

Initiative Title: 3. Guiding Customers to a Clean Energy Future

SO #4: Reducing Cost of Whole Home Electrification

INITIATIVE DESCRIPTION Pages 24-27

- Evaluates an AI-enabled electrification concierge using customer, property, incentive, financing & distribution system data to deliver personalized, step-by-step roadmaps, making electrification easier for customers to understand and take action
- Demonstrates a scalable, AI-enabled approach that helps customers identify lower-cost whole-home electrification pathways & demand-flexibility opportunities
- Integrates personalized guidance, utility and grid data, incentives, financing, & demand-flexibility options to address multiple electrification barriers through one scalable approach. This combination can reduce costs, simplify customer decisions & enable flexible energy use across diverse housing types

PROPOSED INITIATIVE BUDGET	\$1,299,130
% OF TOTAL BUDGET (excl. admin & overhead)	8.5%
# OF RESEARCH TOPIC AREAS	1

ALIGNMENT SUMMARY

STRATEGIC OBJECTIVE ALIGNMENT Page 25

The EPIC program will accelerate innovation, demonstration, and reliable and scalable approaches to deployment that help reduce the all-in cost of whole-home electrification and enable demand flexibility / automated response to process signals or dynamic rates for single-family and multi-family buildings and manufactured housing by 50%, while decreasing residents’ energy costs, by 2035.

SO 4 Alignment: Evaluates a scalable, customer-centered approach to reduce the cost & complexity of whole-home electrification while enabling demand flexibility & automated response to grid signals.

CPUC ALIGNMENT Pages 25-26

- Advances CPUC electrification and affordability objectives through AI-enabled customer targeting, adoption forecasting, and grid planning.
- Provides data-driven methodologies to enhance customer segmentation, inform electrification planning, and support equitable program, incentive, and regulatory decision-making.
- Tests an emerging, objective, utility-backed platform that integrates customer, incentive, infrastructure, and grid data in ways not fully addressed by private-sector, federal, or academic efforts. Research and validation are needed to confirm its security, scalability, cost-effectiveness, and customer benefits before broader deployment.

RTA #6: AI-Enabled Customer Electrification Concierge

SO #4: Reducing Cost of Whole Home Electrification

WHAT PROBLEM ARE WE SOLVING?

Pages 50-52

- Customer whole-home electrification projects face a fragmented and complex landscape that makes it difficult to make informed decisions, especially when considering demand flexibility
- The impact of home electrification, both at individual and zonal level, on the distribution assets is challenging to quantify and translate into customer-specific considerations and benefits
- The AI-enabled concierge will demonstrate whether automated, personalized planning can reduce the all-in cost and uncertainty of electrification and enable demand flexibility

Guiding Customers to a Clean Energy Future

START	2028
OUTPUTS	2029
MARKET READY	2029

ALIGNMENT SUMMARY

WHAT IS THE DISTINCT RESEARCH APPROACH?

- Evaluate opportunities to reduce electrification costs through optimized incentives, equipment sequencing, and infrastructure analysis (p. 50 Gaps Addressed)
- The innovation is an AI-enabled, utility-backed tool that integrates customer, building, cost, incentive, and grid data to provide scalable, personalized electrification recommendations—capabilities not currently combined in existing static tools or human-concierge models (p. 50 Gaps Addressed)

HOW WILL YOU KNOW YOU ARE SUCCESSFUL?

- Validated AI-enabled concierge that reduces whole-home electrification planning cost (p. 50 Gaps Addressed)
- Accelerated electrification adoption through reduced customer barriers and delays, scalable advisory services, and improved grid-planning insights. (p. 51. Expected Outcomes)
- KPIs include customer enrollment, completed electrification plans, technology adoption, decision time, energy-use changes, delivery costs, distribution system impacts, customer satisfaction, and participation among DVCs (p.51 Metrics and Impact Assessment)

HOW WILL YOU COORDINATE?

- Align complementary work on electrification tools w/IOUs to gain insights in customer transition planning, affordability, grid integration, & equitable engagement; avoid duplication and share lessons learned
- EPIC GFO-23-303’s home-electrification decision tool and power-efficient electrification strategies (pp. 50-51 Leveraging Past RD&D)
- Applies lessons from CHERP’s human-concierge model and identified customer barriers (p. 51 Leveraging Past RD&D)
- Builds on AI-analytics that infer appliance-level energy use w/out customer input (p. 51, Leveraging Past RD&D)