



Opinion **Dynamics**

RE-ENVISIONING THE ROLE OF EVALUATION TO SUPPORT THE GRID OF THE FUTURE

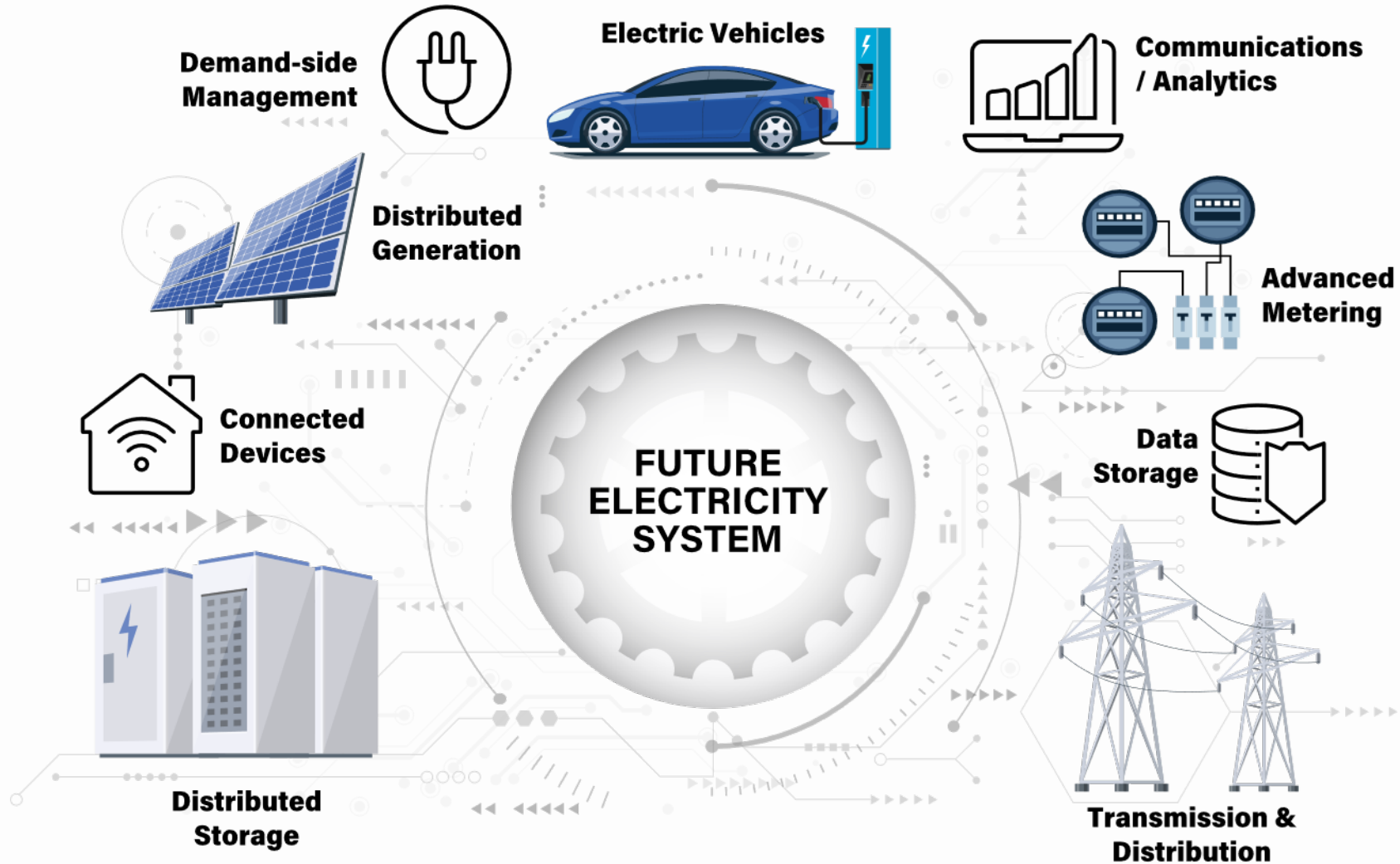
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Conference on Energy
Efficiency as a Resource



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The Vision (end goals)



The Roadmap: Where Are We Going?

