



Stakeholder MEETING

2017

DLC Solid-State Lighting QPL

Presenters



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DLC



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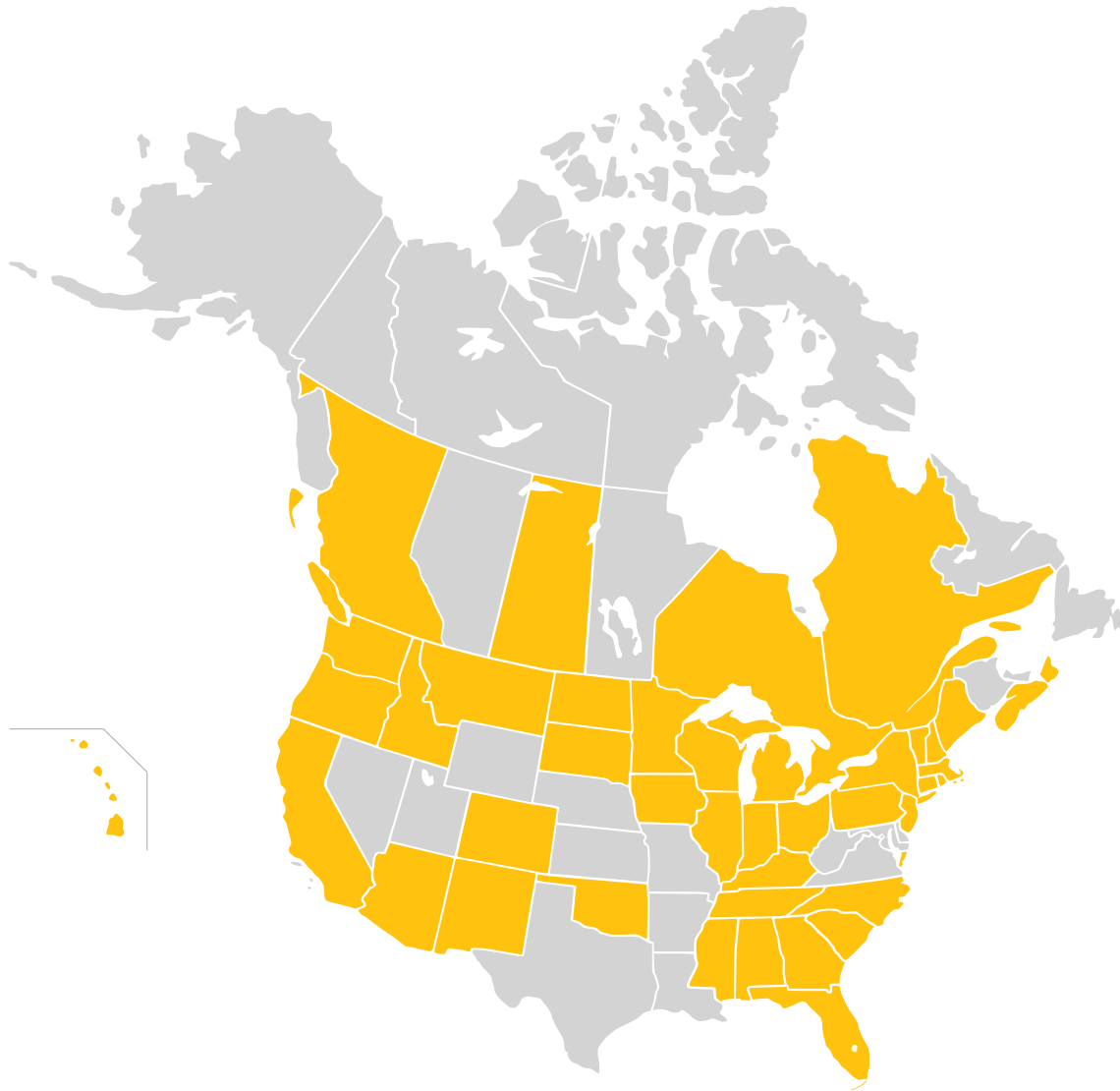
Agenda

- What is the DLC?
 - What is the mission?
 - Who are the members?
 - What is industry's role?
- How to qualify products
 - Overview
 - Application Process
 - Key details
 - Where to find more information
- DLC decision making
 - How to become involved



Bringing Efficiency to LightSM

The DLC[®] drives efficient lighting by defining quality, facilitating thought leadership, and delivering tools and resources to the lighting market through open dialogue and collaboration.



DLC is supported
by 82 Members
throughout the
U.S. and Canada.



Solid State Lighting (SSL)

Driving Energy Savings through:

1. Periodically updating the technical requirements
2. Ensuring that lighting performance does not come at the expense of efficacy
3. Expanding product categories to facilitate new SSL product applications
4. Phasing out lower-performing, outdated products
5. Incentivizing innovation and identify market leaders by offering a premium-tier QPL designation



SSL QPL

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Bringing efficiency to light.

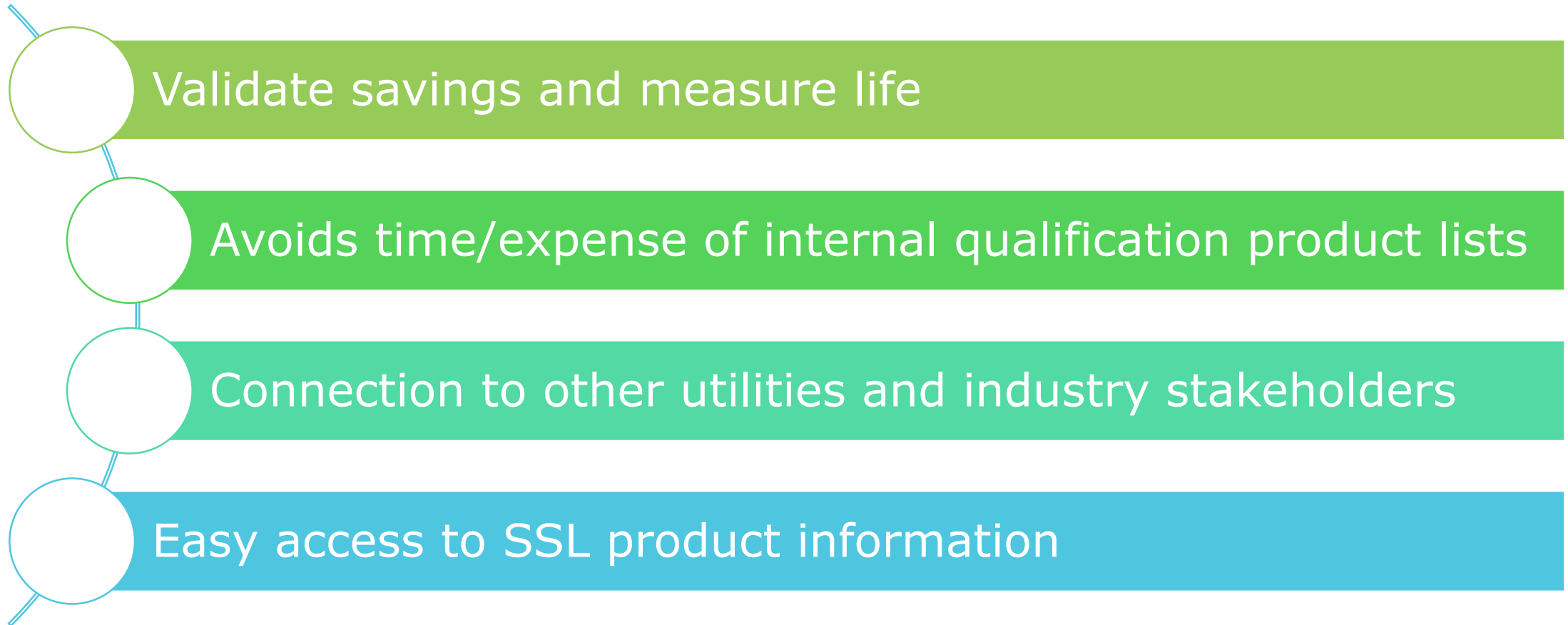
The DLC® is a non-profit organization whose mission is to drive efficient lighting by defining quality, facilitating thought leadership, and delivering tools and resources to the lighting market through open dialogue and collaboration.

