

# Modified Lighting Calculator Deemed Measure(s)



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# Presentation Overview

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## **Objective: Seeking TF input of draft measure package**

- Willdan Approach to MLC Conversion
- Plan to Operationalize
- Issues and Concerns from MSC
- Questions or Comments

## **Highlights:**

- Measure package operationalizes the MLC into deemed lighting measures.

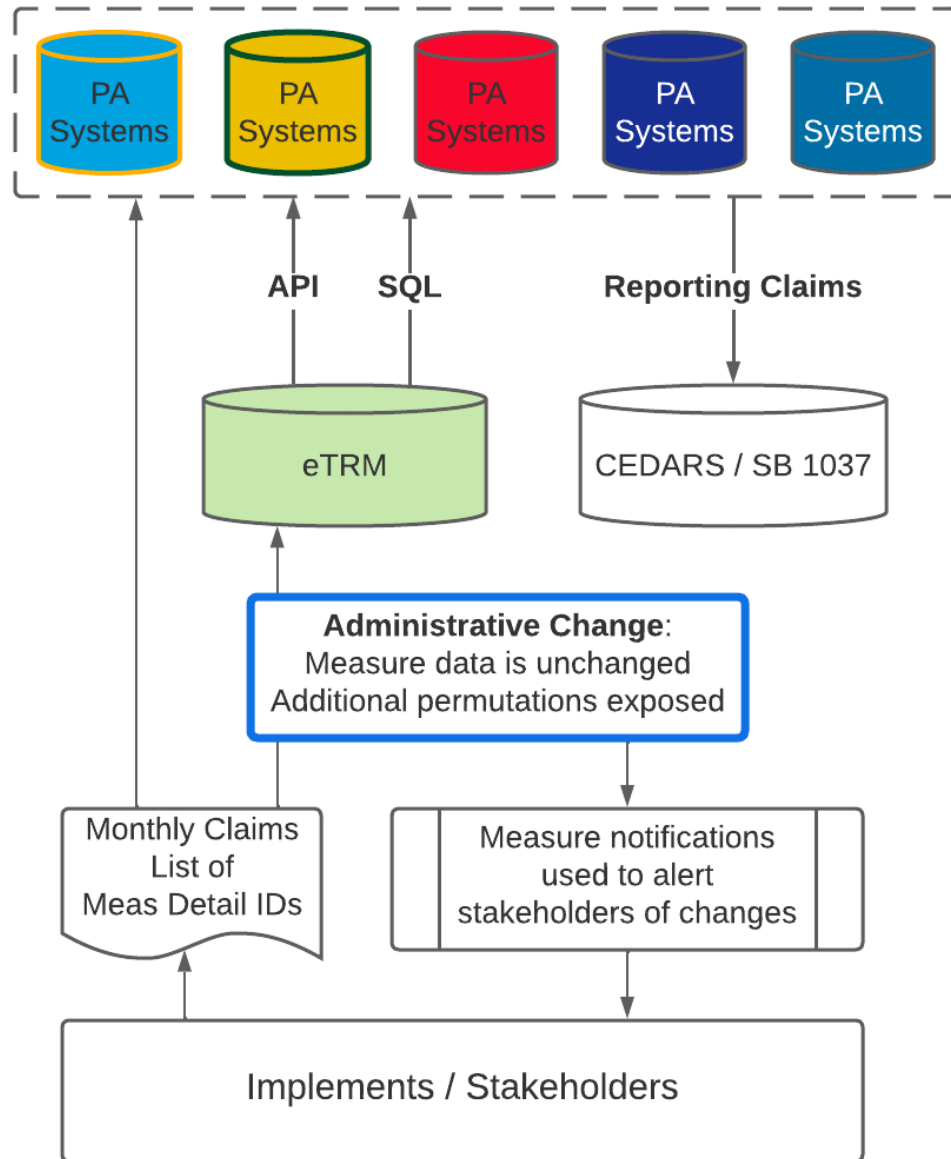
# Willdan Approach to MLC Conversion to Deemed

Willdan presentation:  
“Deemed Lighting Strategy v3”

## Plan to Operationalize

- Flexibility of Offerings:
  - 55 Product Classes
  - Up to 14 Lumen Bins
  - 2 Performance Tiers
  - Up to 1,200 Existing/Base Case options
- ~90 million permutations defined by internal tables
  - All permutations fully defined through MeasDetailID
  - Look-up tables include:
    - ✦ Existing Tech (*updated App B*), Fixture Validity (*with DT and BT*), NTG/EUL, Existing Fixture Efficacy
  - Only claimed permutations exposed in the eTRM

# Plan to Operationalize



# Issues and Comments – Measure Screening Committee (MSC)

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## Proposal Review Comments from the Cal TF - MSC

- ✓ Consider coordinating to collect cost data
  - PG&E has been working with Energy Solutions but in early stages; concerns with cost correlations to efficacy and higher quality.
  - Planning to focus first on tiers and output bins, but then work with contractors and trade pros to gather cost data.
- ✓ Ensure measure package is developed statewide
- ✓ Consider creative solutions for permutation structures due to the extreme size
  - Offering number is extremely large – about 50,000 offerings. Need to plan so that values are not duplicated.
  - Willdan proposed a creative approach that was used with Energy Upgrade program.
- ✓ Not planning to do AR in midstream delivery
  - Midstream must be a code baseline based upon E-4818 direction.
- ✓ Addition of outdoor lighting measures
  - This measure offering is very popular in PG&E territory.
- ✗ Addition of non-standard building types (like police/fire stations)
  - No deemed mechanism exists to add these types of buildings (with hours of use).
- ✗ Consideration of using area types for hours of operation rather than building types
  - There is support for using area types to improve savings evaluations, but no deemed mechanism exists to add this type of data.
- ✗ Consider adding CRI (light quality) requirements
  - CRI requirements have been used before for residential screw-in products.
  - Implementation may be easier to reference and approved list, like DLC.

