

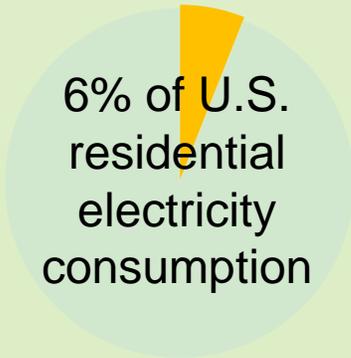
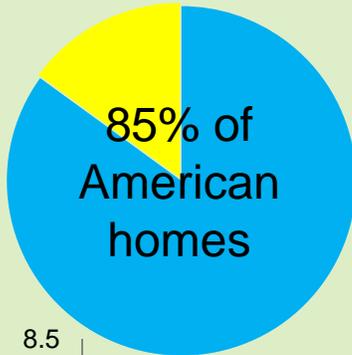


Clothes Dryer Laboratory Testing: Project Summary

**ENERGY STAR Partners Meeting
October 2012**



Clothes Dryer Energy Consumption



- 60 billion kWh
- 40 million metric tons of CO₂
- \$9 billion annual energy bill



Products Tested

European Heat Pump Dryers



North American Conventional Dryers



European and North American dryers are different sizes, but can dry the same amount of clothes



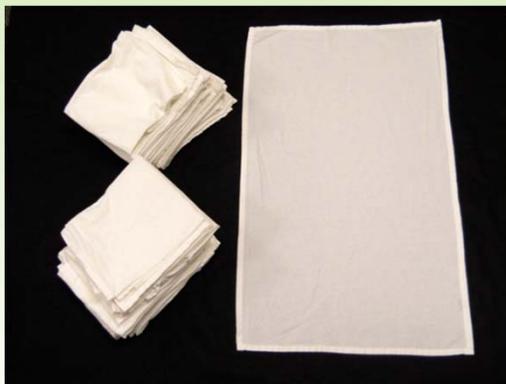
Testing Summary

Each of the following tests were conducted:

- **Primary testing: (3 runs per test)**
 - DOE 2005 – ENERGY STAR Emerging Technology Award
 - DOE 2011 – ENERGY STAR Label
- **Additional testing: (1 run per test)**
 - DOE 2011 (w/ AHAM test cloth)
 - DOE 2011 (w/ IEC test cloth)



