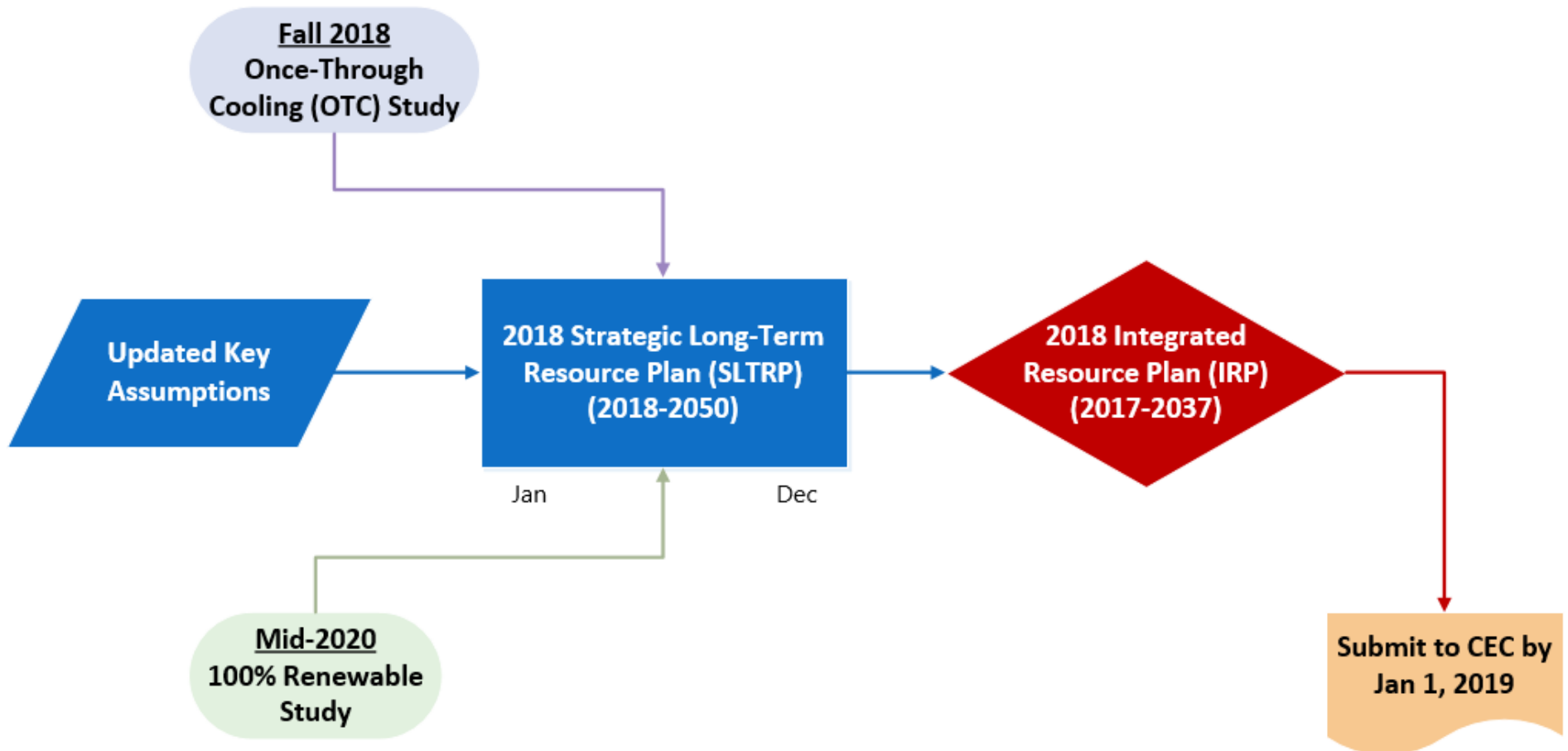**Los Angeles** LADWP **Department of Water & Power**

2017 Power Strategic Long-Term Resource Plan

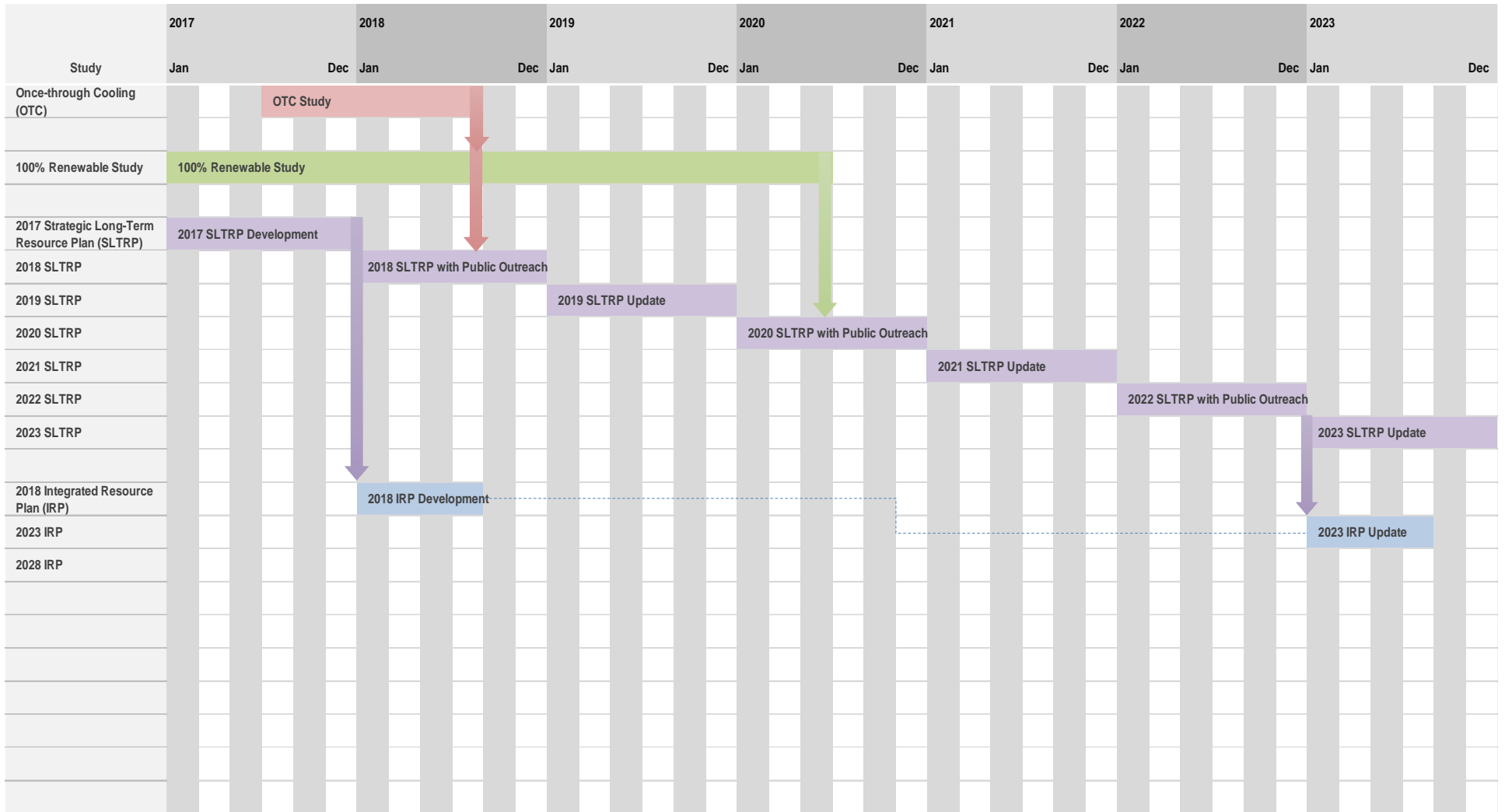## Presentation to 100% Renewable Energy Study Advisory Group

