



Energy Sustainability Plan

Engineering and Operations Committee

Item 6a

May 13, 2019

Outline

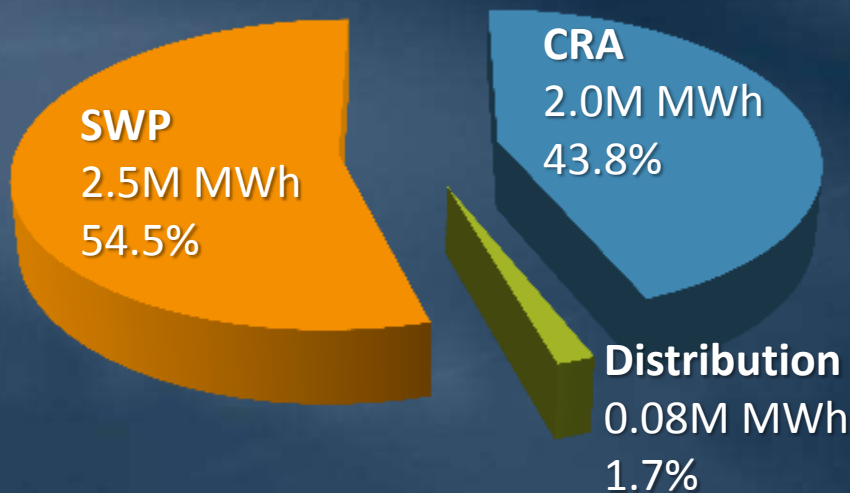
- Overview of energy requirements and power generation resources
- Energy management actions & accomplishments
- Current energy environment and key drivers
- Energy Sustainability Plan scope and schedule

Metropolitan's Energy Requirement



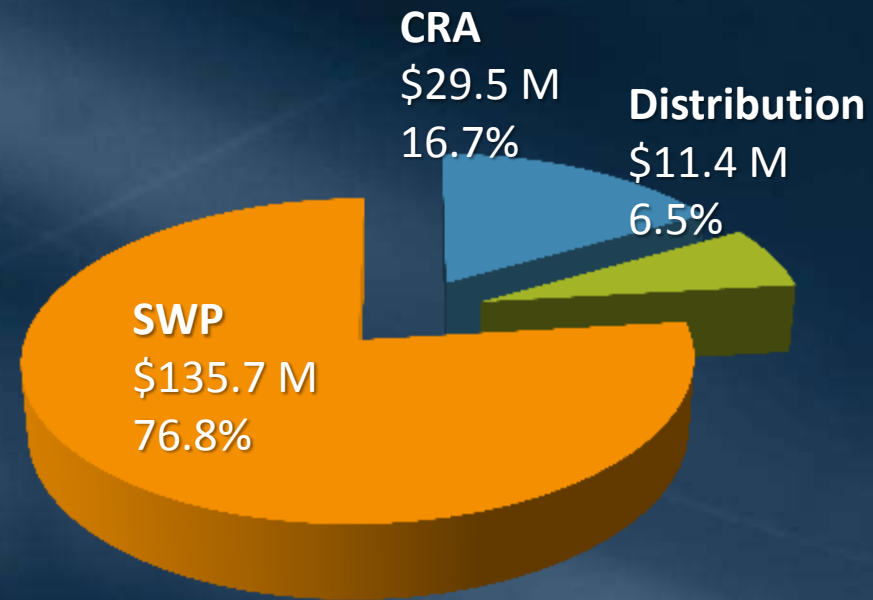
Metropolitan's Energy and Cost Requirement Average 2013-2017

Energy (MWh)



■ CRA ■ Distribution ■ SWP

Cost (\$M)



■ CRA ■ Distribution ■ SWP

Energy Management Actions

1970 to
1990

- Hydro plant development

1991 to
2000

- CRA efficiency improvements
- Energy Policy Principles adopted

2001 to
2010

- Energy established as core initiative
- Energy Mgmt Policies Adopted
- Voluntary GHG reporting

2011 to
2018

- Energy Mgmt Implementation

Energy Management Policies (2010)