[Learn more](#)

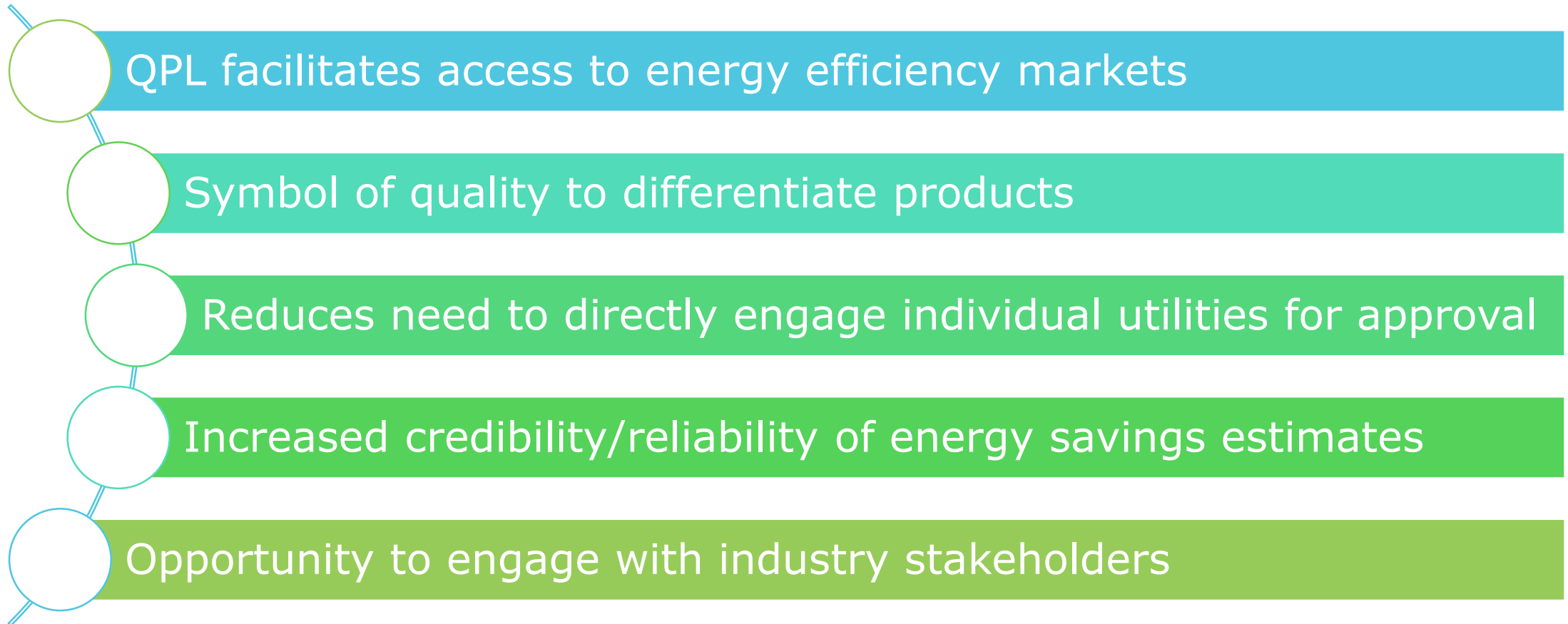
Search over 278,530
qualified lighting products.

[Advanced Search](#)

Value to Utilities



Value to Manufacturers

- 
- QPL facilitates access to energy efficiency markets
 - Symbol of quality to differentiate products
 - Reduces need to directly engage individual utilities for approval
 - Increased credibility/reliability of energy savings estimates
 - Opportunity to engage with industry stakeholders

Value to Others

Lighting Designers

- Starting point for rebate eligibility
- Product comparison

Distributors

- Use DLC qualification as mark of quality
- Product selection

Government

- Program partnerships
- Public procurement agencies cite QPL

End Users

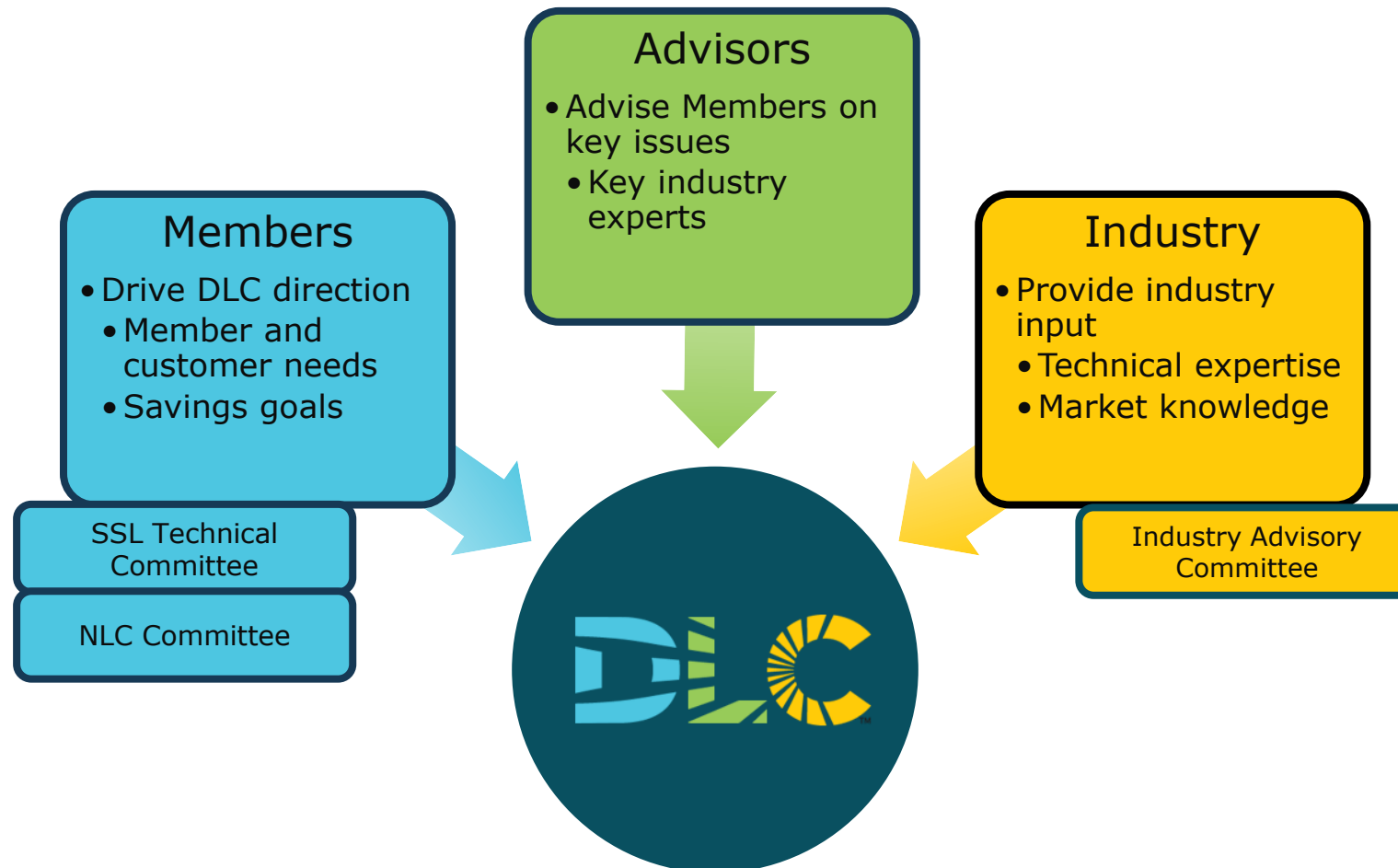
- Verify product performance
- Ensure rebate eligibility

