



LOMPOC UTILITIES

ADVANCED METERING INFRASTRUCTURE

RECOMMENDATION TO CITY COUNCIL



Schmidt Utility
Advisors LLC

May 6, 2025

Agenda

Meeting Output: This session will review what AMI offers the City of Lompoc, key benefits expected, overall costs, and then a request for funding for the Electric Division and to contract with preferred vendor

- 1. AMI Defined and Overall Benefits Expected**
- 2. Competitive Bid: RFP Results**
- 3. Vendor Short-Listing and Final Vendor Selection Results**
- 4. Upfront and Annual Recurring Costs**
- 5. Recommendation to Fund and Contract with Preferred Vendor**
- 6. City Council Questions**

Water AMI: The RFP and overall analysis also included a water AMI analysis to assure the selected electric AMI vendor has strong scalability for a possible future water AMI program.

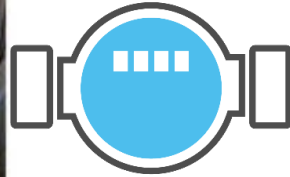
AMR and AMI: Definition & Functionality



AMR: Automatic Meter Reading

System where aggregated kWh usage, water consumption, and in some cases demand, is retrieved via an automatic means such as a drive-by vehicle or walk-by hand-held system.

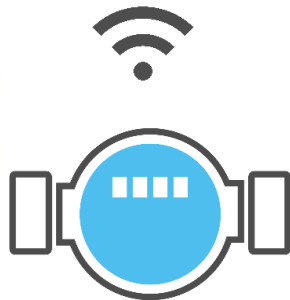
One read per billing period



AMR: Drive-By or Fixed Network AMR:

The drive-by or Fixed Network technology obtains about third of the benefits compared to AMI. This is in place now at Lompoc.

