



A Regulatory Perspective on Smart Grid

WCA Smart Grid SIG

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Aloke Gupta, Senior Energy Analyst
Ph: 415.703.5239. Email: ag2@cpuc.ca.gov
California Public Utilities Commission





California Policies Require a Smart Grid

- ✓ **Aggressive greenhouse gas reduction goals**
 - State law: GHG emissions reduced to 1990 levels by 2020
 - Additional reductions to 80 percent below 1990 levels by 2050
- ✓ **Higher renewable energy mandates**
 - 20% electricity must come from renewable sources by 2010
 - Executive order directing 33% renewables by 2020
- ✓ **Distributed generation growing rapidly**
 - 3,000 MW of rooftop solar photovoltaics by 2017
- ✓ **Electric vehicles entering the market**
- ✓ **Push for more EE and demand response**
- ✓ **Need to maintain / improve Reliability**





California a Leader in Implementing Smart Grid

- **In 2003, CPUC adopted policy requiring Smart Meters for all three major IOU customers**
- **PG&E, SCE, and SDG&E currently deploying**
 - 17M Smart Meters (12M electric, 5M gas) by 2012
 - Total investments of approx \$4.6B
 - Concurrent tariff offerings for time-of-use rates & dynamic pricing
- **Other Smart Grid initiatives in progress by IOUs**
 - Distribution automation; Grid failure prevention, detection, repair
 - SynchroPhasors; Backbone for grid communications
 - EV testing; Microgrid pilot project; Energy Storage pilots
- **Several California projects won DOE ARRA grants**
- **Presently, no specific regulatory framework guiding the non-AMI initiatives**





CPUC Smart Grid Rulemaking in Progress (I)

- **Phase I Decision issued in Dec 2009**
 - Complied with considerations required by federal EISA 2007
 - By 2010, IOUs required to provide customer's **usage data to third parties**, if requested by a customer
 - By 2011, IOUs required to allow customers access to their **usage data in real-time**





CPUC Smart Grid Rulemaking in Progress (II)

- **Phase II: Develop Smart Grid deployment requirements by July 2010 (per SB17)**
 - Explore requiring IOUs to transmit electricity **retail price data in real-time** by 2010
 - Develop rules for privacy, security, authorization, standards for real-time and third party access to customer data
 - Adopt Smart Grid standards & protocols
 - Provide guidelines for evaluating utility investments in Smart Grid
- **Process open to public, involves workshops and comments by any interested party**
 - <http://www.cpuc.ca.gov/PUC/energy/smartgrid.htm>
- **IOUs required to submit deployment plans for approval by July 2011**