Industry Collaboration

- Policy development process
- Input from industry
- Industry Advisory Committee
- Stakeholder input process



Industry Participation

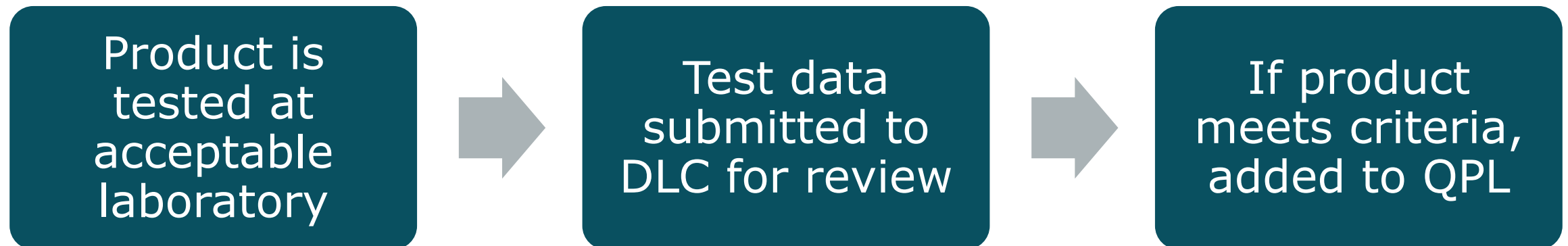


Digging Deeper

- You now know “the basics” of the DLC: why it exists, who runs it, who the Members are
- You want to be more involved
- How do I participate? How do I get my products qualified?
- How are DLC decisions made? How do they decide what categories are eligible, what the performance requirements will be, and other nuances?

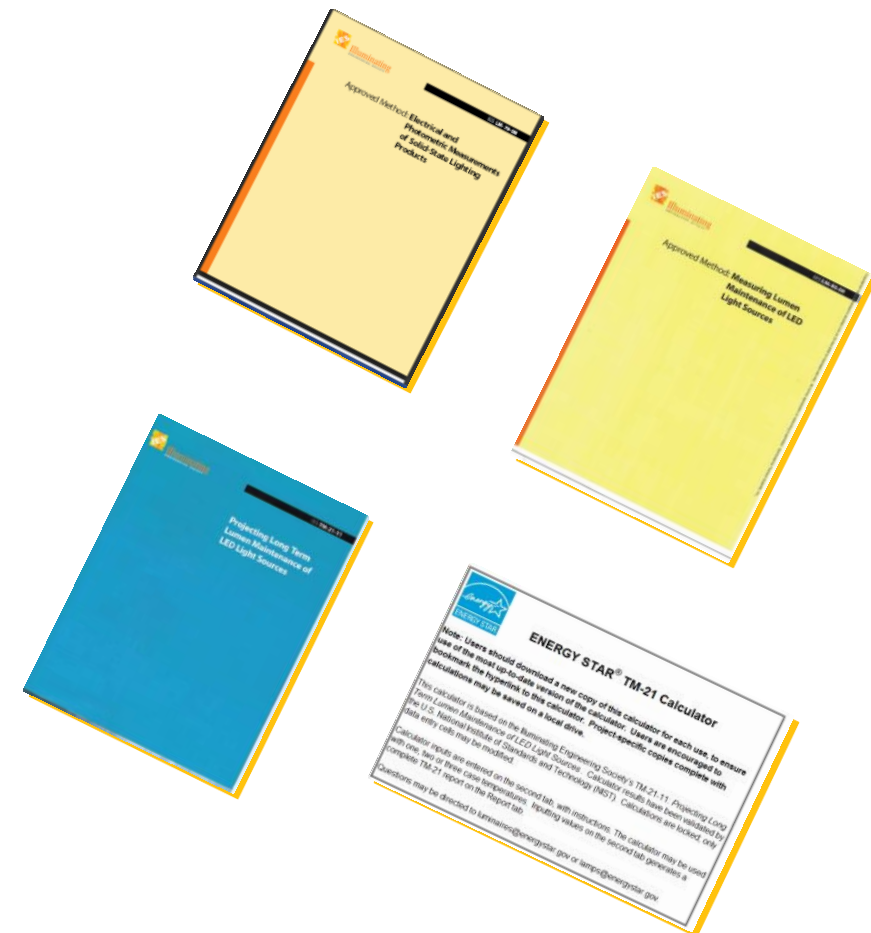
I Sell LED Lighting: How Do I Qualify a Product?

How Do Products Get Qualified?



Testing and Reporting Requirements

- Photometric and Electrical Properties
 - IES LM-79 Electric and Photometric
 - Output and color: integrating sphere
 - Light distribution: goniophotometer
- Lumen maintenance (Option 1)
 - LED package/module/array testing
 - IES LM-80 Lumen Maintenance
 - Luminaire-level testing
 - ISTMT (ANSI/UL1598)
 - L₇₀ determination
 - IES TM-21 Projecting Lumen Maintenance



DLC Technical Requirements Table

#	Category	General Application	Minimum Light Output (lm)	DLC Standard	DLC Premium*	Primary Use**	Distribution
			Minimum Efficacy (lm/W)	Minimum Warranty (years)	CCT / CRI / L ₈₀	Minimum Efficacy (lm/W)	
1	Outdoor	Outdoor – Low Output	250-5,000	90	5	\$5700 / 265 / 250,000	11
2		Outdoor – Mid Output	5,000-10,000	95			11
3		Outdoor – High Output	≥10,000	100			12
4	Indoor	Interior Directional	250-4,500	65	5	\$5000 / 280 / 250,000	90
5		Case Lighting	≥50 lm/ft	80			12
6		Troffer	≥1,500	100			12
7		Linear Ambient	≥375 lm/ft	105			13
8		High-Bay	≥5,000	105			13

#	Category	General Application	Minimum Light Output (lm)	DLC Standard	DLC Premium**	Primary Use**	Distribution
			Minimum Efficacy (lm/W)	Minimum Warranty (years)	CCT / CRI / L ₈₀	Minimum Efficacy (lm/W)	
9	Outdoor Retrofit Kit	Outdoor – Low Output	250-5,000	90	5	\$5700 / 265 / 250,000	110
10		Outdoor – Mid Output	5,000-10,000	95			115
11		Outdoor – High Output	≥10,000	100			120
12	Indoor Retrofit Kit	Troffer	≥1,500	100	5	\$5000 / 280 / 250,000	125
13		Linear Ambient	≥375 lm/ft	105			130
14		High-Bay	≥5,000	105			130