One read per billing period

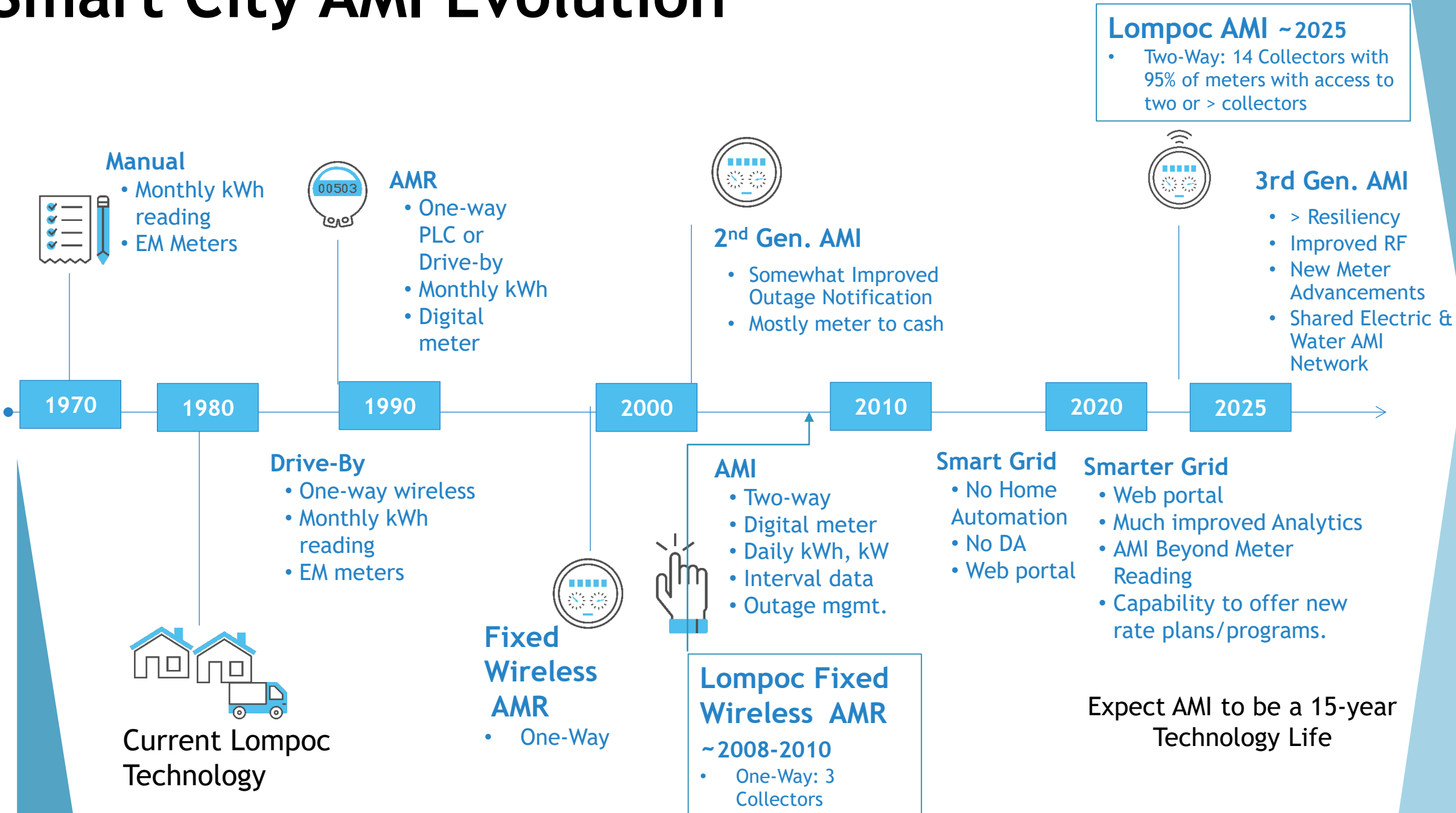


AMI: Advanced Metering Infrastructure (“Smart Metering”)

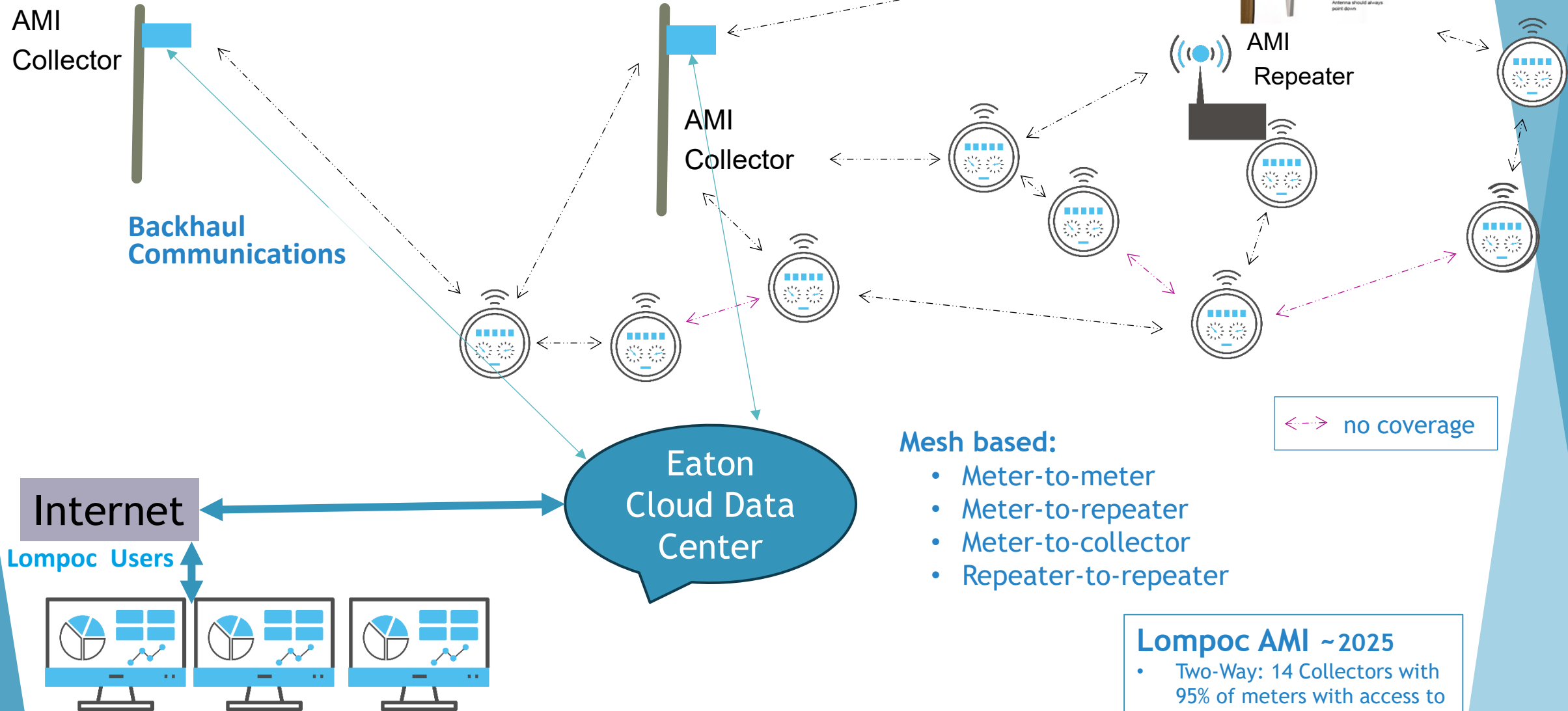
The communications hardware, software, associated system, and data management software that creates a two-way network between advanced meters and utility business systems.

