Super Efficient Dryer Initiative

2012 ENERGY STAR Partner Meeting

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Super Efficient Dryer Initiative (SEDI)

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- Keith Miller
  National Grid
- Mark Rehley
  NEEA
- Pedro Cabrera
  NJ CEP
- Lara Bonn
  Efficiency Vermont
- Linda Schwantner
  LIPA
- With Support from EPA ENERGY STAR
No Efficiency Gains Over the Past Ten Years

- Average energy consumption of clothes washers declined over 75% from 1990
- Opportunities to leverage ENERGY STAR brand and efficiency program experience with clothes washers
Advanced Clothes Dryers are Ready for Market Introduction

- Heat pump technology is one example of an advanced technology
- Over 25 different models of heat pump clothes dryers currently available in EU market
- Switzerland established aggressive minimum energy performance standard in 2012 - 100% market share of heat pump clothes dryers
## SEDI Strategy for Market Transformation

<table>
<thead>
<tr>
<th>Market Barriers</th>
<th>SEDI Activities in 2012/2013</th>
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</table>
| 1. No Products Available              | • Build on European Successes  
• Engage U.S. Manufacturers & Retailers                                                   |
| 2. Unproven Product Performance       | • Support ENERGY STAR & Emerging Tech Award  
• Assist Manufacturers in Securing Underwriters Laboratory (UL) Approval                  |
| 3. Unknown Energy Savings             | • Conduct Field & Lab Testing  
• Improve DOE Test Procedure                                                                 |
| 4. Likely Higher Product Pricing      | • Research and Define Incremental Costs  
• Help Efficiency Programs Develop Incentives (Including Support for Cost-Benefit Analyses) |
| 5. Low Consumer Awareness             | • Help Efficiency Programs Market New Dryers  
• Support Efficiency Programs in Addressing Multifamily and Retail Markets                 |
February 2012: EPA announces final award requirements

August 2012: EPA announces draft specification – April 2013 release!
Defining Energy Savings in Dryers

- Savings estimates developed by SEDI based on estimates of total cycle energy consumption through laboratory testing (NRDC/ECOVA)
- Includes direct and secondary benefits from reductions of HVAC interactive effects of venting dryers
- Fall 2012 - Results from NEEA In Situ Testing of Clothes Dryers in 50 homes
- Fall 2012 - Results from CLASP funded testing of standard and heat pump dryers

### Advanced Clothes Dryer Cost-Effectiveness

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<table>
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<tr>
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<tbody>
<tr>
<td><strong>Annual Savings (kWh/yr)</strong></td>
<td>462</td>
</tr>
<tr>
<td><strong>Annual Savings ($/yr)</strong></td>
<td>$76</td>
</tr>
<tr>
<td><strong>Lifetime Savings (kWh)</strong></td>
<td>5,541</td>
</tr>
<tr>
<td><strong>Lifetime Savings ($)</strong></td>
<td>$909</td>
</tr>
<tr>
<td><strong>Price Premium ($)</strong></td>
<td>$405</td>
</tr>
<tr>
<td><strong>Payback on Price Premium (yr)</strong></td>
<td>5.3</td>
</tr>
<tr>
<td><strong>Present Value of Net Benefits ($)</strong></td>
<td>$297</td>
</tr>
<tr>
<td><strong>Benefit-to-Cost Ratio</strong></td>
<td>1.86</td>
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First advanced clothes dryers are likely to be premium models.

Incentive dollars critical in both retail and multifamily sector.

Secondary benefit for multifamily applications is avoiding cost of central or individual dryer venting.

### Understanding the Market

<table>
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<tr>
<th>Market</th>
<th>Size</th>
<th>Base Price</th>
<th>Price Adder</th>
<th>Other Factors</th>
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</table>
| Retail            | 27”  | >$1000     | >$300       | - National rollout / regional promotion  
                    |      |            |         | - Stacked brand potential (Utility/Mfg/Retailer)                                |
|                   |      |            |         | - Requires broad efficiency program support                                  |
| Distributor/Multifamily | 24”  |            |             | - Price Sensitive  
                    |      |            |         | - Avoided venting cost ~ $300 per unit                                          |
                    |      |            |             | - Bulk purchase                                                               |
Manufacturers are Poised to Enter Market

In 2011, SEDI interviewed 12 major clothes dryer manufacturers:

• 9 of these 12 manufacturers offer heat pump clothes dryers directly or through sub-brands in Europe
• One, maybe two, manufacturers are interested in or have plans to bring a product to market in 2013/2014
• Retailers and manufacturers are sensitive to depressed market and conservative in new product introductions
• Clear indication of partnership opportunities between efficiency programs, retailers, and manufacturers
Efficiency Programs are Getting Ready

- **SEDI** is sponsored by six leading efficiency programs
  - Pacific Northwest/Canada: Northwest Energy Efficiency Alliance, BC Hydro
  - Northeast: National Grid, Long Island Power Authority, Efficiency Vermont
  - Mid-Atlantic: New Jersey Clean Energy Program
- **20 Million residential customers** are covered by these Sponsors
- **SEDI** is working to mobilize these—and more—programs so that incentives can be offered quickly once an advanced dryer is introduced
Driving Consumer Demand is Key

SEDI is…

- Working with efficiency programs, industry, and EPA to identify both traditional retail and multifamily opportunities
- Supporting national and regional marketing strategy to effectively communicate the primary and secondary benefits of advanced clothes dryers
- Supporting EPA and industry in promoting both advanced Emerging Technology Award and future ENERGY STAR qualified products
- Leveraging strength of ENERGY STAR brand and efficiency program experience with clothes washers
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