#	Category	General Application	Minimum Light Output (lm)	DLC Standard	DLC Premium**	Primary Use**	Distribution
			Minimum Efficacy (lm/W)	Minimum Warranty (years)	CCT / CRI / L ₈₀	Minimum Efficacy (lm/W)	
15	Linear Replacement Lamp	Four-Foot Linear Replacement Lamps	In luminaire: 2 lamps: 3,000 3 lamps: 4,500 4 lamps: 6,000 Bare lamp: 1,600	In luminaire: 100 Bare lamp: 110	5	\$5000 / 280 / 250,000	• Replacement Lamps ("Plug and Play") (UL Type A) • Internal Driver/Line Voltage Lamp-Style Retrofit Kits (UL Type B) • 2-lamp External Driver Lamp-Style Retrofit Kits (UL Type C) • 3-lamp External Driver Lamp-Style Retrofit Kits (UL Type C) • 4-lamp External Driver Lamp-Style Retrofit Kits (UL Type C) • Dual Mode Internal Driver (UL Type A or B)
16		Two-Foot Linear Replacement Lamps	In luminaire: 2 lamps: 1,350 3 lamps: 2,000 4 lamps: 2,700 Bare lamp: 800	In luminaire: 100 Bare lamp: 110	5	\$5000 / 280 / 250,000	• Replacement Lamps ("Plug and Play") (UL Type A) • Internal Driver/Line Voltage Lamp-Style Retrofit Kits (UL Type B) • 2-lamp External Driver Lamp-Style Retrofit Kits (UL Type C) • 3-lamp External Driver Lamp-Style Retrofit Kits (UL Type C) • 4-lamp External Driver Lamp-Style Retrofit Kits (UL Type C) • Dual Mode Internal Driver (UL Type A or B)
17	Mogul Screw-Base (E39) Replacements for HID Lamps	Outdoor – Low Output	In luminaire: 250-5,000	In luminaire: 90	5	\$5700 / 265 / 250,000	• Replacement Lamps for Outdoor Pole/Arm-mounted Area and Roadway Luminaires (Type B) • Replacement Lamps for Outdoor Pole/Arm-mounted Decorative Luminaires (Type B) • Replacement Lamps for Outdoor Full-Cutoff Wall-mounted Area Luminaires (Type B) • Replacement Lamps for Parking Garage Luminaires (Type B) • Replacement Lamps for Fuel Pump Canopy Luminaires (Type B)
18		Outdoor – Mid Output	In luminaire: 5,000-10,000	In luminaire: 90			• Replacement Lamps for Outdoor Pole/Arm-mounted Area and Roadway Luminaires (Type C) • Replacement Lamps for Outdoor Pole/Arm-mounted Decorative Luminaires (Type C) • Replacement Lamps for Outdoor Full-Cutoff Wall-mounted Area Luminaires (Type C) • Replacement Lamps for Parking Garage Luminaires (Type C) • Replacement Lamps for Fuel Pump Canopy Luminaires (Type C)
19		Outdoor – High Output	In luminaire: ≥10,000	In luminaire: 95			• Replacement Lamps for High-Bay Luminaires (Type B) • Replacement Lamps for Low-Bay Luminaires (Type B)
20		High-Bay	In luminaire: ≥5,000	In luminaire: 100			• Replacement Lamps for High-Bay Luminaires (Type C) • Replacement Lamps for Low-Bay Luminaires (Type C)

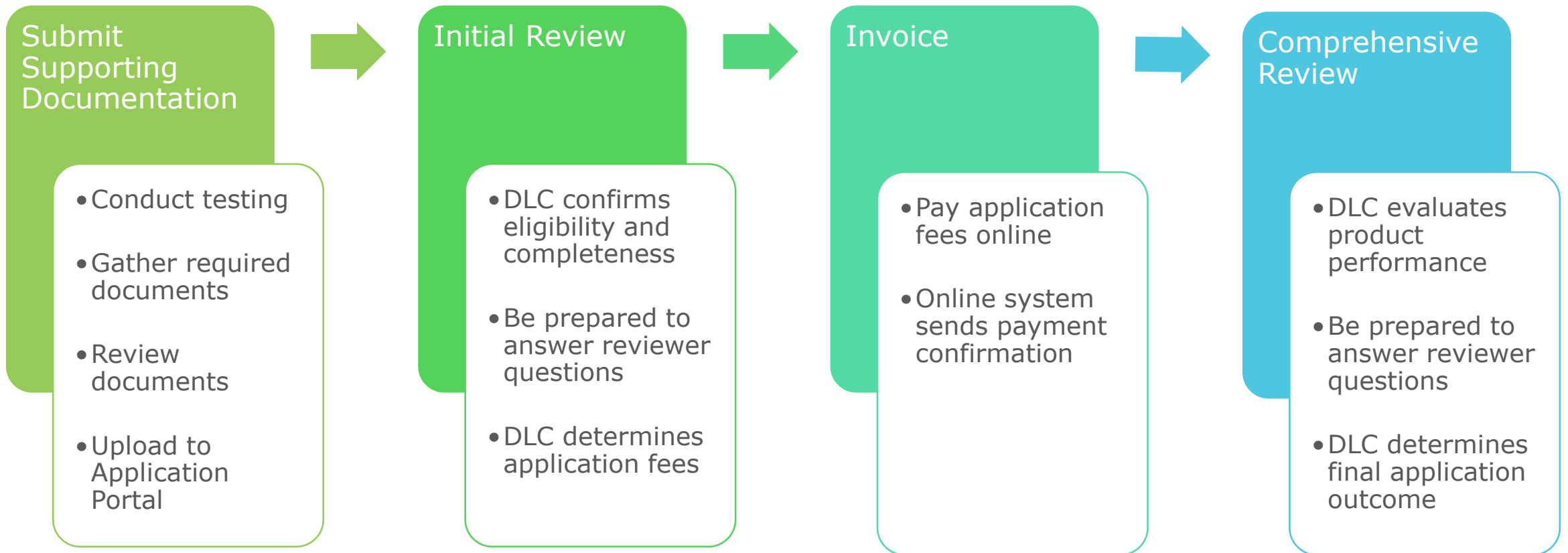
Will DLC Accept My Test Reports?

What are DLC Lab Requirements?

- Evolved based on Stakeholder Input 2012-2013
- LM-79: Recognized by DOE's LED Lighting Facts
- LM-80: Recognized by EPA's ENERGY STAR
- ISTMT
 - OSHA approved Nationally Recognized Test Lab (NRTL), or
 - Approved through OSHA NRTL data acceptance program or OSHA Satellite Notification and Acceptance Program (SNAP), or
 - Accredited by ILAC-MRA Accreditation Body for SSL thermal testing (ANSI/UL 1598 and/or CSA equivalent)
- LM-84 (*Option 2*): Recognized for LM-79 by DOE's LED Lighting Facts and accreditation (by DOE LED Lighting Facts approved accreditation body) includes LM-84-14

Back to the Application Process

Manufacturer Application Process



Application Types

- Single Product Application
 - Limited product groups allowed
 - CCT variations
 - Voltage variations
 - Dimming variations
- Family Grouping Application
 - Modular, scalable products with allowable variations beyond Standard Application
 - Additional testing requirements
 - Communication key!
- Private Label Application
 - For listing of products already on the QPL under different names
- Update Application
 - Performance or marketing improvements to currently qualified products

Application Review Timeframes


Application Type	Initial Review	Comprehensive Review
Single Product	2 business days	10 business days
Family Grouping	5 business days	10 business days
Private Label	5 business days	5 business days
Update	5 business days	10 business days

Supporting Documentation

- Photometric and electrical testing
- Lumen maintenance information
- Excel Application Form
- Specification sheets for product and LED
- Warranty
- Safety certification
- Self-Certification Statement

Single and Family Application Form

1. Contact Information
2. Category Information
3. Product Information
 - Driver model number
 - LED package/array/module
4. Product Identifier Information
 - Full model number breakdown
5. Scaled Performance Table
 - Rated performance of each product submitted

