



## MEMORANDUM ON PROPOSED TARIFF LEGISLATION of the 112th Congress

Date approved

### I. Background

Bill number:

Sponsor name:

Sponsor state:

Interested entity:

Name

City

State

Other bills on product (112th Congress only):

Nature of bill:

Expiration date:

Current or previous chapter 99 heading:

Retroactive date:

CAS number (if applicable):

Industry analyst:

Telephone:

Tariff Affairs contact:

Telephone:

Note:

1. Access to an electronic copy of this memorandum is available at [http://www.usitc.gov/tariff\\_affairs/congress\\_reports/](http://www.usitc.gov/tariff_affairs/congress_reports/).
2. In regard to the country(ies) of origin listed in section III, this report focuses on dutiable imports and does not take into account any tariff preference programs or special rates of duty.

## II. Suggested article description(s) for enactment (including appropriate HTS subheading(s)):

Light emitting diode (LED) lamps, tubular (provided for in subheading 9405.40.80)

(If enacted, the tariff relief provided for in this bill would be available to any entity that imports the product that is covered by the bill.)

Description above compared with bill as introduced:

- Same  
 Different (see Technical Comments section)

## III. Other product information, including uses/applications and source(s) of imports

The subject products are tubular light emitting diode (LED) lamps. These products are cylindrically shaped lamps (bulbs) that use LEDs as the light source and generally serve as replacements for the fluorescent tube lamps commonly used in commercial buildings and other applications. Information from one source, Independence LED, indicates there is domestic production of the subject goods (see contacts table). The principal sources of dutiable imports of the subject products are China and Taiwan. Opposition to this bill is noted below in the Contacts table.

## IV. Estimated effect on customs revenue

Subject product HTS subheading(s)	9405.40.80				
Item	2013	2014	2015	2016	2017
Col.1-general rate of duty or percentage point reduction (%)	3.9	3.9	3.9	3.9	3.9
Estimated value of <i>dutiable</i> imports (\$)	242,700,000	301,000,000	417,200,000	513,100,000	592,600,000
Customs revenue loss (\$)	9,465,300	11,739,000	16,270,800	20,010,900	23,111,400

Note: Customs revenue loss is provided for 5 years, although the effective period of the proposed legislation may differ. Regarding the HTS subheading listed in the article description of the bill, the Commission may express an opinion on the HTS classification of a product to facilitate consideration of the bill. However, by law, only U.S. Customs and Border Protection is authorized to issue a binding ruling on this matter. The Commission believes that Customs should be consulted prior to enactment of the bill.

Dutiable imports were based on (more than one may apply):

- Official statistics of the U.S. Department of Commerce  
 Provided by industry sources  
 Industry information  
 Commission estimates

Duty reduction notes:

- This bill is not a duty reduction  
 This bill is a temporary duty reduction. Rates are shown below.

Col.1-general duty rate (%)  Temporary rate (%)  Percentage point reduction (%)

## V. Technical comments

The article description set forth above was modified for greater clarity and to conform more closely to normal HTS usage.

## VI. Continuation

Contacts with domestic firms/organizations – continued:

The Commission analyst's information regarding domestic production of the subject products was <http://www.ledtronics>.



## VII. Contacts with domestic firms/organizations

#	Firm/organization and contact name	Telephone number	Claims same or competing product made in the United States	Submission attached	Opposition noted
1	Philips Electronics North America Corp. (Interested entity) Randall B. Moorhead	202-962-8555	No	No	No
2	Acuity Brands Neil Egan	770-860-2957	No	No	No
3	Cree, Inc. Diana Allen	919-407-5300	No	No	No
4	General Electric Co. Tim Richards	202-637-4407	No	No	No
5	Independence LED Charlie Szoradi	484-588-5401	Yes	Yes	Yes
6	Keystone Technologies Ira Greenberg	215-283-2600	No	No	No
7	LEDtronics Pervaiz Lodhie	310-534-1424	No	Yes	Yes
8	Lighting Science Group Brad Knight	321-779-5520	No	No	No
9	Lutron Electronics Co., Inc. Pekka Hakkarainen	610-282-6766	No	No	No
10	OSRAM SYLVANIA Pamela Horner	978-750-2563	No	No	No
11	Soraa Wilfred Martis	510-456-2200	No	Yes	Yes
12	Venture Lighting International Thomas Harding	440-836-7250	No	No	No



**Long-Life, Energy-Efficient Drop-In Replacement for Standard 24" Fluorescent Tubes in 2-Pin G13 Base**

**Operates on 90-to-290VAC — Consumes Less than 9 Watts — 3000K/4000K/5000K White — Premium SMD LEDs**

## FEATURES

- **Lamp Warranty:** 3 Years
- **Low Power Consumption:** Only 9 Watts
- **Wide Input Voltage Range:** 90-290VAC  
Accommodates N. American or European Currents
- **Long Operating Life:** White LED Lasts up to 50,000+ Hours
- **Wide-Angle Beam Pattern** of 125°
- **Solid Construction:** UV-Stabilized Polycarbonate Lens, Aluminum Body
- **Easy Installation:** Direct Retrofit into Most Fluorescent Fixtures Using Existing Sockets [with line voltage bypassing ballast/transformer/ starter directly to fluorescent sockets.\*]
- **Even Lighting:** High Intensity / No Halation
- **No Buzzing, No Flickering**
- **High CRI** Enhances All Colors
- **Safety Assurance:** ETL Listed
- **Eco-Friendly:** ROHS Compliant



\*Use of the ETL-listed T8 lamps in conjunction with bypassing the ballast does not effect the overall ETL status, since the fixture is covered by the listing of the lamp and its installation instructions.



Ideal for Use with Alternate or Renewable Energy Resources  
— Solar & Wind Power



Office illuminated with LEDtronics LED fluorescent-replacement tube lights

## APPLICATIONS

- Office Lighting
- General & Street Sign Backlighting
- Task Lighting, Under Cabinets/Counters
- Display Cases
- Coolers, Freezers
- Interior Design Uses
- Retail Store Displays

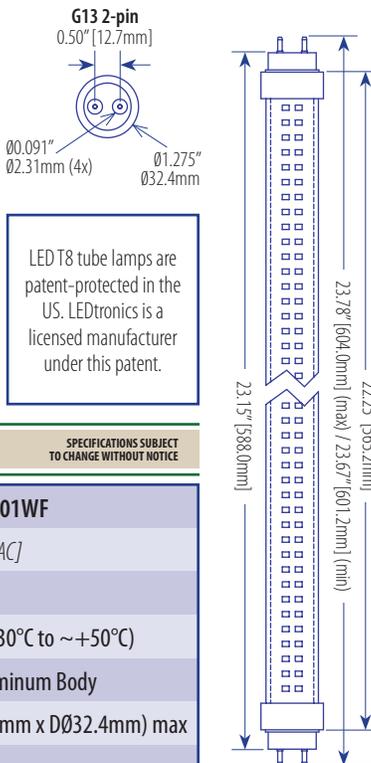
## BENEFITS

- **Major Power Savings:** Compared to Fluorescents, Close to 50% Less Power Usage Dramatically Reduces Energy Costs
- **Solid State:** High-Shock & Vibration-Resistant Body with Polycarbonate Lens Eliminates the Hazard of Glass Tube Breakage or the Additional Expense of Light-Robbing Plastic Tube Guards – A Major Problem in the Food Industry and Food Displays
- **No Radiation:** No Ultraviolet, No Infrared, No RFI/EMI/HD Problems Related to Fluorescents in Hospital Radiology Areas, Sensitive Instruments, Etc.
- **Environment-Friendly:** Eliminates the Mercury Hazard Present in the Fluorescent Tubes; Recyclable
- **Lower-Maintenance:** Lowers Costs by Reducing Re-lamp Frequency, Especially in Difficult to Reach Areas that Require Lifts, Ladders, Scaffolding...
- **Cool Operation:** Remains Cool to the Touch – Reduces Fire Hazard
- **Flexible Ambient Temperatures:** Greater Performance in Cold Freezer Applications Where Fluorescents Have Higher Failure Rates

## CUSTOM OPTIONS

[For qualified applications & large-quantity OEM orders]

- Other Colors / White Color Temperatures
- Other Lengths



LED T8 tube lamps are patent-protected in the US. LEDtronics is a licensed manufacturer under this patent.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

