviously the prices are going to be higher so that's just another element to consider.

CHAIRMAN SCHMIDTLEIN: Okay.

MR. BYRNE: Madam Chairman, Dave Byrne, LG Electronics. I wanted to offer our perspective because I think it is unique. We provide 100% mono. We focus on high efficiency and we did not enter the CNI space effectively until 2015 when we introduced our 72-cell product.

So consistently we are higher priced than all of our competitors except SunPower because we focus on higher efficiency solutions. We -- you know we have been successful in the commercial segment because we have offered these unique solutions and meet the demands of the market as it evolves.

And just to that point, having entered the market at the end of 2015 with a 72-cell solution, we are now number 3 in the commercial space in the U.S. with a 400 watt module whereas many of our competitors are offering 335 or 340 mono.

And the reason is again because we are meeting the demands of the market. For example 20% of the U.S. market now is carport and that is in the commercial space.
And by offering greater power density we bring the overall costs of the system down and we deliver a lower cost of energy. That's a cost per kilowatt hour versus a cost per watt.

And I urge you and your colleagues to look at, you know, what the market is driving towards which is a lower cost per kilowatt hour and that is dominant in both the CNI and the utilities segment in the U.S. which is 11.5 gigawatts of about 14 gigawatts installed last year.

So we have a unique perspective and you know price is only a part of the discussion but when you look at performance factors like what type of doping process are you using, how are you driving down degradation over time? Are you offering a double-sided cell which provides better yield in low light conditions and various other factors, it is a cost per kilowatt hour proposition.

CHAIRMAN SCHMIDTLEIN: Alright.

MR. NICELY: Madam Chairman, I think you have gotten enough of an answer on your pricing question but you also just mentioned a little bit ago market share and I can't leave that unaddressed.

CHAIRMAN SCHMIDTLEIN: Okay.

MR. NICELY: As Jim pointed out in his first slide there is no way this company could have -- this industry could have done anything but lose market share.
They only had a certain amount of capacity right? Their volumes went up. That's not on this slide but their volumes went up which your Figures 1, and 3-2 show in the staff report okay?

There's no way they could have produced and shipped anything more than they did. This is the capacity they had throughout the entirety of the POI alright? So of course they are going to --

CHAIRMAN SCHMIDTLEIN: Are you saying they were at maximum capacity?

MR. NICELY: Well if you look at Jim's slides you will see what we are talking about and we can't talk about that specifically here.

CHAIRMAN SCHMIDTLEIN: No, but I did look at it and I know you focused on SolarWorld and not the entire domestic industry.

MR. NICELY: But if you look at what he said about cells.

CHAIRMAN SCHMIDTLEIN: That too, when you look at the chart in the staff report it is here on page III-9 the numbers are quite different than what's in Mr. Dougan's slides but we can come back to it because we are -- time.

MR. NICELY: It's proprietary right, but my point is that even if there -- and by the way even if they are not at full absolutely 100% capacity, there's nothing -- there's
no way they could have shipped more, much more anyway near
to reach the demand levels that were reached because we were
finally reaching grid parity, right?

That's what drove the demand because we were
finally able to compete against other sources of energy and
so connecting the underselling discussion to a question
about market share and what happened with market share
ignores that reality is my point.

CHAIRMAN SCHMIDTLEIN: Okay let me yield the
floor to Vice Chairman Johanson.

VICE CHAIRMAN JOHANSON: Thank you Chairman
Schmidtlein. If raw material costs are declining, if
domestic producers have undertaken cost-cutting measures
including lay-offs and closures, if the domestic producers
have improve production efficiencies and if demand is
exploding, why would domestic producers be unable to price
their products at prices that enable them to recover their
costs?

MR. DOUGAN: Vice Chairman Johanson I missed the
front end of that question, could you please repeat it, I'm
sorry.

VICE CHAIRMAN JOHANSON: If raw material costs are
declining and if domestic producers have undertaken
cost-cutting measures, which have included lay-off and
closures, why are they not able to recover their costs?
MR. DOUGAN: Well some of that is going to have to deal with proprietary information and so I can answer at length in the post-hearing. But the first part of that we definitely think that there's -- at least towards the end of the POI there is a product mix element to that as well, at least with respect to pricing but again I am cautious about saying more.

MR. PRUSA: I think we had a substantial part of our affirmative presentation whereby a series of very large solar industry people all documenting challenges of the two Petitioners getting product to them in a timely fashion, a reliable fashion, et cetera, et cetera and then that's got to be part of the problem of why they can't make money is they have had customers who can't use them again.

That's affecting their ability to make a profit.

MR. DOUGAN: And just to add to that one thing -- again this deals with some confidential data, but they have also gotten better at recovering their costs over the POI notwithstanding the increase in imports.

MR. WERNER: Yeah this is Tom Werner, if I could just add really briefly that the degree of differentiation makes a huge difference and how well you have improved efficiency on a relative basis will affect both costs because you take your costs and divide by more energy and that's the figure of merit that people buy on.
And additionally you can reduce material costs, not just unilaterally for the whole industry. You can reduce it through innovation. So for example, you can make a thinner wafer and if you use a thinner wafer you use less silicone. You can only do that if you innovate.

And one specific area of innovation is to use something called diamond wire it is to make the wafers differently. And if you are an early mover on diamond wire then you have less silicone then you have a cost advantage so it goes back to innovation, both on the cost of the cell because you have higher efficiency and thinner wafers and there is a number of other areas in the module that you can differentiate on as well that can affect conversion efficiency as well as the amount of material that you use.

VICE CHAIRMAN JOHANSON: Thanks for your response, is there anything else? If not that's fine.

MR. NICELY: Vice Chairman Johanson I would only return you again, picking up on something Tom Prusa just said. Return you again to what Ed Fenster talked about earlier about Sunrun's experience -- it's critical because they admit that their primary focus is on the retail segments of the market. That is residential and commercial and if they are given an opportunity to service the resident, one of the largest residential developers in the country and they don't even play ball, how can they complain
about not making profits?

    MR. FENSTER:  I mean I might point out I think in
the record we have emails for instance from Suniva
acknowledging these problems.  Like this is not you know,
something that ought to be facts in dispute.

    We tried to get both Petitioners qualified.  Our
approved vendor list -- not only does it govern our own
purchasing but we have dozens of partners who can choose to
procure.  Some sell on a buy America theme, some make their
own decisions. We just insure that what we receive is good
equipment.

    They didn't participate and so I struggle to see
how when you are not competitive in the utility scale
market, you are not competitive in 62% or whatever in the
residential market -- when you face that sort of headwind,
even if you do have declining costs, you know, it wouldn't
make sense to me that you could recover your costs.

    There was a comment you know that Suniva made
that said that they didn't think qualifying their equipment
was important because only people with poor credit use
non-recourse financing.  That evidence is a massive lack of
understanding about the end market into which they sell
their equipment.