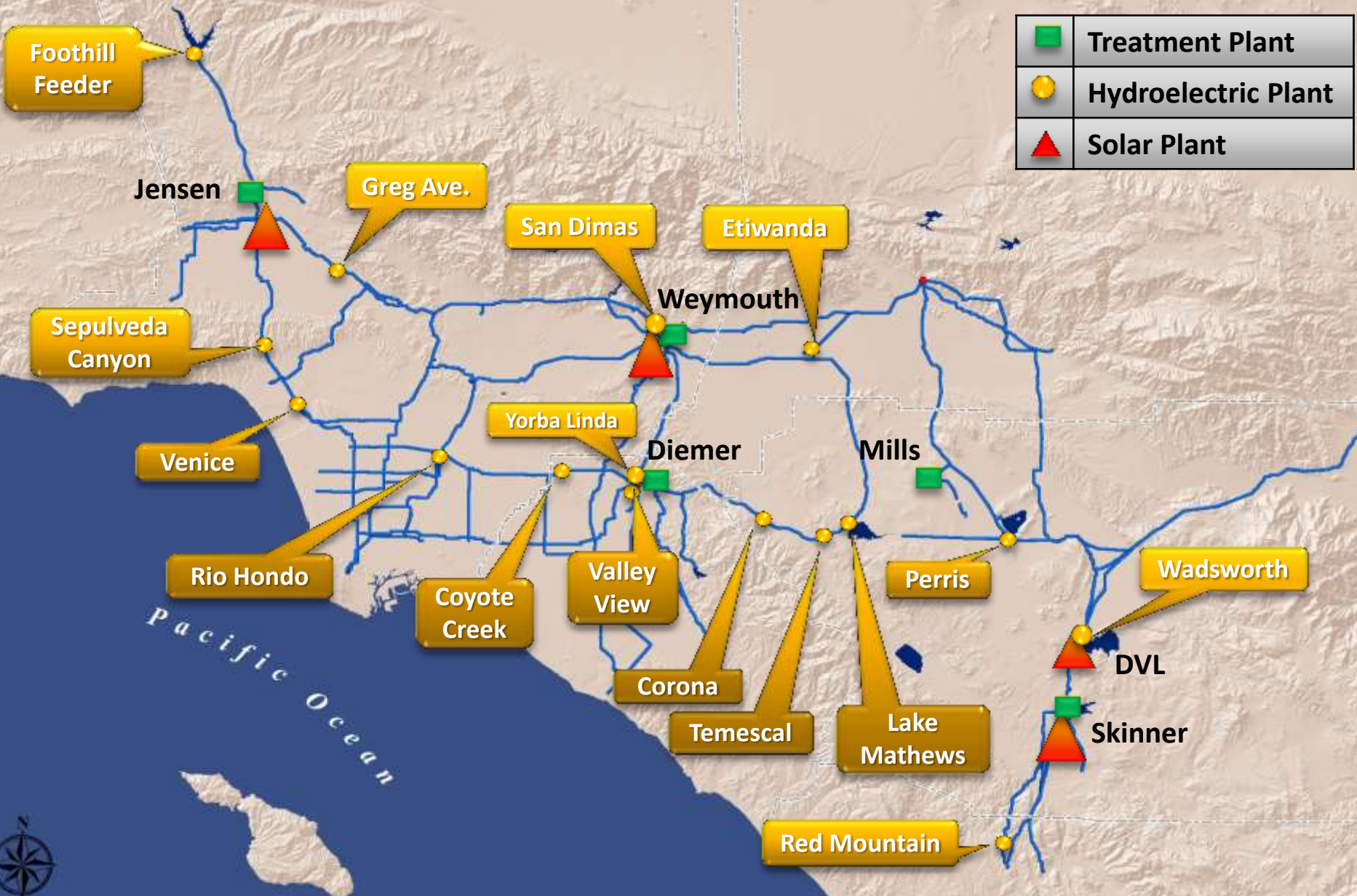
Objectives

- Contain costs & reduce exposure to price volatility
- Enhance operational reliability
- Provide a revenue stream to offset costs
- Move towards energy independence