Hourly Meter Reads to every 15 minutes

Smart City AMI Evolution



AMI Two-Way Mesh Architecture



AMI Business Drivers and Benefits



Safety

Enhance employee and customer safety by greatly reducing the number of service truck miles driven for meter account administration.



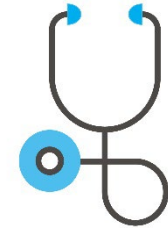
Operational Performance

Build a program that is nimble, effective, and can scale to meet the evolving needs with greatly improving many business processes.



Customer Satisfaction

Ensure a focus on new customer programs and support evolving and growing customer expectations.



Reliability

Improve system reliability by having better awareness of outages, new reliable meters and new tools to improve power quality and reliability.

Future scalability to water AMI with same vendor, network, and software.

Reduce Field Labor for Meter Connects/Disconnects and Moves

Remote Disconnect and Reconnect

- Ability to automatically complete disconnects for non-pay, reconnects, move-ins and move-outs.
 - Every short-cycle trip avoided reduces operational costs.
- Automate processes (disconnect from within Tyler CIS).
- Disconnect/Reconnect switches included in all residential electric meters.
- While labor is saved, it also improves employee safety and morale.



Proactive Electric Outage Restoration

Proactive Outage Message:

- Accuracy of knowing which strategic and critical asset locations have a sustained outage.
- Ability to obtain Restoration information from those same accounts to determine that the power is restored, in some cases, before the crew even leaves the area (eliminate courtesy calls).
- Better customer service, in some cases providing a message with an estimated restoral time rather than a generic outage message.

How will AMI assist with the outage restoration process?