## SPECIFICATIONS

<b>PART NO.</b>	LED24T8SM-144-XxW-001WF
<b>Input Voltage</b>	90-290VAC [Tested @120VAC]
<b>Ambient Humidity</b>	≤95%
<b>Ambient Temperature</b>	~-22°F to ~+122°F (~-30°C to ~+50°C)
<b>Lamp Shell</b>	Polycarbonate Lens / Aluminum Body
<b>Dimensions (w/o pins)</b>	L23.78" x DØ1.275" (L604mm x DØ32.4mm) max
<b>Weight</b>	0.55 lb / 8.8 oz / 249.5 g

PART NUMBER	INPUT CURRENT	ENERGY USED (typ)	EFFICACY	POWER FACTOR	TOTAL LUMENS	MAXIMUM CANDELA	CRI	COLOR TEMP.	EMITTED COLOR	VIEWING ANGLE*
LED24T8SM-144-XIW-001WF	73 mA	8.8 Watts	53 lm/W	0.99	468 lm	152 cd	79	2800K~3200K	Warm White	105°×120°
LED24T8SM-144-XWW-001WF	76 mA	8.9 Watts	61 lm/W	0.99	545 lm	186 cd	74	3600K~4500K	Natural White	105°×120°
LED24T8SM-144-XPW-001WF	72 mA	8.5 Watts	75 lm/W	0.99	638 lm	200 cd	75	4500K~5000K	Pure White	105°×125°

(\*Full Beam Width @ 50% Intensity)



**LED24T8SM-144-XIW-001WF**

**Luminaire Photometric Report**

Filename: LED24T8SM-144-XIW-001WF  
 Manufacturer: LEDTRONICS  
 Luminaire: FROSTED LENS, 8.8W, 120VAC  
 Luminaire Cat: LED24T8SM-144-XIW-001WF  
 Lamp: LUMEN RATING: 468.1Lms  
 Lamp Output: 1 lamp(s), rated Lumens/lamp: 468.1  
 Max Candela: 152.0 at Horizontal: 0°, Vertical: 0°  
 Luminous Opening: Point  
 Test: 2-8-11

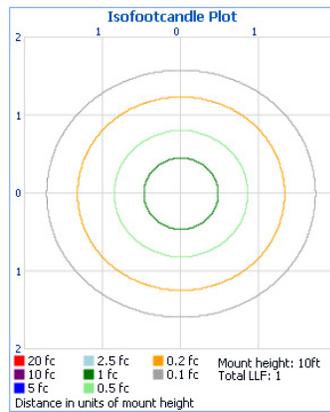
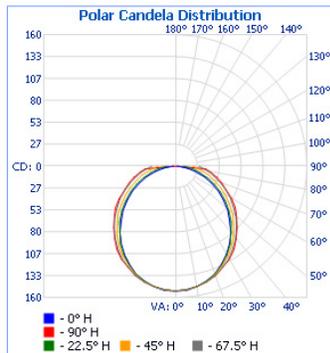
**Zonal Lumen Summary**

Zone	Lumens	% Lamp	% Luminaire
0-30	117.3	25.1%	25.1%
0-40	191.7	41%	41%
0-60	340.6	72.8%	72.8%
60-90	127.5	27.2%	27.2%
70-100	68.6	14.7%	14.7%
90-120	0	0%	0%
0-90	468.1	100%	100%
90-180	0	0%	0%
0-180	468.1	100%	100%

**Illuminance at a Distance**

Center Beam FC	Beam Width
1.7R	54.72 fc 4.4ft 6.0ft
3.3R	13.68 fc 8.8ft 12.1ft
5.0R	6.08 fc 13.2ft 18.1ft
6.7R	3.42 fc 17.6ft 24.2ft
8.3R	2.19 fc 22.1ft 30.2ft
10.0R	1.52 fc 26.5ft 36.3ft

Vert. Spread: 105.8° Horiz. Spread: 122.3°



**LED24T8SM-144-XWW-001WF**

**Luminaire Photometric Report**

Filename: LED24T8SM-144-XWW-001WF  
 Manufacturer: LEDTRONICS  
 Luminaire: FROSTED LENS, 8.9W, 120VAC  
 Luminaire Cat: LED24T8SM-144-XWW-001WF  
 Lamp: LUMEN RATING: 545.1Lms  
 Lamp Output: 1 lamp(s), rated Lumens/lamp: 545.1  
 Max Candela: 186.0 at Horizontal: 0°, Vertical: 0°  
 Luminous Opening: Point  
 Test: 2-8-11

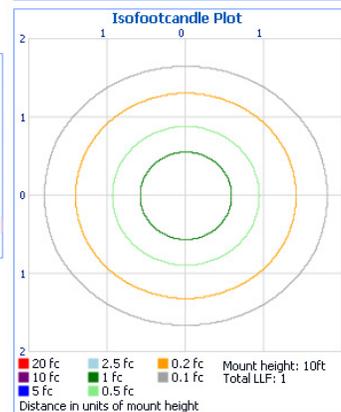
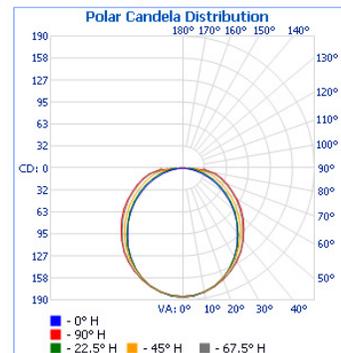
**Zonal Lumen Summary**

Zone	Lumens	% Lamp	% Luminaire
0-30	141.5	26%	26%
0-40	230.0	42.2%	42.2%
0-60	403.7	74.1%	74.1%
60-90	141.4	25.9%	25.9%
70-100	74.2	13.6%	13.6%
90-120	0	0%	0%
0-90	545.1	100%	100%
90-180	0	0%	0%
0-180	545.1	100%	100%

**Illuminance at a Distance**

Center Beam FC	Beam Width
1.7R	66.96 fc 4.2ft 5.6ft
3.3R	16.74 fc 8.4ft 11.2ft
5.0R	7.44 fc 12.5ft 16.8ft
6.7R	4.19 fc 16.7ft 22.3ft
8.3R	2.68 fc 20.9ft 27.9ft
10.0R	1.86 fc 25.1ft 33.5ft

Vert. Spread: 102.9° Horiz. Spread: 118.3°



**LED24T8SM-144-XPW-001WF**

**Luminaire Photometric Report**

Filename: LED24T8SM-144-XPW-001WF  
 Manufacturer: LEDTRONICS -  
 Luminaire: FROSTED LENS, 8.5W, 120VAC  
 Luminaire Cat: LED24T8SM-144-XPW-001WF  
 Lamp: LUMEN RATING: 638.2Lms  
 Lamp Output: 1 lamp(s), rated lamp lumens: 638.2  
 Max Candela: 200.0 at Horizontal: 0, Vertical: 0  
 Luminous Opening: Point  
 Test: 3-31-10

**Flood Summary**

Field (10%):	Efficiency	Lumens	Horizontal Spread	Vertical Spread
99.9%	637.6	n/a	166	
Beam (50%):	67.5%	430.6	125.3	104.5
Total:	100%	638.2		

**Zonal Lumen Summary**

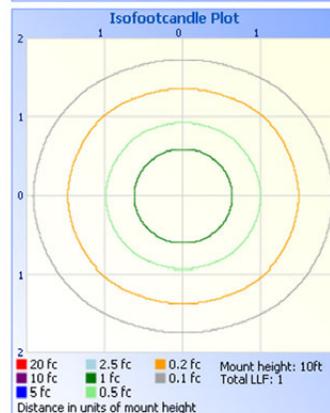
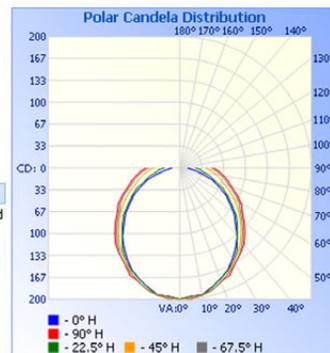
Zone	Lumens	% Lamp	% Luminaire
0-30	152.8	23.9%	24%
0-40	249.7	39.1%	39.2%
0-60	445.2	69.8%	69.9%
60-90	191.6	30%	30.1%
0-90	636.8	99.8%	100%
0-180	636.8	99.8%	100%

