

# Program Elements for Small Compressed Air System Approach

updated, August 20, 2007

## General Principles:

1. Easy for vendors/allies.
2. Help utilities acquire cost-effective energy savings.
3. Integrates with Market Transformation components and messaging.
4. Utilities may collaborate on some of the elements.

## Program Elements and Current Status of Task Force Efforts

### Notes from 9/11 call: Chou, Nancy, Tom, Eskil

#### **A. Benchmarking [Collaborate]**

- ◆ Learn from others by reviewing other utility offerings (i.e., Tacoma Power, Focus on Energy, National Grid, Xcel Energy, Alliant Energy, Mid American, CAMP, etc.). Also review their approach, cost and savings analysis, studies, implementation rates, evaluations, etc.  
*Status - Research has been performed and sent to team members. Completed*

#### **B. Technical Approach [Collaborate]**

- ◆ Market characterization – define supply side market potential < 100 horse power (HP) systems (who are the vendors, what is their structure, what is the base case for new compressed air (CA) system equipment, where does energy efficiency fit in the existing market structure for small systems?, etc.). *See Figure 1, page 3 Met on 9/ 11, ETO will draft something up and share with others to consider other states being added.*
- ◆ Look into the use of Energy Trust of Oregon (ETO)/Bonneville Power Administration (BPA)/Cascade Energy Engineering small CA system spreadsheet tool. *See [www.bpa.gov/ca](http://www.bpa.gov/ca). Currently being tested by Puget Sound Energy (PSE), BPA and Manitoba consultants. Osborn working to look at calculator comments and then work with Cascade to update*
- ◆ Work with Compressed Air Challenge (CAC)/Department of Energy (DOE) for the creation of AirMaster Lite version, based on AirMaster Plus. *Why we don't use Airmaster Plus. Osborn will do a little paper on pro/con on Airmaster*
- ◆ Savings potential for each measure (baseline, savings, cost, measurement and verification (M&V).
- ◆ Determine if/how to develop an approach to ensure a long-term commitment for leak repair and other operations and maintenance measures. *Tacoma has a 3 yr commitment, ETP is working on re-commissioning. Status - Small CA tool being reviewed by CAC members shopped with vendors and utilities. Results will be forthcoming in the next few weeks. To come later....priority 2.*

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**C. Vendor Outreach** [*Possible to collaborate*]

- ◆ Identify vendors of <100 HP systems. Tom has a list of manufacturer suppliers. And, he can put together list of distributors.
- ◆ Regional effort representative meets/calls each to fill them in on our goals and intentions up front.  
*Status – Still under discussion*

**D. Program Specifications and Eligibility Requirements** [*Possible to collaborate*]

- ◆ Strive for a coordinated program looks at the ‘whole system approach’ (e.g., CAC BestPractices recommend review; supply and demand side possibly use a checklist). Priority 2
- ◆ Perform some market research on specifications and eligible small CA systems and what the base case would be. Market characterization  
*Status - Market research/benchmarking is being done.*

**E. Prescriptive Measures** [*Possible to collaborate*]

- ◆ Is it possible to have deemed measures for cycling dryers, high performance nozzles, variable frequency drives (VFD), low pressure drop filters, added receiver capacity, flow controller, more efficient condensate removal system, or purge control on desiccant dryers. Priority 2. Who doing this? Need to do done staff work on this.....Chou and Tom
- ◆ How did other utilities offer prescriptive measures? Is it working?  
*Status - Still under consideration. Same as above.*

**F. Acquisition and Market Transformation** [*Possible to collaborate*]

- ◆ How to involve IEA/market transformation, e.g., (CAC) training; Plant Floor training; BestPractices training, Brochures, etc.
- ◆ Determine how to motivate and engage the suppliers/vendors/trade allies on small CA approaches.
- ◆ Research the new compressor market (i.e., find out what the standard practice is).
- ◆ How to integrate market transformation and acquisition approach for seamless effort in market place.  
*Status - Industrial Efficiency Alliance (IEA) is back on the training track. Before we have outreach with vendors, the team should develop a message. Eskil hiring Keating to help*

**G. Customer Outreach** [*Possible to collaborate*]

- ◆ **Marketing (Utility program, vendor, consumer)**
  - i. Develop some case studies for small CA systems to share with vendors and end-users (or share the ones we already have).  
*[Should be easy to collaborate]Priority 2*

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- ii. Develop similar looking 'Compressed Air System Incentive Forms' for trade allies or a website portal. *[May be more challenging to collaborate]*
- iii. How can BPA-served utilities offer consistent incentive levels?  
*Status - Still under development. Recommend that we work on the case studies first.*

**H. Consumer Education Tools** *[Should be easy to collaborate]*

- ◆ Assemble simplified educational materials for end-users (i.e., one pager with tidbits – for instance, 100 HP compressor uses over \$25K/yr in electricity; or how to read an electric meter; 4 cfm = 1 HP; 2 psi = 1 percent savings; ¼" leak = \$8K/yr. (Existing IEA materials?) Priority 2
- ◆ Use other utility or vendor flyers to come up with a regional one pager.  
Priority 2  
*Status - Still under development. IEA made tailgate cards that might contain the tidbits needed and CAC has the data.*

**I. Training** *[Should be easy to collaborate]*

- ◆ IEA will develop the regional training plan. Status – Plan developed/implemented

**J. Utility Offered Incentive Levels** *[Hard to collaborate]*

**K. Other**

- ◆ Consult with CAC on a small CA system approach (note, Tom Osborn attended the June CAC meeting in Washington DC).
- ◆ Establish a regional account manager for CA that would include training.  
*Status - CAC session completed.*

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## Proposed next steps

1. Request IEA (David Vanderbeek?) prepare an order of magnitude estimate of the energy savings potential for small CA systems in Oregon, Washington, Idaho, and Montana, in a way that will allow utilities to estimate the potential in their customer base.
2. Based on the potential, develop plan to proceed to a market characterization to further develop the potential estimate and define the best approach (e.g., prescriptive measures, simplified analysis, etc.).

## Task Force Members

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Figure 1, *Market Characterization Analysis Approach*

