

Exhibit to Agenda Item #1d

Board Strategic Development Committee and Special SMUD Board of Directors Meeting

Tuesday, November 13, 2018, scheduled to begin at 5:30 p.m.

Customer Service Center, Rubicon Room

RPS Overview

- Current RPS Policy
 - 2020 33% RPS
 - 2030 60% RPS (SB100)
 - SD9 mirrors the State's RPS



- SMUD is on track to meet the 2020 goal
 - Will need to procure additional renewables to achieve the 2030 60% goal

- SB 100 directs the State to study a 100% net clean energy goal by 2045



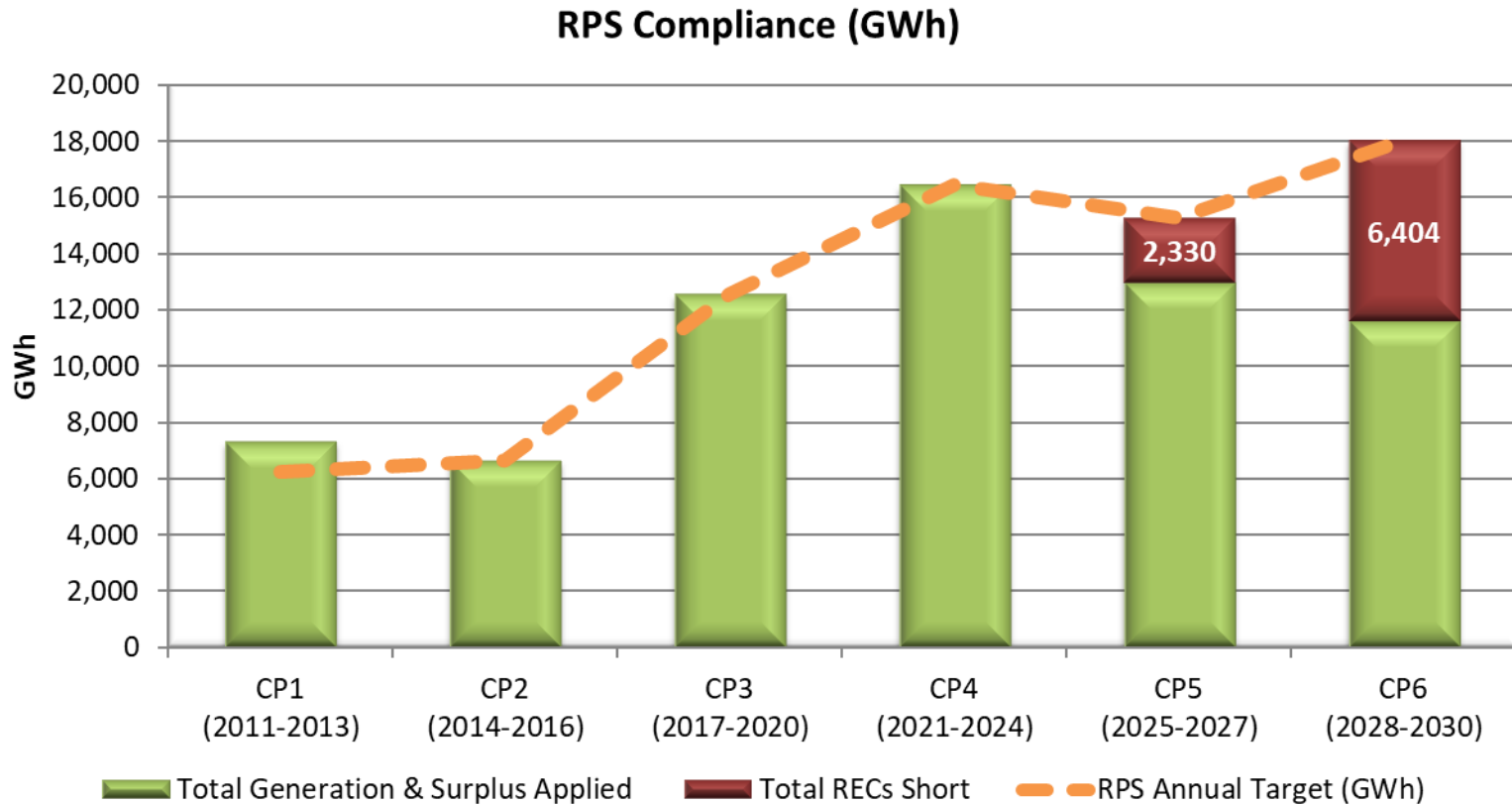
Renewable Outlook

- Short-term renewable expansion 2019-2025:
 - Reviewing Category 2/3 purchases and best use of biogas
 - Expansion of Greenergy and SolarShares