The Pathways

- Breaking Down Administrative Silos
- Regulatory and Policy Reform
- ★ Measurement Framework that appropriately values the attributes of DERs
- New technologies that enable multiple value streams (e.g. smart thermostats)

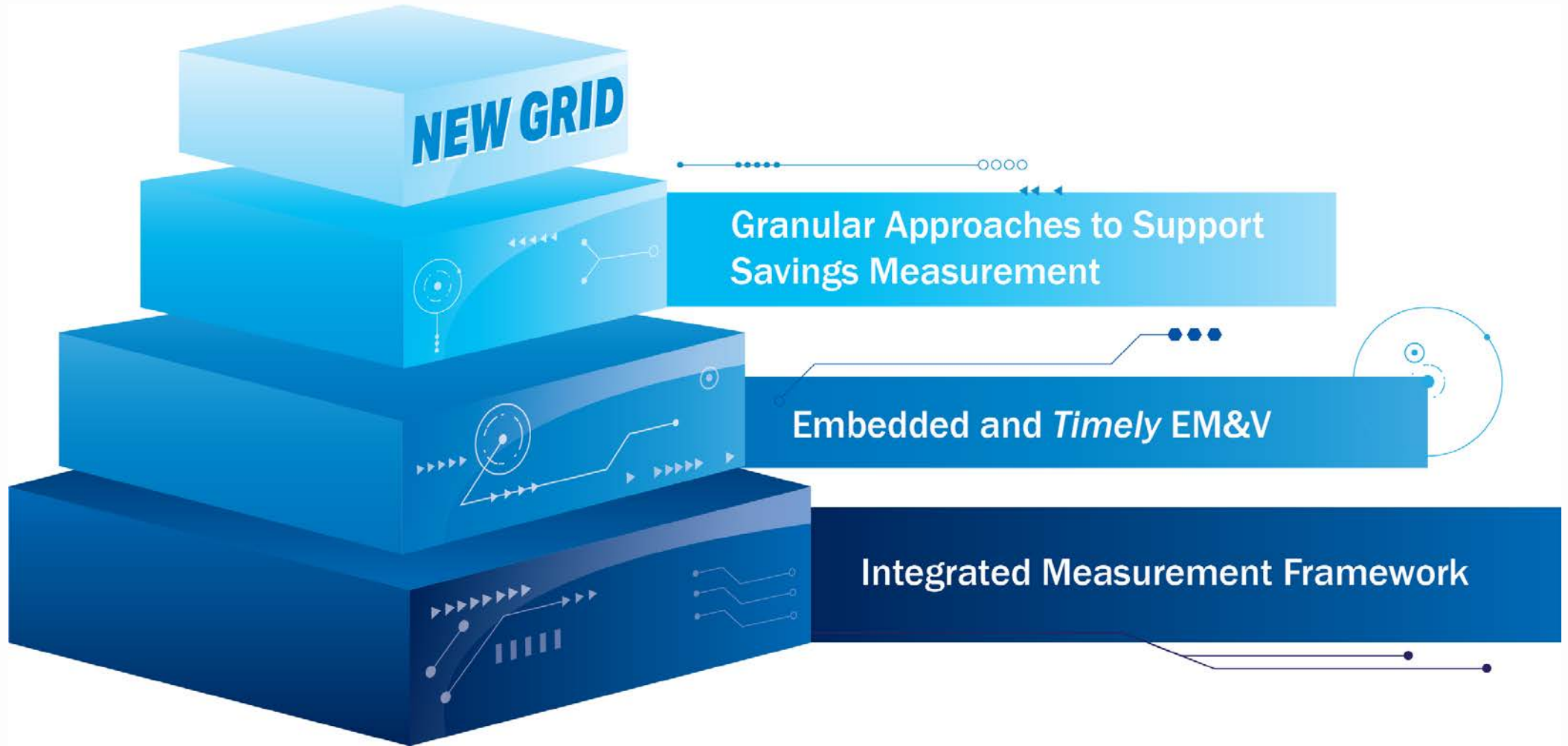
The Outcomes

- Integrated EE/DER/DR Programs
- Customers that are responsive to grid needs

The End Goals

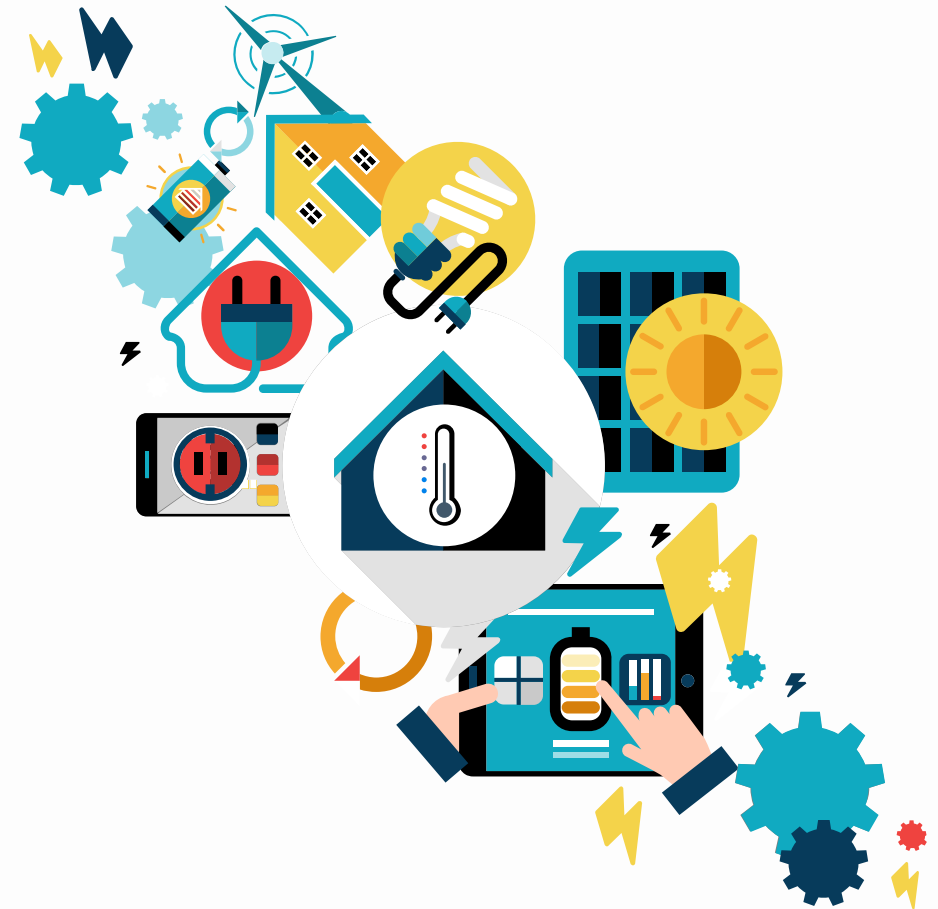


The grid of the future requires a more sophisticated measurement system