    Almost all solar modules get financed
non-recourse.  Power plants get financed non-recourse.
Almost all commercial real estate gets financed non-recourse. It is best practice. In the state of California mortgages that homeowners paid by law to purchase a home are non-recourse -- the alternative is what is called cross-collateralization where you are basically guaranteeing to your lender you are back-stopping Suniva's warranty.

So for Suniva to say people shouldn't buy their equipment using non-recourse loans, they are saying that their customers should guarantee the production of their equipment to their lenders. Like that's like an outrageous abdication of their responsibility.

VICE CHAIRMAN JOHANSON: Thanks for your responses. During the period of growth in the market why are inventories held by U.S. importers so high and growing?

MR. CORNELIUS: Mr. Commissioner, could I ask a clarifying question?

VICE CHAIRMAN JOHANSON: Yes.

MR. CORNELIUS: Since the report data that you may be referencing isn't apparent to us, are those inventories of modules that are held for sale here in the United States? Is that the pattern you'd observed? And over what period? Sorry, I realize I'm supposed to be answering the questions.

(Laughter.)

VICE CHAIRMAN JOHANSON: Right, right. I
understand.

MR. CORNELIUS: Well let me try this a different way. I'll try--

VICE CHAIRMAN JOHANSON: I don't think this has happened before.

(Laughter.)

VICE CHAIRMAN JOHANSON: I'm not used to this.

(Laughter.)

VICE CHAIRMAN JOHANSON: I'd have to look closer, but I do--I mean, I can't--

MR. CORNELIUS: I could try to take a stab at it, which I recognize--

VICE CHAIRMAN JOHANSON: The inventories are high.

I do recall that.

MR. CORNELIUS: Understood. I think one way of potentially explaining that pattern is the pattern of in-market growth that you see. So for sellers, and particular sellers like SolarWorld or Suniva who sell a greater portion of their output to distributors or to customers that are operating on shorter purchasing cycles.

In a market that is growing with its total serviceable end-market demand going up each quarter, the total absolute quantity of inventory that you'd need to be able to hold in order to sell to your customers would probably be going up because the total demand you're trying
to service is going up.

So, you know, I think, you know, what we see in terms of the requirements for delivery times for a larger utility solar purchase, for example, you know, product is shipped on a per-order basis scheduled well in advance. But for much of the market of people who procure less than one megawatt of modules at a clip, they're usually buying it within three months of when they need it. So--

MR. DOUGAN: Sorry, Mr. Cornelius, I didn't mean to cut you off.

Vice Chairman Johanson, I'm looking at the public staff report, page III-25, Table III-13, importers inventories are down as a percentage of shipment. Down as a percentage of the market. They're up absolutely, but the market is up hugely.

So to the degree that there's a greater absolute amount of inventory, that's an expectation of selling into a growing market. But it's lower as a percentage of imports, shipments of imports, and total shipments of imports than in 2016 than it was in 2015.

MR. FENSTER: And this is Ed Fenster at Sunrun. I might also mention, particularly in the residential end market, you see a lot of demand spikes and troughs as a result of local incentives.

For instance, Penacle West, the Arizona utility,
has said publicly they're seeing a large spike in
installations right now in Arizona because the policy there
is becoming less favorable.

In the history of our company in California, the
California State incentives stepped down on a programmatic
basis from a lot to a little. Every time there was going to
be a step down, you saw a huge surge in demand followed by a
brief period of apathy.

I think the same dynamic occurred around the
extension of the Investment Tax Credit in 2015, in December
2015, causing a little bit of slack in the early part of
2016. So I think, you know, you also need to look at the
underlying policy drivers.

One of the things I mentioned in my statement was
that because solar is viewed as deflationary, that there's
the expectation it's always cheaper to buy tomorrow than
today, these changes in incentives really do drive
purchasing urgency and can move that end market,
particularly in residential, significantly from period to
period.

VICE CHAIRMAN JOHANSON: Okay. Thanks for your
responses. I do note that at page III-25 of the staff report,
if you look, importers end-of-period inventories have
increased markedly. But you're stating that reflects the
growing market?
MR. DOUGAN: In absolute terms, for sure. But the market has grown—I mean, look at that chart. So the fact that you may have seen an increase in those inventories between '14 and '16, look at the growth in installations and shipments between '14 and '16.

So you would expect, in order to service that market, they would have to be holding inventories, especially given the factors that Ed talked about, about how there was this sort of rush to get these installations and get these things in before the tax credit expired.

MR. FENSTER: I mean maybe just to add quickly, you know, we own a distribution company. And the KPI that we use for that, the Key Performance Indicator they have is "Days of Inventory," not "Inventory Level." Right?

So I think maybe what I'm hearing is that even though inventories were going up, days of inventory were coming down, right? So if you're going to distribute equipment, you need to make sure you have a certain amount on hand relative to the run rate of demand. Am I reading that correctly?

MR. DOUGAN: That's correct. It's a different metric for measuring pretty much the same thing.

VICE CHAIRMAN JOHANSON: Alright, thanks for your responses. My time has expired.

CHAIRMAN SCHMIDTLEIN: Commissioner Williamson?
COMMISSIONER WILLIAMSON: Okay, thank you.

Mr.Nicely, this is for you. This is my last question on this question of employment and where the products are. But are you arguing that under the 201 statute the Commission should be considering the effect of our decision on industries that are upstream and downstream of the industry, the industry that has been identified in the Petition? Is that our job? Or is that the President's job?

MR. NICELY: At this stage of the investigation, you're right. What you're supposed to be looking at are cell and module manufacturing.

I'm simply picking up on something the Petitioners themselves put in front of you, which is a map that showed closures of not only cell manufacturing facilities but also other manufacturing facilities. They're the ones putting in front of you broader manufacturing numbers, and I'm just here to explain to you that they're misleading. They're misrepresenting what's in fact going on.

It is relevant to you, though, by the way, under the law to not—and not merely for the President—once, if we should get to remedy, which I hope we don't, but once we get to remedy, if we do, then by all means you are supposed to take into consideration in making a recommendation to the
President what the effect is on downstream industries, the overall economy, consumers, et cetera.

That's a significant difference between this law and Title 7.

COMMISSIONER WILLIAMSON: Okay, fine--

MR. DOUGAN: And, sorry, Commissioner Williamson, if I can build on what Mr. Nicely said--Jim Dougan--they definitely opened the door for this. Because not only did they put it in their presentation, but it was in their brief where they have this exhibit that shows, you know, the 3,500 jobs in all these different competing technologies that--

COMMISSIONER WILLIAMSON: Point taken

Okay, let me turn to something else. There's been some talk about the 60 and 72-cell modules, and I was just wondering is there--I think I asked Petitioners this morning--is there a difference in the manufacturing or technological differences in this product?

MR. WERNER: This is Tom Werner. I'll take that.