Proactive AMI Alarms and Alerts



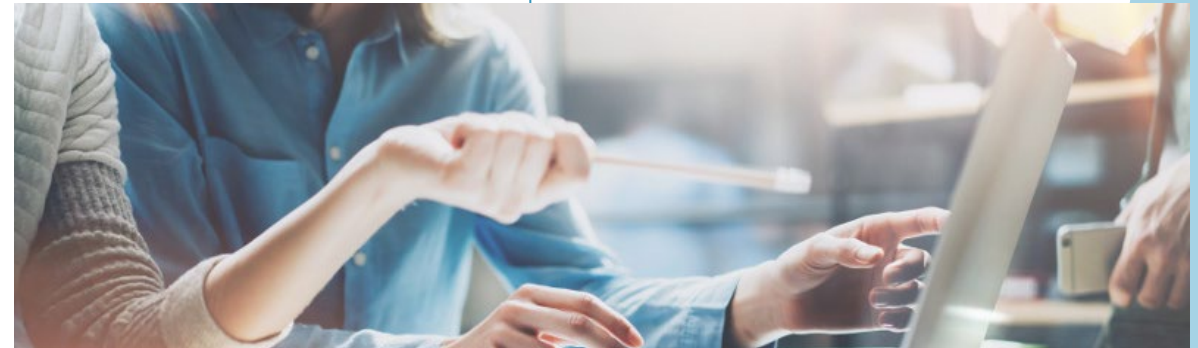
Proactive Electric Meter Alarms and Alerts

- Meter Programming
- Power Outage
- Power Restored
- Meter Disconnect confirmed
- Meter Reconnect confirmed
- Voltage Sag
- Voltage Swell
- Bad Metrology
- Meter Misconfigured
- Meter Tamper alert
- Reverse Energy Flow
- External Demand Reset
- Load Side Voltage Present
- No Metrology Communication

While the AMI meter will report the various alarms and alerts, there still is a lot of work to do to create the business rules for the alarms/alerts and the internal process steps on how best to address the events.

If in the future, possibly adding water AMI, then Proactive Water Alarms, Alarms and Analytics

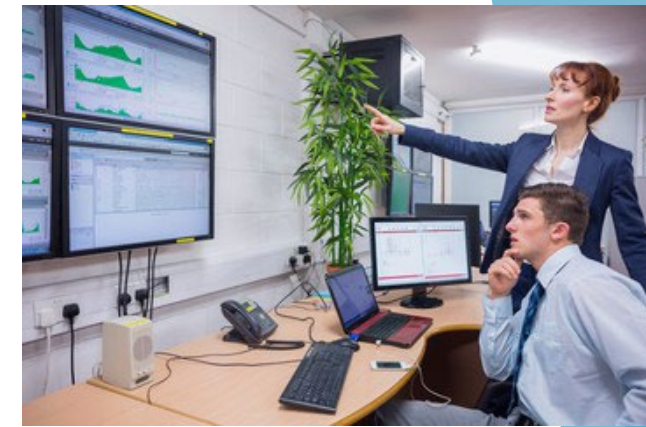
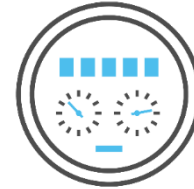
- Reverse Flow
- Leak Detect (through Analytics)
- Cut Cable
- Low Battery
- Stale Read



Maximize the Use of Meter Interval Data

Interval Reading for Internal Users:

- Flexible interval readings can be provided (5 min., 15 min., 1 hour, 24 hour, etc.). Also valuable for water applications but hourly intervals is more typical.
- Flexible interval reporting times. Timing and frequency can typically be remotely adjusted.
- Interval and **Time of Use** is becoming more common for peak shifting programs.
- Obtain voltage readings to trouble shoot power quality (blinks) issues.



More Data Available:

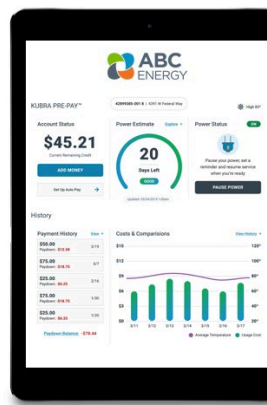
- kWh hourly readings
- kW
- Power Factor
- Voltage min/max
- Voltage profile
- Load profile
- Alarms/Events





Customer Web Portal

Customers can view detail electric consumption data



- ▶ Consumption use data by day and by hour or it could be as granular as 15- or 5-minute interval recording.
- ▶ By hour over a 24-hour period for any day.
- ▶ Last month versus this month.
- ▶ Year over year (i.e. July of 2023 versus July 2024).