## Proposal Review Comments from Cal TF Members

- ✓ Stakeholder comment 1
  - Description of how comment was addressed
- ✓ Stakeholder comment 2
  - Description of how comment was addressed
- ✗ Stakeholder comment 3
  - Explain why comment was not addressed

Updated based upon comments received during the meeting

# Issues and Comments – Other Stakeholders

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## Proposal Review Comments from \_\_\_\_\_

- ✓ Stakeholder comment 1
  - Description of how comment was addressed
- ✓ Stakeholder comment 2
  - Description of how comment was addressed
- ✗ Stakeholder comment 3
  - Explain why comment was not addressed

Updated based upon comments received during the meeting



# Questions or Comments?

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Updated based upon comments  
received during the meeting

# Product Classes Included (1 of 2)

Product Category	Product Class
Energy Star	A Lamp
	Candelabra
	Globe
	MR16
	Reflector
	Downlight Solid State Retrofit
	Downlight Surface Mount
	Downlight Recessed
	Downlight Pendant
Indoor Fixture	2x2 Luminaires for Ambient Lighting of Interior Spaces
	1x4 Luminaires for Ambient Lighting of Interior Spaces
	2x4 Luminaires for Ambient Lighting of Interior Spaces
	Direct Linear Ambient Luminaires
	Linear Ambient Luminaires with Indirect Component
	Low Bay for Commercial and Industrial
	High Bays for Commercial and Industrial
Indoor Retrofit	1x4 Integrated Retrofit
	2x2 Integrated Retrofit
	2x4 Integrated Retrofit
	1x4 Linear Retrofit Kits
	2x2 Linear Retrofit Kits
	2x4 Linear Retrofit Kits
TLED	Replacement Lamps (Type A and Type A/B)
	Internal Driver (Type B, Type A/B, Type C)
Wallpacks - Pole Mounted	Outdoor Pole/Arm-Mounted Area and Roadway Luminaires (Low Output)
	Outdoor Pole/Arm-Mounted Area and Roadway Luminaires (Mid Output)
	Outdoor Pole/Arm-Mounted Area and Roadway Luminaires (High Output)
	Outdoor Pole/Arm-Mounted Area and Roadway Luminaires (Very High Output)

*As of May 2022*

# Product Classes Included (2 of 2)

Product Category	Product Class
Outdoor Fixture	Architectural Flood and Spot Luminaires (Low Output)
	Architectural Flood and Spot Luminaires (Mid Output)
	Architectural Flood and Spot Luminaires (High Output)
	Architectural Flood and Spot Luminaires (Very High Output)
	Bollards (Low Output)
	Fuel Pump Canopy Luminaires (Low Output)
	Fuel Pump Canopy Luminaires (Mid Output)
	Fuel Pump Canopy Luminaires (High Output)
	Outdoor Full-Cutoff Wall-Mounted Area Luminaires (Low Output)
	Outdoor Full-Cutoff Wall-Mounted Area Luminaires (Mid Output)
	Outdoor Full-Cutoff Wall-Mounted Area Luminaires (High Output)
	Outdoor Non-Cutoff & Semi-Cutoff Wall-Mounted Area Luminaires (Low Output)
	Outdoor Non-Cutoff & Semi-Cutoff Wall-Mounted Area Luminaires (Mid Output)
	Outdoor Non-Cutoff & Semi-Cutoff Wall-Mounted Area Luminaires (High Output)
	Outdoor PoleArm-Mounted Area and Decorative Luminaires (Low Output)
	Outdoor PoleArm-Mounted Area and Decorative Luminaires (Mid Output)
	Outdoor PoleArm-Mounted Area and Decorative Luminaires (High Output)
	Outdoor PoleArm-Mounted Area and Roadway Luminaires (Low Output)
	Outdoor PoleArm-Mounted Area and Roadway Luminaires (Mid Output)
	Outdoor PoleArm-Mounted Area and Roadway Luminaires (High Output)
	Outdoor PoleArm-Mounted Area and Roadway Luminaires (Very High Output)
	Parking Garage Luminaires (Low Output)
Parking Garage Luminaires (Mid Output)	
Parking Garage Luminaires (High Output)	
Outdoor Retrofit	Retrofit Kits for Outdoor Pole-Arm Mounted Area and Roadway (Mid Output)
	Retrofit Kits for Outdoor Pole-Arm Mounted Area and Roadway (High Output)
	Retrofit Kits for Outdoor Pole-Arm Mounted Area and Roadway (Very High Output)

*As of May 2022*