Total Efficiency: 99.8%

**Illuminance at a Distance**

Center Beam FC	Beam Width
1.7R	72.00 fc 4.3ft 6.4ft
3.3R	18.00 fc 8.6ft 12.9ft
5.0R	8.00 fc 12.9ft 19.3ft
6.7R	4.50 fc 17.2ft 25.8ft
8.3R	2.88 fc 21.5ft 32.2ft
10.0R	2.00 fc 25.9ft 38.7ft

Vert. Spread: 104.5° Horiz. Spread: 125.3°





7.10.11

Andrew David  
US International Trade Commission  
500 E Street, SW  
Washington, DC 20436  
Phone: (202) 205-3368 Fax: (202) 205-2018  
Andrew.David@usitc.gov  
**Subject:** RE: Digital File for Trade Commission File on HID and LED Components

Mr. David,

Thank you for contacting us on July 9<sup>th</sup> about the United States International Trade Commission's Temporary Duty Suspension on certain HID and LED lamp components. We understand that the Commission is an independent agency in the U.S. Government, which among other things, provides advice to the President and Congress on all matters of international trade. In response to your request for input to Congressional legislation related to certain HID and LED lamp components, we also understand that the Commission prepares reports on legislation concerning duty suspensions for the Ways and Means and Senate Finance Committees. Since the Commission attempts to identify and contact domestic firms and associations that may have interest in the subject legislation, we have also included a brief background on our domestic manufacturing business to provide context for our response and key Appendix research files for your review.

Kind regards,

**Charlie Szoradi – Chairman and CEO**

C. Szoradi Direct: 610.551.5224 [Charlie@IndependenceLED.com](mailto:Charlie@IndependenceLED.com)  
LEED AP, BPI Energy Auditor, Green Economy Task Force



Con Edison  
Market Partner  
Network Member



The  
Main Line  
Chamber  
of Commerce™  
ACCREDITED

2011  
GREEN  
BUSINESS  
OF THE YEAR

Independence LED's EAGLE LED Tube System is Made in America with Domestic and Imported Components and is UL Classified. The External Independent Driver, Heat Sink, Modular Light Engines, and Advanced Thermal Management Systems are Patent Pending, and the US Manufacturing also meets the BUY AMERICA Qualifications of the American Recovery and Rescue Act (ARRA).



## Background on Independence LED – U.S. Manufacturer of LED Tubes

We moved the manufacturing of our LED Tubes from China to Boyertown, PA in Q2 2010, and we have seen a tremendous lift in demand and leadership respect across the engineering landscape. Over the course of last year, Lockheed Martin’s engineering team conducted the reviews and approved our Independence LED tube system over others for the coveted Con Edison Rebates in the NYC Metro Market. The Independence LED “External Driver” system has set a new standard, and also earned the Underwriters Laboratories (UL) and the Compliance European (CE) Listings on the combined driver and tube retrofit kit system. Our Deep Fin thermal management and Flex Density™ for the light engines provide cost-effective US manufacturing with scale and reliability to cut the cost of electricity by 50% or more over fluorescent tubes. Our clients now range from Morgan Stanley to MetLife and from Distribution Centers like Davis and Warshow to national auto service chains like Monro Muffler. Our recent retrofit of 50 different Monro Muffler locations across CT and NJ includes over 6 miles of tubes and may stand as the largest installation of LED Tubes in the US Market to date. The Cushman and Wakefield management team for MetLife has specified the Independence “Eagle” LED tubes for its properties, resulting in three new orders in Q2 and, to date, one new order in Q3. For 2011, we won the Green Business of the Year Award from the Main Line Chamber of Commerce. To review our Technology Differentiation, Spec Sheets, and Retrofit Photo files, plus Videos, please see this page: [www.IndependenceLED.com/BootCamp](http://www.IndependenceLED.com/BootCamp) Here is the link to our recent Newsletter: [www.IndependenceLED.com/q2\\_newsletter](http://www.IndependenceLED.com/q2_newsletter)

### Responses:

The Commission has asked to advise you in regard to the following four points and the breakdown of legislation in Attachment #1: We have provided a response to each of the four points below:

- The Commission: Do you have an interest in the proposed duty suspension legislation and, if so, do you support, oppose, or are you neutral to each of the bills?

U.S. LED Tube Manufacturer: **We support 11 of the 13 duty suspensions. The two that we oppose are Bill H.R. 5478 and Bill H.R. 5484**

Bill H.R. 5478: Light emitting diode (LED) Tubular LED (TLED) (provided for in subheading 9405.40.80). It calls for a FREE Duty through 12/31/2015 in lieu of the current 3.9% Duty on Tubular LED products. Out of the set of 13 Bills, this one accounts for the vast majority of impact on technology adoptions and domestic jobs, because the majority of commercial lighting is tubular with current fluorescent technology that typically uses twice the energy as LED equivalents. The Department of Energy has reported that there are over 3 Billion fluorescent tubes in U.S. Ceilings. This response warrants further explanation per the ADDITIONAL information on LED Tubes in this file.



Bill H.R. 5484 Light emitting diode (LED) drivers. This Bill calls for a FREE Duty through 12/31/2015 in lieu of the current 1.5% Duty on Tubular LED products. The vast majority of LED Drivers are currently made overseas and they serve as the companion technology to the LED Tubes. A FREE Duty on U.S. Drivers will significantly deter U.S. Manufacturing, reduce the number of potential U.S. Jobs, and reduce American Energy Security. The security issue comes up in this context: If an LED Driver were like the starter on a car and the LED Tube is the car, then it is a potential national security issue for the U.S. if ONLY foreign companies make the “starters” for the tube lights that dominate all of commercial illumination.

- The Commission: Do you make any of the products described in the bills or competing products in the United States? Is there other U.S. manufacturing of the products described in the bills or competing products? If so, could you provide the names of the firms that make these products?

U.S. LED Tube Manufacturer: We make LED Tubes that would be impacted by Bill H.R. 5478: Light emitting diode (LED) Tubular LED (TLED). The vast majority of other manufacturers of LED Tubes are from China. There are only a few U.S. Companies that are making LED tubes in America and a few others that have expressed interest in shifting manufacturing from China to America, but this lift in the import duty will most likely serve to deter them from either keeping the manufacturing in America or bringing the jobs and technology to America. The margin in electronics is so narrow that 3.9% can become the difference between keeping an operation overseas and setting up U.S. manufacturing in this clean energy sector.

- The Commission: Do you import the products described in these bills? If so, what countries are the major sources of imports for each of these products?

U.S. LED Tube Manufacturer: We import the LED Drivers referenced in Bill H.R. 5484. We are working on a U.S. made LED Driver to add to our manufacturing operations but we currently import the Drivers from China. H.R. 5484 does not reference that one of the key components of an LED Driver is the “Capacitors”. The vast majority of Capacitors are made in Asia with very few manufactured in America. This may be one of the reasons that the current Duty is only 1.5% vs. 3.9% on the other components. Our Company and in turn our Distributors and End Users (Property Owners and Managers) would only slightly benefit in the short term with the lift on the Duty, but in the long run it just creates one more reason to let the manufacturing continue in Asia.

- The Commission: Will you benefit from this bill? If so, can you provide me an estimate of the value of imports that will benefit from this bill in each of the next five years?

U.S. LED Tube Manufacturer: We will not benefit from this set of bills other than a very slight short term advantage on the imported LED Drivers referenced in H.R. 5484. However, we will face a significant challenge that could add up to hundreds of millions of dollars in lost revenue and thousands of U.S. jobs lost if H.R. 5478 PASSES for Light emitting diode



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(LED) Tubular LED (TLED). The flood of Chinese LED Tubes is already difficult enough for us to compete with our U.S. products. The margins are very tight on our clean energy products so 3.9% advantage to the Chinese is a significant additional hurdle to overcome. The stakes are so high because with over 2 Billion U.S. fluorescent tubes that will eventually be replaced by LED tubes that use 50% less energy, the scale of the retrofits at \$50 per tube is \$100 Billion over the next 10 years. A 3.9% Duty is not just 3.9 Billion dollars lost. It could be the majority of the LED tube industry lost to China. With at least 5 jobs created for every \$1 Million in U.S. Made LED Tube Retrofits, the jobs creation potential is as follows; if we keep the technology at home. \$100 Billion per year for a decade breaks down to \$10 Billion per year. This is 10,000 Million so with 5 jobs per Million there would be 50,000 new jobs each year. Given that we are struggling to create this many jobs each month across the entire U.S. in every business and government sector, the timing could not be worse to give a hand up to overseas manufacturers.