The Platform: Integrated Measurement Frameworks

- There is a growing need for new protocols that govern claiming savings from integrated EE, DR, and DER program designs to handle issues such as:
 - Unintended consequences of integrated programs (e.g. energy efficiency “cannibalizing” DR baselines)
 - Uncertainty about how to model savings for customers with solar and EVs



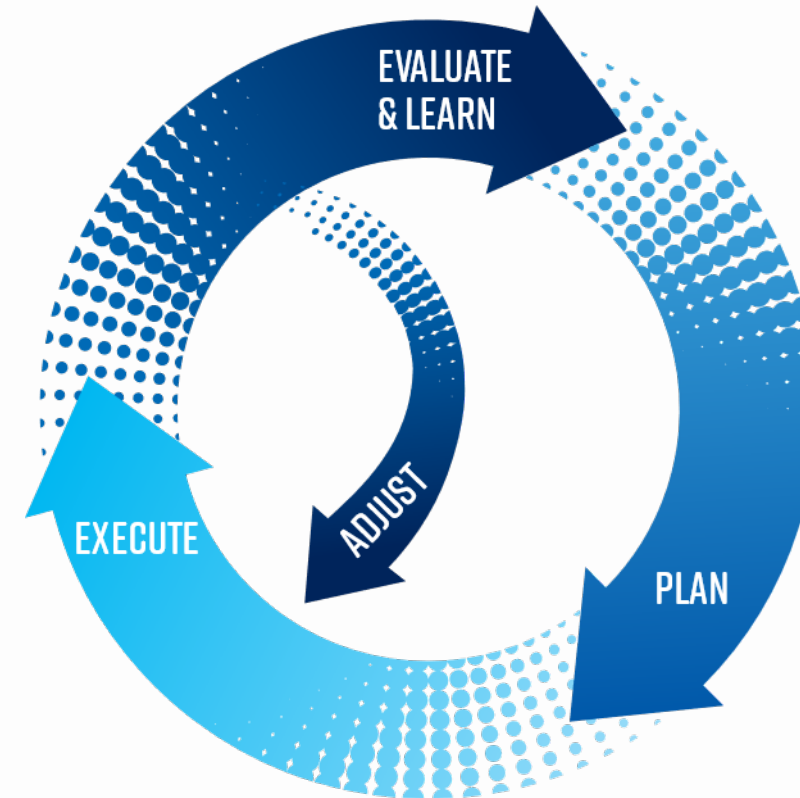
Case Study: Ameren Missouri Integrated EE and DR Program Evaluation

