



**AMERICAN
ELECTRIC
POWER**

BOUNDLESS ENERGYSM

BOUNDLESS ENERGYSM



Innovation Overview and Advanced Technology Focus Areas
Ram Sastry, VP – Innovation and Technology
(rsastry@aep.com)

AEP IS GLOBALLY LOOKING FOR NEW TECHNOLOGIES



Nick Akins, Chairman, President and CEO recently said:

"I am confident in our ability to transform our industry for the benefit of the communities we serve. AEP is globally searching for, and validating innovative, advanced technologies, especially to integrate into the distribution grid of the future, for all of our customers and for our operations. Our electrification activities need to improve the lives of all members of society."



THE GRID OF THE FUTURE



Decentralized

Intelligent devices from substations to customers' homes and premises – Industrial Internet of Things



Digitalized

Network services across multiple platforms providing customers with greater control over energy products and services



Decarbonized

Cleaner, greener more sustainable energy options

AEP AREAS OF INTEREST EXAMPLES: Platforms (P), E-Mobility (E) and Resiliency (R)

- P/R-Distributed Energy Resource Management Systems (DERMS)
- P/E-Mobility – EV Fleet Management and Optimization
- P/E-Mobility – Vehicle to Grid, etc. (V2x) applications (Grid and Home)
- P/E/R-Machine Learning (ML)/Artificial Intelligence (AI) Use Cases for Energy Management for Commercial Customers
- P/R-ML/AI Use Case for Asset Management (aka Predictive Analytics)
- P/R-ML/AI Use Case for sensor data (on grid and at customer premise)
- Resiliency as a service
- Reliability as a service
- P-UAS/Image Processing/Work Management Integration
- P-Blockchain Use Case – Customer Data Management and Digital ID
- P-Blockchain Use Case – Transactive Systems
- P/R-Micro and nano grids
- R-Residential distributed solar plus storage
- P/R-second life storage

Seeking deployable opportunities that are looking 2 – 5 years into the future



START-UP PITCH DECK QUESTIONS TO ANSWER ABOUT YOUR TECHNOLOGY

1. What is the challenge your technology can solve for AEP?
2. What is the solution that your technology provides?
3. Describe a pilot with the minimum, fastest to complete activities that would demonstrate its benefits to AEP and its customers
4. What would you need from AEP to have a successful pilot?
5. What would be the approximate cost of your pilot?
6. What would be the milestones and duration of your pilot?