Website: www.ladwp.com/cleanenergyfuture

Putting Customers First

2018 Strategic Planning Process

Strategic Planning Timeline

Study	2017 Jan — Dec	2018 Jan — Dec	2019 Jan — Dec	2020 Jan — Dec	2021 Jan — Dec	2022 Jan — Dec	2023 Jan — Dec
Once-through Cooling (OTC)	OTC Study						
100% Renewable Study	100% Renewable Study						
2017 Strategic Long-Term Resource Plan (SLTRP)	2017 SLTRP Development						
2018 SLTRP		2018 SLTRP with Public Outreach					
2019 SLTRP			2019 SLTRP Update				
2020 SLTRP				2020 SLTRP with Public Outreach			
2021 SLTRP					2021 SLTRP Update		
2022 SLTRP						2022 SLTRP with Public Outreach	
2023 SLTRP							2023 SLTRP Update
2018 Integrated Resource Plan (IRP)		2018 IRP Development					
2023 IRP							2023 IRP Update
2028 IRP							

2017 Power Strategic Long-Term Resource Plan

Eliminate Coal from LADWP's Power Supply

Reach 33% RPS by 2020, 55% by 2030, 65% by 2036

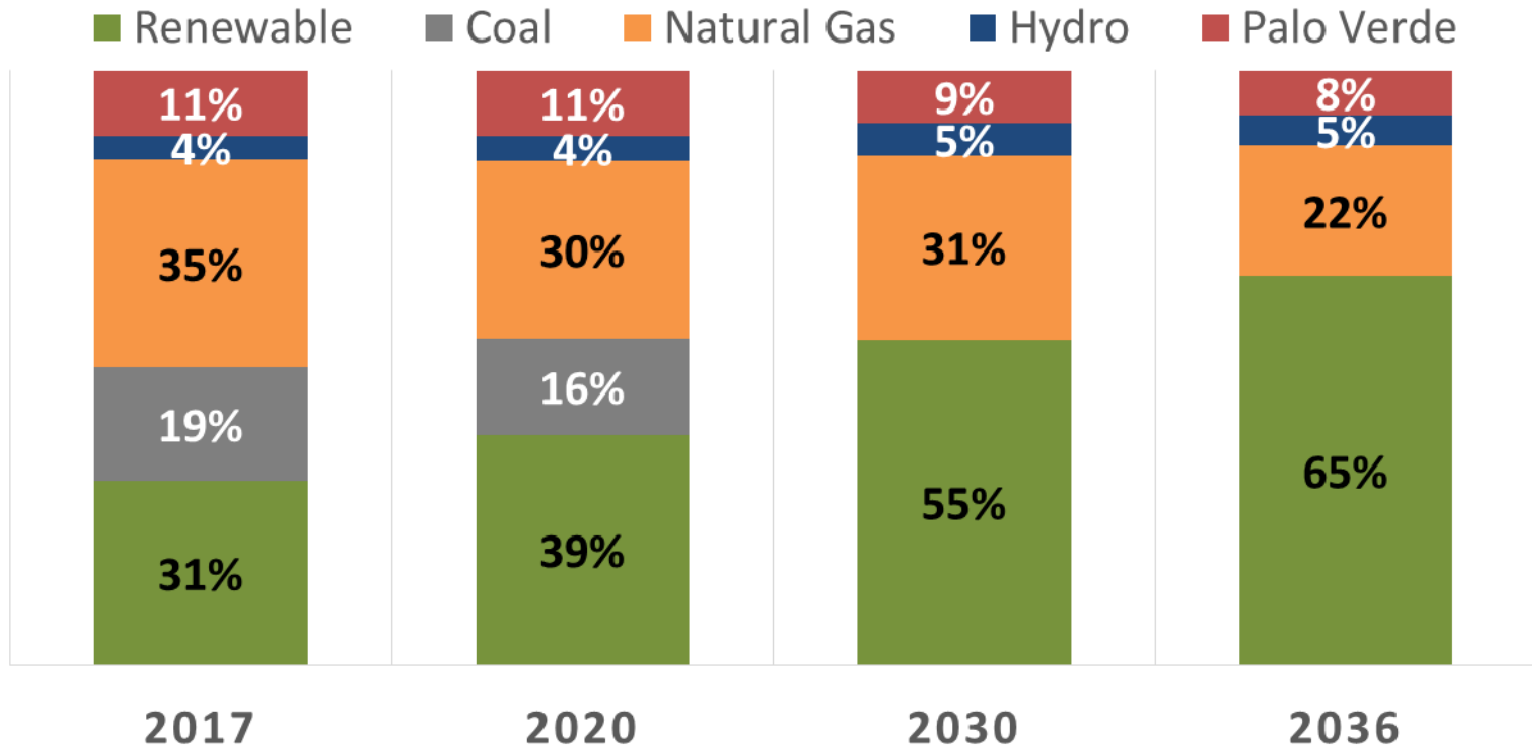Double Energy Efficiency by 2030

Develop Hybrid Energy Projects

Accelerate Electric Vehicle Expansion

Invest in Power System Reliability Program

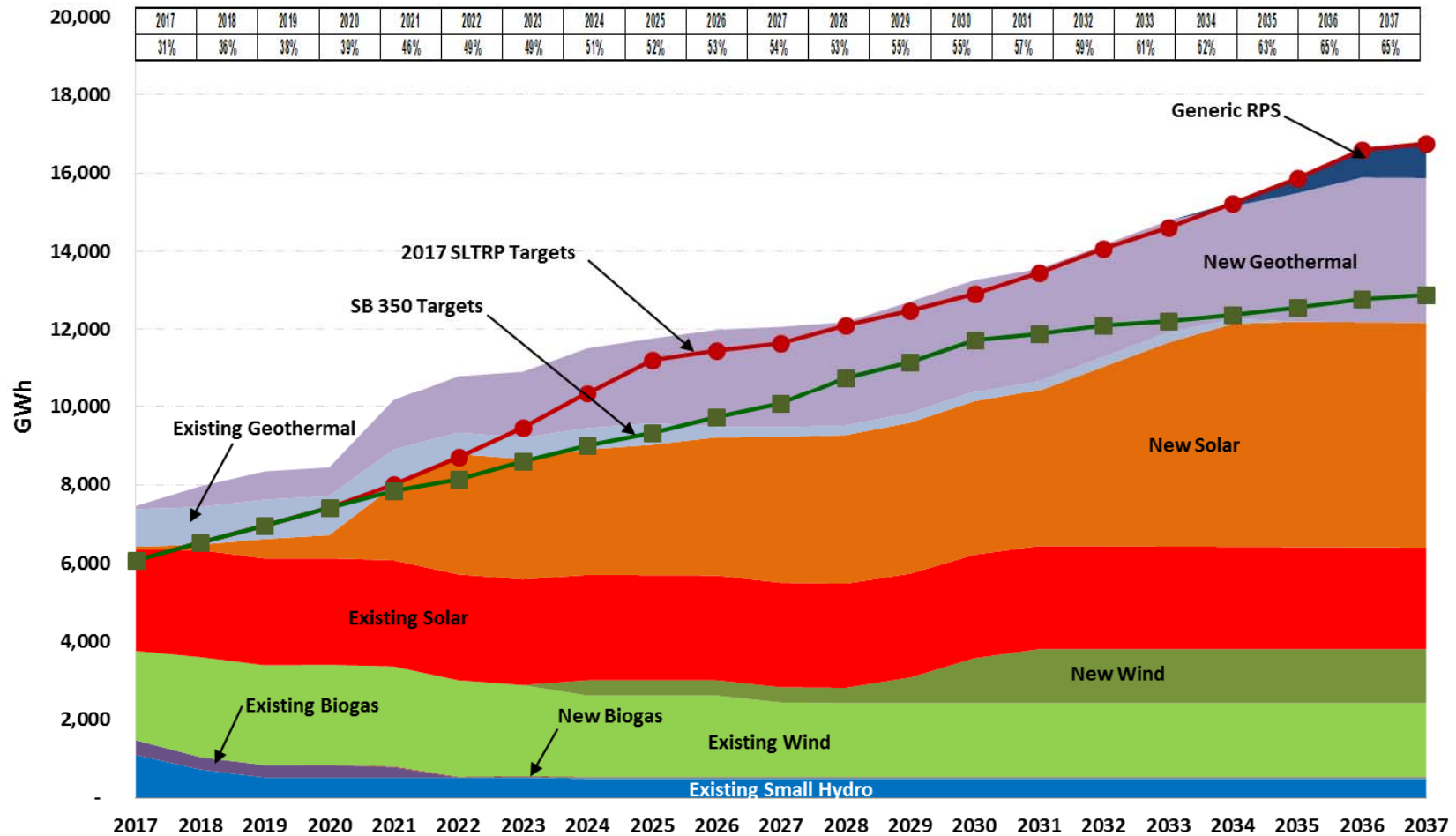# Transformation of Energy Resources

Resource Mix by Year

Legend: ■ Renewable ■ Coal ■ Natural Gas ■ Hydro ■ Palo Verde

Resource	2017	2020	2030	2036
Palo Verde	11%	11%	9%	8%
Hydro	4%	4%	5%	5%
Natural Gas	35%	30%	31%	22%
Coal	19%	16%		
Renewable	31%	39%	55%	65%