#### **ADDITIONAL information on LED Tubes:**

The following points are supported and reinforced by APPENDIX #3, #4 and #5. Leading research groups like McKinsey have identified that the next three and half years leading up to 2016 are critical for developing LED Technology. 30% of Commercial Electricity is lighting. The vast majority of commercial lighting is tubular via current fluorescent tubes. Fluorescent tubes consume twice the energy as LEDs and also have toxic mercury. LED tubes are toxic free. This lift on the Duty for LED tubes would be one more hand up for foreign manufacturers and a hurdle for American Manufacturers that provide “Living Wages” for workers. The ripple effect of Jobs is massive given the non “green” jobs like the box makers, the drivers, and the support staff of Account Managers outside of the manufacturing facilities. Please note that there is also a very real Energy SECURITY issue if the vast majority of the commercial lighting in America is not made in America.

The Bill H.R. 5478: Light emitting diode (LED) Tubular LED (TLED) makes an assumption that all Tubular LEDs or “TLEDs” are a singular category of product. In fact LED Tubes are as different as different types of vehicles. There are poor quality vehicles and there are vehicles fueled by combustion, diesel, hybrid, etc.

Here are several key differentiators in LED Tubes for legislative consideration:

1: LED Tubes without External Drivers – Typically with less expensive Internal Drivers

1A: LED Tubes with External Drivers

2: LED Tubes without Thermal Management – Typically less expensive construction

2A: LED Tubes with Thermal Management

(Note: Since heat degrades the phosphor on Light Emitting Diodes, Thermal Management is key to quality light and longevity)

3: LED Tubes without Underwriters Laboratories (UL) Certification and Listing

3A: LED Tubes with Underwriters Laboratories (UL) Certification and Listing



The Independence LED Tubes include 1A + 2A + 3A and this is the key driver to the success of the products and the adoption through U.S. sales. Over the past six months an increasing number of overseas Distributors have requested sales opportunities to different countries around the world. They have specifically cited the Made in America quality and top engineering as the reason for their interest.

After 9 months of review by Underwriters Laboratories (UL) and the Lockheed Martin engineering team working as the administrator of the Con Edison Utility in the New York Metro Market, they determined that the criteria for their rebate program included External Drivers and a UL Certification on the complete Retrofit Kit combination of Tube and External Driver.

Lifting the Duty on LED Tubes across the board that do not meet the minimum engineering and quality standards is a recipe for disaster. Property Owners and Managers will suffer as well as the U.S. Manufacturer's of high quality products that have more advanced engineering and components such as deep fin aluminum heat sinks for thermal management.



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## APPENDIX #1: Legislation

Bill	Product	General tariff rate	Proposed tariff rate	Proposed expiration	Link to bill
H.R. 5470	Polycrystalline alumina tubes and shaped bodies designed for high intensity discharge (HID) lamps (provided for in subheading 8539.90.00)	2.6%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5470ih/pdf/BILLS-112hr5470ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5470ih/pdf/BILLS-112hr5470ih.pdf</a>
H.R. 5471	Metal screw type bases designed for high intensity discharge (HID) lamps (provided for in subheading 8539.90.00)	2.6%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5471ih/pdf/BILLS-112hr5471ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5471ih/pdf/BILLS-112hr5471ih.pdf</a>
H.R. 5473	Frit rings composed of dysprosium oxide, dysprosium monosilicate, and mullite (CAS Nos. 12161-58-9, 235-295-7, 1302-93-8, 215-113-2, 1308-87-8, and 215-164-0) (provided for in sub-heading 8539.90.00)	2.6%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5473ih/pdf/BILLS-112hr5473ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5473ih/pdf/BILLS-112hr5473ih.pdf</a>
H.R. 5475	Polycrystalline Alumina discharge tubes prefilled with metal halide salts (CAS Nos. 65997-17-3, 266-046-0, 7439-97-6, 231-106-7, 7440-33-7, 231-143-9, 7681-82-5, 231-143-9, 7681-82-5, 231-679-3, 7790-30-9, 230-199-7, 10102-68-8, 233-276-8, 15474-63-2, 239-493-4, 13813-41-7, and 237-470-3) and designated for high intensity discharge (HID) lamps (provided for in subheading 8539.90.00)	2.6%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5475ih/pdf/BILLS-112hr5475ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5475ih/pdf/BILLS-112hr5475ih.pdf</a>
H.R. 5476	Ceramic bases designed for high intensity discharge (HID) lamps, with metal locking pins to allow passage of an electrical current (provided for in subheading 8536.61.00)	2.7%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5476ih/pdf/BILLS-112hr5476ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5476ih/pdf/BILLS-112hr5476ih.pdf</a>
H.R. 5477	Light emitting diode (LED) cooler modules (LCM) (provided for in subheading 9405.40.80)	3.9%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5477ih/pdf/BILLS-112hr5477ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5477ih/pdf/BILLS-112hr5477ih.pdf</a>
H.R. 5478	Light emitting diode (LED) Tubular LED (TLED) (provided for in subheading 9405.40.80)	3.9%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5478ih/pdf/BILLS-112hr5478ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5478ih/pdf/BILLS-112hr5478ih.pdf</a>
H.R. 5479	Light emitting diode (LED) down light modules (DLM) (provided for in subheading 9405.40.80)	3.9%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5479ih/pdf/BILLS-112hr5479ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5479ih/pdf/BILLS-112hr5479ih.pdf</a>
H.R. 5480	Light emitting diode (LED) display modules (LDM) (provided for in subheading 9405.40.80)	3.9%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5480ih/pdf/BILLS-112hr5480ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5480ih/pdf/BILLS-112hr5480ih.pdf</a>
H.R. 5481	Light emitting diode (LED) line modules (provided for in subheading 9405.40.80)	3.9%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5481ih/pdf/BILLS-112hr5481ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5481ih/pdf/BILLS-112hr5481ih.pdf</a>
H.R. 5482	Light emitting diode (LED) twistable down light modules (TDLM) (provided for in subheading 9405.40.80)	3.9%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5482ih/pdf/BILLS-112hr5482ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5482ih/pdf/BILLS-112hr5482ih.pdf</a>
H.R. 5483	Light emitting diode (LED) spot light modules (SLM) (provided for in subheading 9405.40.80)	3.9%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5483ih/pdf/BILLS-112hr5483ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5483ih/pdf/BILLS-112hr5483ih.pdf</a>
H.R. 5484	Light emitting diode (LED) drivers which contain diodes, transistors and other semiconductor material designed to work with an LED array to deliver constant current and to prevent transients of current from damaging the LED, specifically designed to withstand extreme temperatures of 55 «C at a case temperature of 80 «C and a full operating ambient temperature range of -40 «C to 55 «C, offering at least 50,000 hours operating life in whole temperature range (provided for in subheading 8504.40.95)	1.5%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5484ih/pdf/BILLS-112hr5484ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5484ih/pdf/BILLS-112hr5484ih.pdf</a>



## **APPENDIX #2:**

### **Additional Background on Independence LED and working at the Federal Level.**

On June 28<sup>th</sup>, 2012, Independence LED Chairman and CEO, Charlie Szoradi, joined one of the company's Distributors to travel to Washington, DC for a meeting with high ranking members of the Energy Conservation Team from one the Department of Defense (DOD) specialty divisions.

The meeting was to discuss strategic implementation of retrofits for T12 and T8 fluorescent tubes to American Made LED Tubes. Since the summer of 2011, The Independence LED Distributor has been conducting multiple lighting audits for a vast range of energy conservation efforts for the military. The Independence LED Eagle Tubes were selected and installed in a pilot program over Q3, 2011. The feedback from the July 28<sup>th</sup> meeting was that the Independence LED Eagle Tubes have out-performed a set of imported tubes with internal driver technology over the year long testing program.

This recent trip to Washington, DC is not the first time that Mr. Szoradi has engaged at the Federal level. In 2009, he served on the Green Economy Task Force, specifically for the Capital Hill Delegation through his role as Board Member of the Sustainable Business Network. His Task Force role included meeting with Senators and members of the House of Representatives, from both sides of the aisle, to identify the benefits of energy efficiency measures in the private sector, in advance of the vote on the multi-billion dollar American Recovery and Reinvestment Act (ARRA).