Utility Service Reps can assist customers by:

- ▶ Helping customers understand high bill concerns by reviewing hourly use data.
- ▶ Specific suggestions on how to conserve electricity and scalable if adding water AMI in the future..
- ▶ Our preferred AMI vendor proposed to bring in one of their customer web presentment partners.

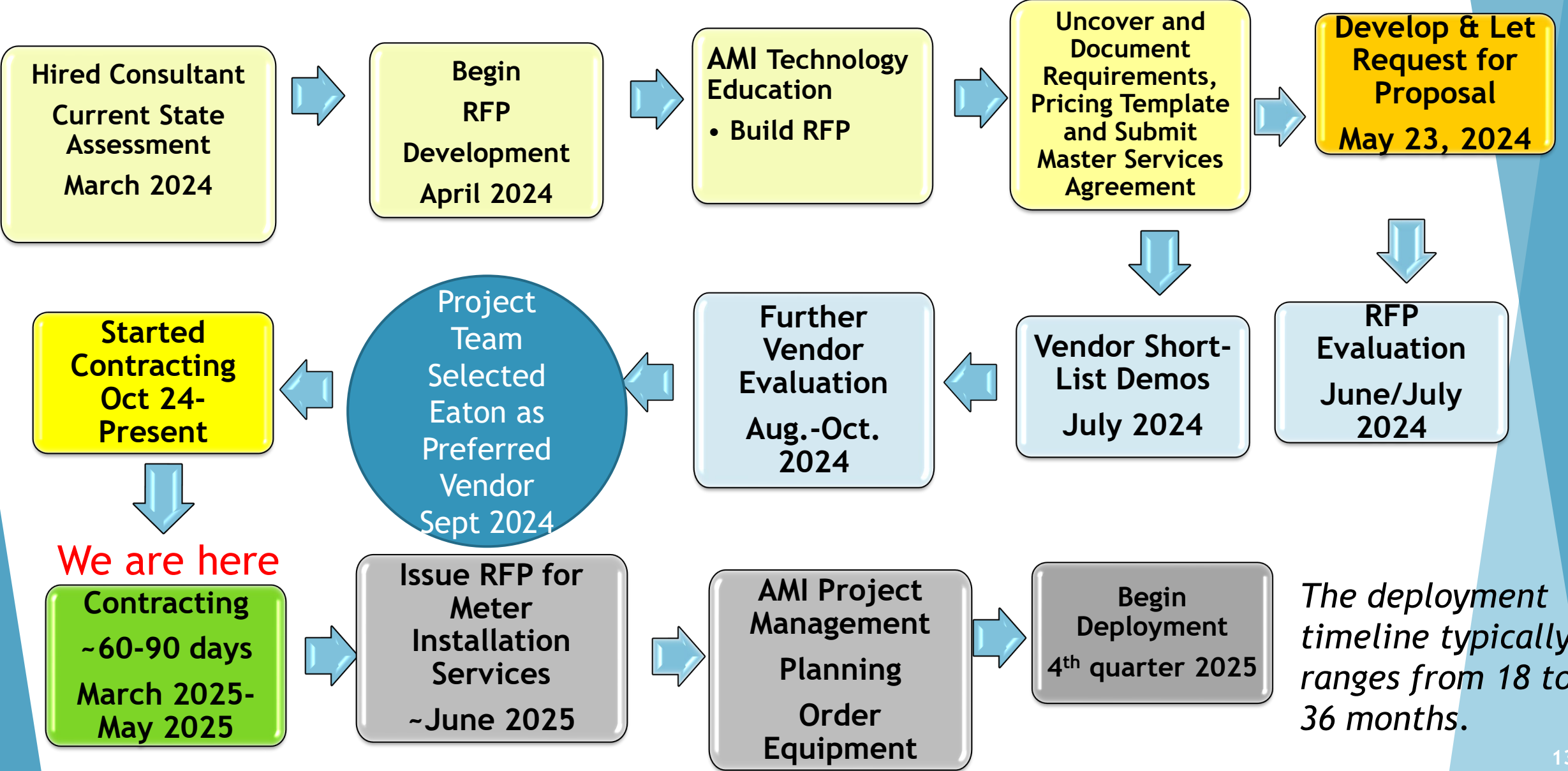


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Lompoc's AMI RFP Procurement Process



AMI Lompoc Bid Scoring - Requirements & Short Listing

Vendor Bidding Sept 2024	Aclara	Eaton	Wesco & Honeywell	L+G	Tantalus
Responding to RFP	Y	Y	Y	Y	Y
Round 1 Short- List	N	Y	Y	Y	Y
Round 2 Short-List	N	N	Y	N	Y
Requirements Scores > 750 Requirements	635	689	708	701	655
Bid Pricing: Upfront One- Time Costs for Electric	\$2.6M	\$3.3M	\$2.9M	\$2.5M	\$3.1M
Total Costs: Upfront One- Time Plus 15-Year Recurring Costs for Electric	\$4.5M	\$3.8M	\$3.5M	\$3.4M Proposed lower cost older vintage meter	\$4M

Several factors were used to short-list the bidders: 1) requirements scores, 2) strength of software, 3) cost, 4) assumed risks 5) capability of success without MDM, 6) software integration strength, 7) type of meter proposed, and 8) value-adders. We also evaluated the overall strength to add water AMI in the future.

There are several differences between the Eaton costs listed above versus what we show on slide 14 and the Staff Report. The Eaton costs above don't include shipping costs or any costs for the customer web portal but does include 5-year warranty cost adders. Also, all annual recurring fees are Present Value (PV) reflected above and in the staff report and slide 14 they are not PV calculated.

Lompoc's Bid Scoring Team

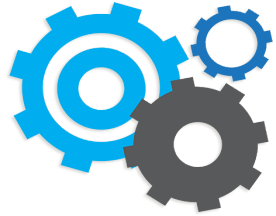
	Key Selection Attributes	Weight
1	Proposed Cost Calculated Points	35%
2	Requirements Scoring: Attachment A Total Points	10%
3	Level of Perceived Risks	5%
4	Capabilities of AMI solution to address the electric metering needs	10%
5	Capabilities of AMI solution to address the water metering needs	10%
6	Lompoc expected Operating and Maintenance Costs to manage and maintain the AMI infrastructure and system integrations.	5%
7	Headend software capabilities.	10%
8	Value-Add Ranking – Capabilities for future needs such as EV, PV and Behind the Meter programs, ease of maintaining integrations, capable of operating without an MDM, relationship with Munis for billing and consumption web presentment, network management ease and other factors.	10%
9	Capability and prior success of operating without an MDM.	5%
	Total	100%

Lompoc Bid Scoring Team Members	
	GIS Technician II (Project Lead)
	Electric Regulatory Compliance Coordinator
	Electric Manager
	Water Manager
	Financial Services Manager
	Information Technologies Manager
	Treasury and Utility Billing Supervisor
	Utility Director

The Management Services Director, in the absence of a Purchasing Manager, acted in the Purchasing Agent role and facilitated the evaluation process.

Eaton is the Recommend AMI Vendor

Best balance of functionality, project management plan, and costs



Functionality

- 1) High scores for requirements for functionality most desired.
- 2) Highly rated software by employees.
- 3) Scalability for future smart city and water AMI programs.
- 4) Continue with Itron as the standard meter.



Simplicity

- 1) Software provided by Eaton without an MDM.
- 2) Strong project management plan.
- 3) Software Integration Plan viewed as very strong.
- 4) Electric over same network with scalability to water.