Note: Includes a doubling of energy efficiency by 2030

Renewable Portfolio Standard Growth

RPS Generation

Energy Efficiency Cumulative Savings
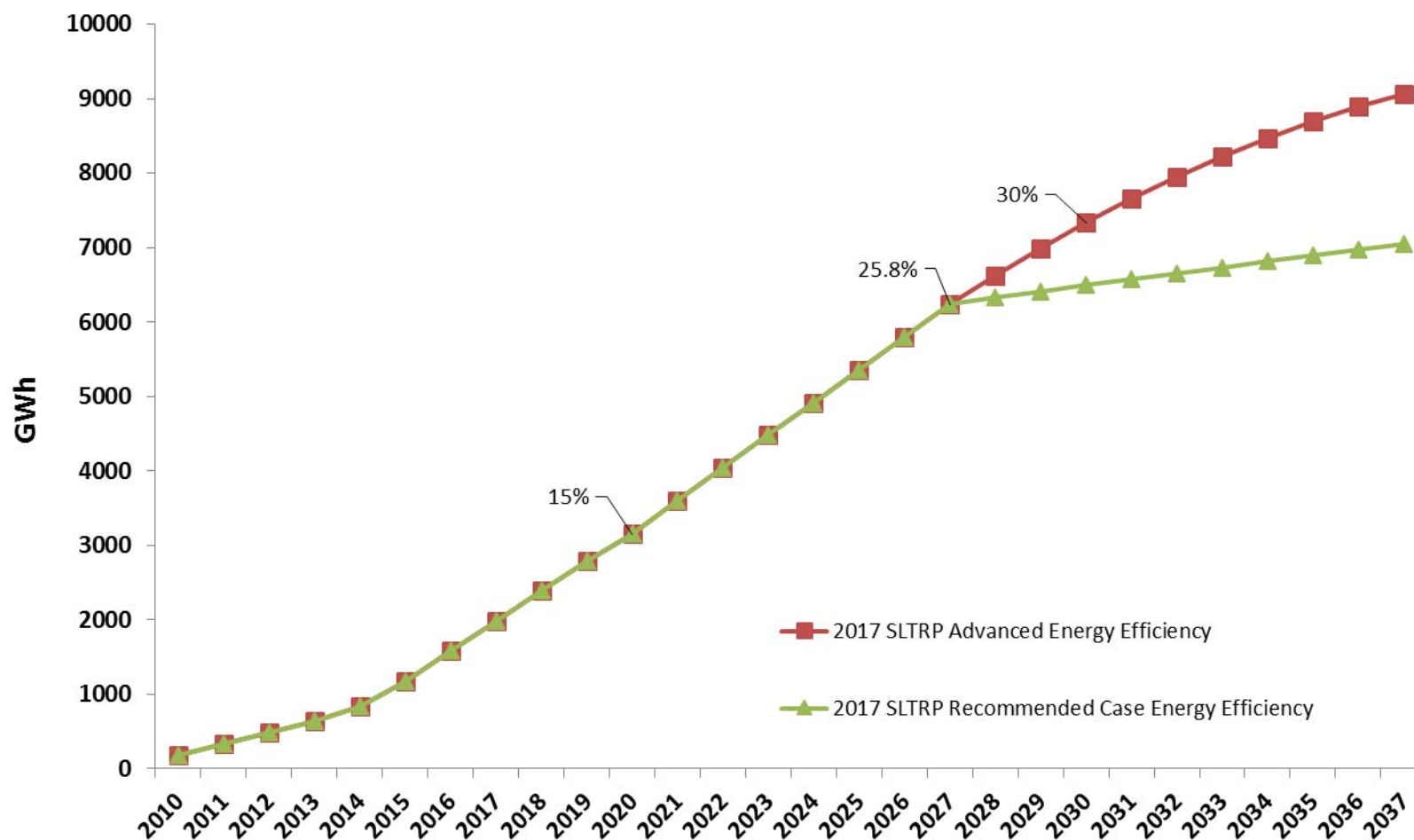
*Note: Estimated energy efficiency cumulative savings including codes & standards*

Transportation Electrification
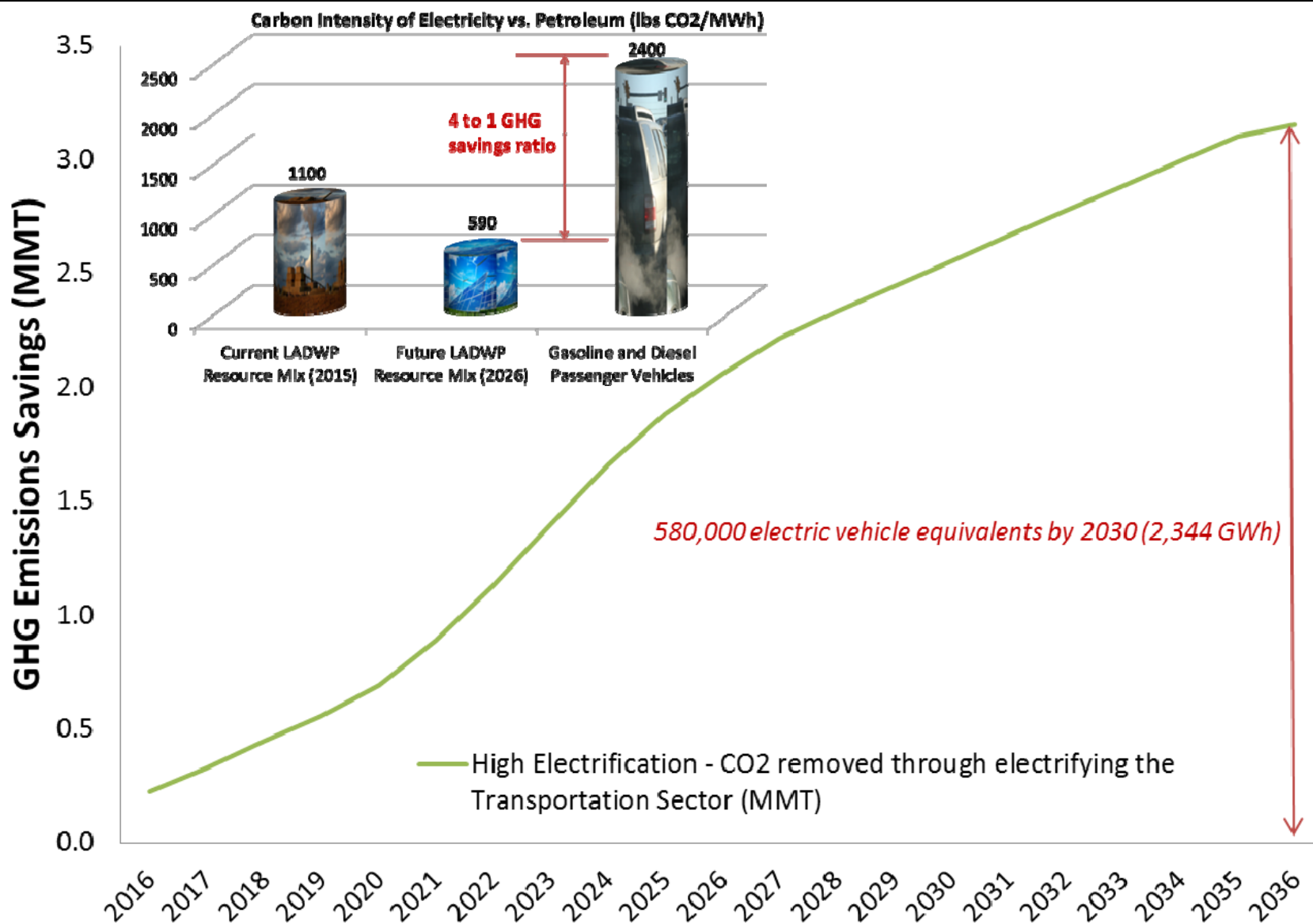
Carbon Intensity of Electricity vs. Petroleum (lbs CO2/MWh)

