Crossing the Other Chasm: Transferring Emerging Technologies into Programs

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Overview

- Bonneville Power’s role in the region
- Emerging Technology scoping
- Process (modeling, pilots, evaluation)
- Larger scale testing, refining assumptions
- Address program/delivery issues
- Next steps
BPA region
What’s driving us?
Goal: 1200 aMW in 5 years (504 for BPA)
Emerging technology scoping

- Collaborative process – engineering/programs
- Broad scan of emerging technologies (“the list”)
  - Estimate of savings and market potential
  - Consideration of program accessibility
  - “Readiness”
  - Ranking/prioritization
- Seek out reports/data (secondary research)
- Conduct the study (primary research)
- Watch/fund someone else (primary research)
Emerging Tech & Programs review
Emerging technology process

Scoping process – brainstorm “the list”

Review technical potential  Model saving potential  Estimate market potential

Does technology show promise?

Document decision

No  Yes

Consider next steps

Custom project?  Conduct pilot?  Watch others pilot?

Evaluate and share results
Ductless heat pumps (initially SF zonal)

2005
5-unit cold climate heat pump

2006
Preliminary modeling

2007
14-unit DHP pilot

2008
Potential assessment, risk analysis

2009 - 2011
Continue program support

2008-2009
Region-wide pilot 2500 units

2011-2013
Pilot: small comm., multifam, manuf

BPA engineering

BPA emerging tech

BPA programs/planning

NEEA, Fluid, EPRI

BPA, NEEA, Fluid
Heat pump water heaters

2008
Convene advisory committee

2009
Northern Tier Specification

2010
Lab tests (NREL)

2011
Refine assumptions/potential assessment

2010
Field tests (EPRI)

2011-12
Larger scale testing/program deployment

BPA & NEEA

BPA programs

BPA emerging tech

NEEA emerging tech

BPA ET, NREL

BPA ET, EPRI

BPA planning
What makes it work

- Integrate planning and evaluation team early
- Availability of funding
- Considering the “best buy”
- Don’t fear disagreement from stakeholders
- Be persistent, keep process moving
- Remember that failure is possible outcome
- Test programmatic solutions
- Share the credit 😊
Share what you learn

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**BPA reports and studies can be found at**
http://www.bpa.gov/energy/n/emerging_technology/projects.cfm