

# Super Efficient Dryer Initiative

ENERGY STAR Partner Meeting

October 7, 2010



# What is SEDI?

**Mission:** Bring super high efficiency dryers in to the North American market

## 2010 Milestones

- 2010 funding from NJCEP (Electric focus)
- Develop a core stakeholder group of industry, EEPS and ENERGY STAR
- Research the market & technologies
- Develop a program plan and specification for super high efficiency dryers



# SEDI Primary Goals

**2010**

**Industry, Efficiency Programs and ENERGY STAR Collaboration**

**2011**

**Product Development & Field Data**

**2012**

**Pilots in N. American Market of Super Efficient Clothes Dryers**

**2013**

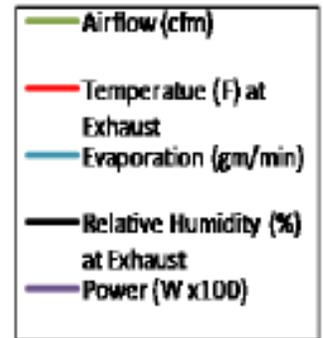
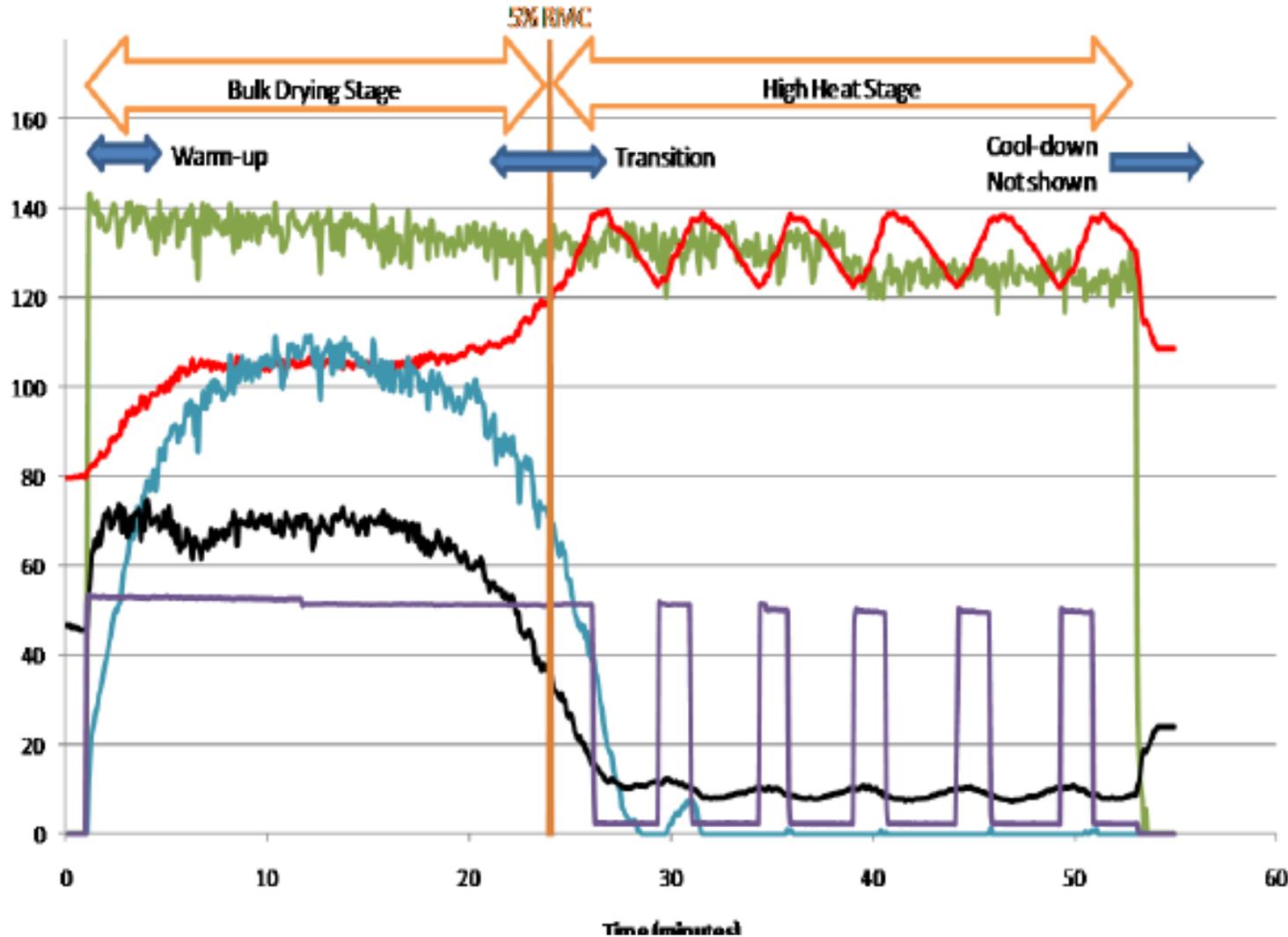
**ENERGY STAR & Full Market Launch**