So there is. And the idea of 60-cell or 72-cell is you have more cells, 12, therefore you have a bigger area. You're connecting all of these cells, and you are laminating them with, we'll call it, plastics, and you're putting glass on top of it. Because you have more area, the lamination is different. The way you connect the strings is broader, and so it is different. And then the way--the
glass that you buy is different, and how you mount that
glass. So there are differences in the manufacture between
the two.

We could debate the significance of those
differences, but for sure there are differences.

MR. FENSTER: And as a residential company, I
might also add there are differences that correlate to those
two markets, too. So, for instance, we purchase almost
exclusively 60-watt panels. There's safety and other
reasons we don't want to bring 72-watt panels onto a roof--
cell, I'm sorry, cells onto a roof.

But things like aesthetics, again, are important
in the residential market that may not be as important in
the utility-scale market. And so there are attributes that
correlate as well that are different.

COMMISSIONER WILLIAMSON: Okay. Thank you. What
role did China's reduction in its feed-in tariff in the
mid-2016 play in the increased exports to the U.S. market?
And the following U.S. prices?

MR. GRIFFITH: Spencer Griffith. I'm sorry,
Commissioner, I had trouble hearing your question. Could
you repeat it, please?

COMMISSIONER WILLIAMSON: I'm sorry. Sure. What
role did China's reduction in its feed-in tariff in mid-2016
play in the increased exports to the U.S. market, and in
declining U.S. prices? I asked the same question of the
Petitioners, too.

MR. GRIFFITH: Sure. I'll start, and others may
have response. Spencer Griffith of Akin Gump. The feed-in
tariff was reduced in 2016 I believe as a reflection of
decreasing costs in the industry overall. And we'll address
this further in our posthearing brief, but it's just a
natural evolution and maturation of the market and
reflecting these technological--

COMMISSIONER WILLIAMSON: The market where?

MR. GRIFFITH: In China. Technological advances
that Dr. Prusa and Jim Dougan have been discussing on the
panel all day are also at work in China that work in markets
globally. And so the reduction of feed-in tariff was a
reflection of a reduction in the cost structure of the
industry. We'll address this further in our posthearing
brief.

COMMISSIONER WILLIAMSON: Okay. Thank you. A
question for SunPower. Your firm reported that it
contracted with Flex Limited to produce modules in a plant
in California, and I was wondering what size and types the
modules were produced at this plant? And do you still
produce the modules at this plant? And if not, why not? Or
was this one of these more like experimental--

MR. WERNER: We have in fact made modules in
California twice previously at scale. We now make them again in smaller scale with our latest generation technologies mentioned. The previous two times that we manufactured, we actually bought a company and continued to ramp that company, improve the technology, and then we already had a manufacturing facility elsewhere that was at scale that had other cost advantages because of the scale, as I referred to earlier.

So we consolidated those two facilities. And then many years ago we produced modules with a partner and the stack margin with the partner no longer made sense so we vertically integrated in one of our other facilities.

COMMISSIONER WILLIAMSON: Okay. Thank you. Sorry, bear with me because there are lots of questions here.

(Pause.)

Okay, Some suggest that a variety of countries invested in CSPV capacity in response to antidumping and countervailing duty order on China and Taiwan. Do you agree with this, that this was the reason? And what was the impact on global cell and module prices from this new capacity? I don't think that's been raised before.

MR. WERNER: This is Tom Werner. I'll comment. In the manufacture of cells and modules, scale is a huge factor. Because with scale you have purchasing power for
the input materials. You can also vertically integrate more. You can just buy a vertical integration. So the race to grid parity competing with conventional electricity, sources of conventional electricity, would logically lead you to using scale as a point of differentiation. And we've seen massive growth in the deployment of solar.

    And so in anticipation of future growth, that's one of the ways to compete, is to differentiate on scale.

    COMMISSIONER WILLIAMSON: So you said these new plants were created in other countries?

    MR. WERNER: Yes, combining with what I said earlier, if you have multiple facilities and you can take best practices, you can have those facilities share best practices. You have diversity of supply. But when you add it together, you have a scale advantage as well. So it's a combination of my previous answer, as well.

    MR. NICELY: Commissioner Williamson, I think the point is that if you have a sense that global demand is increasing, you're going to find a place to build new capacity. And this is an industry that recognizes that in order to drive down costs, in order to reach true parity, you've got to have that capacity. Otherwise, it stalls out, right? Otherwise, solar doesn't compete with the conventional sources of energy.

    COMMISSIONER WILLIAMSON: Okay, so did the orders
on China and Taiwan, they had an impact on people going to
other places to do their scaling is what you're saying?

MR. GRIFFITH: Spencer Griffith of Akin Gump.

Commissioner Williamson, whether or not the
capacity was added in Malaysia or in China or elsewhere has
to be again put in context of the explosion in demand that
we've seen in 2014, 2015, 2016.

So as Matt Nicely indicated, if you've seen this
explosion in demand, you're going to see explosion in
capacity as well. I mean, you can't have one without the
other.

So whether or not the expansion in capacity is in
Asian country A or Asian country B, what Petitioners haven't
shown is that there's been a greater growth in capacity in
Malaysia than there might have been in China, for example.
The issue is total capacity, not where is the capacity, when
we're looking at a 201 case.

COMMISSIONER WILLIAMSON: Okay, thank you. When
purchases are--whoops, I'm sorry. My time has expired.

CHAIRMAN SCHMIDTLEIN: So polite. Commissioner
Broadbent.

COMMISSIONER BROADBENT: Let's go back again
once more to Table III-3. I think that this really links
together a lot of the arguments we've heard today.

We see that there were 19 module producers that
shut down, and I'm guessing maybe a few of those are under
new ownership, but still a lot of full shutdowns compared to
the 10 startups.

With the rapidly growing market, and with supply
shortages as you allege, can we really blame this on bad
technology and bad choices? Is this degree of turnover
typical in other countries' solar industries?

MR. NICELY: Again, as we discussed earlier,
Commissioner Broadbent--Matt Nicely, sorry, I've not been
mentioning my name but I guess you know who I am by now--
each of these companies have closed or opened for different
reasons. Again, it's a dynamic--no, I'm not going to say
that I'm going to make a generalization that each one of
them has closed because of a failure of their technology to
work out. But each one of them may have different reasons.
We could try to go through and talk about each one.

I know the Petitioners will try to find some
article in a trade rag that says, where somebody said that
it was because of low-cost imports, but each one of those
companies' situations is different.

I think what is clear is that they're in a
dynamic, high-tech industry. This is not uncommon for
companies to close down because it didn't work out, and for
new companies to be opening, just as this page shows.

MR. FENSTER: This is Ed Fenster. I might add, I
think you would expect in a maturing industry to see over
time fewer companies rather than more. And I think one of
the unique attributes that the United States has, you know,
we have this very extensive network of venture funding, and
the ability for us to, you know, as a nation engage in new
enterprises, one of our key differentiating factors
globally.

And so I think, you know, there are lots of
companies that what you may be seeing is just there were
more darts thrown at the board using different technique in
the United States because we have such a rich capital
formation process here; whereas internationally, you
wouldn't see that.

