Distribution System Efficiency Incentives

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06/18/2009

Why is BPA holding this meeting?

- The Northwest Power and Conservation Council's (Council) 6th Power Plan draft is expected to contain a regional conservation target for distribution efficiency of 421 aMW. BPA service area portion of this target is just over 200 aMW.
- BPA has been tasked by Northwest Energy Efficiency Taskforce (NEET) to catalyze regional participation in distribution-level conservation efforts.
- Although distribution-level measures are included in EE's Implementation Manual, BPA has not aggressively marketed this offer to Utilities in the past. This meeting marks the turning point.
- Distribution-level conservation targets have been established for BPA. As a result, BPA recently has launched several projects designed to:
  1. Utilize regional experts to provide education and training in distribution efficiency
  2. Increase collaboration by creating a venue for utilities to share knowledge and experience
  3. Simplify M&V protocols
  4. Streamline the process for submitting energy efficiency projects for reimbursement
  5. Formalize a distribution efficiency program

About the Distribution System Efficiency projects currently underway

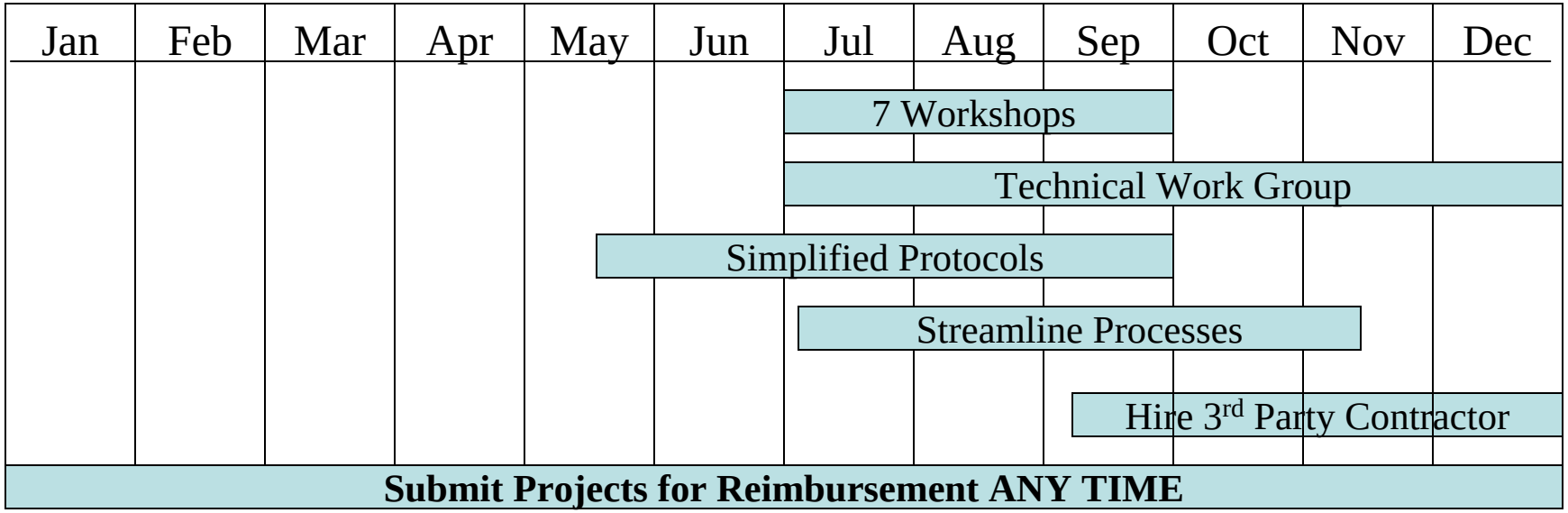
1. Utilize regional experts to provide education and training in distribution efficiency
   - BPA is sponsoring seven Education & Training Workshops throughout the region to facilitate a common understanding in the PNW of distribution efficiency principles. Regional experts will be presenting on topics such as voltage impacts on equipment, effects of lowering voltage, distribution principles and simplified voltage optimization (CVR) techniques.
   - The first two Work Shops will be occur in: Longview, WA - July 15/16 and Tacoma, WA –July 30/31 (Continuing Educational Units available).