Committed/Planned Renewable Additions	Year	MW
Geothermal Contract	2019	10
Small Hydroelectric Project	2019	3
Wind Contract	2019	200
Geothermal Contract	2020	10
Solar PV Project (local)	2020	13
Solar PV Project (local)	2021	140
Solar PV Project	2022	100
Solano 4 Development (+ Repower Phase 1)	2023	80

- Long-term renewable expansion 2025-2030:
 - Local resource focus
 - RPS additions primarily solar and wind
 - Local balancing need increases with local focus

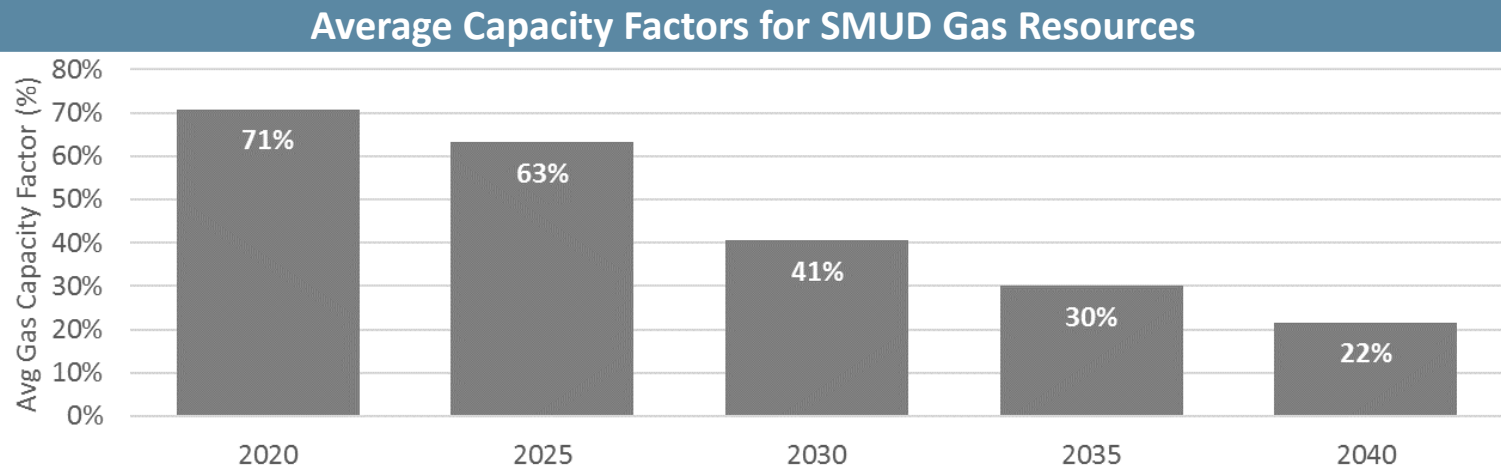
RPS Forecast



- Additional renewables will be needed mid-2020s through 2030 to comply with the 60% RPS

Gas Generation Trends

- 2018 IRP shows significant reduction in gas fleet capacity factors over the next 20+ years
- Higher renewable levels will alter the use of gas generation
 - Transition of gas resources from energy to capacity and reliability operation
 - Gas will support firming and ramping needs caused by variable energy resources
- Gas generation still very valuable in a high decarbonized world
 - Very expensive to replace Gas with batteries with today's technology
 - Long duration storage will be needed to meet today's reliability requirements



Transmission Outlook

- Local transmission projects to meet customer capacity needs
 - Reconductoring Hurley to Proctor
 - Capacitor banks
- CoSu transmission project
 - Project is still in the environmental review phase
 - SMUD is continuing to evaluate costs and benefits of CoSu line
 - <https://www.cosuline.com/>