This summer, the next meetings range from the Navy Weapons Station in San Diego, California to the Army Corps of Engineers in Rogers, Arkansas. Given the July 14<sup>th</sup>, 2012 ban by the DOE on the inefficient "T12" fluorescent tubes and the significant volume of remaining T12s in the military properties, the leadership team at the June 28th meeting in Washington, DC was naturally interested in the advantages of Independence LED's [CASH for CLUNKERS Lighting](#) program that the Company launched in response to the July 14<sup>th</sup> 2012 ban by the Department of Energy on inefficient T12 fluorescent tubes.

### **APPENDIX #3:**

#### **Green Building Council and Booz Allen Hamilton Report:**

Source: US Green Building Council: <http://www.usgbc.org/ShowFile.aspx?DocumentID=6435>

Buildings generate approximately 40 percent of the United States' carbon emissions.

Booz Allen calculated the savings that result from green buildings based on data from a meta-analysis of 10 reports on LEED-certified buildings. The study then calculated the estimated savings per square foot for four savings categories: energy, operations and maintenance (O&M), trash, and water. Based on these analyses, the study calculated the following average savings per square foot: Energy: \$0.52 /sq. ft.

#### **Results**

Once the absolute value of the expenditure impacts and the savings impacts were estimated in IMPLAN, the difference was calculated between the two to obtain the overall net economic impact of green construction. Over the nine-year time period from 2000 to 2008, green construction generated \$173 billion dollars in GDP and supported over 2.4 million jobs that in turn provided \$123 billion dollars in labor earnings. Over the five-year time period from 2009 to 2013, this study forecasts that green construction will generate an additional \$554 billion dollars in GDP and will support over 7.9 million jobs that in turn will provide \$396 billion in labor earnings. Exhibit 2-3 illustrates the total net economic impact effects of green construction in terms of GDP, jobs, and earnings. Exhibit 2-4, Exhibit 2-2, and Exhibit 2-6 illustrate the direct, indirect, and induced effects on GDP, jobs, and earnings.

#### **Green Construction Economic Impact**

From 2000–2008, the green construction market has:

- Generated \$173 billion dollars in GDP
- Supported over 2.4 million jobs
- Provided \$123 billion dollars in labor earnings

From 2009–2013, this study forecasts that green construction will:

- Generate an additional \$554 billion dollars in GDP
- Support over 7.9 million jobs
- Provide \$396 billion in labor earnings

## **APPENDIX #4: Research Sources**

### **Appendix # 4.1: Department of Energy – January 2012 Report**

Page #35 of the DOE Report identifies:

2,385,399,000 fluorescent tubes in American ceilings:

**48.1%: T8s** totaling 1,148,222,000 Tubes

**39.5%: T12s** totaling 941,335,000 Tubes

**12.4%: T5s or Miscellaneous** totaling 295,842,000 Tubes

Source: <http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/2010-lmc-final-jan-2012.pdf>

All 2.3 Billion of these tubes will eventually be replaced by LED Tubes that save 50% or more on electricity.

### **Appendix # 4.2: Presidential Memorandum – December 2011**

President Obama has reached a key understanding. On December 2<sup>nd</sup>, 2011, the President wrote a Memorandum, “Upgrading the energy performance of buildings is one of the fastest and most effective ways to reduce energy costs, cut pollution, and create jobs in the construction and energy sectors. The Federal Government can do so by increasing the pace of the implementation of energy conservation measures, and improving the results from its energy efficiency investments.”

See the full [White House Memorandum Dec 2011](#).

Please note that with over 3 Billion sq. ft. of Federal real estate, the U.S. Government should look to retrofit with U.S. Made LED Tubes vs. imported ones.

### **Appendix # 4.3: Size of the Federal Government Real Estate**

The Federal Real Property Profile (FRPP) is the single comprehensive inventory system that contains data on all federal real property assets within and outside the United States, including improvements on federal land. The government's portfolio of building assets totals approximately **3.87 billion sq. ft of space**. In all, the government has a total of 1.25 million building, land, and structure assets with a total replacement value of \$1.53 trillion.

[www.gsa.gov/portal/content/104199](http://www.gsa.gov/portal/content/104199). Of the total Federal properties more than half is the Department of Defense, “DoD occupies a reported 300,658 buildings throughout the world, valued at over \$575 billion comprising over **2.2 billion sq. ft.**” Source: Page #12: Military Report: <http://www.acq.osd.mil/ie/download/bsr/BSR2010Baseline.pdf>

More on Size of the Federal Government: With more than 1.8 million civilian employees, 500,000 buildings, and \$500 billion in annual purchasing power, the Federal Government has a



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responsibility to lead by example when it comes to its environmental, energy, and economic performance. <http://sustainability.performance.gov/>

#### **Appendix # 4.4: Government Energy Consumption and Waste**

“Government agencies spend more than \$10 billion a year on energy to provide public services and meet constituent needs — while grappling with tightening budgets. Yet nearly one-third of the energy used to run typical government buildings goes to waste.”

[http://www.energystar.gov/index.cfm?c=government.bus\\_government](http://www.energystar.gov/index.cfm?c=government.bus_government)

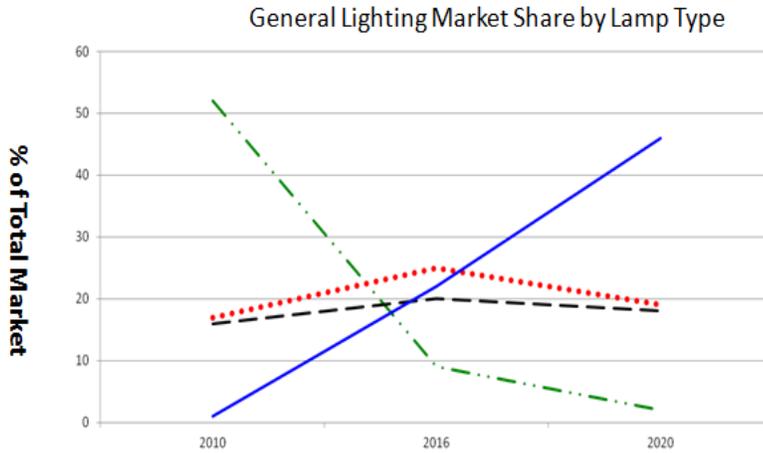
#### **Appendix # 4.5: Why are LED Tubes for Lighting such a Big Deal?**

According to the DOE, over half of our U.S. electricity consumption is for buildings. Plus, lighting accounts for 30% -35% of all commercial electricity use, per the Electric Power Research Institute. See the [EPRI Report](#).

**APPENDIX #5:**  
McKinsey Studies

Source: McKinsey Global Lighting Market Model; McKinsey Global Lighting Professionals Consumer Survey

## LED Takes Over General Lighting Segment



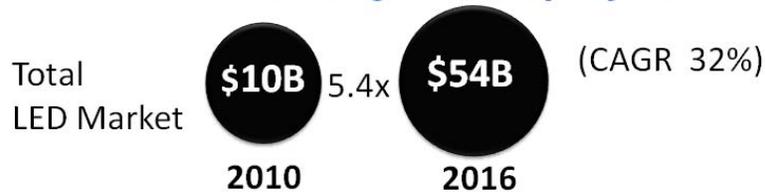
**LED's are projected to gain share from all other light sources.**

Incandescent = Filament Lights  
LFL = Linear Fluorescent Tubes  
CFL = Compact Fluorescent Lights  
LED = Light Emitting Diodes

**The Massive Size of the LED Market:**

McKinsey classifies the lighting market into three categories: Automotive, Backlighting, and General Lighting. General Lighting includes: residential, office, shop, hospitality, outdoor, industrial, and architectural.

### The LED Market is Large and Rapidly Growing



### The fastest growing sector – General Lighting





7.10.11

Andrew David  
US International Trade Commission  
500 E Street, SW  
Washington, DC 20436  
Phone: (202) 205-3368 Fax: (202) 205-2018  
Andrew.David@usitc.gov  
**Subject:** RE: Digital File for Trade Commission File on HID and LED Components

Mr. David,

Thank you for contacting us on July 9<sup>th</sup> about the United States International Trade Commission's Temporary Duty Suspension on certain HID and LED lamp components. We understand that the Commission is an independent agency in the U.S. Government, which among other things, provides advice to the President and Congress on all matters of international trade. In response to your request for input to Congressional legislation related to certain HID and LED lamp components, we also understand that the Commission prepares reports on legislation concerning duty suspensions for the Ways and Means and Senate Finance Committees. Since the Commission attempts to identify and contact domestic firms and associations that may have interest in the subject legislation, we have also included a brief background on our domestic manufacturing business to provide context for our response and key Appendix research files for your review.