4 to 1 GHG savings ratio

2400

1100 — Current LADWP Resource Mix (2015)

590 — Future LADWP Resource Mix (2026)

Gasoline and Diesel Passenger Vehicles

580,000 electric vehicle equivalents by 2030 (2,344 GWh)

High Electrification - CO2 removed through electrifying the Transportation Sector (MMT)

GHG Emissions Savings (MMT)

Dependable Capacity

Definition: A generating plant's maximum output it can reliably produce with 95% certainty when required during the net peak hour (load minus variable energy resources)
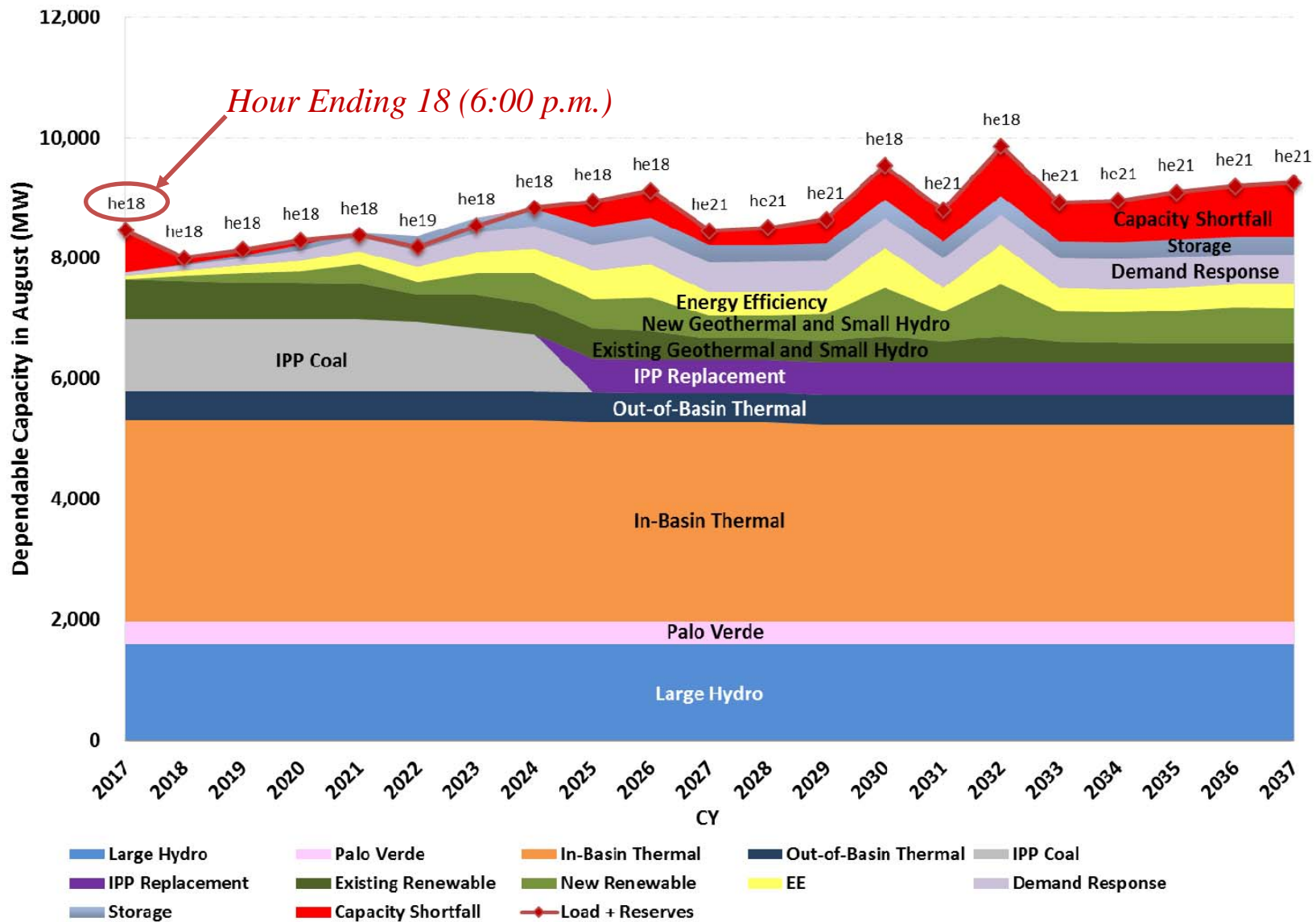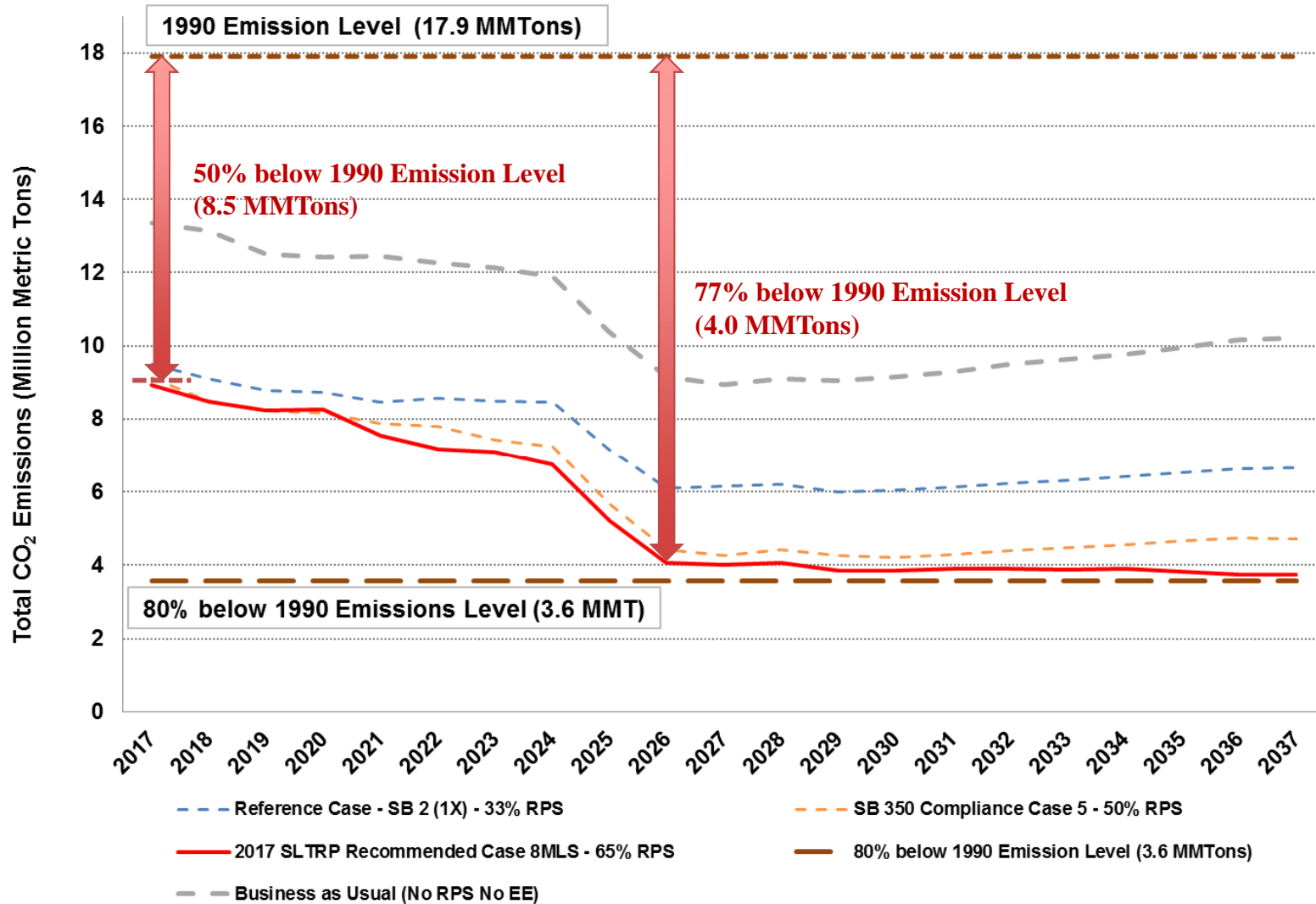