So I think that that is as much an indication of
the strength of our country from a capital formation basis
as anything else.

MR. CORNELIS: Yeah, and a few thoughts to add to
that. I think, driven by that same
ease-of-capital-formation and entrepreneurship here, I would
imagine that if you were to look at the total number of
companies opened and then closed in other segments of the
market--say for example the downstream portion--you would
see an even higher number of companies that aimed to go
develop solar projects who had started up and then exited
the market.
And, you know, what we've seen, you know, over our careers of entrepreneurship in growing this industry here in the United States is that there's this wonderful optimism that the capital markets have here that America's business people have, hat their local governments have, and sometimes the particular business venture idea that they have is well informed, and sometimes the teams that they assemble to go implement that business venture are up to the task, and sometimes they are not.

And I've been a part of both successful and unsuccessful enterprises that have started across a range of parts of the supply chain, and, you know, in a lot of instances when they don't work out it's not just because there are some predatory pricing from a domestic importer.

So I'm not sure that the pattern of openings and closings is by itself explained by imports as a substantial cause.

MR. SHUGAR: It's noteworthy the most profitable solar company in the world is a U.S. company for solar, and they have a very strong--they are excluded from this proceeding because they don't make crystalline, they make thin-film, and they have a really large market share in the U.S. right now. And the technology leader is sitting here, Tom Werner from SunPower, a global technology leader for 10 years in photovoltaic module.
COMMISSIONER BROADBENT: Okay. Good. Let's see, I'm going to go back to my scope question that I asked the Petitioners. The scope covers cells whether or not assembled into products, as opposed to cells to modules defined explicitly.

I'm hoping that you can compare this scope to that of recent ADCBD investigations relating to tires and aluminum extrusions, which included further assembled products, but only the in-scope components within those products.

Is the non-cell portion of the assembled modules included in the scope of these investigations?

MR. NICELY: It's a good question. We'll I guess deal with it in the posthearing.

COMMISSIONER BROADBENT: Thank you.

Back on the China question, let me make sure I get the answer here. According to Solar World's Annual Report, the Chinese solar market nosedived in the second half of 2016 after the government's surprise move to cut subsidies on July 1st, 2016. Because Chinese manufacturers were unable to sell expected volumes in their own market, they dumped their excess capacity on the world, leading to a drop in U.S. prices.

As a factual matter, was there a major move by the Government of China in 2016 to cut subsidies? And if
so, what has the effect been on demand in China?

MR. GRIFFITH: Commissioner Broadbent, Spencer Griffith of Akin Gump, a couple of comments.

First of all, again this relates to Commissioner Williamson's question as well, the reduction of the feed-in tariff Petitioners have implied led to an explosion of Chinese exports to the U.S. Chinese exports to the U.S. in 2016 declined. They declined from 2015 levels.

So Petitioners' theory that any reduction in the Chinese feed-in tariff resulted in a fundamental qualitative change in the U.S. market is simply not correct.

Secondly, as I indicated earlier, and as we indicated in our posthearing submission, all the projections for Chinese demand are continuing to be highly optimistic, and indeed Chinese capacity itself by 2020 is expected to be 100 gigawatts. The reduction in the feed-in tariff was not intended and did not serve as a brake on the continued growth of the Chinese market. China has always been a leader in the use of solar power, and all projections are that Chinese demand will continue to explode in the future.

MR. FENSTER: This is Ed Fenster. It is best practice for governments to reduce incentives, you know, as costs come down. You know, California was a leader in that. We've seen many states in the United States do the same. The United States has done that with wind energy over time.
You know, I think that is an inappropriate
reaction to declining costs.

COMMISSIONER BROADBENT: Okay, good. This is for
the Canadian Respondents. Since there's no Canadian
production of CSPV cells, which countries other than the
United States are the leading sources of cells for Canadian
produced modules?

MR. STOEL: Commissioner Broadbent, Jonathan Stoel
from Hogan Lovells. We will take that into a posthearing
submission. I would just point out for the Commission that
we actually requested that the data on modules from Canada
be included in the staff report and for your consideration
because, as you said, there are no cells being manufactured
in Canada. In other to make sure the NAFTA exemption is
properly applied in this case, we specifically requested
that data and that's the reason why we believe Canadian
imports should be exempted from the investigation.

COMMISSIONER BROADBENT: Okay, but you can't tell
me where the cells are coming from?

MR. STOEL: That's confidential information,
Commissioner, and we'll provide that in the posthearing.

COMMISSIONER BROADBENT: Okay.

MR. PORTER: Excuse me, Commissioner Broadbent,
the brief of the Canadian Government provides this
information.
COMMISSIONER BROADBENT: Okay, I appreciate that.

Thank you.

MR. STOEL: Commissioner Broadbent, sorry, I did want to add one point, which is there have been some false allegations about our client, Canadian Solar, from the Petitioners. There's been no trans-shipment of Chinese cells through Canada to the United States market. We said that very clearly in our brief and I want to reiterate it here for the public record today.

COMMISSIONER BROADBENT: Okay. Good. Okay, for Canadian or Mexican Respondents: If the Commission makes an affirmative injury determination that imports from Canada and Mexico shall be excluded from relief unless they are relatively substantial and they contribute importantly to the serious injury or threat found by the Commission, if the Commission defines imports from Canada and Mexico based on module assembly location and also finds these imports to account for a substantial share of total imports, would the increase in import volumes from these countries be sufficiently similar to the increase in total imports to represent an important contribution to the overall cause of serious injury?

Just to think about this differently, would imports from these countries be part of the hammering effect of imports on the industry? And is this sufficient for
meeting the important contribution standard in the law?

MR. STOEL: Commissioner Broadbent, again for the record Jonathan Stoel. I guess I would just go back to one very important point with respect to Canada, which is Canadian imports during the Period of Investigation, as we documented carefully in our brief, have been extremely small. So we don't think in any way did we contribute importantly to any injury, if there is such an injury, during the Period of Investigation.

I would also point out, as you've heard from the witnesses today, that there's been a very strong relationship with both Suniva and SolarWorld among Canadian producers, and indeed exporters. So again we don't see any basis on the record before you to find "contribute importantly."

I would also go back to the first prong and say that with respect to Canadian imports from--regardless of where the cells were sourced, there has never been a substantial share of imports form Canada. And they're clearly outside the top five test with the NAFTA and U.S. law require. We're way out of the top 10 even.

So again, I just think that there's no basis for inclusion of Canada in any injury finding, if you were to make such a finding.

COMMISSIONER BROADBENT: Okay. Thank you. Oh,
yes, sir?

MR. GERKIN: Yes, Commissioner Broadbent. I'm sorry. I'm in Matt Nicely's old seat and I don't have a working microphone.

COMMISSIONER BROADBENT: Can you say your name?

MR. GERKIN: Yes, this is Dan Gerkin at Vinson & Elkins, on behalf of SunPower.

COMMISSIONER BROADBENT: I'm afraid we can't hear you.

