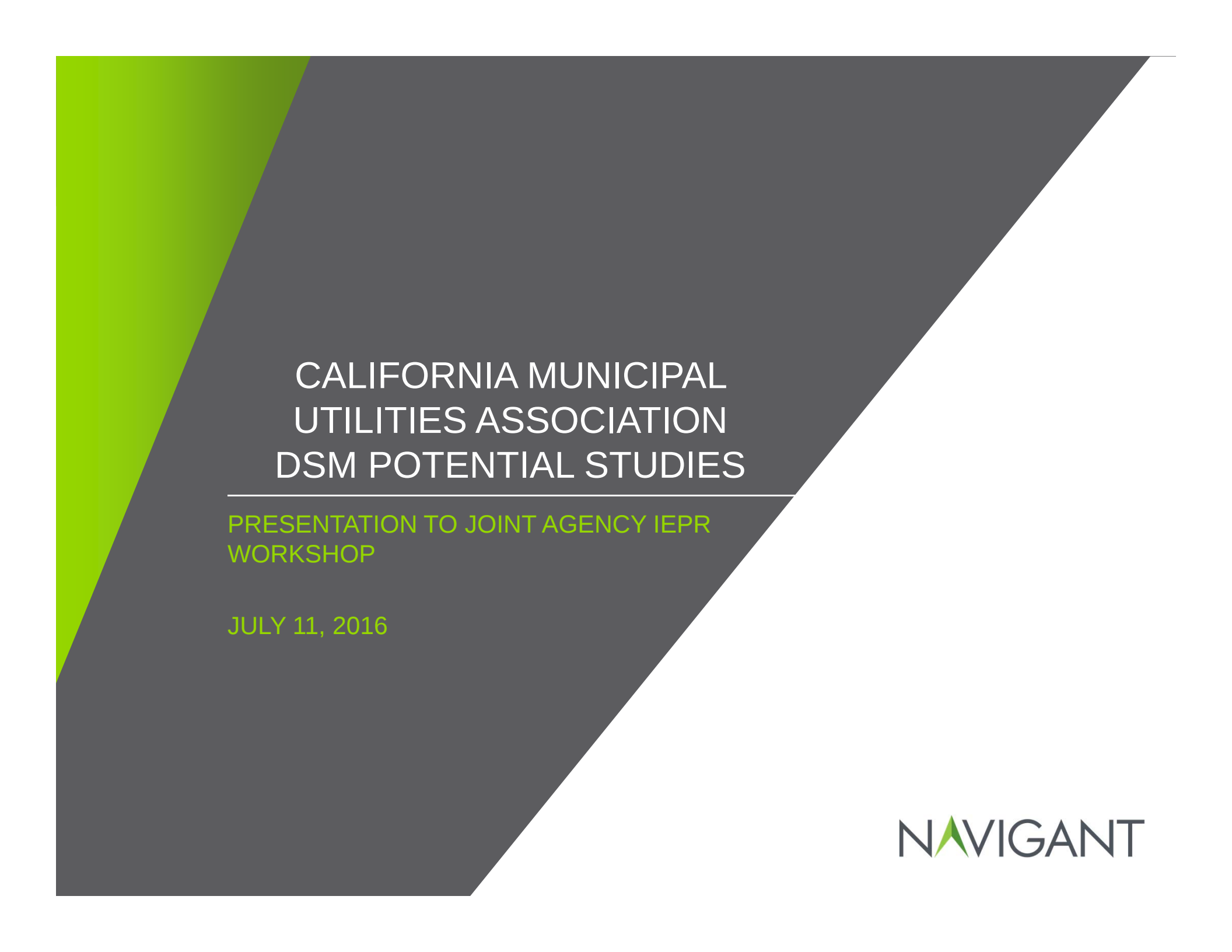


DOCKETED

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Project Title:	Electricity Demand Forecast
TN #:	212224
Document Title:	Presentation - CALIFORNIA MUNICIPAL UTILITIES ASSOCIATION DSM POTENTIAL STUDIES
Description:	Gary Cullen, Director, Navigant
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CALIFORNIA MUNICIPAL UTILITIES ASSOCIATION DSM POTENTIAL STUDIES

PRESENTATION TO JOINT AGENCY IEPR
WORKSHOP

JULY 11, 2016

NAVIGANT

CMUA POTENTIAL STUDIES OVERVIEW

- General Scope:
 - 37 CMUA Member Utilities participating
 - Each utility is being provided their own unique Potential Study
 - Utilities range in size from LADWP/SMUD to many small utilities such as Banning and Biggs
 - Each utility wants to ensure that the goals identified by their Potential Study are appropriate for their service territory.
 - The measures and programs that will be part of each utility's Potentials Plan will likely vary significantly
 - However, each utility will be provided nearly the same program/measure options to consider.
 - Could includes savings from Early Retirement, Codes and Standards, Behavior, and Financing programs