Customer Satisfaction and Cultural Fit

- 1) Focus on public power utilities like the City Lompoc.
- 2) Heavy focus on customer satisfaction.
- 3) Attractive value-add with proposed customer web portal solution.



Price

- 1) Competitive price.

Next Steps: 1) City Council approval, 2) Finalize contract terms 3) Begin planning Deployment

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AMI Cost- Pending Final Contract

Prepared April 15th 2025

	One-Time Costs	Total Costs	Fiscal Year: July 1-June 30th		
			2026	2027	2028
	Network and Meters	\$ 3,142,543	\$ 1,000,000	\$ 1,389,391	\$ 753,152
	Software	\$ 75,200	\$ 75,200		
	Services	\$ 916,259	465,400	213,859	237,000
	Contingency @ ~5%	\$ 225,000	47,500	92,500	85,000
	Total One-Time Costs	\$ 4,359,002	\$ 1,588,100	\$ 1,695,750	\$ 1,075,152
	Total One-Time Cost Per Meter Over 15-Year Expected System Life	\$ 1.50			
	Recurring Costs				
	Annual software maintenance	\$ 43,578	\$ 21,789	\$ 43,578	\$ 43,578
	Annual internet portal services	\$ 22,800	\$ 11,400	22,800	22,800
	Total Annual Recurring Cost	\$ 66,378			
	Total Annual Recurring Software Cost Per Month Per Meter	\$ 0.34			
	Notes				
1	The meter quantity includes assumptions for growth with a total of 16,126 meters. Lompoc will be invoiced upon delivery of meters throughout the 15-year contract. There is a need to order meters about 5-months ahead of expected delivery need and pay upon delivery.				
2	The cost allocation by year is primarily based on the forecasted # of meters installed per year.				
3	Fiscal year 2026 annual recurring software costs are estimated as the start date is not certain and assumed to be December 1, 2025 and is tied to passing the Initial System Acceptance Tests.				
4	The Eaton proposed costs are subject to change as Lompoc exceeded the 180 price fix from the proposal date...				

Assumes in 2025

- ✓ Meter installation vendor contracted.
- ✓ Project Management Plan completed.
- ✓ System Integrations completed.
- ✓ All Network built and tested and operating.
- ✓ Deployment of 500 AMI meters in the Initial Deployment Area.
- ✓ Initial System Acceptance test passed.
- ✓ 4,000 meters for the first waive of the full deployment delivered but not installed.
- ✓ We classify our deployment approach as a “walk”, “jog”, and “run”.

Costing differences from Slide 14 vs table above and the Staff Report: Several differences are reflected in the above table. 1) shipping is included in the above costs and excluded on slide 14, 2) the 5-year warranty optional costs are rejected and not included above but are included in slide 14, 3) the above costs includes the MyMeter web portal and estimated Meter Installation services and slide 14 does not include the web portal costs or meter installation costs and lastly slide 14 the costs are Present Value costs reflecting inflation and the above don't include a Present Value formula.

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Lompoc's Electric Division Recommendations Approval of AMI Program

Recommendations

- ✓ Authorize implementation and installation of an AMI System
- ✓ Award contract to Eaton Corporation for a total one-time cost of \$3,524,002.

Commitments

- ✓ Funding of about \$1.6M for Fiscal year 2026, \$1.7M in 2027, and \$1.1M in 2028.
- ✓ Assignment of a Lompoc project team to facilitate the implementation
- ✓ Various customer engagement announcements (public relations) to inform customers of the AMI program)
- ✓ Change in many operational business processes
- ✓ An understanding that annual vendor software fees will result in operating costs of \$66,378/year fixed for the first three years of the contract
- ✓ Improvement of customer web portal with the presentation of hourly electric consumption

Key Success Factor: Develop an effective project management plan and then execute the plan.



Questions