

Developing Interim And Regional Targets for 12,000 MW of DG by 2020

Presented by James Shetler, AGM Energy Supply

Presentation to CEC IEPR
Committee Workshop
May 9, 2011

**SMUD**

SACRAMENTO MUNICIPAL UTILITY DISTRICT

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SMUD BACKGROUND

- POU with 7 member elected Board
- ~600,000 customers
- 900 sq. mi. territory
- 3300 MW Peak
- Average residential rate = \$0.12/kwh
- Local Economy
 - Load growth flat
 - Unemployment stuck at 12-13%



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SMUD ENERGY POLICY GOALS

- RPS/Greenenergy
 - 20%/3% by 2010 – exceeded goal
 - 33%/4% by 2020 – on track with sufficient renewable procurement through 2016 and planned options to reach 2020
- Energy Efficiency
 - 1.5%/year over 10 years
- Ca Solar Initiative
 - SMUD share = 125 MW; currently ~35 MW installed
- GHG reduction
 - Electric sector goal by 2020
 - 90% below 1990 levels by 2050



SMUD POLICY APPROACH

- Customer-owners want electric supply that is safe, reliable, environmentally responsible, and cost-effective
- Board policy direction is to implement a sustainable approach that balances these competing demands
- Key to our success is flexibility to be creative in meeting these demands
 - Focus on energy policy goals in a measured manner



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RENEWABLE RESOURCE MIX

- Balance between utility scale and distributed resources and between base load and variable generation
 - Utility scale
 - Wind
 - Biomass
 - Biogas
 - Solar PV
 - Small hydro
 - Distributed
 - Solar PV
 - Customer installations
 - Solar Shares
 - Feed-in-Tariff
 - Biomass
 - Dairy digesters
 - Land-fill gas



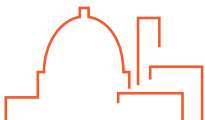
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SMUD FOCUS

- Looking beyond 2020
 - Existing game plan meets 2020 goals for GHG and RPS at a reasonable cost (though rate increases will be required)
- Finalizing Integrated Resource Plan (IRP) looking at how to meet goals for 2030 and beyond with objectives focused on:
 - GHG Reduction
 - Reliability
 - Renewable



SMUD PRELIMINARY IRP

- GHG Reduction Objectives
 - Through 2020 – existing EE and RPS plans
 - Post 2020 – EE, large hydro, RPS, and/or offsets
- Reliability Objectives
 - Additional 300 MW of load serving capability by 2030
 - Additional 200-275 MW local firming capacity by 2025
 - Maintain local co-gens through at least 2030
 - Demand response: 275 MW by 2015/350-400 MW by 2030
- Renewable Objectives
 - New local & regional biogas
 - New local wind (up to 500 MW)
 - Solar PV
 - Consider expanding FIT or develop Solar Auction Mechanism
 - Utility scale solar (up to 200 MW)
 - 50-80 MW base load renewable (geothermal or biomass) by 2030



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SMUD POSITION ON DISTRIBUTED GENERATION MANDATE

- SMUD is looking for clearly defined policy goals; not further mandates on how to accomplish them
 - Flexibility and creativity important to our future success
- A further mandate is not needed to meet 2020 RPS and GHG goals
- Concerns with moving too fast on expanding distributed generation
 - High relative costs (both direct and indirect to distribution system and grid operations),
 - Reliability impacts to distribution system and grid operations need further evaluation
 - Local permitting and land use issues need to be addressed
- Any new mandate should be “need-based” to reflect zero-to-low load growth and existing accomplishments
- Already many moving parts with EE, RPS, Smart Grid, GHG reduction, and Cap-and-Trade programs in play this decade
 - Let’s make sure we evaluate all the impacts before we add more uncertainty



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