**2020**

**50% Energy Reduction in Clothes Dryer Usage**



# Typical Drying Cycle



<b>Energy Consumed</b>	
Bulk-dry	1.990 kWh
High-heat	0.907 kWh
<b>Total</b>	<b>2.897 kWh</b>
<b>Water evaporated</b>	
	4.98 pounds
<b>Air exhausted</b>	
	6815 cf
<b>Max Temperature</b>	
	230 °F at Heater
	139.5 °F at Exhaust



\* NRDC/Ecos 2010 Evaluation of Clothes Dryer Savings Potential



Your Power to Save

[njcleanenergy.com](http://njcleanenergy.com)

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# Current Market Clothes Dryer Savings

- ENERGY STAR clothes washers
  - Lower RMC = Reduced dryer usage
- Automatic Termination w/ moisture sensing
- Fuel switch (Site vs. Source Energy)
- Databases – ID Best in Class
  - **California Energy Commission**  
<http://www.appliances.energy.ca.gov/>
  - **NRCAN**  
<http://oee.nrcan.gc.ca/residential/business/manufacturers/search/clothes-dryers-search.cfm>



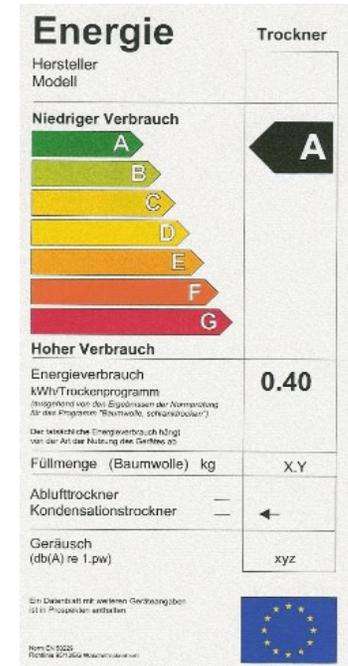
# Clothes Dryer Potential

Table 1: North American Clothes Dryer Stock (2005)

Market Penetration	US	Canada	Both
Total households	111.1 mil	12.6 mil	123.7 mil
% electric	60.5%	81%	62.5%
Total with electric	67.2 mil	10.2 mil	77.4 mil
% natural gas or propane	18.3%	2.5%	16.7%
Total natural gas or propane	20.3 mil	318,000	20.6 mil
% without dryers	21.2%	16.7%	20.1%
Homes without dryers	23.6 mil	2.1 mil	25.7 mil