MR. GERKIN: Hello? Thank you. Thank you, Tom.

Similar to the Canadian experience, the Mexican experience is one where from a quantity standpoint Mexican imports during the period are outside the top five. And so not a substantial share of imports, and therefore not to be considered in terms of an injury determination.

In addition, to your earlier question, and the data is confidential and we've addressed it in our brief, and we'll address it in the post-hearing brief as well, but I would say using your language that Mexican imports are not part of any hammering effect.

CHAIRMAN SCHMIDTLEIN: Okay thank you. I wonder if someone could tell me what is going on from 2014-2015 where we see total imports almost doubling from '14 to '15? So I know we have talked about the utility projects being booming in 2016.
MR. SHUGAR: There are tax credits, the 30% federal investment tax credit was due to expire at the end of 2015 -- I'm sorry 2016 and so but these projects are big and so there was a huge acceleration of project development in the U.S. in '15 and '16 as a result of that.

And then at the end of '15 it got extended and so it changed the dynamic but that was driving a lot of the accelerated demand in utilities scaled in the U.S.

MR. HAUBENSTOCK: If I may -- Arthur Haubenstock with 8minutenergy. It takes a long time to build these utility scale projects and for financers to put the money up to build these projects they have to be assured that it is going to be done 6 months before the deadline for the ITC.

So if it takes 18 months to two years to build the projects -- sometimes it's less, sometimes it's a year, you need to assure your financers that you have everything in place to get it done in case there is going to be some delay because the ITC is such a large percentage of the financing of the project.

CHAIRMAN SCHMIDTLEIN: So the increase we see in '15 was for utility projects that were built in '16, is that what you are telling me?

MR. SHUGAR: Yeah they were built in '15 and '16.

CHAIRMAN SCHMIDTLEIN: Well there was only one additional project build in '15 so according to your slide
MR. SHUGAR: I'm sorry I'm not familiar with that slide but you know, certainly in the utility scale area there would be you know, roughly you know, think of like 100 projects in the U.S. and then --

CHAIRMAN SCHMIDTLEIN: Well this is the slide you all provided. This is the public slide.

MR. SHUGAR: Right but that's not number of --

MR. NICELY: That's the number of gigawatts.

MS. GRACE: So that's gigawatts of projects.

CHAIRMAN SCHMIDTLEIN: Okay.

MS. GRACE: So there are 14 total gigawatts across all sectors in 2016.

CHAIRMAN SCHMIDTLEIN: Okay so it is a different measure but you see that the increase from '14 to '15 was not that great I guess compared to '15 to '16 and so my question is -- I don't see this same correlation in the increase in subject imports and that's why I asked.

So are you saying that the increase from '14 to '15 was really in anticipation of what happened in '16?

MR. NICELY: Correct because you have to bring the product in in order to do the installations. The installations have to be complete in order to get the tax credit. The installation has to be complete -- absolutely complete and it takes how long to do these installations.
MR. CORNELIUS: Is this quantity delivered like FOB, custom's collections? Okay so that actually would explain if we are looking at 2015 to be able to put 10 gigawatts worth of utility solar projects in the ground during 2016, especially given the financing set-backs which Arthur cites and which are real but it was impossible to get tax equity or debt financing on projects without something like 6 months of cushion to that cliff date on the ITC.

You had module deliveries to sites in the 2015 calendar year that would have come into various ports of entry in the U.S., you know, for a good portion of what was commissioned in 2016 during the 2015 calendar year. So that is not necessarily surprising that way.

CHAIRMAN SCHMIDTLEIN: Okay. Alright I don't have any further questions, Vice Chairman Johanson?

VICE CHAIRMAN JOHANSON: Thank you Chairman Schmidtlein. Can you all please respond to industry reports referenced on page V-37 of the pre-hearing staff report indicating that increase in prices in 2013 and 2014 were driven primarily by the imposition of the anti-dumping and countervailing duty orders on imports from China and Taiwan?

MR. NICELY: Spencer is that something you want to handle?

MR. GRIFFITH: Spencer Griffith, Akin Gump. As we discussed in our pre-hearing Brief the imposition of the
Orders on Solar 1 and Solar 2 did constrain the volume of imports into the United States from China. And it is our position that that will also constrain the volume of imports going forward when the Commission is looking at threat.

What the impact was on price -- that I would defer to the U.S. companies.

VICE CHAIRMAN JOHANSON: Do the U.S. companies have any views on that or if you would like you could reply in the post-hearing Brief.

MR. SHUGAR: No I would just say you know, we heard SolarWorld speaking earlier today about well they just you know, they put in 2016 the 72-cell line capacity into place. You created the opportunity for them back then okay with these countervailing duties -- that's when they should have put that 72-cell line in.

Because that -- we just looked at the big bar on the graph that shows the big demand, it's utility. They missed the opportunity that's when they needed to move and get that done -- not last year but back then.

VICE CHAIRMAN JOHANSON: Thanks Mr. Shugar. And I just have one more question for you all. It's something that I think we should address just for the record and that is the whole issue of unforeseen developments.

And I asked this same question of the Petitioners this morning. When analyzing unforeseen developments, whose
position is relevant? Should it matter whether the
negotiators did not foresee the development? Whether the
domestic industry did not foresee the development or some
other entity did not foresee the development?

    MR. CORNELIUS: I can speak to whether all three
of those categories or parties should have been able to
foresee all these market conditions and then perhaps leave
it to legal counsel to speak to how the code would determine
that standard.

    And what I can say is for anyone of those parties
the type of deflation that we have seen in the cost of
electricity from solar has been an essential fact of the
market that we operate in from the time that grid supplied
solar electricity started to grow 20 years ago -- every year
power prices have come down. Every year in markets that
have grown, governments have reduced the subsidies that were
available because they saw the industry respond and be able
to build more projects.

    Every year we have seen manufacturing tooling
advance in the state of the art. Every year we have seen
the performance of products advance. We have seen companies
like ours increase our demand and our scale requirements
from our vendors. So whether you are talking about a
category, a professional that is responsible for negotiating
the price on the sale of a module, if you are talking about
the business planners within the Petitioners -- virtually no
participant in this industry who is a thinking participant
who took in its information could have avoided the
expectation that this market continued to require technology
innovation and scale and continued downward price.

MR. PRUSA: Commissioner Johanson in the -- this
is Tom Prusa. In the annexes to my exhibit, I include
academic studies. These are not the thinking minds of the
industry, these are just pointy head academics. They, years
ago, were making long-run predictions.

So the idea that it was unforeseen -- that solar
prices would continue to drop, there were academics making
long run projections and what we are seeing is in fact what
they were predicting 4, 6, 10 years ago.

So in that sense, it has been this continuation
of a long run trend. It is simply not just, "oh my gosh
prices really fell," prices have been falling like this for
a long time. Academics observed that and were making
projections that were in fact about where they thought we
were going to be in terms of price.