- Developing methods to quantify EE and DR impacts from an integrated program design
- Informing optimal program design through comparing performance across program elements:
 - Technology type
 - Delivery channel



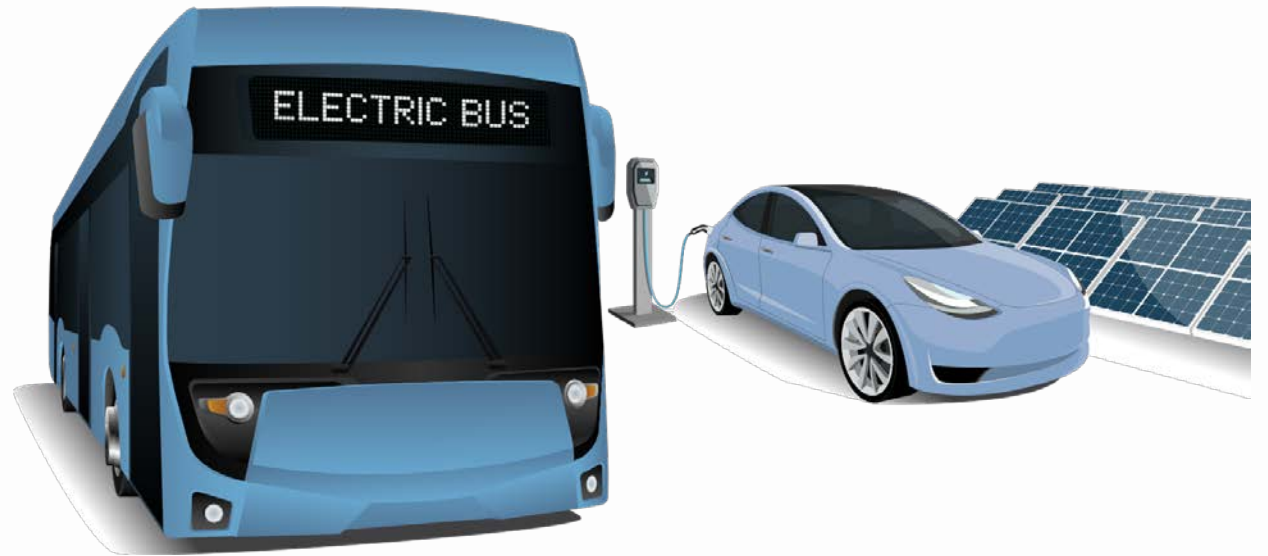
The Execution: Embedded and Timely EM&V

- It is harder to predict the outcomes from new integrated program designs, this warrants:
 - Timely feedback and a flexible research plans
 - Frequent and early communication between evaluators, program staff, and implementers

