

**Global Safeguard Investigation:
Crystalline Silicon Photovoltaic Cells and Modules (Whether or Not Partially or Fully
Assembled into Other Products), Inv. No. TA-201-75**

**Statement of Craig Cornelius
President
NRG Renewables**

August 15, 2017

1. 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.
2. NRG is one of the largest independent power producers in the United States and, with over 48,000MW 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-scale solar fleet, the 4th largest distributed solar fleet, and the 5th largest wind fleet.
3. 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 under long-term contracts.
4. During the last decade, over the time prior to and during the period of investigation for this case, we saw transformational change in U.S. electric power supply and demand, market prices, and fuel sources. All came as a result of the relentless progress of innovation, supply chain evolution, and cost reduction – most notably, in natural gas production, wind technology and construction, and solar CSPV and thin-film technology, construction, and operations.
5. 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 markets serviceable by solar today range from \$29 to \$37 per MWh. A new solar power contract signed today must offer pricing that is 60-70% *lower* than the average levelized cost from solar installations in 2012.
6. 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 #1 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.

7. As of 2012, 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. 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.
8. 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 every customer sales conversation, every engagement with power market regulators, and every sound business planning or investment process.
9. And yet, through investments in technology, product design, scale, and business operations, U.S. utility-scale solar grew from 780 MW in 2011 to more than 10 GW 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 grid parity.
10. In addition to being able to offer grid price to drive this growth, we also need to provide solutions that are designed "fit-to-purpose." For large solar projects, during the POI, developers used 72-cell CSPV modules almost exclusively because these module designs enabled low-cost construction methods that made projects viable. Additionally, as initial installation costs compressed, lifetime modules 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 degradation. The only available sources of 72-cell modules with these specifications for most of the period of investigation 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.
11. 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. Thus, we needed them to operate at multi-GW 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

– indeed, they were broadly recognized by our company and others like us as failing every single one of these tests.

12. As a former federal official myself, I sympathize with the vital role you play and the important decision you need to make. So, I thank you for this opportunity to testify and I look forward to your questions.