MR. FENSTER: This is Ed Fenster. I might even
go one step further to say if you didn't believe the price
depreciations were inevitable, like you really had no business
starting a business to begin with because it would
intuitively therefore mean that in the future you wouldn't
have a competitive business you know.

Like we would never have started our company in 2007 if we didn't believe what has happened would happen and if we didn't believe that in 2007 it wouldn't have made sense to start the business because you ultimately would have just had to lay everybody off.

MR. CORNELIUS: And I think part of the point that you are making there, Ed, is given that the benchmark price ultimately that we sell against as an industry -- our wholesale power prices, our retail power prices -- even if they weren't declining which they have been since 2009, we worked through various tiers of customers and generally we sell to the customers first who have the highest avoided costs and who can most easily afford solar.

And the more solar we put in, we get the customers who pay lower and lower costs because we have already shaved off the customers who were the most easy for solar to address. But in point of fact during the course of the last 9 years we saw wholesale power prices decline dramatically.

We saw retail power prices in Northeastern markets where residential and distributed solar cell for the first time in 10 years we saw retail power prices deflate. And so even if you were to put aside the solar industry's historical and foreseeable deflationary price trends,
anybody who observed U.S. power markets would understand that if you expected to sell more solar every year for the next 5 years, you should expect that you would have to sell it at a lower price because no one would buy it otherwise.

MR. FENSTER: I will add to that analysis just the declining incentives which were known in advance. So just to tread water even before considering the factors that Craig just mentioned you know, you wouldn't have known in 2007 that you needed to get you know, 50 to 67% of your costs out just to keep pace with expected declines in government incentives.

MR. NICELY: Vice Chairman Johanson I love these answers and I think that answers your question from a legal perspective. Article 19 is unclear right? It's passive, it doesn't say who has to find it to be unforeseen but I think what you have just heard is -- you would have to be sleeping not to see this coming right?

Swanson's Law is called Swanson's Law for a reason. It has been established as something everybody in this industry knows is happening and has been happening ever since 1976.

MR. WERNER: Tom Werner, I'd like to comment a little bit further. So Professor Dick Swanson was the founder of SunPower and when I started as CEO he was moved to CTO role so I know him extraordinarily well.
We were owned by a semi-conductor company at the time. Semi-conductor costs go down by Moore's Law. It is common that when you scale you apply a learning rate and you project costs to go down so that was a concept that created this was that as you scale manufacturing you would expect that costs will come down.

And then the question is at what slope or at what rate. So it is completely consistent with the concept that as we get costs down we scale and then it is a virtuous cycle as I referred to in my prepared remarks.

VICE CHAIRMAN JOHANSON: Alright well thank you for your responses I appreciate it. That concludes my questions and again I would like to thank you all for being here. I know that some of you came a fairly long way so thanks for educating us further on this subject.

CHAIRMAN SCHMIDTLEIN: Commissioner Williamson?

COMMISSIONER WILLIAMSON: Thank you and just a few additional questions. When purchasers are evaluating the bankability of a particular manufacturer, do they base their evaluation on a particular brand name or on a particular manufacturing location?

For example, for some of the firms with operations in multiple countries, is your bankability associated with your brand or tied to a specific production location?
MR. FENSTER: This is Ed Fenster, I'll handle that. It's actually a specific line in a specific factory typically. So you know we will probably -- our quality assurance program will look at a particular module type and a particular location.

So it doesn't matter where the actual factory is, that's not relevant to the quality discussion. The question is just is the module that is being manufactured in that specific factory -- is that sort of quality standards, what are the building materials, you know, for that piece of equipment.

And so it's really that specific and targeted and we talk about this a little bit more in Dirk Morbitzer's declaration which is in the appendix to the Brief.

MR. HALL: This is Aaron with Borrego. I just wanted to add from a commercial market perspective anyway and I mentioned it in my statement earlier. When we are purchasing modules I would say it enters into the realm of bankability in terms of how our customers are going to view the project that we are selling to them and how their financial partners are going to view that.

And one of those elements is examining the production characteristics of that module, like you light induced degradation which is how much you lose, you know, in the first few days and what not, your temperature
coefficients -- those sorts of things.

What we have found is that our import customers
do an excellent job in working with these third party labs
to justify the quality of the product -- by quality I mean
how much is a system going to produce over time? There's
also reliability as a separate sphere. I am just going to
focus on the production aspect.

And so what we find is we have gone to great
lengths, even in the last 6 months with both Suniva and
SolarWorld because we have these buy American projects. We
said please provide us the data to back up the expected
performance characteristics of your modules.

And it is sub-par to what we receive from the
importers. The importers often have multiple reports so we
can take averages, have high sample sizes. It's credible,
it's thorough. We pull teeth specifically with the two
Petitioners to get information.

COMMISSIONER WILLIAMSON: Does the product meet
the specs is almost what you are saying, no matter where it
is manufactured?

MR. HALL: No I'm going to bankability because if
we can't prove how much the system is going to produce then
we can't sell that.

COMMISSIONER WILLIAMSON: I thought that was the
specs but maybe I'm wrong, Mr. Fenster?
MR. FENSTER: I would just say so these are 30 to 35 year assets and so over that time period how much energy they make each year matters and what the cost to maintain them matters substantially.

So I had mentioned for instance in my comments that if we have to visit a home once more that's equivalent to like 10 cents a water module cost.

COMMISSIONER WILLIAMSON: Because I want to go on to some other question but you are basically talking about performance specs aren't you?

MR. FENSTER: Yeah so the important thing to understand is 1 -- that the module is being manufactured to the performance spec, which is not always the case; 2 -- to insure that the equipment that is going into the module is correct because again there are not a lot of -- you know 20 to 25 years is a long time and it is great that company's provide warranties --

COMMISSIONER WILLIAMSON: Thank you I got the answer. I want to move on to some other things but thank you. So Suniva has suggested that the pricing data may suffer from a recent survivor bias in that they only reflect information from firms that continue to operate and not domestic producers that operate earlier in the period of investigation and that have shuttered operations. Do you agree with this -- if you want to answer post-hearing?
MR. DOUGAN: This is Jim Dougan from ECS. We will take a look at that post-hearing. Any detailed discussion is going to go into BPI so.

COMMISSIONER WILLIAMSON: Okay that's fine, thank you. Suniva -- this is for SunPower, Suniva argues that your operations in Mexico are serving as an export platform for trans-shipment of third country cells to the U.S. I don't know whether Commissioner Broadbent raised that question or not but that's the question.

And I guess Mr. Werner, did you also talk about having a 7 megawatt plant or something coming online in Mexico?

MR. WERNER: So a couple of things. One in Mexico we won about 560 megawatts in the first tender that they held, the first auction that they held and that was about I think it was approximately two years ago. We subsequently won some more projects in the second tender.

So we in fact, intend on that capacity to go to those projects as well. Yes we do export some of what we produce in Mexico to the United States as well. The 7 megawatts that I have referred to was what we are bringing up with our latest generation of technology in Silicon Valley.