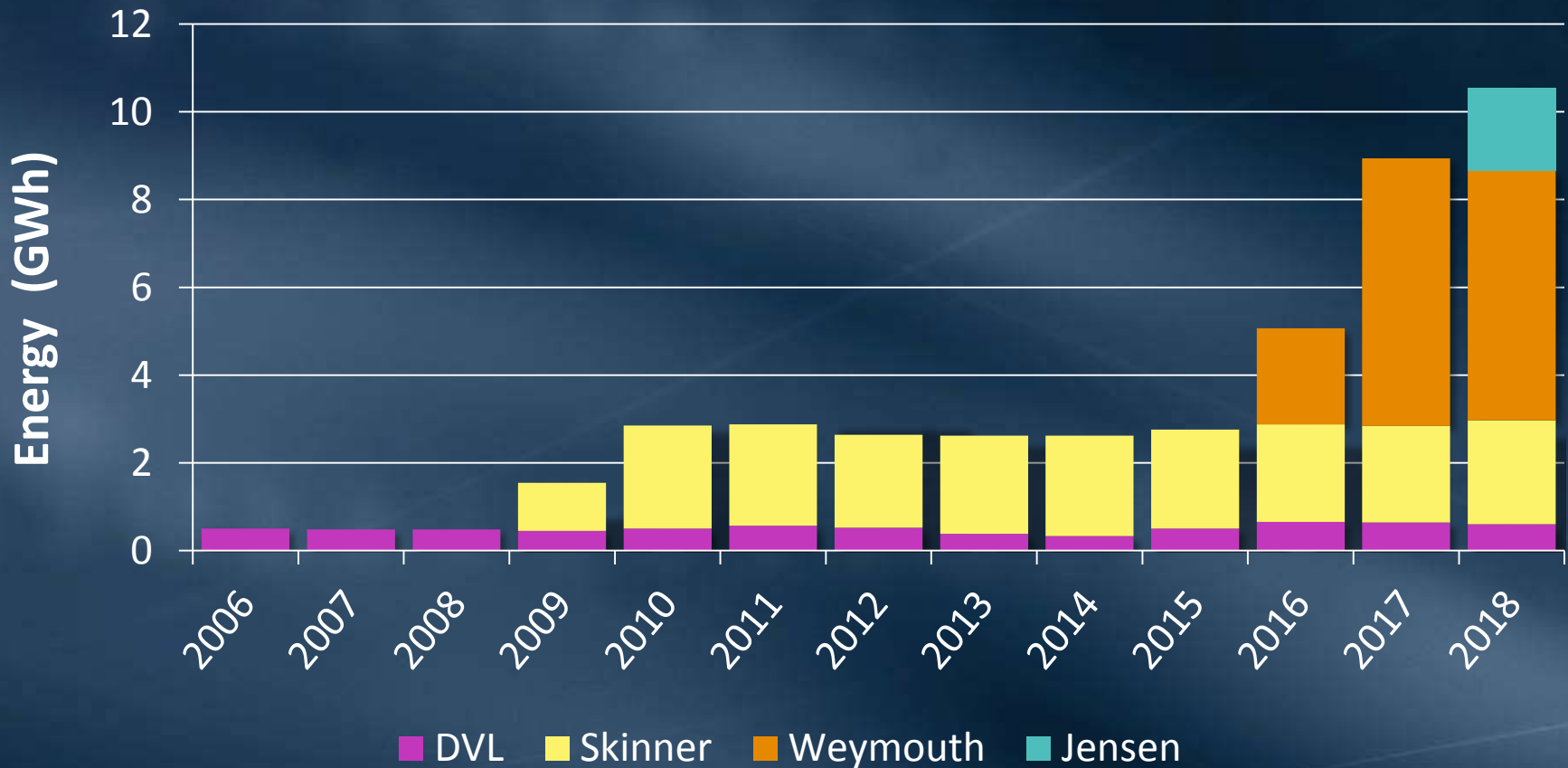
La Verne Solar Dedication Ceremony

MWD Hydroelectric & Solar Power Plants



Accomplishment:

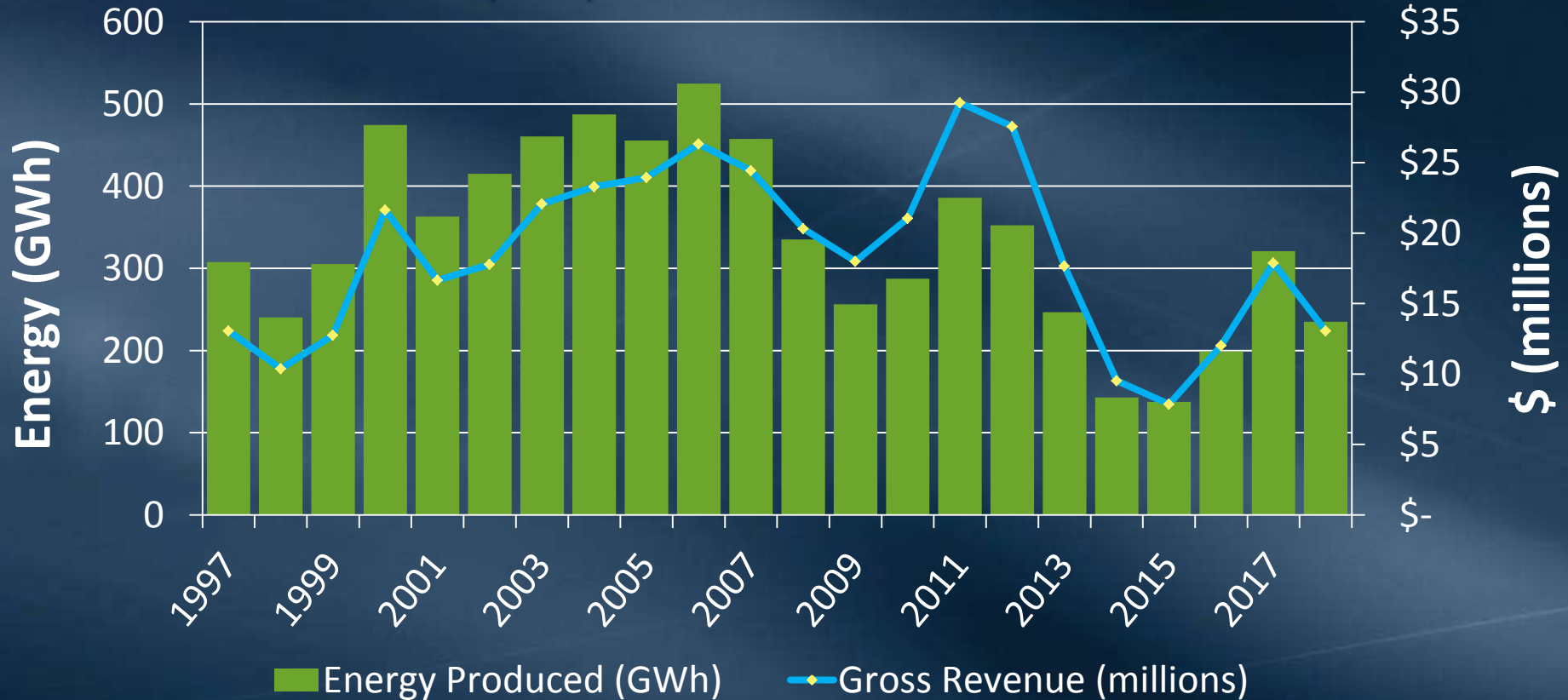
Solar power totaling 5.5 MW (2006-17)



Accomplishment:

Five hydropower plants re-contracted for 51 MW (2016)