 DLC Qualified Products List Family and Single Submission Form: Technical Requirements V4.2 (5/8/2017)	
Entire application form must be filled out and submitted online using your manufacturer account. Applications will not be considered complete until payment has been processed and both this Application Form and Scaled Performance Table are submitted.	
Company	
Brand Name	
Contact Name	
Phone	
Email	
Website	
Application Type (Must Select)	
Single Product or Family Group?	Select from Drop-down Menu ----->
Category Information	
DLC Category	Select from Drop-down Menu ----->
General Application	Select from Drop-down Menu ----->
Primary Use	Please note your Primary Use or Specialty Use in the applicable column in the Scaled Performance Table. If you wish to submit the same model number under multiple Primary/Specialty Uses, please list the model number with each additional Primary Use. Please refer to the Category Reference tab for the correct Primary Use language.
-OR-	
Specialty Use(s): Provide description	
DLC Classification	Please note your DLC Classification for each model in the Scaled Performance Table.
Product Information	
Rated voltage range	
List your driver model number * Please include your driver spec sheet	
LED Manufacturer	
LED Package/Module/Array Part Number	

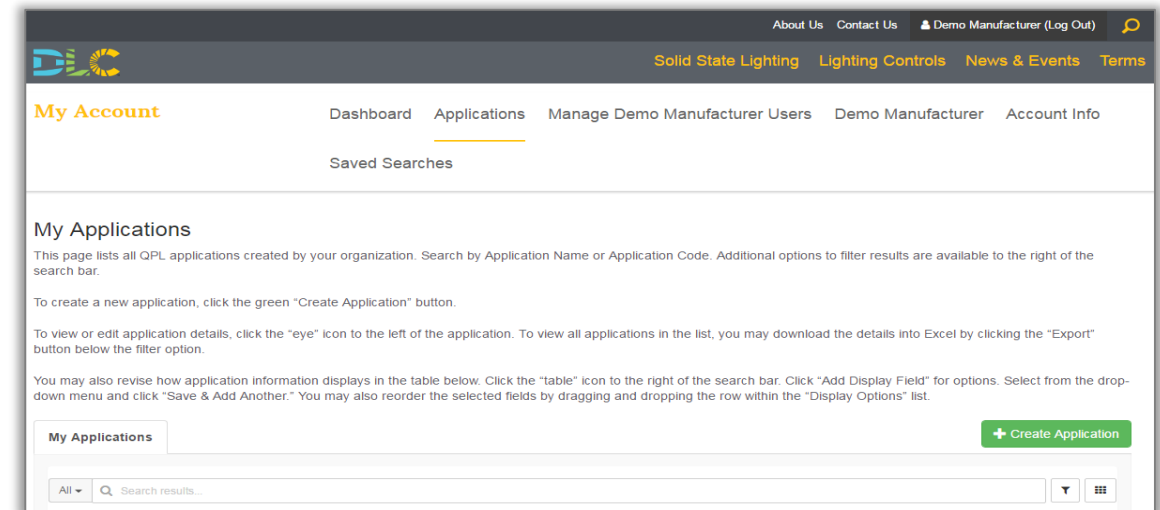
Private Label Application Form

1. Contact Information
2. Model Number Information
 - Correlation to OEM models
3. Product Identifier Information
 - Full model number breakdown

DLC		DLC Qualified Products List Submission Form: Private Label Application Technical Requirements V4.2 (6/26/2017)	
Application Instructions			
1) Read the DLC's Private Labeling policy on the DLC website. https://www.designlights.org/solid-state-lighting/submit-a-product/private-label-applications/		I have read the policy	
2) Complete the Contact Information section for both the OEM and the Private Labeling organization. A Company Name and Brand Name <u>must</u> be provided for both organizations in order to move forward with the application.			
3) Download the OEM's products from the DLC's QPL to obtain the exact qualified model numbers and Product IDs. The OEM's Product IDs <u>must</u> be provided in order to move forward with the application.		https://www.designlights.org/search/	
4) Complete the Model Number Information section by providing the OEM model numbers downloaded from the DLC QPL and their associated Product IDs. Then provide the Private Labeler's corresponding model numbers in the designated Private Label Model Number column.			
5) Complete the Private Label Checklist at the bottom of this form. We will not move forward with your application if the checklist has not been completed.			
Original Engineering Manufacturer (OEM)	Contact Information	Private Labeling Organization	
	Company Name		
	Product Brand Name		
	Contact Name		
	Address		
	Phone		
	Fax		
	Email		
	Website		
Model Number Information			
OEM Model Number(s) Listed in QPL	OEM Product Code(s) from the Downloaded DLC QPL	Private Label Model Number(s)	

Application Portal

- Online system launched June 26
- New interface and functionality
- Designed to
 - Improve application review timelines
 - Clarify application statuses
 - Provide more information about application history
 - Integrate all DLC website functions under one log-in for manufacturers



New Functionality

- Validated document checklist
- Messaging System
- Detailed application status history

My Account Dashboard Applications Manage Demo Manufacturer Users Demo Manufacturer Account Info

Saved Searches

My Applications

This page lists all QPL applications created by your organization. Search by Application Name or Application Code. Additional options to filter results are available to the right of the search bar.

To create a new application, click the green "Create Application" button.

To view or edit application details, click the "eye" icon to the left of the application. To view all applications in the list, you may download the details into Excel by clicking the "Export" button below the filter option.

You may also revise how application information displays in the table below. Click the "table" icon to the right of the search bar. Click "Add Display Field" for options. Select from the drop-down menu and click "Save & Add Another." You may also reorder the selected fields by dragging and dropping the row within the "Display Options" list.

My Applications + Create Application

All ▾ 🔍 Search results...

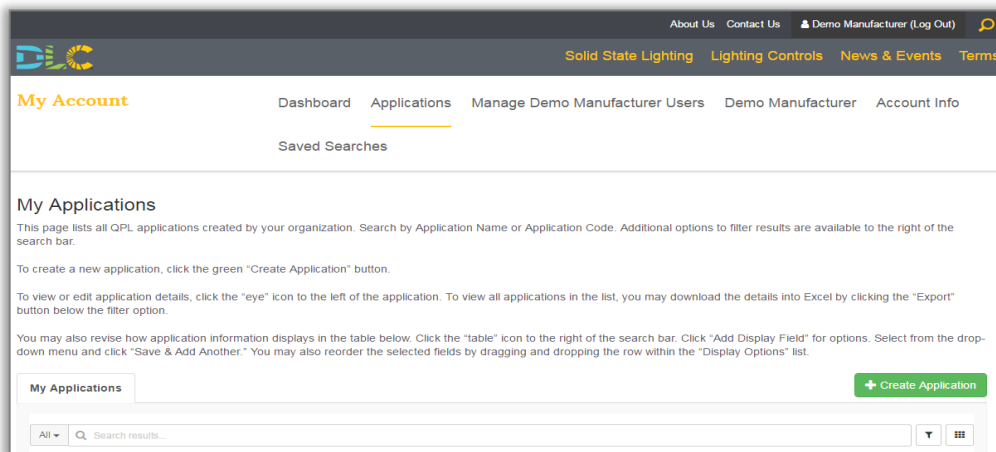
Export ▾

	Application Code ⌵	Application Name ⌵	Name ⌵	First Name ⌵	Last Name ⌵
👁	CFMMO8G	Demo Family Application			