COMMISSIONER WILLIAMSON: Not in Mexico?

MR. WERNER: Correct.
COMMISSIONER WILLIAMSON: Okay I misunderstood, sorry, okay. Thank you. And those are modules that are using cells that are imported?

MR. WERNER: Modules that are imported from our factories in the Philippines and Malaysia that I referred to earlier.

COMMISSIONER WILLIAMSON: Okay, okay thank you. Let's see I have one last question. Actually that's it, Commissioner Johanson asked the last one, okay. I want to thank everybody for their answers.

CHAIRMAN SCHMIDTLEIN: Okay, alright so that brings us to the end of the Commissioner's questions. Does staff have any questions for this panel?

MR. ANDERSON: Thank you Madame Chairman yes staff has a few brief questions.

MR. DAVID: Yes, thank you Andrew David, U.S. International Trade Commission. Mr. Werner I want to ask you a little bit more about SunPower's U.S. operations. When did you start U.S. cell production?

MR. WERNER: U.S. cell production, the FAB that I just talked about started within the last 6 months.

MR. DAVID: Okay and did you have other cell production during the POI in the U.S.?

MR. WERNER: No.

MR. DAVID: Okay. And regarding your module
production -- I know you put out a press release in 2013 with Flextronics that you had about 80 to 90 megawatts of module capacity in the U.S., is that accurate?

MR. WERNER: What was the number again?

MR. DAVID: 80 - 90 megawatts?

MR. WERNER: Yes, that sounds correct.

MR. DAVID: Why did you start U.S. production of modules?

MR. WERNER: So the original idea there was to test out different levels of automation and we thought that we could integrate new equipment that would lower -- improve quality and lower costs. That turned out to be true but we couldn't do it in scale.

MR. DAVID: Okay and you were doing if I remember correctly you were doing 96 and 128-cell format for residential, commercial and utility projects?

MR. WERNER: Yeah generally speaking the higher cell count is for utility scale.

MR. DAVID: Okay. So why did you stop production at the plant? Was it because the concepts you were trying out weren't working?

MR. WERNER: Two things -- one, the plant was not to scale so it was disadvantaged that way and secondly we didn't want to pay extra margins so we re-integrated the modular capacity back into our own facilities.
MR. DAVID: Okay and my final question is I see on Table I-2 that you are not listed amongst the firms there. Can you provide a U.S. producer questionnaire?

MR. WERNER: Okay that's one I'll have to have our team provide in our post-hearing Brief.

MR. DAVID: Thank you.

MS. ALVES: Good evening, Mary Jane Alves from the General Counsel's Office. Thank you to all of the witnesses who have participated today. It has been extremely helpful. I don't want to prolong this hearing any longer than we have to so feel free to answer this question in your post-hearing Briefs.

Looking at the various industries throughout the world can you tell us if we are missing any major players? Are there major players that are not accounted for in the report? Are there specific countries for example, that the United States may have FTA's with that either are participants in the market in terms that there are imports from those countries?

Or, are they major suppliers as well? So again if you could just give us a feel from your experience in the industry who else is out there that we haven't already accounted for, thank you.

MR. ANDERSON: Thank you Madame Chairman, staff has no further questions.
CHAIRMAN SCHMIDTLEIN: Okay thank you. Do Petitioners have any questions for this panel?

MR. MCKAYE: No we do not.

CHAIRMAN SCHMIDTLEIN: Alright thank you very much. So this brings us to closing statements. I will dismiss this panel now, thank you all very much, thank you for staying late with us, it's been very helpful.

MR. BISHOP: Will the room please come to order?

CHAIRMAN SCHMIDTLEIN: All right, thank you.

So, for closing statements, the petitioners have two minutes from direct, five minutes for closing, for a total of seven. And the respondents have one minute from direct, five minutes for closing, for a total of six minutes. And petitioners, you may begin when you're ready.

MR. KAPLAN: Seth Kaplan, International Economic Research. One rebuttal point. The causation issue before the Commission is, what is the largest cause of the injury to the domestic industry? Of course, technology lowers costs. This is the semiconductor industry.

The issue is that prices were falling faster than costs, causing serious injury. All major companies make this point in their SCC filings. The idea that the semiconductor industry writ large is barred from Section 201 relief because technology improves over time is frankly nuts.
The reason prices fall faster than costs in this case, of course, is increased volumes of low-priced imports. No one knows what Dr. Prusa does. The staff and I don't have his models. We don't have his data. We don't have his code to judge his results. But he hasn't addressed the causes of injury.

CLOSING REMARKS OF MATTHEW MCCONKEY

MR. MCCONKEY: This is Matthew McConkey of Mayer Brown. I just have some random observations and some random thoughts here, then we'll turn it over to Mr. Brightbill for a more cohesive closure. Overall observation from the day. Respondents testimony ignores, discounts the hard data, the information and the analysis in the staff report, the prices, the financial conditions and quality issues. And they instead have relied on a handful of anecdotes and sort of creative economic models to lay blame anywhere but imports.

With respect to these academic predictions that this is exactly what was going to happen, they did not predict the scale of these price reductions, these declines and the flood of imports in the last couple of years. They did not predict that. With respect to technology, lots of comments made about technology, Mr. Nicely at one point said something along the lines of, "A lot of companies invest in technology, it just didn't work out."
Well, petitioners have invested in the same
technologies as those in the other overseas companies. They
seem to work out, but then our companies can't -- that's not
an explanation. Respondents testified that at one point
that there's a shortage of product at this point, however,
as Commissioner Johanson notes, inventories are high. I
suggest these two things are contradictory, and only one,
inventory levels, are supported by the staff report.

Mr. Cornelius of NRG told the Commission that
Suniva failed all of its criteria, including that of
quality. And that's an exceedingly odd statement to make,
since in the winter of 2015, Suniva's panels were put on the
NRG Sports Park in Houston. Indeed, in a November 3, 2015
press release, NRG announced the installation of Suniva's
panels on that sports complex.

With respect to continue with technology a
little bit, Exhibit 10 of respondents brief we submit,
acknowledges that petitioners' technology is superior, and
with respect to quality, that the quality problems based on
warranty claims in official SCC filings is higher with many
foreign sources by far than the domestic industry.

And finally, with respect to this argument that
we didn't scale up enough, it's hard to scale up when
imports are crushing you and you're losing projects for one
and a half cents per watt.
CLOSED REMARKS OF TIMOTHY BRIGHTBILL

MR. BRIGHTBILL: Tim Brightbill, Wiley Rein. I agree. How do you scale up when you're under an avalanche of imports? I know how China does it. I'm not sure how the U.S. industry was supposed to do it here. We'd like to commend all four Commissioners for your tough questions. These are the key questions of the case.

Just to pick out one, you asked multiple times, why did all of the U.S. cell and module companies exit the market? You heard a litany of suggestions. Trade Cases 1 and 2 caused that? That makes no sense. A lack of scale? We've already talked about. Lack of product differential? This is a product sold on the basis of price, as your report has found.