CMUA POTENTIAL STUDIES OVERVIEW

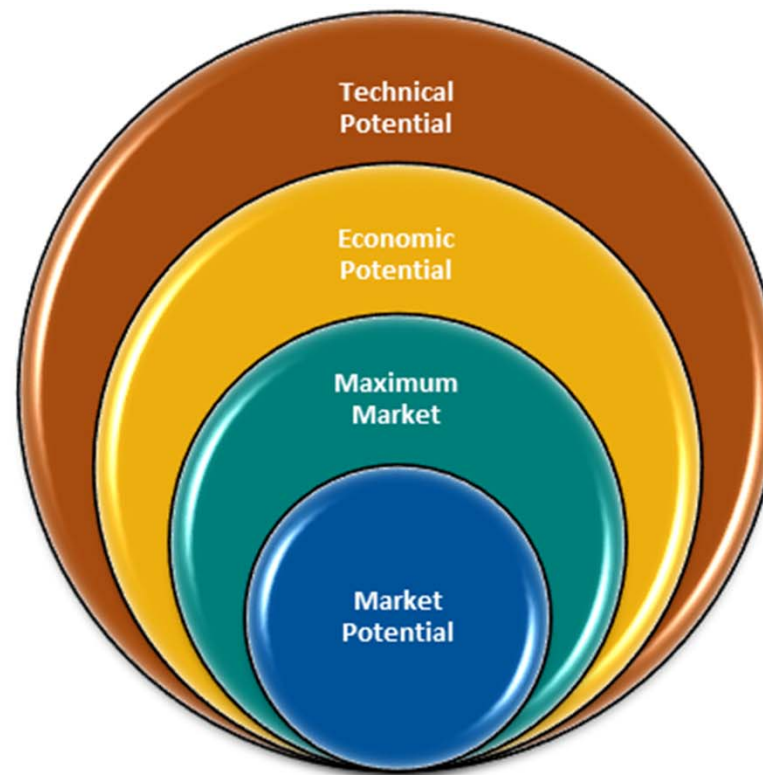
- General Scope:
 - Each utility's E3 submittals to the CEC are used to identify current utility programs, measure offerings, incentive level, and administrative cost.
 - Each utility model is calibrated at the program and end-use level based on these E3 submittals
 - Other measures not currently included in each utility's portfolio will be identified as "New" and can be considered for inclusion in future portfolios.
- Recent history of the POU Potential studies:
 - Studies completed in 2009 and 2012
 - Most of the utilities currently participating also participated in these earlier studies
 - These earlier studies were also conducted by Navigant/Summit Blue

DATA SOURCES AND GRANULARITY

- The model utilizes a bottom-up approach
- Over 200 technologies characterized by sector, building type, and climate zone are included
- Sales data by building type and industrial classification rely on each utilities submittals of QFER data reported to the CEC
- Measure impact and cost data rely initially on the same dataset as used for the CPUC Potential Study but modified as needed to reflect assumptions included in the recently completed CMUA Technical Reference Manual (TRM)
- All measure level data based on an annual savings basis. Each measure is classified into an end-use by sector category that could be used to develop hourly impacts using some existing CPUC hourly load shapes by end-use category. (this is an option beyond the current scope)
- Demand savings are based on DEER definition of the peak hours

MODELING METHODOLOGY

ELRAM estimates four levels of energy efficiency potential



MODELING METHODOLOGY

- The Baseline results for each utility will be a continuation of their current program offerings
- Scenarios will be developed for each utility, based on utility input, that could include:
 - ✓ Changing program design to consider early retirement and/or financing
 - ✓ Additional measures beyond the current portfolio
 - ✓ Addition of behavioral programs (if the utility does not already offer) for the residential, commercial, and industrial sectors.
 - ✓ Adjusting incentive levels and administrative expenditures

MODELING METHODOLOGY

Scenario Option Switches

New Measures Beyond Current Portfolio		
Sector	Include? (Y/N)	Starting Year
Residential	Y	2018
Commercial	Y	2018
Industrial	Y	2018
Agriculture	Y	2018
Streetlighting	Y	2018

MODELING METHODOLOGY

Scenario Option Switches

In What Year Should Early Retirement Programs Begin		
Sector	Include? (Y/N)	Starting Year
Residential	Y	2018
Commercial	Y	2018
Industrial	Y	2018
Agriculture	Y	2018
Streetlighting	Y	2018

MODELING METHODOLOGY

Scenario Option Switches

Behavioral Programs <i>(These settings can be overridden in the Behavior Program worksheets)</i>		Starting Year	% Participating
Residential Type #1 (% of sales affected)	Enhanced Billing	2018	40.0%
Residential Type #2 (% of sales affected)	Direct Feedback & Automation	2022	10.0%
Commercial (% of sales affected)	Building Operator Certification	2018	10.0%
Industrial (% of sales affected)	Strategic Energy Management	2020	10.0%

MODELING METHODOLOGY

Scenario Option Switches

Scenario Incentive Multiplier	Starting Year	Incentive Multiplier
Value of 1.0 = base incentive. Value of 2.0 = double base incentive up to limit (<i>maximum incentive is limited by model to 100% of incremental cost</i>)	2019	1.00
Scenario Administrative Cost Multiplier (Base = 1.0)	Starting Year	Admin Cost Multiplier
The administrative cost multiplier is used as a proxy to simulate changes in promotional/education efforts	2018	1.00

CONTACT

GARY CULLEN

DIRECTOR

360-828-4008

GARY.CULLEN@NAVIGANT.COM

navigant.com

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