Transition to Application Portal

New Application Portal

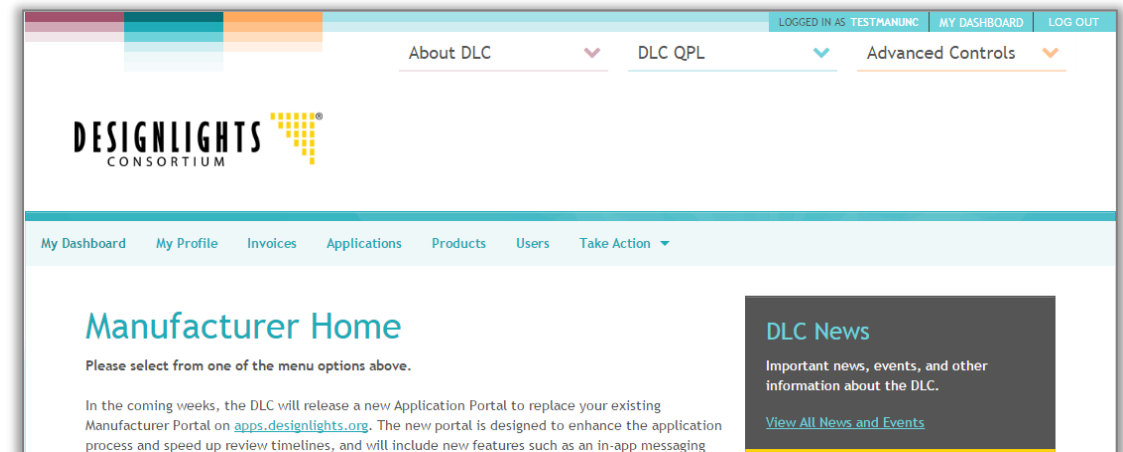
www.designlights.org



- Available June 26th
- All new applications must be submitted through Application Portal

Old Manufacturer Portal

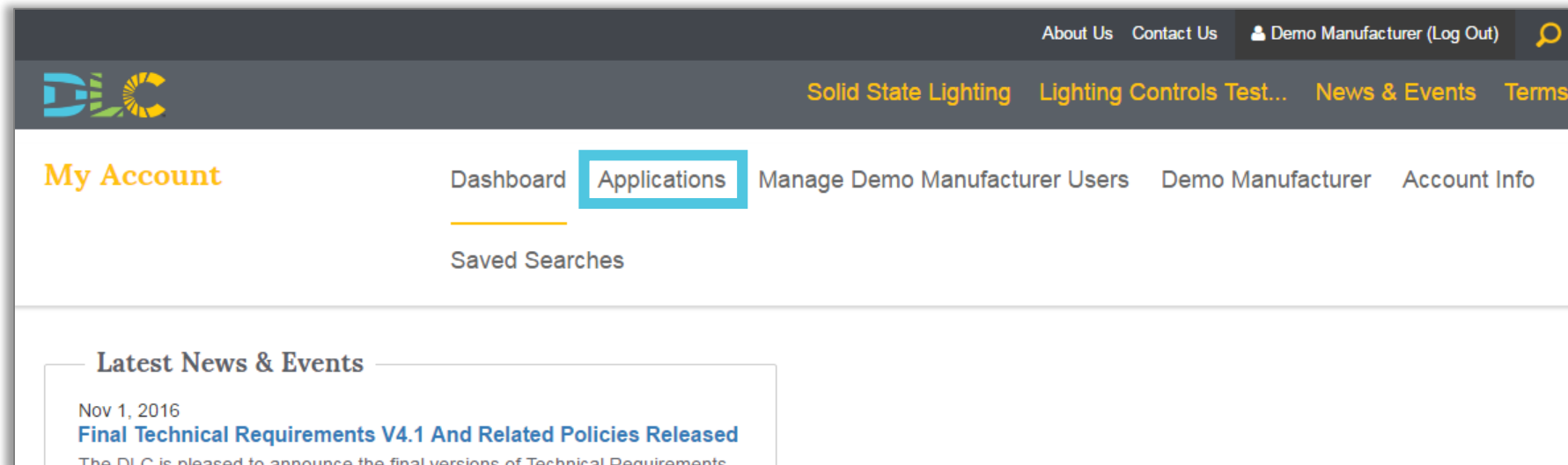
apps.designlights.org



- Previously submitted applications will continue to be processed through Manufacturer Portal

Accessing the Application Portal

- Once logged in, you will be directed to your Dashboard
- Click 'Applications' to submit or view applications
 - Note: applications submitted through apps.designlights.org will eventually be transferred to the Application Portal, but will not be available June 26th



Documents

- Itemized document upload
- Questions are specific to the application type

The screenshot shows a web application interface for document uploads. On the left is a sidebar with navigation links: 'Application Home', 'Documents' (highlighted with a vertical bar), 'Messaging 0', 'Invoice', 'Products', and 'History'. The main content area has a pink header bar with the message 'Application is incomplete. Review missing documentation'. Below this is a green 'Submit Application' button. The section is titled 'Application Documents' and 'Required Documentation' with a progress indicator '0 / 22'. The first document requirement is 'Please Upload A Completed Family Grouping Application Form.' followed by instructions to download the most up-to-date form and fill out all fields. A red 'X' icon is next to the text: 'Application Form tab and Scaled Performance Table tab must be filled out. Omitting information in either the Application Form or the Scaled Performance Table will delay application review.' To the right of this text is a 'Choose File' button and the text 'No file chosen'. The second document requirement is 'Please Upload A Specification Sheet For All Products Included In Your Application Form.'

Documents

- Questions grouped into Required and Optional sections
- Optional sections applicable to Premium applications and certain Primary Use Designations

Additional Documentation Required for Four Pin-Base Replacement Lamps for CFLs

Additional Documentation Required for DLC Premium Applications

Please Upload A Specification Sheet For

Required Documentation

Please Upload A Completed Family Grouping Application Form. To download the most up-to-date Family Grouping Application Form, see the Family Grouping Applications page. All fields in the Application Form tab and Scaled Performance Table tab must be filled out. Omitting information in either the Application Form or the Scaled Performance Table will delay application review.

Choose File No file chosen

Choose File No file chosen

Choose File No file chosen

Documents

- Some questions allow multiple files
- Click 'Add File' and then click 'Choose File'

✓ Please Upload A Specification Sheet For The LED Package/Module/Array.

LED Package Spec Sheet.pdf
6/1/17 10:05 AM

[Add File](#)

✓ Please Upload A Specification Sheet For The LED Package/Module/Array.

LED Package Spec Sheet.pdf
6/1/17 10:05 AM

[Choose File](#) LED Package ...c Sheet.pdf [Upload](#)

✓ Please Upload A Specification Sheet For The LED Package/Module/Array.

LED Package Spec Sheet.pdf
6/1/17 10:05 AM

LED Package Spec Sheet.pdf
6/1/17 10:06 AM

[Add File](#)

Messaging

- All application-specific communications must be conducted through 'Messaging' tab
- DLC reviewers will require you to resend any application-specific communication received outside of 'Messaging'

The screenshot shows a web application interface for "CFMMO8G - Demo Family Application". On the left is a sidebar with navigation links: "Application Home", "Documents", "Messaging 1" (highlighted with a blue box), "Invoice", "Products 3", and "History". The main content area has a header with "← Applications" and "Actions ▾". Below this, there are three paragraphs of text explaining the messaging process. At the bottom, a "Recent Messages" section shows a message from "5/24/17 5:06 PM" with the subject "Missing Correct LED Spec Sheet" and a green "RESOLVED" status tag.

CFMMO8G - Demo Family Application ← Applications Actions ▾

Application Home

Documents

Messaging 1

Invoice

Products 3

History

All correspondence regarding this application should be submitted through the application Messaging page. Previous messages from your DLC reviewer will be accessible here. To send a new application message, click the "Actions" button above Recent Messages and select "Add Application Message."

Details about each message will be displayed, including the date and time when it was sent, the message subject, and the status of the message topic as determined by your DLC reviewer. You may post a reply to any message listed. Click the message subject to view the message and post a reply.

If a message indicates that additional supporting documentation is required, you must upload the files through the Documents page. Once the additional documents are uploaded, you must resubmit the application. Please post a message confirming the additional documents have been submitted.