Kind regards,

**Charlie Szoradi – Chairman and CEO**

C. Szoradi Direct: 610.551.5224 [Charlie@IndependenceLED.com](mailto:Charlie@IndependenceLED.com)  
LEED AP, BPI Energy Auditor, Green Economy Task Force



Con Edison  
Market Partner  
Network Member



The  
Main Line  
Chamber  
of Commerce™  
ACCREDITED

2011  
GREEN  
BUSINESS  
OF THE YEAR

Independence LED's EAGLE LED Tube System is Made in America with Domestic and Imported Components and is UL Classified. The External Independent Driver, Heat Sink, Modular Light Engines, and Advanced Thermal Management Systems are Patent Pending, and the US Manufacturing also meets the BUY AMERICA Qualifications of the American Recovery and Rescue Act (ARRA).



## Background on Independence LED – U.S. Manufacturer of LED Tubes

We moved the manufacturing of our LED Tubes from China to Boyertown, PA in Q2 2010, and we have seen a tremendous lift in demand and leadership respect across the engineering landscape. Over the course of last year, Lockheed Martin’s engineering team conducted the reviews and approved our Independence LED tube system over others for the coveted Con Edison Rebates in the NYC Metro Market. The Independence LED “External Driver” system has set a new standard, and also earned the Underwriters Laboratories (UL) and the Compliance European (CE) Listings on the combined driver and tube retrofit kit system. Our Deep Fin thermal management and Flex Density™ for the light engines provide cost-effective US manufacturing with scale and reliability to cut the cost of electricity by 50% or more over fluorescent tubes. Our clients now range from Morgan Stanley to MetLife and from Distribution Centers like Davis and Warshow to national auto service chains like Monro Muffler. Our recent retrofit of 50 different Monro Muffler locations across CT and NJ includes over 6 miles of tubes and may stand as the largest installation of LED Tubes in the US Market to date. The Cushman and Wakefield management team for MetLife has specified the Independence “Eagle” LED tubes for its properties, resulting in three new orders in Q2 and, to date, one new order in Q3. For 2011, we won the Green Business of the Year Award from the Main Line Chamber of Commerce. To review our Technology Differentiation, Spec Sheets, and Retrofit Photo files, plus Videos, please see this page: [www.IndependenceLED.com/BootCamp](http://www.IndependenceLED.com/BootCamp) Here is the link to our recent Newsletter: [www.IndependenceLED.com/q2\\_newsletter](http://www.IndependenceLED.com/q2_newsletter)

### Responses:

The Commission has asked to advise you in regard to the following four points and the breakdown of legislation in Attachment #1: We have provided a response to each of the four points below:

- The Commission: Do you have an interest in the proposed duty suspension legislation and, if so, do you support, oppose, or are you neutral to each of the bills?

U.S. LED Tube Manufacturer: **We support 11 of the 13 duty suspensions. The two that we oppose are Bill H.R. 5478 and Bill H.R. 5484**

Bill H.R. 5478: Light emitting diode (LED) Tubular LED (TLED) (provided for in subheading 9405.40.80). It calls for a FREE Duty through 12/31/2015 in lieu of the current 3.9% Duty on Tubular LED products. Out of the set of 13 Bills, this one accounts for the vast majority of impact on technology adoptions and domestic jobs, because the majority of commercial lighting is tubular with current fluorescent technology that typically uses twice the energy as LED equivalents. The Department of Energy has reported that there are over 3 Billion fluorescent tubes in U.S. Ceilings. This response warrants further explanation per the ADDITIONAL information on LED Tubes in this file.

Bill H.R. 5484 Light emitting diode (LED) drivers. This Bill calls for a FREE Duty through 12/31/2015 in lieu of the current 1.5% Duty on Tubular LED products. The vast majority of LED Drivers are currently made overseas and they serve as the companion technology to the LED Tubes. A FREE Duty on U.S. Drivers will significantly deter U.S. Manufacturing, reduce the number of potential U.S. Jobs, and reduce American Energy Security. The security issue comes up in this context: If an LED Driver were like the starter on a car and the LED Tube is the car, then it is a potential national security issue for the U.S. if ONLY foreign companies make the “starters” for the tube lights that dominate all of commercial illumination.

- The Commission: Do you make any of the products described in the bills or competing products in the United States? Is there other U.S. manufacturing of the products described in the bills or competing products? If so, could you provide the names of the firms that make these products?

U.S. LED Tube Manufacturer: We make LED Tubes that would be impacted by Bill H.R. 5478: Light emitting diode (LED) Tubular LED (TLED). The vast majority of other manufacturers of LED Tubes are from China. There are only a few U.S. Companies that are making LED tubes in America and a few others that have expressed interest in shifting manufacturing from China to America, but this lift in the import duty will most likely serve to deter them from either keeping the manufacturing in America or bringing the jobs and technology to America. The margin in electronics is so narrow that 3.9% can become the difference between keeping an operation overseas and setting up U.S. manufacturing in this clean energy sector.

- The Commission: Do you import the products described in these bills? If so, what countries are the major sources of imports for each of these products?

U.S. LED Tube Manufacturer: We import the LED Drivers referenced in Bill H.R. 5484. We are working on a U.S. made LED Driver to add to our manufacturing operations but we currently import the Drivers from China. H.R. 5484 does not reference that one of the key components of an LED Driver is the “Capacitors”. The vast majority of Capacitors are made in Asia with very few manufactured in America. This may be one of the reasons that the current Duty is only 1.5% vs. 3.9% on the other components. Our Company and in turn our Distributors and End Users (Property Owners and Managers) would only slightly benefit in the short term with the lift on the Duty, but in the long run it just creates one more reason to let the manufacturing continue in Asia.

- The Commission: Will you benefit from this bill? If so, can you provide me an estimate of the value of imports that will benefit from this bill in each of the next five years?

U.S. LED Tube Manufacturer: We will not benefit from this set of bills other than a very slight short term advantage on the imported LED Drivers referenced in H.R. 5484. However, we will face a significant challenge that could add up to hundreds of millions of dollars in lost revenue and thousands of U.S. jobs lost if H.R. 5478 PASSES for Light emitting diode



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(LED) Tubular LED (TLED). The flood of Chinese LED Tubes is already difficult enough for us to compete with our U.S. products. The margins are very tight on our clean energy products so 3.9% advantage to the Chinese is a significant additional hurdle to overcome. The stakes are so high because with over 2 Billion U.S. fluorescent tubes that will eventually be replaced by LED tubes that use 50% less energy, the scale of the retrofits at \$50 per tube is \$100 Billion over the next 10 years. A 3.9% Duty is not just 3.9 Billion dollars lost. It could be the majority of the LED tube industry lost to China. With at least 5 jobs created for every \$1 Million in U.S. Made LED Tube Retrofits, the jobs creation potential is as follows; if we keep the technology at home. \$100 Billion per year for a decade breaks down to \$10 Billion per year. This is 10,000 Million so with 5 jobs per Million there would be 50,000 new jobs each year. Given that we are struggling to create this many jobs each month across the entire U.S. in every business and government sector, the timing could not be worse to give a hand up to overseas manufacturers.

#### **ADDITIONAL information on LED Tubes:**

The following points are supported and reinforced by APPENDIX #3, #4 and #5. Leading research groups like McKinsey have identified that the next three and half years leading up to 2016 are critical for developing LED Technology. 30% of Commercial Electricity is lighting. The vast majority of commercial lighting is tubular via current fluorescent tubes. Fluorescent tubes consume twice the energy as LEDs and also have toxic mercury. LED tubes are toxic free. This lift on the Duty for LED tubes would be one more hand up for foreign manufacturers and a hurdle for American Manufacturers that provide “Living Wages” for workers. The ripple effect of Jobs is massive given the non “green” jobs like the box makers, the drivers, and the support staff of Account Managers outside of the manufacturing facilities. Please note that there is also a very real Energy SECURITY issue if the vast majority of the commercial lighting in America is not made in America.

The Bill H.R. 5478: Light emitting diode (LED) Tubular LED (TLED) makes an assumption that all Tubular LEDs or “TLEDs” are a singular category of product. In fact LED Tubes are as different as different types of vehicles. There are poor quality vehicles and there are vehicles fueled by combustion, diesel, hybrid, etc.