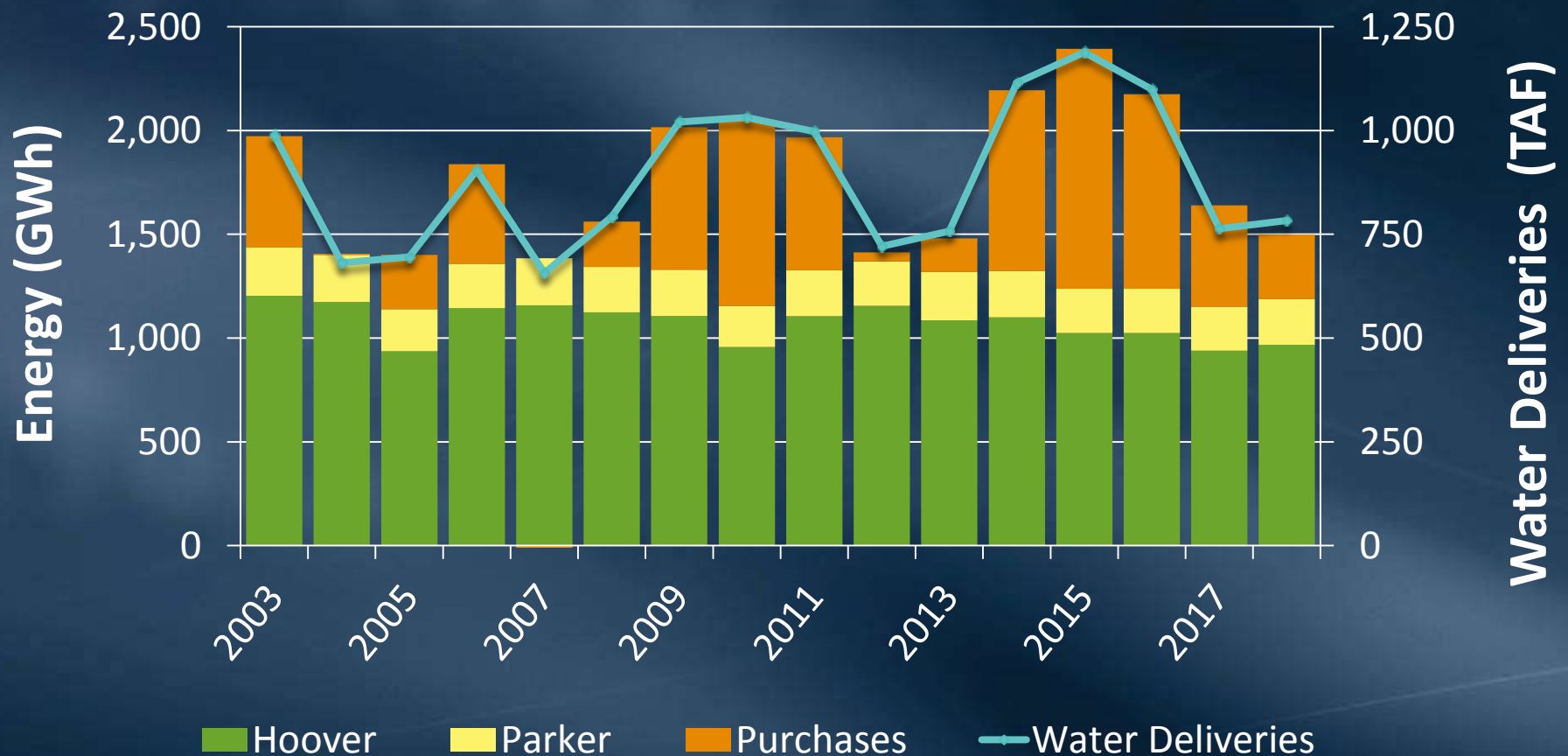
Small Hydropower Generation & Revenue



Accomplishment:

50-yr Hoover contract extension (2017)

CRA Energy Sources



Accomplishment:

New agreement with AEPCO for CRA power operations (2017)



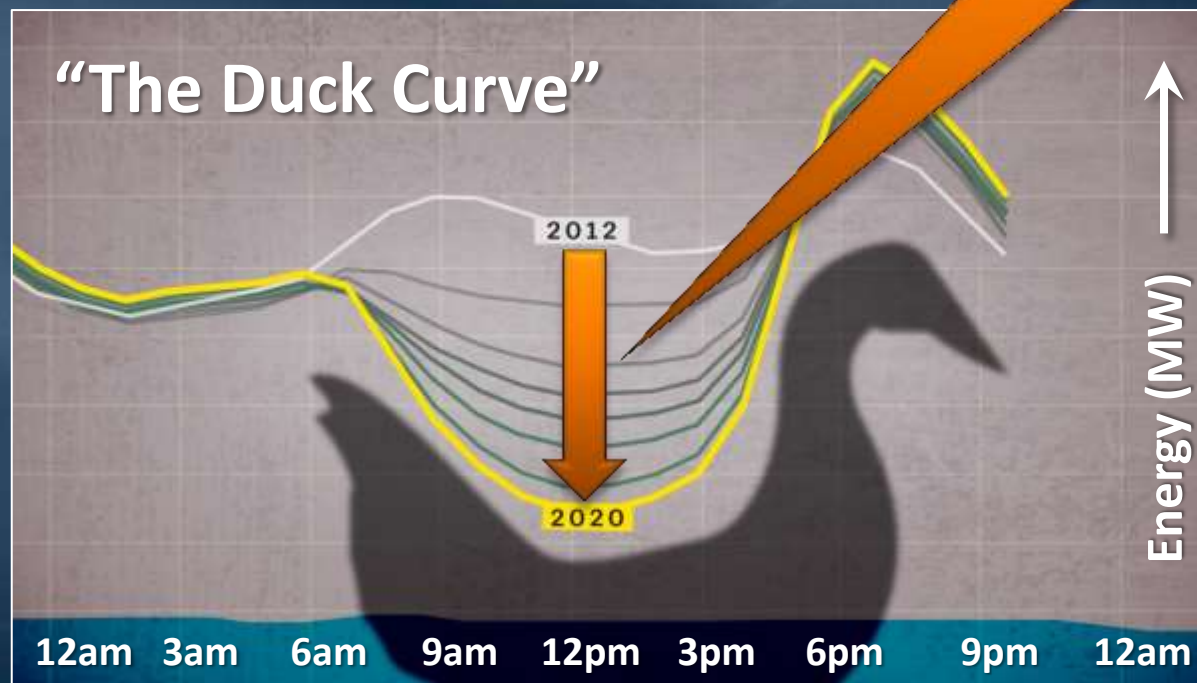
Implemented 5 major agreements with Arizona Electric Power Cooperative and other entities for CRA transmission and power scheduling services, replacing a long-standing agreement with Southern California Edison