Recent Messages

5/24/17 5:06 PM Missing Correct LED Spec Sheet **RESOLVED**

Messaging

- All previous messages available
- Message status is shown – determined by the DLC reviewer

CFMMO8G - Demo Family Application ← Applications Actions ▾

Application Home
All correspondence regarding this application should be submitted through the application Messaging page. Previous messages from your DLC reviewer will be accessible here. To send a new application message, click the "Actions" button above Recent Messages and select "Add Application Message."

Documents

Messaging 2
Details about each message will be displayed, including the date and time when it was sent, the message subject, and the status of the message topic as determined by your DLC reviewer. You may post a reply to any message listed. Click the message subject to view the message and post a reply.

Invoice

Products 3
If a message indicates that additional supporting documentation is required, you must upload the files through the Documents page. Once the additional documents are uploaded, you must resubmit the application. Please post a message confirming the additional documents have been submitted.

History

Recent Messages	
6/5/17 1:46 PM	Product Category OPEN
5/24/17 5:06 PM	Missing Correct LED Spec Sheet RESOLVED

Submitting the Application

- Submit the application from 'Documents' section
- Click the green 'Submit Application' button

The screenshot displays a web application interface for submitting an application. On the left is a sidebar with navigation links: 'Application Home', 'Documents' (highlighted with a blue box), 'Messaging' (with a '0' badge), 'Invoice', 'Products', and 'History'. The main content area has a pink header bar stating 'Application is incomplete. Review missing documentation'. Below this is a tab labeled 'Application Documents'. A dark grey bar indicates 'Required Documentation' with a progress indicator '0 / 22'. The main content area contains a message: 'Please Upload A Completed Family Grouping Application Form. To download the most up-to-date Family Grouping Application Form, see the Family Grouping Applications page. All fields in the Application Form tab and Scaled Performance Table tab must be filled out. Omitting information in either the Application Form or the Scaled Performance Table will delay application review.' To the right of this message is a file upload section with a 'Choose File' button, the filename 'Application F..._Family.xlsx', and a green 'Upload' button. In the top right corner of the main content area, there is a green 'Submit Application' button highlighted with a blue box.

Submitting the Application

- Application Home will show Submitted status

The screenshot displays the 'CFMMO8G - Demo Family Application' interface. On the left is a navigation menu with links: Application Home, Documents, Messaging (0), Invoice, Products (3), and History. The main content area has a header with a back arrow and 'Applications'. Below this is a message box stating: 'Your application has been submitted. You will receive a submission confirmation email shortly. For any questions, please contact...'. This message box is highlighted with a blue border. Below the message box is a 'Recent Messages' section with a 'View all Messages' button and a message stating 'There aren't any Application Messages.' At the bottom is an 'Application History' section with a 'View Complete History' button. The history list contains three entries: 1) '6/1/17 7:00 PM - Your application has been submitted. You will receive a submission confirmation email shortly. For any questions, please contact...' 2) '6/1/17 7:00 PM - Review Status Changed to: Open' 3) '6/1/17 6:37 PM - Required application information is complete. Application must be submitted for review.'

CFMMO8G - Demo Family Application

← Applications

Application Home
Documents
Messaging 0
Invoice
Products 3
History

This page lists recent activity specific to this application. Use the menu on the left to navigate through the application details. If you have just created this application, please begin with the Documents page.

Your application has been submitted. You will receive a submission confirmation email shortly. For any questions, please contact...

Recent Messages View all Messages

There aren't any Application Messages.

Application History View Complete History

6/1/17 7:00 PM - Your application has been submitted. You will receive a submission confirmation email shortly. For any questions, please contact...

6/1/17 7:00 PM - Review Status Changed to: Open

6/1/17 6:37 PM - Required application information is complete. Application must be submitted for review.

Recommended Best Practices

- Read all instructions online
 - General instructions and category-specific requirements
- Review information before submitting
 - Ensure all documentation is provided
 - Ensure all documentation is consistent
- Be courteous when responding to DLC reviewer questions
- Check out this week's **Breakout Sessions** for more information on product qualification and common stumbling blocks!

Breakout Sessions

Col-LAB-boration with Labs Tuesday, 1-2	
Beyond the Technical Requirements: DLC Program Compliance Wednesday, 1-2pm	
Supporting Documentation for SSL Applications Tuesday and Wednesday, 2-2:30	Common SSL Application Questions Tuesday and Wednesday, 2-2:30
DLC Website Updates and Searching the SSL QPL Tuesday and Wednesday 2:30-3	V4.2 Category Nuances and Allowances Tuesday and Wednesday 2:30-3

How Do I Get More Involved?

General Approach

- You must understand the DLC mission as well as the needs of the Members
 - Comments and requests that demonstrate a lack of understanding are difficult to move forward
- Demonstrating significant energy savings can help
 - Reality: DLC is resource constrained like everyone else
 - Market research: what is the realistic energy savings potential?
- Specific suggestions can help
 - Reduces legwork/cost for program to develop from scratch
- Be friendly.

How Do I Get More Involved?

- Join us at the DLC Stakeholder Meeting (Welcome!)
 - Annual event
 - Understand program/Members; interact with other stakeholders; build coalitions
- Join our mailing list
 - Click the link at the bottom of the website – www.designlights.org
 - Industry Update comes out ~quarterly
 - Comment during Stakeholder Input Process
 - Monitor the DLC News on the DLC homepage
- Articulate interests to efficiency programs by **highlighting projects by their customers!**
 - Efficiency programs under many different sets of constraints
 - Often will have custom programs, when prescriptive programs not yet practical

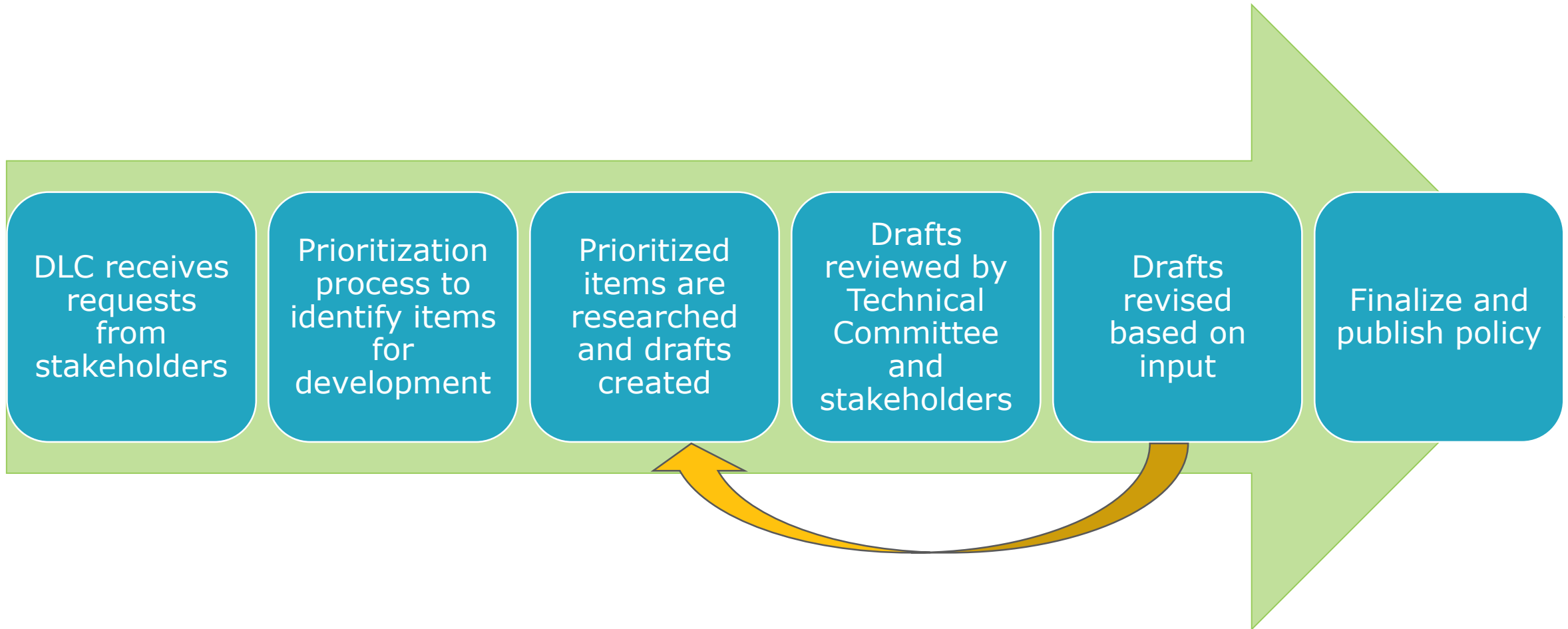
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✉ Newsletter Sign Up