Net Load (Load minus Solar and Wind)
Typical Summer Day
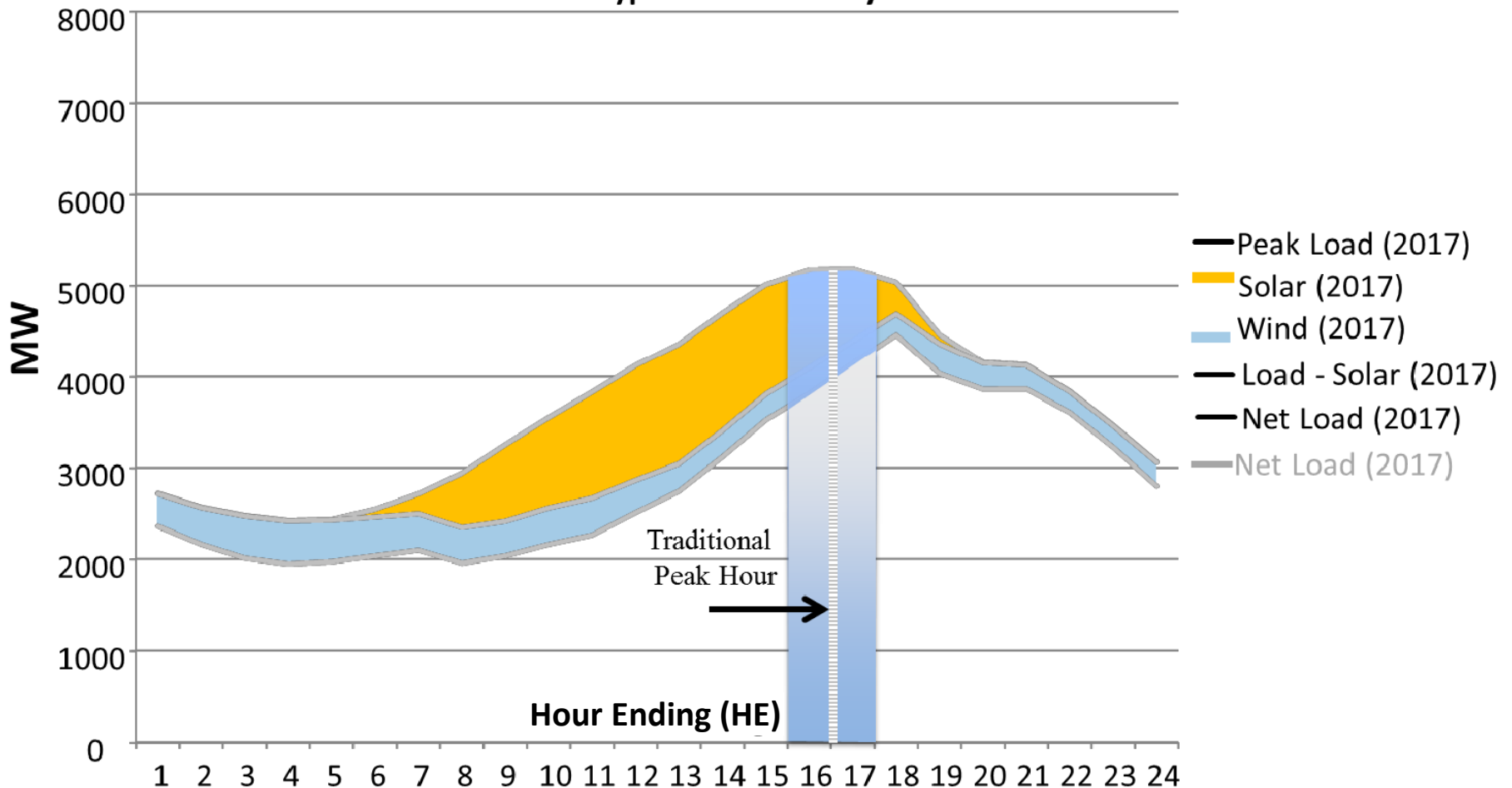
Dependable Capacity