Here are several key differentiators in LED Tubes for legislative consideration:

1: LED Tubes without External Drivers – Typically with less expensive Internal Drivers

1A: LED Tubes with External Drivers

2: LED Tubes without Thermal Management – Typically less expensive construction

2A: LED Tubes with Thermal Management

(Note: Since heat degrades the phosphor on Light Emitting Diodes, Thermal Management is key to quality light and longevity)

3: LED Tubes without Underwriters Laboratories (UL) Certification and Listing

3A: LED Tubes with Underwriters Laboratories (UL) Certification and Listing



The Independence LED Tubes include 1A + 2A + 3A and this is the key driver to the success of the products and the adoption through U.S. sales. Over the past six months an increasing number of overseas Distributors have requested sales opportunities to different countries around the world. They have specifically cited the Made in America quality and top engineering as the reason for their interest.

After 9 months of review by Underwriters Laboratories (UL) and the Lockheed Martin engineering team working as the administrator of the Con Edison Utility in the New York Metro Market, they determined that the criteria for their rebate program included External Drivers and a UL Certification on the complete Retrofit Kit combination of Tube and External Driver.

Lifting the Duty on LED Tubes across the board that do not meet the minimum engineering and quality standards is a recipe for disaster. Property Owners and Managers will suffer as well as the U.S. Manufacturer's of high quality products that have more advanced engineering and components such as deep fin aluminum heat sinks for thermal management.



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## APPENDIX #1: Legislation

Bill	Product	General tariff rate	Proposed tariff rate	Proposed expiration	Link to bill
H.R. 5470	Polycrystalline alumina tubes and shaped bodies designed for high intensity discharge (HID) lamps (provided for in subheading 8539.90.00)	2.6%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5470ih/pdf/BILLS-112hr5470ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5470ih/pdf/BILLS-112hr5470ih.pdf</a>
H.R. 5471	Metal screw type bases designed for high intensity discharge (HID) lamps (provided for in subheading 8539.90.00)	2.6%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5471ih/pdf/BILLS-112hr5471ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5471ih/pdf/BILLS-112hr5471ih.pdf</a>
H.R. 5473	Frit rings composed of dysprosium oxide, dysprosium monosilicate, and mullite (CAS Nos. 12161-58-9, 235-295-7, 1302-93-8, 215-113-2, 1308-87-8, and 215-164-0) (provided for in sub-heading 8539.90.00)	2.6%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5473ih/pdf/BILLS-112hr5473ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5473ih/pdf/BILLS-112hr5473ih.pdf</a>
H.R. 5475	Polycrystalline Alumina discharge tubes prefilled with metal halide salts (CAS Nos. 65997-17-3, 266-046-0, 7439-97-6, 231-106-7, 7440-33-7, 231-143-9, 7681-82-5, 231-143-9, 7681-82-5, 231-679-3, 7790-30-9, 230-199-7, 10102-68-8, 233-276-8, 15474-63-2, 239-493-4, 13813-41-7, and 237-470-3) and designated for high intensity discharge (HID) lamps (provided for in subheading 8539.90.00)	2.6%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5475ih/pdf/BILLS-112hr5475ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5475ih/pdf/BILLS-112hr5475ih.pdf</a>
H.R. 5476	Ceramic bases designed for high intensity discharge (HID) lamps, with metal locking pins to allow passage of an electrical current (provided for in subheading 8536.61.00)	2.7%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5476ih/pdf/BILLS-112hr5476ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5476ih/pdf/BILLS-112hr5476ih.pdf</a>
H.R. 5477	Light emitting diode (LED) cooler modules (LCM) (provided for in subheading 9405.40.80)	3.9%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5477ih/pdf/BILLS-112hr5477ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5477ih/pdf/BILLS-112hr5477ih.pdf</a>
H.R. 5478	Light emitting diode (LED) Tubular LED (TLED) (provided for in subheading 9405.40.80)	3.9%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5478ih/pdf/BILLS-112hr5478ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5478ih/pdf/BILLS-112hr5478ih.pdf</a>
H.R. 5479	Light emitting diode (LED) down light modules (DLM) (provided for in subheading 9405.40.80)	3.9%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5479ih/pdf/BILLS-112hr5479ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5479ih/pdf/BILLS-112hr5479ih.pdf</a>
H.R. 5480	Light emitting diode (LED) display modules (LDM) (provided for in subheading 9405.40.80)	3.9%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5480ih/pdf/BILLS-112hr5480ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5480ih/pdf/BILLS-112hr5480ih.pdf</a>
H.R. 5481	Light emitting diode (LED) line modules (provided for in subheading 9405.40.80)	3.9%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5481ih/pdf/BILLS-112hr5481ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5481ih/pdf/BILLS-112hr5481ih.pdf</a>
H.R. 5482	Light emitting diode (LED) twistable down light modules (TDLM) (provided for in subheading 9405.40.80)	3.9%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5482ih/pdf/BILLS-112hr5482ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5482ih/pdf/BILLS-112hr5482ih.pdf</a>
H.R. 5483	Light emitting diode (LED) spot light modules (SLM) (provided for in subheading 9405.40.80)	3.9%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5483ih/pdf/BILLS-112hr5483ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5483ih/pdf/BILLS-112hr5483ih.pdf</a>
H.R. 5484	Light emitting diode (LED) drivers which contain diodes, transistors and other semiconductor material designed to work with an LED array to deliver constant current and to prevent transients of current from damaging the LED, specifically designed to withstand extreme temperatures of 55 «C at a case temperature of 80 «C and a full operating ambient temperature range of -40 «C to 55 «C, offering at least 50,000 hours operating life in whole temperature range (provided for in subheading 8504.40.95)	1.5%	Free	12/31/2015	<a href="http://www.gpo.gov/fdsys/pkg/BILLS-112hr5484ih/pdf/BILLS-112hr5484ih.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-112hr5484ih/pdf/BILLS-112hr5484ih.pdf</a>



## **APPENDIX #2:**

### **Additional Background on Independence LED and working at the Federal Level.**

On June 28<sup>th</sup>, 2012, Independence LED Chairman and CEO, Charlie Szoradi, joined one of the company's Distributors to travel to Washington, DC for a meeting with high ranking members of the Energy Conservation Team from one the Department of Defense (DOD) specialty divisions.

The meeting was to discuss strategic implementation of retrofits for T12 and T8 fluorescent tubes to American Made LED Tubes. Since the summer of 2011, The Independence LED Distributor has been conducting multiple lighting audits for a vast range of energy conservation efforts for the military. The Independence LED Eagle Tubes were selected and installed in a pilot program over Q3, 2011. The feedback from the July 28<sup>th</sup> meeting was that the Independence LED Eagle Tubes have out-performed a set of imported tubes with internal driver technology over the year long testing program.

This recent trip to Washington, DC is not the first time that Mr. Szoradi has engaged at the Federal level. In 2009, he served on the Green Economy Task Force, specifically for the Capital Hill Delegation through his role as Board Member of the Sustainable Business Network. His Task Force role included meeting with Senators and members of the House of Representatives, from both sides of the aisle, to identify the benefits of energy efficiency measures in the private sector, in advance of the vote on the multi-billion dollar American Recovery and Reinvestment Act (ARRA).

This summer, the next meetings range from the Navy Weapons Station in San Diego, California to the Army Corps of Engineers in Rogers, Arkansas. Given the July 14<sup>th</sup>, 2012 ban by the DOE on the inefficient "T12" fluorescent tubes and the significant volume of remaining T12s in the military properties, the leadership team at the June 28th meeting in Washington, DC was naturally interested in the advantages of Independence LED's [CASH for CLUNKERS Lighting](#) program that the Company launched in response to the July 14<sup>th</sup> 2012 ban by the Department of Energy on inefficient T12 fluorescent tubes.

### **APPENDIX #3:**

#### **Green Building Council and Booz Allen Hamilton Report:**

Source: US Green Building Council: <http://www.usgbc.org/ShowFile.aspx?DocumentID=6435>

Buildings generate approximately 40 percent of the United States' carbon emissions.

Booz Allen calculated the savings that result from green buildings based on data from a meta-analysis of 10 reports on LEED-certified buildings. The study then calculated the estimated savings per square foot for four savings categories: energy, operations and maintenance (O&M), trash, and water. Based on these analyses, the study calculated the following average savings per square foot: Energy: \$0.52 /sq. ft.