2. Increase collaboration by creating a venue for utilities to share knowledge and experience
   - BPA EE and Tx is facilitating the formation of a Technical Work Group. The Work Group's initial goal will be to draft a work plan that will enable an efficient means of providing peer review of a formal DSE Program
   - BPA EE and Tx will continue to support the Technical Work Group, which will be mostly self-directed, to facilitate a positive environment for public and private utilities to interact, share technical knowledge, experience and ideas and to identify education and training needs
   - The first Technical Work Group meeting will be held in July. EE will be sending out a meeting invitation along with call-in information.

About the Distribution System Efficiency projects currently underway cont'd

3. Simplify M&V protocols
   - BPA is working to simplify the current M&V requirements for utilities wishing to submit energy efficiency projects for reimbursement.
   - BPA expects to present these simplified protocols to the RTF in August/September
4. Streamline the process for submitting energy efficiency projects for reimbursement
   - EE plans to work closely with the Technical Work Group to review the existing EE participation procedures and requirements in order to streamline processes. EE recognizes that this is a critical component affecting utility participation
   - This timeline for this process will be defined in the Technical Work Group Work Plan
5. Formalize a distribution efficiency program
   - EE plans to hire a 3rd party contractor to implement a formal Distribution System Efficiency Program. The contractor's role will involve facilitating and supporting utilities in their efforts to increase distribution efficiency. *BPA will not provide direct labor toward any distribution system improvement projects.
   - BPA expects to hire a 3rd party contractor in 2009

While these BPA projects are underway, distribution efficiency projects can be submitted for reimbursement at any time!



Distribution System Energy Efficiency Measures

- Conservation Voltage Regulation (Voltage Optimization)
- Power transformer replacement
- Service conductor replacement
- Higher distribution primary voltage (including insulator additions and replacement)
- Transformer load management (replacement of improperly sized transformers for loss improvements)
- Balancing loads and phases
- Adding parallel feeders
- De-energizing Transformers
- Operation improvement (recognition and phase balancing)
- Service distribution transformer
  - Replacing an existing or proposed transformer with a higher efficiency transformer
  - Multiple transformers vs. single transformer based on system analysis
- Power factor improvement (measure to improve power factor and reduce line losses)
  - VAR management
  - Voltage management
  - Fixed and switched capacitors

Key points related to submitting energy efficiency projects for reimbursement

- All measures must be "cost-effective" as determined by the Council's Power Plan. The Council looks to section 3.3 of the 1980 Act that states "Conservation means any reduction in electric power consumption as a result of increases in efficiency of energy use, production, or distribution".
- Every Utility with a Conservation Agreement can submit projects to reduce line losses in their distribution system.
- All projects must be submitted as Custom Project Proposals (CPP)
- CPPs must have a Benefit/Cost ratio of 0.5 or greater to be considered (EE manages the program portfolio to ensure a B/C ratio of 1.0 or greater over the rate period)
- All Custom Projects where credit/reimbursement from BPA is based on verified energy savings, require approval of a Measurement & Verification Plan (M&V)
- BPA payment rate is currently either $0.17 (BPA provides technical assistance in developing the project) or $0.20 per first year kWh (no BPA technical assistance). Both rates are subject to a cap of 70% of the eligible project costs. Project costs can include labor and material on either a total or incremental basis depending on the particular measure(s)
- A Utility receives 75% credit toward the conservation adjustment to the Utility's High Water Mark calculation if BPA funds are used and 100% if the project is Utility Self-funded.
- BPA provides the credit/reimbursement on the M&V savings values (the delta between the before and after condition)

Who to Contact

To pursue an energy efficiency project, contact any of the following BPA staff: EE Representative, EE Engineer, Account Executive, or Customer Engineer

For questions about your Conservation Agreement, contact your EE Representative

To reserve a spot at one of the Educational & Training Workshops, please visit www.capps.wsu.edu/wsubpa. For Work Shop related questions, contact Cris Love, lovec@energy.wsu.edu, 360-956-2172

For general questions relating to the material in this presentation or to get more information about the Technical Work Group, contact Jillianne Welker, jwelker2007@gmail.com, 503-504-7331

For questions about the Councils regional conservation target, contact Charlie Grist, cgrist@nwcouncil.org, 503-222-5161