Definition: A generating plant's maximum output it can reliably produce with 95% certainty when required during the net peak hour (load minus variable energy resources)

Net Load (Load minus Solar and Wind)
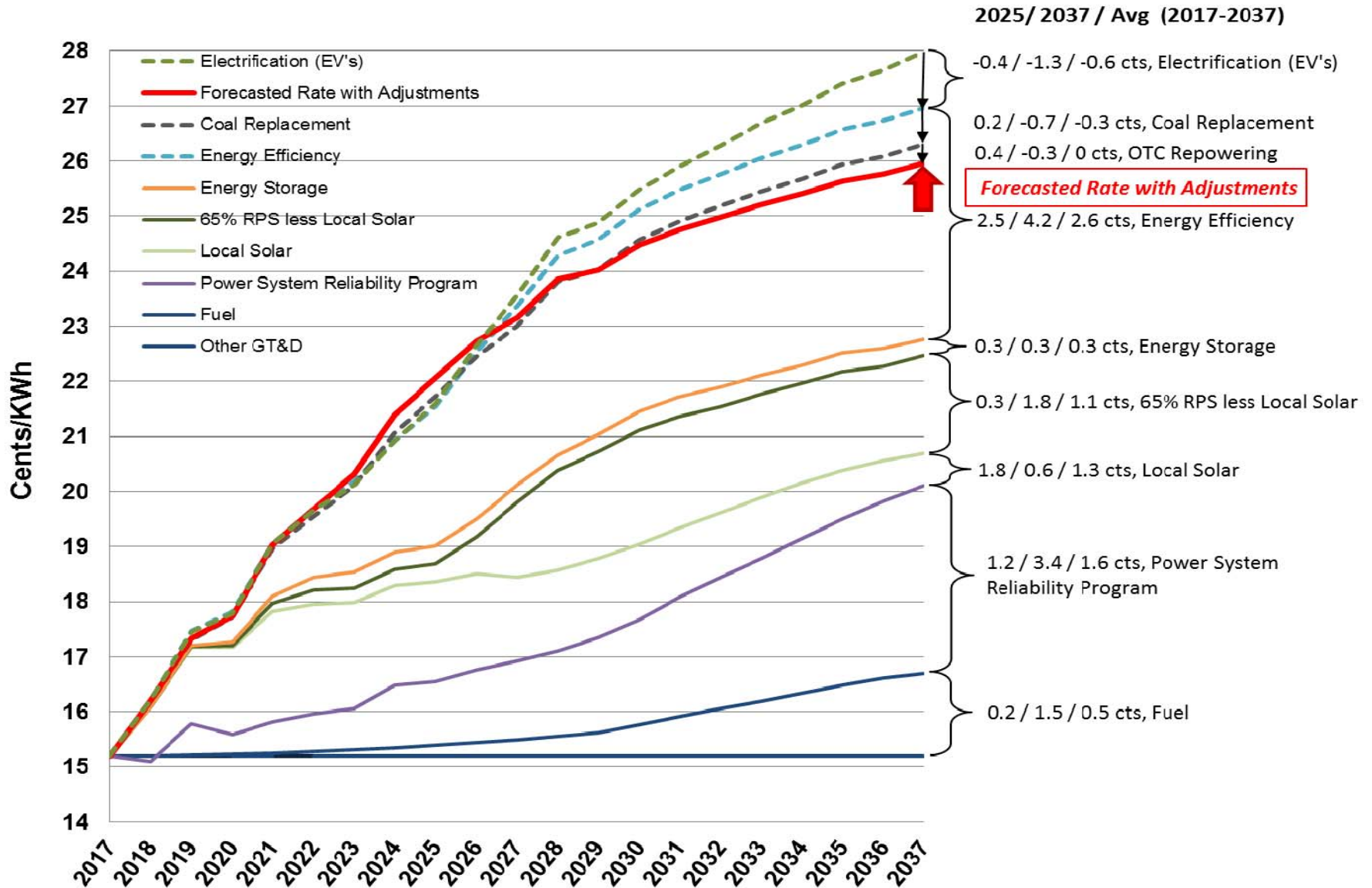**Typical Summer Day**
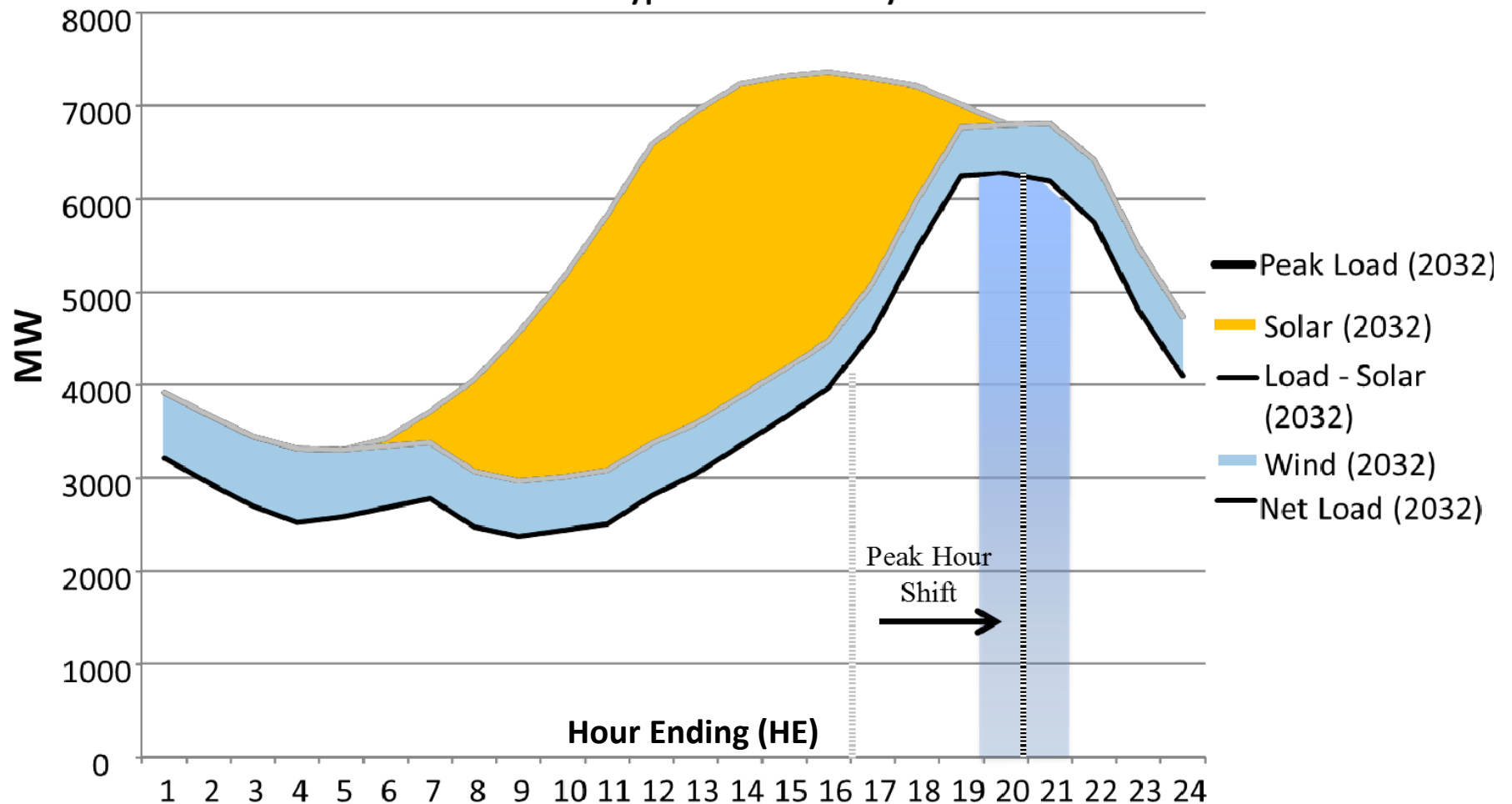
Dependable Capacity Profile
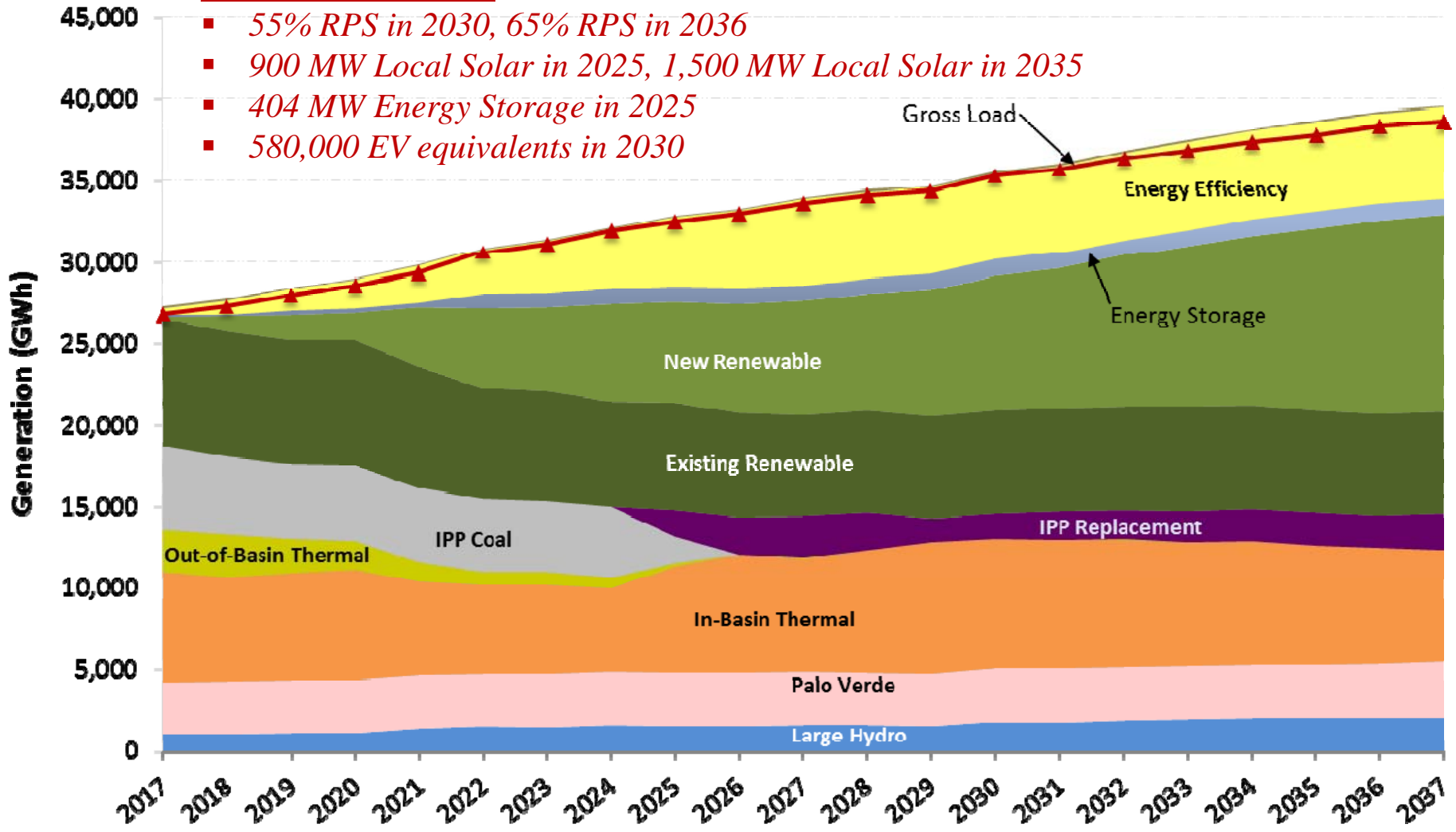
Greenhouse Gas Emissions Forecast

Rate Layer Diagram

2017 SLTRP Resource Timeline

Recommended Case: (same as 2016 IRP Recommended Case)
- *55% RPS in 2030, 65% RPS in 2036*
- *900 MW Local Solar in 2025, 1,500 MW Local Solar in 2035*
- *404 MW Energy Storage in 2025*
- *580,000 EV equivalents in 2030*

For more information, visit: www.ladwp.com/powerSLTRP

Questions?