Contact Us

info@designlights.org

Generalized Development Process



Stakeholder Input Process

- Identify issue for input – new spec, update to existing spec, change to DLC procedure, etc.
- Provide clear request to stakeholders for input
 - Sent to entire distribution list (manufacturer, testing labs, lighting designers, specifiers, members)
 - Sent via email, posted on website
 - Includes firm response date
- Use ad-hoc respondent committee to review input
- Discuss critical issues via conference call and create a “statement of input”
- Deliver input to DLC Technical Committee

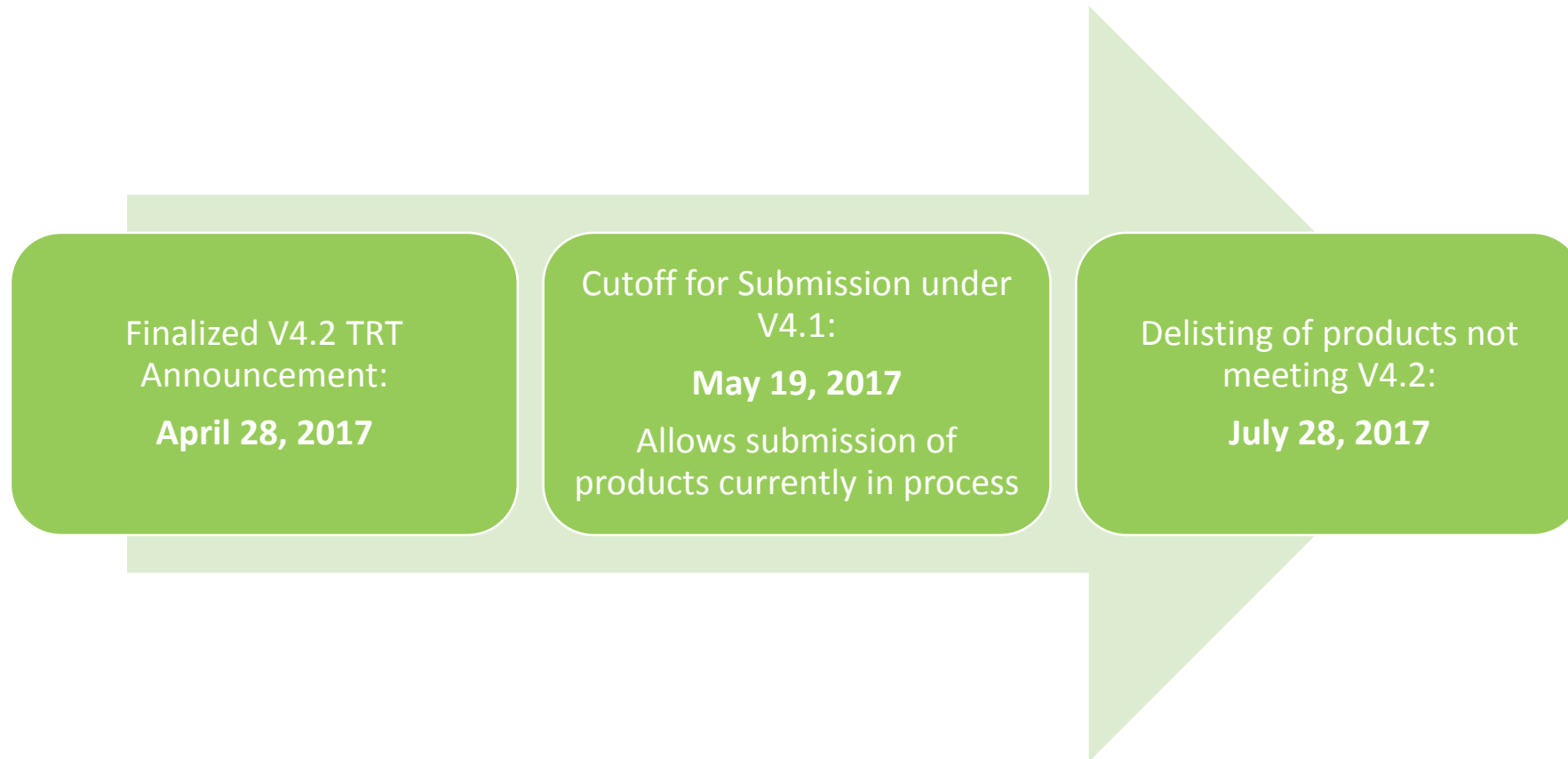
What If There's No Category?

- DLC can only qualify products that are intended for applications that have categories (Primary Uses) on the Technical Requirements Table
- DLC does not currently have categories for every possible lighting application
- Dozens of categories and policies outstanding on wish lists
 - Potential: Specialty Use Designation

What's New in V4.2?

- New General Applications
 - T5
 - T5HO
- New safety requirement for “Specialty: Hazardous” products
 - UL 844
- Allowances to Efficacy
 - 3% for CCT \leq 3000K
 - 5% for CCT \leq 2700K
 - 5% for CRI \geq 90

V4.2 Transition Timeline



Current Development Efforts

Color
Tunable
Products

Field
Adjustable
Products

Horticultural
Lighting

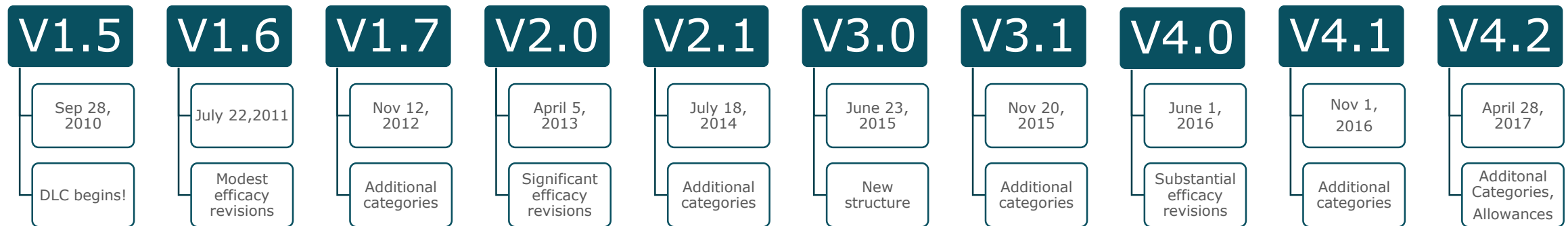
New Lamp
Categories

DC/PoE
Lighting

Flicker

Additional
Allowances

Specification Development/Revision History



Thank You!



**Irina
Rasputnis**
DLC



**Nicholas
Case**
D+R International