



PHASE THREE PROJECT UPDATE FOR ELECTRIC ADVANCED METER SYSTEM AND METER DATA MANAGEMENT SYSTEM

Riverside Public Utilities

Land Use/Sustainability/Resilience Committee
June 14, 2021

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ADVANCED METER INFRASTRUCTURE

AMI is a system of:

1. **Advanced meters**
2. **Communications networks**
3. **Data management**

It allows **two-way communication** between a customer's meter and the utility. The system transmits near **real-time information** about usage.



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METER DATA MANAGEMENT SYSTEM

An MDMS **validates, estimates** and **edits** the meter data to ensure the data is **accurately transferred** to the Customer Information System (CIS) for billing.



RIVERSIDE'S PROGRAM APPROACH

- 1. Primary Goal:** maximize investment in existing meters.
- 2. ERT Overlay:** install fixed network utilizing new AMI meters and collection devices to collect data from the existing meters, while providing new AMI functionality.
- 3. Phased Approach:** Alpha and Beta Proof-of-Concepts, before rolling out Full Implementation.
- 4. Best Practices:** utilize lessons learned from many other utilities that have already implemented AMI

CALIFORNIA IOU AMI DEPLOYMENT

4.1.2 ADVANCED METERING INFRASTRUCTURE DEPLOYMENT

Table 4. Advanced Metering Infrastructure (aka Smart Meters) Rollout⁹⁵ as of Oct. 2019⁹⁶

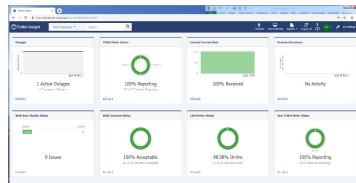
IOU	Total Number of Electric Smart Meters (Millions)	Cumulative Electric Smart Meter Opt-outs ⁹⁷ (No. of customers)	Percentage of Opt-outs	Annual Customer Complaints (escalated) ⁹⁸
PG&E	5.44	43,064	0.79%	9
SDG&E	1.45	4,217	0.29%	0
SCE	4.7	22,972	0.48%	495
Total	11.59	70,253	0.61%	504

Source: IOU 2019 Smart Grid Reports and Data Requests



ALPHA PROOF-OF-CONCEPT

AMI Test Lab



Field Install



BETA PROOF-OF-CONCEPT

1. Installed all remaining communication devices
2. Installed approximately 1,000 AMI meters
3. Completed the integration between the AMI HES and the MDMS
4. Developed the real-time interface between the MDMS and the CIS

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BETA PROOF-OF-CONCEPT

5. Verified design, security, and capabilities of the AMI HES and the MDMS
6. Validated that data flows accurately from the meter all the way through to the billing system
7. Configured the customer usage web portal
8. Re-engineered impacted business processes
9. Implemented initial staffing changes

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SYSTEMS AND SOFTWARE

1. During this Phase, it was determined that additional work will be necessary for the enQuesta system integration to automate an AMI manual work order process
2. Second Amendment to the Implementation Services Agreement to extend term to June 3, 2021 and increase the amount of the agreement by \$87,470
3. First Amendment to the Support and Maintenance Agreement in the amount of \$6,450

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COMMUNITY/CUSTOMER ENGAGEMENT CAMPAIGN

1. Maintained / updated AMI Program webpage
2. Postcard mailer to all Beta POC customers
3. Letter mailed to all Beta POC customers
4. AMI Program 1-page flyer, available at all customer service locations



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PHASE 3 - FULL IMPLEMENTATION

1. Full implementation of the “ERT overlay”
2. Full AMI network with the deployment of approximately 24,000 additional AMI meters
 - a) All commercial and industrial meters (approximately 12,500)
 - b) Approximately 11,500 residential meters
3. Fully automated electric meter reading process
 - a) AMI devices will collect data from all ERT meters



FISCAL IMPACT

The total Fiscal Year 2020-21 impact associated with this report is \$2,502,341 as summarized in the following table:

Item	18/19	19/20	20/21	21/22	22/23	TOTAL
Tantalus AMI System	\$140,000	\$5,800,000	\$1,327,644			\$7,267,644
SmartWorks MDMS	\$47,918	\$595,732	\$319,697	\$395,665	\$395,665	\$1,754,677
EnQuesta Integration	\$100,000	\$275,000	\$0	\$0	\$0	\$375,000
Innovation & Technology Labor	\$50,000	\$230,000	\$20,000	\$0	\$0	\$300,000
Meter Test, IT and other Equipment	\$150,000	\$100,000	\$0	\$0	\$0	\$250,000
Customer Engagement Campaign	\$150,000	\$150,000	\$0	\$0	\$0	\$300,000
Contingency	\$22,082	\$77,918	\$835,000	\$0	\$0	\$935,000
TOTALS:	\$660,000	\$7,228,650	\$2,502,341	\$395,665	\$395,665	\$11,182,321



RECOMMENDATION

That the Land Use/Sustainability/Resilience Committee recommend that the City Council receive and file the phase three project update for implementation of an Electric Advanced Meter System and Meter Data Management System.