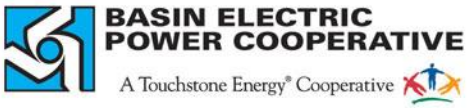
Demand-Side Management Technology Workshop: Advances in Water Heating

Sponsored by
Basin Electric Power Cooperative
with Western Area Power Administration

May 26, 2010
Bismarck, ND



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Developing a Successful Water Heating Program

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DSM Strategies

- **Energy Efficiency:**
  Reduce energy use overall
- **Peak Load Reduction:**
  Reduce peak load consumption
- **Load Shifting:**
  Move load to cheaper times
- **Load Building:**
  Increase consumption to off-peak hours or increase overall consumption

Water Heating Cost Calculator

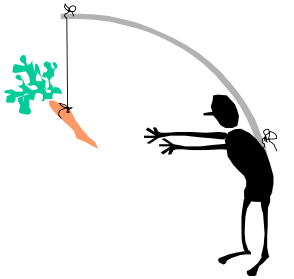
www.nppd.com/my_home/services/additional_files/waterheater_calculator.asp

Successful Water Heater Program Tactics

- Best Practices in Program Design
- Marketing and Outreach
- Customer Participation
- Implementation
- Program Evaluation

Best Practices in Program Design

- Enlist trade ally support in program delivery.
- Use targeted incentives. These encourage trade allies strategies that increase customers' adoption of recommended practices.



- Ensure proper installation
- Develop a sound program plan; have a clearly articulated program theory
- Leverage national efforts to increase efficient product availability

Program Management

- Clarify requirements for implementation through the application process
- Articulate the data requirements needed to measure success

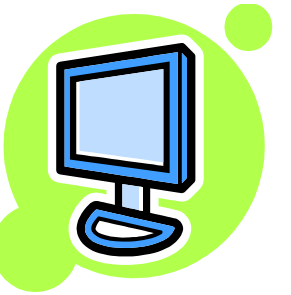
- Conduct regular checks of the tracking reports
- Use databases that fully integrate with cross-program energy-efficiency program information systems
- Develop program databases that anticipate requests for key information

Program Management: Quality Control and Verification

- Develop inspection and verification procedures during the program design phase
- Consider administrative cost in designing the verification strategy

Program Implementation: Participation Process

- Publish program application documents on the Internet
- Provide assistance in preparing and submitting program applications through outreach events and workshops and online tools
- Minimize documentation requirements
- Offer incentives, particularly to upstream market actors
- Try to maintain some availability of program funds throughout the program year
- Successful programs also ensure adequate product availability prior to program launch



Program Implementation: Marketing & Outreach

- Cooperate with contractors to get message out
- Communicate with customers via multiple media
- Leverage marketing dollars through cooperative marketing efforts, sponsorship by manufacturers and through coordination with national or regional efforts to promote similar products
- Keep contractors and providers well informed about program features and changes

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Program Evaluation

- Periodically review and update algorithms for calculating projected savings
- Perform market assessments routinely
- Present actionable findings to program managers at the conclusion of study
- Conduct both process and impact evaluations routinely
- Include estimation of free-ridership and spillover

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Leasing Options for Water Heaters

Many utilities use rental or leasing programs

Customer Benefits:

- Hot water now with no upfront cash.
- Hot water at lowest possible cost to own and operate.
- Plentiful supply of hot water at competitive rates.
- Peace of mind - if anything ever goes wrong, all they have to do is call and the utility will fix it.
- Professional, responsive service staff.

Utility Benefits

- Profitable new business opportunity.
- Steady incremental income stream from water heater rental payments.
- Satisfied customers today with long term contracts for tomorrow.
- Way to halt erosion of water heating market share to gas companies.
- Opportunity to lock up to 30% of household energy use by reducing market switch to gas
- Way to build profitable off-peak load and kWh sales.
- Flexibility to adjust the program's risk/return ratio to suit your strategy.

Leasing Program Providers

- **Vaughn Turnkey**
  - Turnkey program tailored to specific utility needs

- **American Water Heater Rentals**
  - Has 100,000 customers nationwide and offers Lifetime Water Heater Plan.
  - Have Authorized Dealers install top-of-the-line water heaters and service them whenever needed – all for a low monthly fee
  - Great Lakes Co-op has a water heating sales program- more information available at: www.johnsonconsults.com/case_great_lakes.pdf

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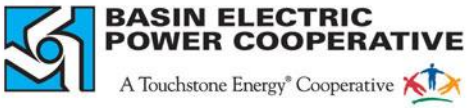

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