Super Efficient Dryer Initiative

2012 ENERGY STAR Partner Meeting

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Christopher Wold (CLASP)
Chris Granda (Grasteu Associates)
Super Efficient Dryer Initiative (SEDI)

**SEDI Team**
- Chris Badger
  - VEIC
- Rebecca Foster
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- Chris Wold
  - CLASP
- Chris Granda
  - Grasteu Associates

**SEDI Sponsors**
- Gary Hamer
  - BC Hydro
- 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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<tbody>
<tr>
<td>1. No Products Available</td>
<td>• Build on European Successes&lt;br&gt;• Engage U.S. Manufacturers &amp; Retailers</td>
</tr>
<tr>
<td>2. Unproven Product Performance</td>
<td>• Support ENERGY STAR &amp; Emerging Tech Award&lt;br&gt;• Assist Manufacturers in Securing Underwriters Laboratory (UL) Approval</td>
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<tr>
<td>3. Unknown Energy Savings</td>
<td>• Conduct Field &amp; Lab Testing&lt;br&gt;• Improve DOE Test Procedure</td>
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<tr>
<td>4. Likely Higher Product Pricing</td>
<td>• Research and Define Incremental Costs&lt;br&gt;• Help Efficiency Programs Develop Incentives (Including Support for Cost-Benefit Analyses)</td>
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<tr>
<td>5. Low Consumer Awareness</td>
<td>• Help Efficiency Programs Market New Dryers&lt;br&gt;• Support Efficiency Programs in Addressing Multifamily and Retail Markets</td>
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Roadmap for Advanced Clothes Dryers

**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

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
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<tbody>
<tr>
<td>Annual Savings (kWh/yr)</td>
<td>462</td>
</tr>
<tr>
<td>Annual Savings ($/yr)</td>
<td>$76</td>
</tr>
<tr>
<td>Lifetime Savings (kWh)*</td>
<td>5,541</td>
</tr>
<tr>
<td>Lifetime Savings ($)</td>
<td>$909</td>
</tr>
<tr>
<td>Price Premium ($)</td>
<td>$405</td>
</tr>
<tr>
<td>Payback on Price Premium (yr)</td>
<td>5.3</td>
</tr>
<tr>
<td>Present Value of Net Benefits ($)</td>
<td>$297</td>
</tr>
<tr>
<td>Benefit-to-Cost Ratio</td>
<td>1.86</td>
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### 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>
</tr>
</thead>
</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                           |

- 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
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

ENERGY STAR 2011
Emerging Technology Award
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