



## TIP 238: EPRI Coordinated Early Deployments of Efficient End-Use Technologies

### Context

The electricity industry faces growing demand for power and the imperative to maintain reliable, affordable service while reducing carbon emissions. Utilities and policy makers in the United States and abroad are turning to energy efficiency and demand response resources meet these needs. BPA works collaboratively with others to “fill the pipeline” of energy efficiency opportunities for utilities to offer their customers.

The Electric Power Research Institute (EPRI) is an independent, non-profit company performing research in coordination with its members, which represent approximately 90% of the electricity generated and delivered in the U.S. In September 2012, BPA and EPRI co-sponsored the National Energy Efficiency Roadmapping Summit to create a shared research agenda, identifying technologies and research efforts that would accelerate the energy efficiency resource nationwide.

EPRI has created a research framework to evaluate the readiness of emerging end-use technologies for utility programs, along a continuum spanning technology scouting, assessment and lab testing, research and development (R&D) field testing and demonstration, coordinated early deployment, and full program rollout.

Participation in EPRI projects includes “membership” in their base program for a particular topic, plus additional opportunities to join “supplemental projects” defined to meet the needs of a subset of utilities and other partners, and funded separately.

### Description

This TIP 238 project supports BPA’s participation in a supplemental project, called Coordinated Early Deployments, related to EPRI Program 170. This project was initiated at the request of members (including BPA) to take technologies that have performed well in the lab and limited field tests, and deploy them on a broader scale quickly and cost-effectively by addressing infrastructure, technical and market based challenges. Multiple utilities will engage in the planning for each technology and several may conduct early deployments, learning from each other’s experience to improve the rollout and reduce the cost in each of their programs.

The three technologies that are being supported through Coordinated Early Deployments are Heat Pump Water Heaters, Data Centers (within commercial buildings), and Variable Refrigerant Flow equipment (like a ductless heat pump for commercial applications).

Each participating utility has the option of being a member of the collaborative, with access to learnings, or being a “host” which means that they will actually develop a program offer in their territory. As of March 2013, BPA has chosen to be a member, and is considering the option of hosting programs for either data centers or variable refrigerant flow systems. For each of the selected technologies, EPRI will work with the utilities to conduct consumer and supply chain research, identify innovative strategies to overcome remaining gaps, and design the early deployments with the intent to produce transferable results within a single territory and across multiple territories. Utilities will conduct the early deployments with EPRI guidance. EPRI will analyze and evaluate the results.

EPRI will coordinate the early deployment plans and projects, facilitate frequent communications among collaborators, and conduct technology transfer to inform public and other stakeholders of the early deployment process and results. EPRI will facilitate interactions with manufacturers and other supply chain actors to help promote delivery of products that meet consumer needs.

### Why It Matters

The Coordinated Early Deployments project is designed to reduce the cost of accelerating the readiness of emerging technologies by deploying multiple technologies in parallel and enabling collaborators to use results from early deployments from other participants.

This project is related to BPA’s commitment to acquire cost effective energy efficiency. BPA has determined that in order to meet its energy efficiency goals cost effectively over the long term, it is necessary to conduct ongoing R&D and emerging technology research. This includes development and adoption of energy-efficient and demand response technologies to accelerate their adoption into utility programs, influencing the progress of codes and standards, and ultimately creating market transformation – achieving the savings at little or no cost to the utility.

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## Goals and Objectives

The objectives for this collaborative project include:

- Increase adoption by overcoming consumer, regulatory, and supply chain market barriers
- Generate transferrable results
- Developed a framework for planning coordinated early deployments

**Project Start Date:** January 1, 2013

**Project End Date:** December 31, 2016

## Reports & References (Optional)

## Links (Optional)

## Funding

Total Project Cost:	\$1,000,000
BPA Share:	\$125,000
External Share:	\$875,000
BPA FY2012 Budget:	\$125,000

## For More Information Contact:

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## Participating Organizations

EPRI  
SCE  
SDG&E  
Oncor  
TVA  
SMUD  
SRP  
CPS Energy