# SEDI Clothes Dryer Savings



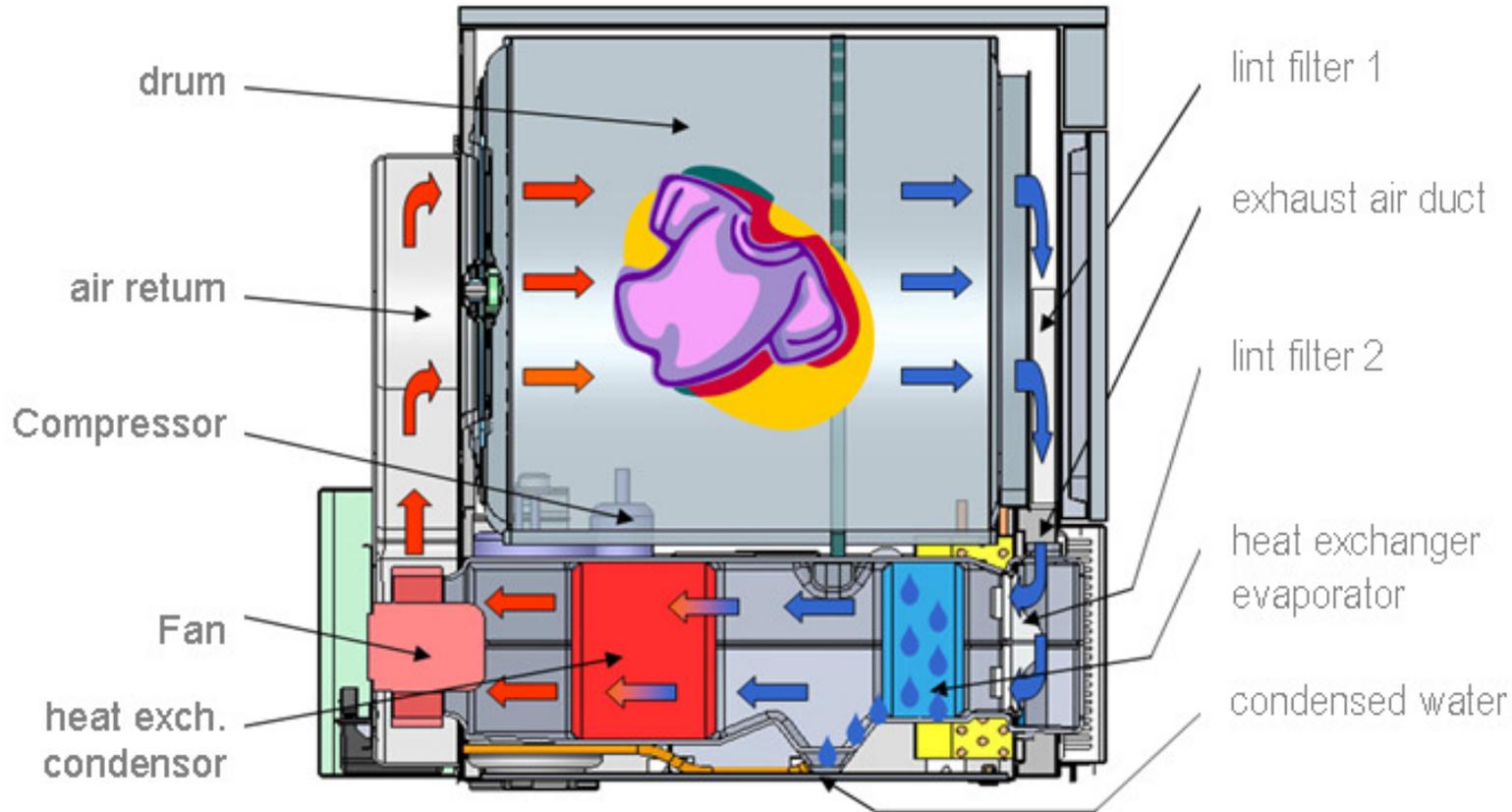
Model	Bosch WTS86513CH	Bosch WTW86561CH
Energy	3.36 kWh	1.35 kWh
Technology	Air condensor	Heat pump