Other key questions. Do you agree that there's global overcapacity in this market? By the way, the trade rag that we cited for that is Bloomberg New Energy Finance, who was on respondents' panel today. Why did companies invest in all of these other countries and throughout the world? That's a key question. What about the pervasive underselling of 72-cell modules? That's a key question.

Why domestic producers were unable to recover their costs during this period when demand was up so much? Can we really blame everything on these companies? On bad bets and bad technology? So all of these are the key
questions of the case, and if you focus on them, you'll reach the proper result. Also, as Commissioner Williamson pointed out, we heard a lot about a lot of other industries, which is really not the Commission's job today. We're happy to discuss that in the remedy phase.

Now, for part of today, we heard an inaccurate smear campaign of SEIA and the respondents panel. We look forward to fully rebutting with the facts. The good news is, you already have the facts on the record in the form of your pre-hearing report. Respondents are running from the statutory standard and the Commissions' evidence as quickly as possible.

On supplier qualification, your pre-hearing report states most purchasers reported that no domestic or foreign supplier had failed in its attempt to qualify product or had lost its approved status since 2012. Also in your report, most U.S. producers, importers and purchasers reported that U.S.-produced products were interchangeable with imported CSPV products. That's Table V-8.

Bankability. The Commission received questionnaire responses from fifty-six importers. Only three mentioned bankability, or Tier 1 status as an important purchasing factor. Most important, of course, was price. A majority of purchasers reported that they had increased their purchases of imported CSPV products. The
number one reason cited for increasing purchases of foreign
products was lower price. That's 5-14 and 5-15 of your
report.

So, turning back to this case and your decision,
and the answer to your questions. This domestic industry
has been seriously injured by a global import surge. This
case is about a whole industry, not two companies, more than
thirty, as you've found. This case is about the harm that
was sustained throughout this period, but intensified in
2016 due to massive overcapacity in Asia enterprise
collapse.

Global imports have increased 500%. They've
taken market share from the domestic industry and all of the
increase in demand in the U.S. Without relief, this import
surge will continue. The U.S. manufacturing industry will
very likely disappear. So thanks to you and to the staff
for your stamina, your hard work, and your careful
consideration of this important case that matters a great
deal to all of our companies and all of our workers. Thank
you.

CHAIRMAN SCHMIDTLEIN: Thank you.

CLOSING REMARKS OF MATTHEW R. NICELY

MR. NICELY: Madam Chairman,
Commissioners, it's always hard to go last. Everybody wants
to go home, particularly tonight, at 8:15, but I'll make
this as fast as I can. You may recall my annoying question, which doesn't happen very often in these proceedings, to Mr. Card today. The article that he mentioned in which my client, CEO, Abby Hopper, what she had said was, and I quote, "Grid parity is of the utmost importance so that we are competing on price and price alone." She was talking about price competition between CSPV and natural gas and wind, thin-film, other forms of energy. Not CSPV versus CSPV.

The point is, we're in an industry here where we're competing against other forms of energy. We have finally gotten to the point where we're actually at that point, as Amy Grace showed you today, we finally got there. And as several of the other industry witnesses showed you. We're there and as a result, demand boomed, right? We got there because what Swanson's Law said would happen, happened. And it finally got down to that point where we could actually compete against other forms of energy.

Electrons are what are the substitutable product here. And you're dealing with substitutable products that are ultimately sending out electrons, right? That is, it's probably the most freely substitutable product on the planet. And for petitioner to deny that undeniable fact is simply ludicrous.
The decline in price because of the technological advances was complete foreseen. It happened like clockwork thanks to the work that Mr. Swanson talked about. The problem is, is the petitioners didn't see it coming, because they didn't do their homework. The missed opportunities here are so severe. Why not scale up right after getting ABCDB relief as Dan Shugar said today?

They didn't do it. And therefore, simply couldn't come close to meeting the booming demand that happened in 2015 and 2016. They couldn't do it. There's no way they could actually supply the utility-scale sector at the levels you heard Craig Cornelius talk about today. Why didn't they? Think about the other missed opportunities. Why didn't they try to qualify to sell to the biggest residential developer in the country?

Now, petitioners focus your attention on a map that shows about forty companies that have gone out of business, right? About half, as I said before, are cell and module producers. Some of those that are cell and module producers opposed trade relief, either in the ABCDB cases or here. Others went out of business.

Well, for the other half, it's unclear how they went out of business or why they went out of business, but it's worth mentioning that they are maybe 20 out of 600 solar manufacturing businesses in this country. So the
number that have gone under is a small percentage. There are almost 40,000 solar manufacturing jobs in the United States.

Only a small portion of which are cell and module manufacturers. These are just some of the jobs that will go away with the imposition of Section 201 relief in this case. The notion that 45,000 jobs will be created as they've said is preposterous. The duties will increase price, reduce imports and crush demand, which will eliminate jobs.

Killing demand does not create jobs.

Fortunately, you don't have to actually get into the analysis that that's really about, which is about remedy. You don't have to consider what the import relief will do because we've already shown you today that this industry doesn't meet the standard for imposing Section 201 relief.

You heard about a lot of closures. You've heard about a petitioner that's gone bankrupt. But we've shown you that despite those closures, the serious injury during the POI doesn't actually show up. They actually improve during the course of the POI. And if you do ultimately conclude that they were seriously injured, we've shown you myriad ways in which imports themselves are not as important a factor as multiple other factors that Tom Prusa showed in his analysis.
And even if you don't want to go to an analysis using econometric model, then consider what Jim Dougan put in front of you and I hope that you'll look very carefully at the confidential slides today. Because your record, even without economic modeling, shows that there is no causation between imports and the so-called serious injury. Thank you.

CHAIRMAN SCHMIDTLEIN: Thank you very much, Mr. Nicely. So this brings us to the end of our hearing. I'd like to thank everyone who has stayed with us tonight for your stamina and your attention. We very much appreciate it and I would extend that thanks to anyone who's still left in Courtrooms A and C. I'm not sure if anyone's still there, but if you are, I really admire your stamina and attention.

So let me remind everyone that post-hearing briefs, statements responsive to questions and requests of the Commission and corrections to the transcript must be filed by August 22nd, 2017, and the Commission is tentatively scheduled to vote on the injury phase of this investigation on September 22nd, 2017. And with that, we are adjourned.

(Whereupon, at 8:21 p.m., the hearing was concluded.)
CERTIFICATE OF REPORTER

TITLE: In The Matter Of: Crystalline Silicon Photovoltaic Cells (Whether or Not Partially or Fully Assembled into Other Products)

INVESTIGATION NO.: TA-201-75

HEARING DATE: 8-15-17

LOCATION: Washington, D.C.

NATURE OF HEARING: Hearing

I hereby certify that the foregoing/attached transcript is a true, correct and complete record of the above-referenced proceeding(s) of the U.S. International Trade Commission.

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