

DOCKETED

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Evolution of CEC's Advanced Metering Data and New Projects

Kadir Bedir, Program & Project Supervisor
Distributed Energy Resource Unit
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What is Advanced Metering Data?

Detailed, time-based consumption and diagnostic information collected by smart meters and transmitted automatically to utility companies.

- Advanced metering infrastructure (AMI) collects billing data and interval metering data (IMD)
- Most legacy smart meters collect consumption data in hourly intervals





Utility Reporting to CEC Data Warehouse

Selected AMI Data Tables in the CEC Data Warehouse

Table Name	PG&E	SCE	SDG&E	LADWP	SMUD	SoCalGas
Billing Charge (E)						
Billing Charge (G)						
ID Relations						
Interval Consumption (E)						
Metered Consumption (E)						
Metered Consumption (G)						
Premise						
Rate Schedule						

(E): Electricity

(G): Natural Gas



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Interval Consumption (E)						
Metered Consumption (E)						
Metered Consumption (G)						
Premise						
Rate Schedule						

Interval Consumption E
MeterID
Interval End Time
Interval Length
Time Zone
kWh Delivered
kWh Returned

(E): Electricity

(G): Natural Gas



Data Needs for Distributed Energy Planning: “4 Tracks”



(1) DER technology adoption & customer use patterns



(2) Programmatic resource utilization & load impacts



(3) CEC and utility forecasting results for tracks #1 and #2



(4) Track emerging trends (new technologies, pilots, etc.)

**Develop Future
Resource Scenarios &
Inform Policy
(Statewide or Local)**



AMI Data Use for Distributed Energy Planning



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EAD's AMI Data Analytics Timeline





First Wave of Completed Projects:

1. Residential Customer Data Enrichment
2. Residential Load Disaggregation
3. EV Detection Analysis
4. Electricity Consumption Patterns of Solar Homes
5. Commercial & Industrial Customer Load Profiles





New (Planned) Projects:

1. Supply-Side Demand Response (SSDR) Performance Analysis
 - Using IMD and Unified Methods
 - Including Demand-Side Grid Support (DSGS): Option 3
2. Energy Storage Discharge Behaviors
3. Heat Pump Detection Analysis
4. Distribution Mapping and Capacity Utilization





Thank you!

Kadir Bedir
Kadir.Bedir@energy.ca.gov