**> 50% Reduction in energy**

\* Courtesy Eric Bush, TopTen International, Zurich



# SEDI Clothes Dryer Savings



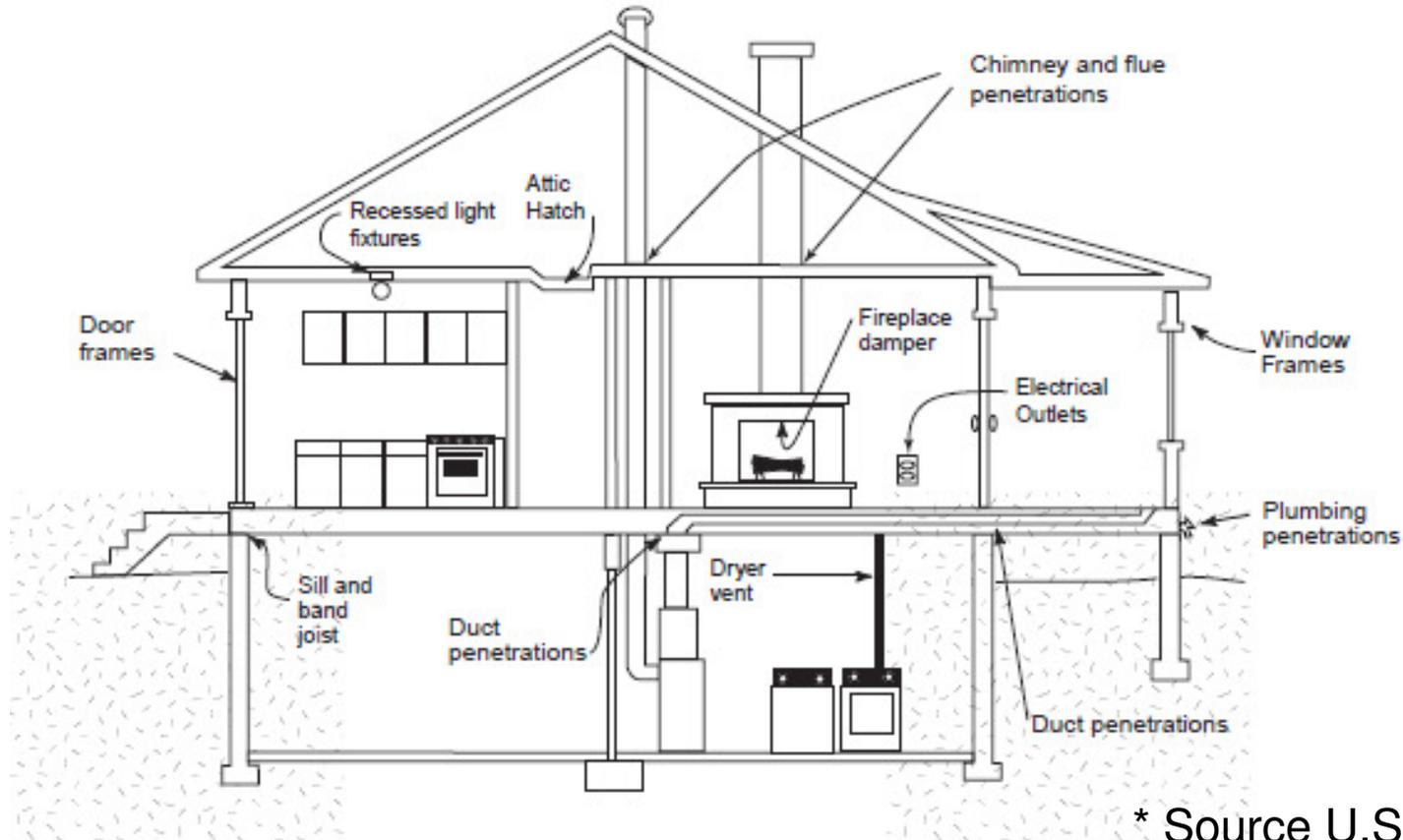
Picture source: Schulthess AG, Switzerland



**60-80% Reduction in power with heat recovery**

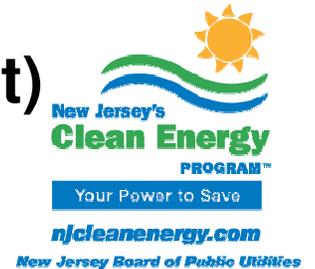


# SEDI Clothes Dryer Savings



**Ventless drying = No HVAC impacts**

**Vented = 150 Air changes annually (2000 sqft)**



# Is it Possible?

- > 20 “A” labeled super efficient dryers from multiple manufacturers available on EU market
- Rapidly increasing market share in EU
  - 25% in Switzerland / 100% by 2012
- Research documents 50% direct savings
- SNOPR on Clothes Dryer Test Procedure
  - Automatic Termination
  - Ventless Standard Dryer



# Movement so far...

## 1. Research and Market Potential Report

- TopTen EU
- NRDC / Ecos Report (October 2010)
- SNOPR Dryer Test Procedure

## 2. Draft tech spec and program design

## 3. Regional program provider meetings

- Vancouver (July 26)
- Chicago (July 30)
- Iselin, NJ (August 5)
- ACEEE Summer Study (August 16)

## 4. Manufacturer Meeting

- Core stakeholders and industry meeting this afternoon!



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[njcleanenergy.com](http://njcleanenergy.com)

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# Next Steps

- Become a SEDI Core Stakeholder
  - Help shape the SEDI efficiency target and program design
  - Staff time only in 2010
  - Research and possibly pilot testing in 2011
- Plan for 2012-2013
  - Retail price incentives
  - Marketing
  - Bulk purchase



# Contacts

## *SEDI Core Stakeholders*

**Michael Russom**  
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**Jeff Harris**  
*Northwest Energy Efficiency Alliance*

**Kerry Hogan**  
*NYSERDA*

**Kari Reid**  
*BC Hydro*

**Jay Wrobel**  
*Midwest Energy Efficiency Alliance*

**Pedro Cabrera**  
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