Changing Energy Landscape

Wholesale (CRA)

- Renewable portfolio standards (RPS)
- CA AB32 and carbon pricing
- New energy price dynamic

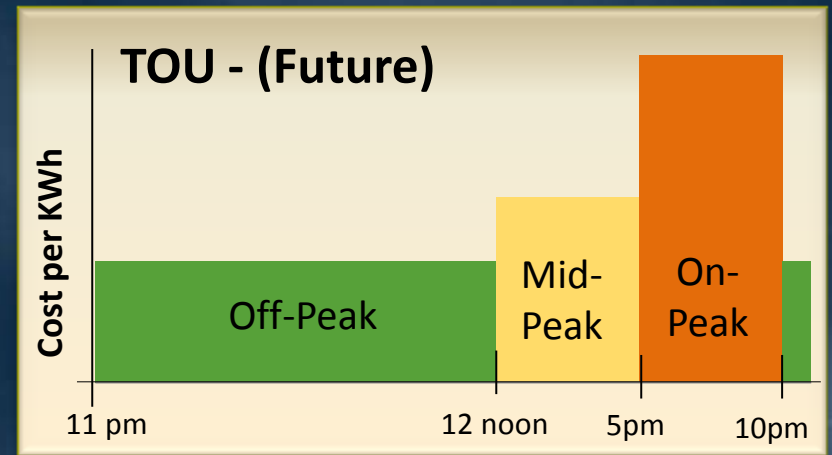
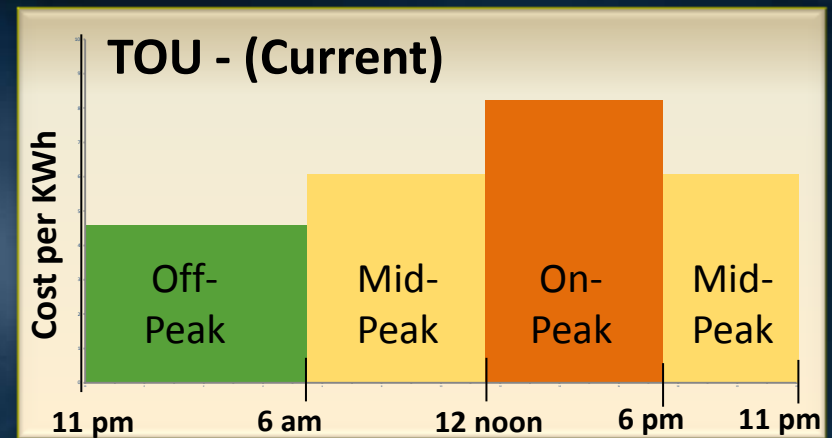
Decrease in fossil energy use due to solar generation



Changing Energy Landscape

Retail (Treatment Plants & Other Facilities)

- New Time of Use (TOU) rates
- New technology options - energy storage
- Alternative Service Options - Community Choice Aggregation and Direct Access