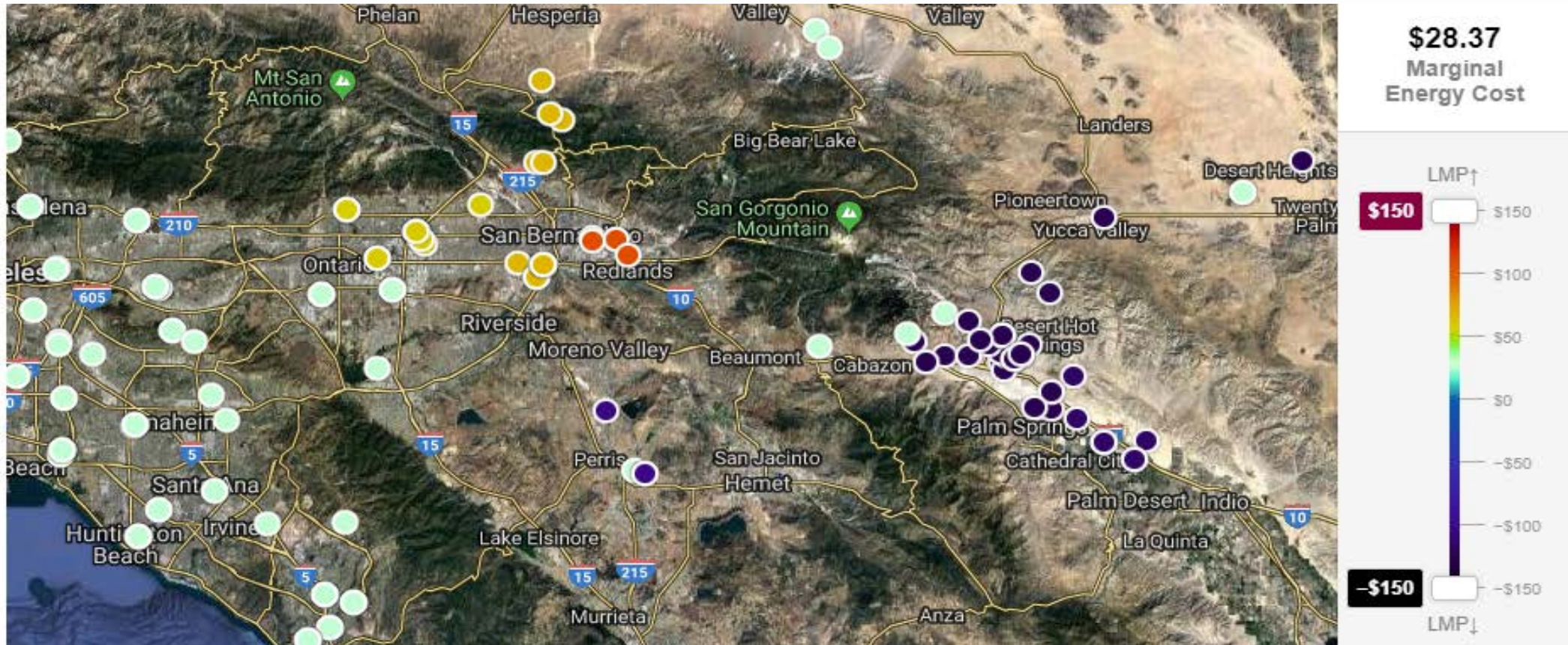


Case Study: Transportation Electrification Pilot

- Executing embedded evaluation on a coordinated set of pilot programs to encourage EV adoption in the PNW
- Identified the market barriers to EV adoption early in the pilot implementation process



The Tools: Granular Approaches to Support Savings Measurement



Source: CAISO

California NMEC Protocols and Programs



Strategy for handling tension between need for both timely and accurate saving estimates





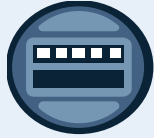







Upfront agreement on guidelines for data collection, preparation, and analytical methods



Shift from energy reductions to multi-directional and time-dependent changes in consumption



Out with the old... in with the new...evaluation paradigms

	Outdated Evaluation Paradigm	Relevant Evaluation Paradigm	Meter-based approaches	Embedded EM&V	Integrated Framework
Intention	Reactive	Proactive			
Metrics	Kwh and therms	Time and locational savings, GHG reductions			
Timeline	Annual Feedback	Continuous feedback			
Administration	Siloed	Integrated			
Delivery Mechanism	Program	Market			

Will grid of the future need evaluators? Yes!

- Evaluators will need to leverage existing skillsets for new applications
- In this context, evaluators become more like market advisors that help maximize investment in customer resources





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Contact Information

Hilary Polis

Managing Consultant

hpolis@opiniondynamics.com

510-214-0181