#### **Results**

Once the absolute value of the expenditure impacts and the savings impacts were estimated in IMPLAN, the difference was calculated between the two to obtain the overall net economic impact of green construction. Over the nine-year time period from 2000 to 2008, green construction generated \$173 billion dollars in GDP and supported over 2.4 million jobs that in turn provided \$123 billion dollars in labor earnings. Over the five-year time period from 2009 to 2013, this study forecasts that green construction will generate an additional \$554 billion dollars in GDP and will support over 7.9 million jobs that in turn will provide \$396 billion in labor earnings. Exhibit 2-3 illustrates the total net economic impact effects of green construction in terms of GDP, jobs, and earnings. Exhibit 2-4, Exhibit 2-2, and Exhibit 2-6 illustrate the direct, indirect, and induced effects on GDP, jobs, and earnings.

#### **Green Construction Economic Impact**

From 2000–2008, the green construction market has:

- Generated \$173 billion dollars in GDP
- Supported over 2.4 million jobs
- Provided \$123 billion dollars in labor earnings

From 2009–2013, this study forecasts that green construction will:

- Generate an additional \$554 billion dollars in GDP
- Support over 7.9 million jobs
- Provide \$396 billion in labor earnings

## **APPENDIX #4: Research Sources**

### **Appendix # 4.1: Department of Energy – January 2012 Report**

Page #35 of the DOE Report identifies:

2,385,399,000 fluorescent tubes in American ceilings:

**48.1%: T8s** totaling 1,148,222,000 Tubes

**39.5%: T12s** totaling 941,335,000 Tubes

**12.4%: T5s or Miscellaneous** totaling 295,842,000 Tubes

Source: <http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/2010-lmc-final-jan-2012.pdf>

All 2.3 Billion of these tubes will eventually be replaced by LED Tubes that save 50% or more on electricity.

### **Appendix # 4.2: Presidential Memorandum – December 2011**

President Obama has reached a key understanding. On December 2<sup>nd</sup>, 2011, the President wrote a Memorandum, “Upgrading the energy performance of buildings is one of the fastest and most effective ways to reduce energy costs, cut pollution, and create jobs in the construction and energy sectors. The Federal Government can do so by increasing the pace of the implementation of energy conservation measures, and improving the results from its energy efficiency investments.”

See the full [White House Memorandum Dec 2011](#).

Please note that with over 3 Billion sq. ft. of Federal real estate, the U.S. Government should look to retrofit with U.S. Made LED Tubes vs. imported ones.

### **Appendix # 4.3: Size of the Federal Government Real Estate**

The Federal Real Property Profile (FRPP) is the single comprehensive inventory system that contains data on all federal real property assets within and outside the United States, including improvements on federal land. The government's portfolio of building assets totals approximately **3.87 billion sq. ft of space**. In all, the government has a total of 1.25 million building, land, and structure assets with a total replacement value of \$1.53 trillion.

[www.gsa.gov/portal/content/104199](http://www.gsa.gov/portal/content/104199). Of the total Federal properties more than half is the Department of Defense, “DoD occupies a reported 300,658 buildings throughout the world, valued at over \$575 billion comprising over **2.2 billion sq. ft.**” Source: Page #12: Military Report: <http://www.acq.osd.mil/ie/download/bsr/BSR2010Baseline.pdf>

More on Size of the Federal Government: With more than 1.8 million civilian employees, 500,000 buildings, and \$500 billion in annual purchasing power, the Federal Government has a



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responsibility to lead by example when it comes to its environmental, energy, and economic performance. <http://sustainability.performance.gov/>

#### **Appendix # 4.4: Government Energy Consumption and Waste**

“Government agencies spend more than \$10 billion a year on energy to provide public services and meet constituent needs — while grappling with tightening budgets. Yet nearly one-third of the energy used to run typical government buildings goes to waste.”

[http://www.energystar.gov/index.cfm?c=government.bus\\_government](http://www.energystar.gov/index.cfm?c=government.bus_government)

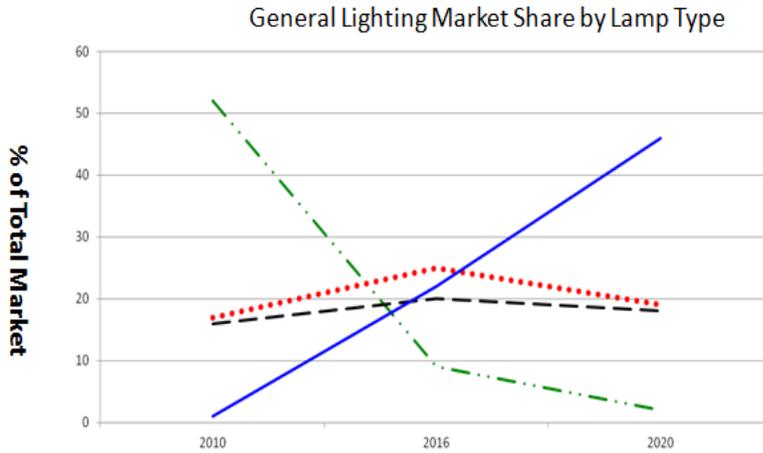
#### **Appendix # 4.5: Why are LED Tubes for Lighting such a Big Deal?**

According to the DOE, over half of our U.S. electricity consumption is for buildings. Plus, lighting accounts for 30% -35% of all commercial electricity use, per the Electric Power Research Institute. See the [EPRI Report](#).

**APPENDIX #5:**  
McKinsey Studies

Source: McKinsey Global Lighting Market Model; McKinsey Global Lighting Professionals Consumer Survey

## LED Takes Over General Lighting Segment



**LED's are projected to gain share from all other light sources.**

Incandescent = Filament Lights  
LFL = Linear Fluorescent Tubes  
CFL = Compact Fluorescent Lights  
LED = Light Emitting Diodes

**The Massive Size of the LED Market:**

McKinsey classifies the lighting market into three categories: Automotive, Backlighting, and General Lighting. General Lighting includes: residential, office, shop, hospitality, outdoor, industrial, and architectural.

### The LED Market is Large and Rapidly Growing



### The fastest growing sector – General Lighting



## David, Andrew

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**From:** Wilfred Martis  
**Sent:** Monday, June 25, 2012 1:59 PM  
**To:** David, Andrew  
**Subject:** Re: Temporary duty suspensions on LED and HID lamp components

Hi Andy,

Thanks a lot for the guidance last week.

I responded online to the House Ways & Means Committee on Friday with the Soraa position.

Below is what I sent them. Pls incorporate this position in any material your organization will be submitting.

**Soraa opposes the selective removal of tariffs in Bills 5477, 5478, 5479, 5480, 5481, 5482, 5483 & 5484, because they seem preferential to certain LED/Lighting industry players, and could adversely affect Soraa's products & business if implemented as is. To help promote the US-based and funded research and development on Violet LED based products & subsystems and to ensure a leveled playing field, we recommend that tariffs be removed for these products & subsystems too.**

**Soraa, based in Fremont, California, is the world's leading developer of solid-state lighting technology built on pure gallium nitride substrates, commonly referred to as GaN on GaN™. Only Soraa uses a pure GaN crystal to create simply perfect light. Soraa's flagship product is the highest-performance LED MR16 halogenreplacement lamp on the market.**

Pls let me know if you need additional info from me. I will also be sending this response to our local House member, Pete Stark (D), who happens to be a member of the Ways & Means Committee.

Thanks for all your help,  
Wilfred

112<sup>TH</sup> CONGRESS  
2<sup>D</sup> SESSION

# H. R. 5478

To suspend temporarily the duty on light emitting diode (LED) Tubular LED (TLED).

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IN THE HOUSE OF REPRESENTATIVES

MAY 7, 2012

Mr. REED introduced the following bill; which was referred to the Committee on Ways and Means

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## A BILL

To suspend temporarily the duty on light emitting diode (LED) Tubular LED (TLED).

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. LIGHT EMITTING DIODE (LED) TUBULAR LED**  
4 **(TLED).**

5 (a) IN GENERAL.—Subchapter II of chapter 99 of  
6 the Harmonized Tariff Schedule of the United States is  
7 amended by inserting in numerical sequence the following  
8 new heading:

“	9902.01.00	Light emitting diode (LED) Tubular LED (TLED) (provided for in subheading 9405.40.80) ....	Free	No change	No change	On or before 12/31/2015	”.
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1       (b) EFFECTIVE DATE.—The amendment made by  
2 subsection (a) applies to goods entered, or withdrawn from  
3 warehouse for consumption, on or after the 15th day after  
4 the date of the enactment of this Act.

○