For illustrative purposes only

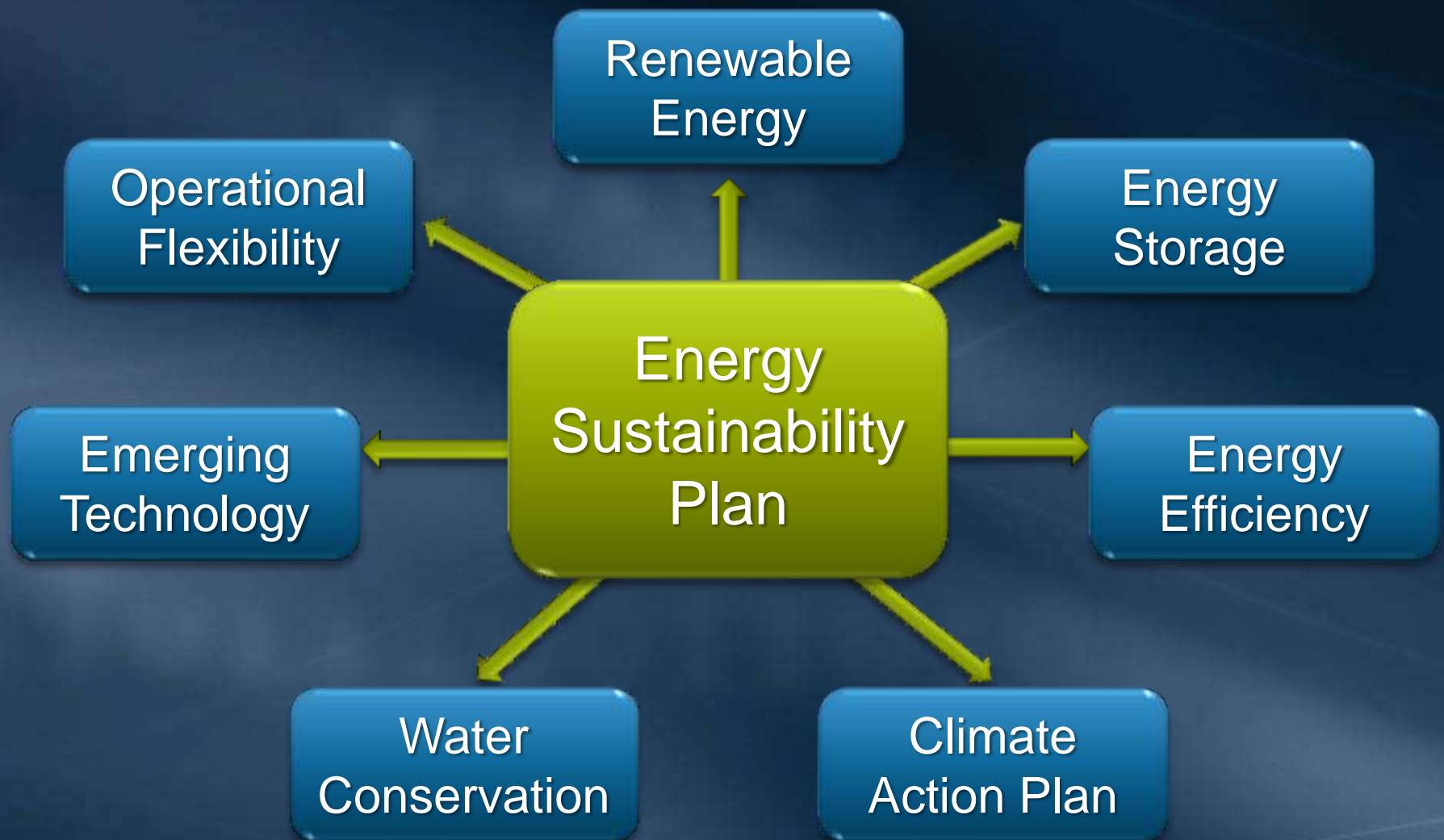
Energy Sustainability Plan

Key Objectives

- Position Metropolitan as a leader in energy sustainability consistent with core mission
- Define strategies to increase flexibility, and reduce energy costs and GHG emissions
- Support Metropolitan's Climate Action Plan



Focus Areas



Scope of Work

- Review energy sustainability best practices
- Evaluate key uncertainties and scenarios that impact energy sustainability
- Identify and evaluate investment opportunities that support sustainable energy practices
- Optimize water operations while adapting to energy market conditions
- Develop near and long-term strategies to respond to evolving market conditions

Schedule

Energy Sustainability Plan (ESP)	2019			2020	
Kickoff Meeting					
Peer Review of Best Practices					
Board Update - ESP					
Energy Sustainability Plan Development					
Board Update - Interim Results					
Board Update – Final Draft Plan					
Final Energy Sustainability Plan					

 **Major Task**

 **Milestone**

 **Board Update**