Real World Clothing



DOE Test Cloth

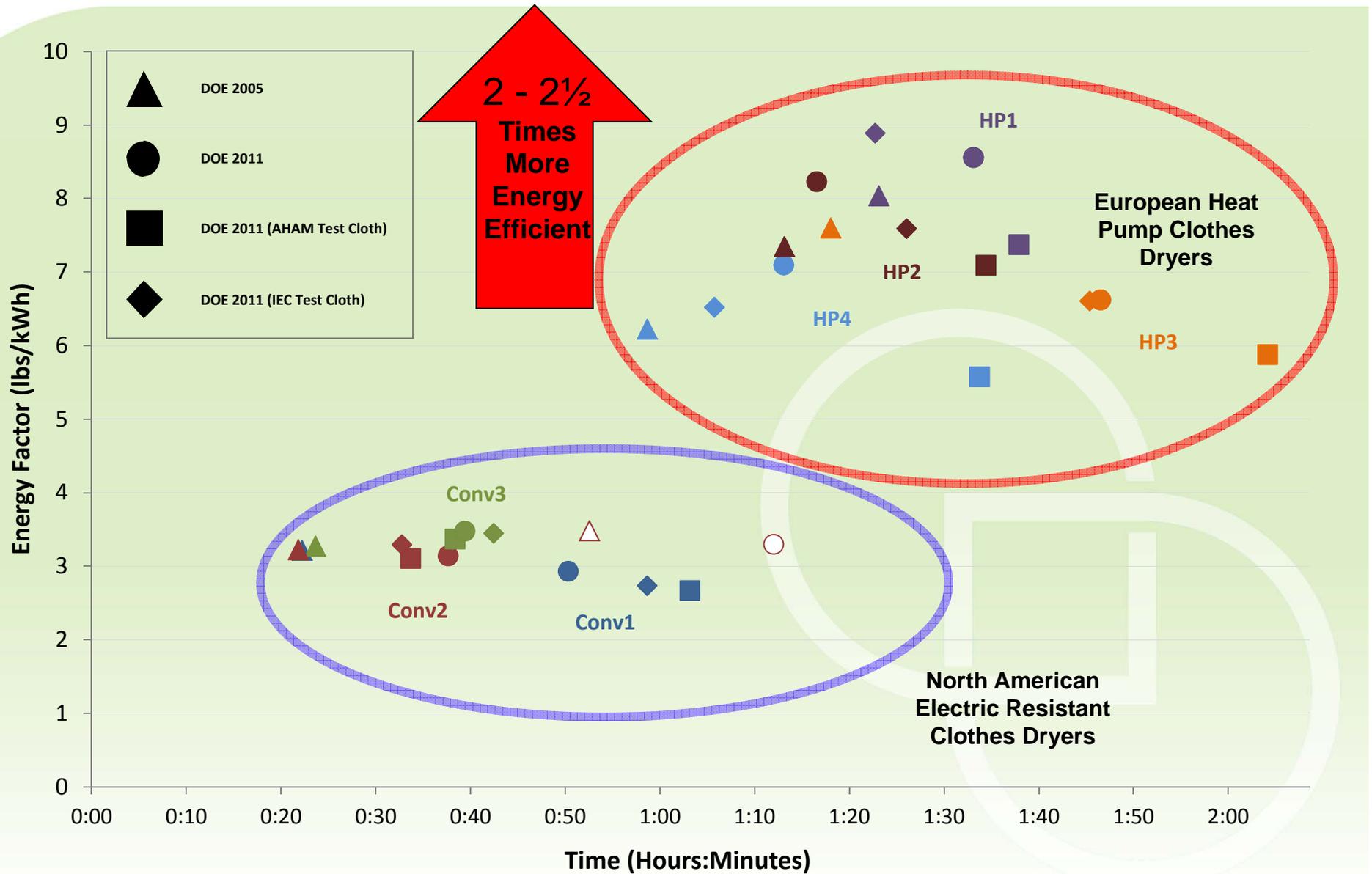


IEC Test Cloth



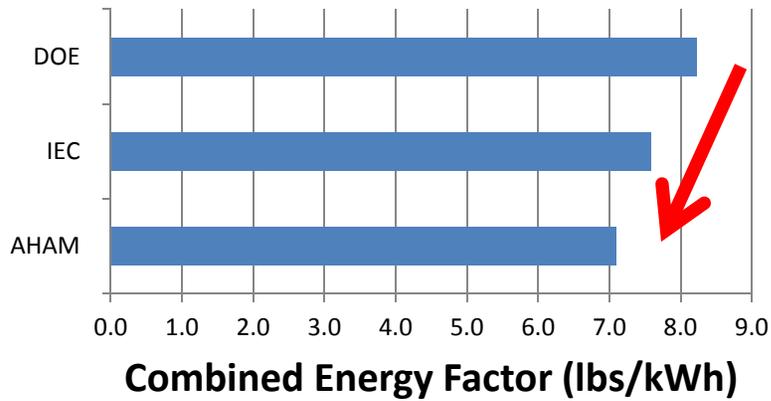
AHAM Test Cloth

Clothes Dryer Performance



“Real World” Clothing

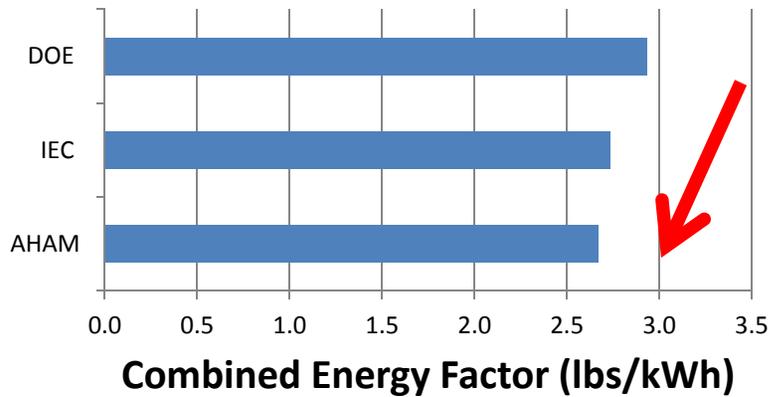
Heat Pump



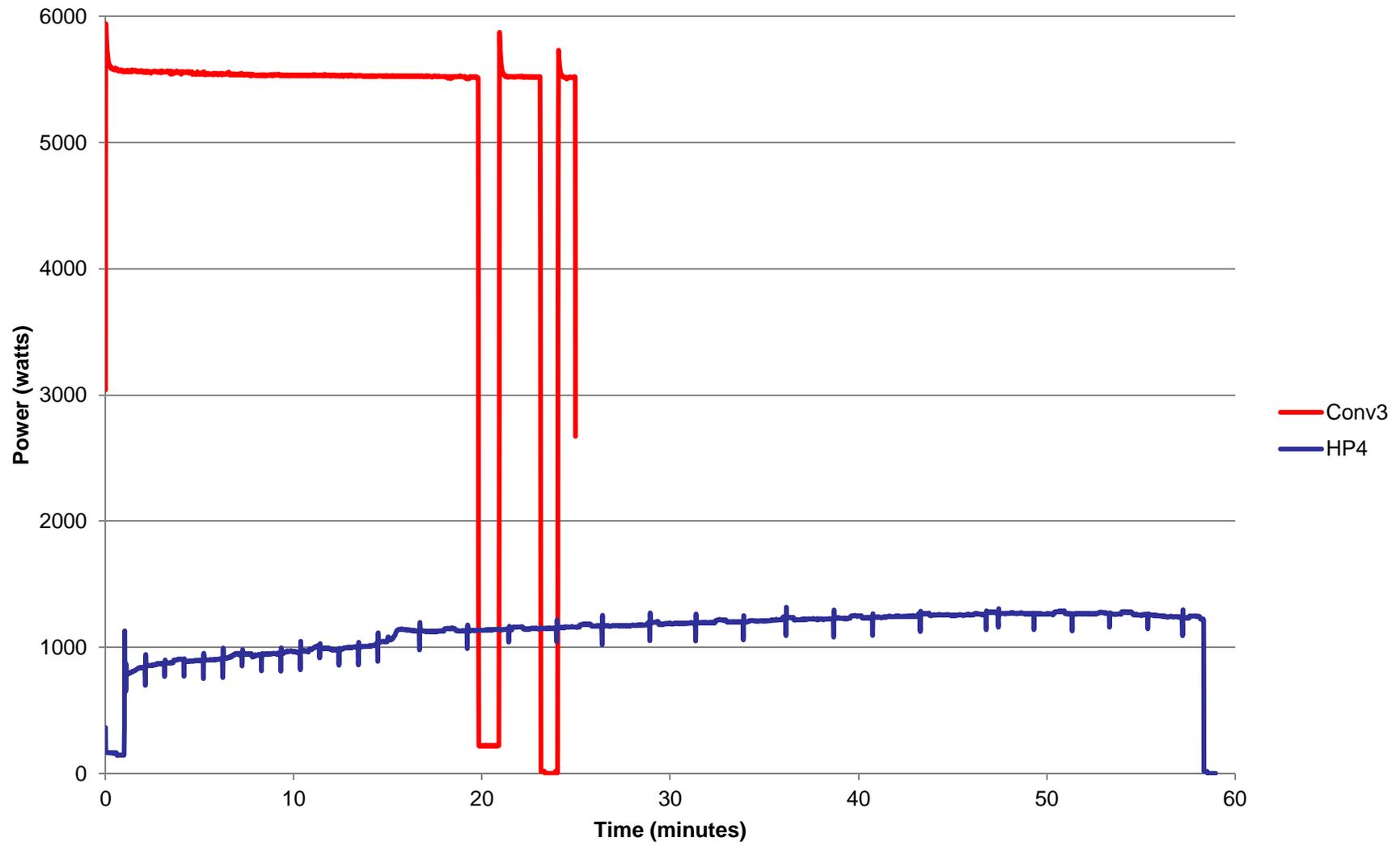
Dryer efficiency decreases the more closely the test load resembles “real world” clothing



Electric Resistant

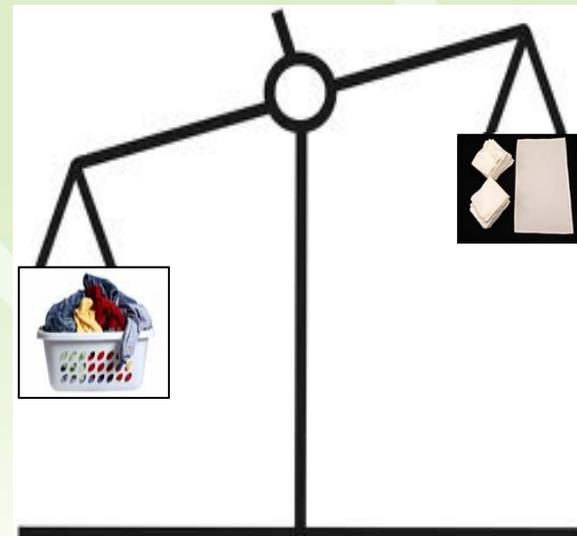


Power Demand



Conclusions

- **Super efficient clothes dryers are a substantial opportunity for North American energy saving**
- **Super efficient clothes dryers have a smaller power demand profile**
- **To meet consumer expectations, a North American super efficient dryer might be a hybrid**
- **Clothes dryers consumer more energy when drying “real world” clothing**

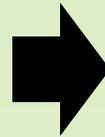


Additional Research Needed

1. **Develop a “correction factor” to calculate “real world” energy consumption from manufacturer testing.**



DOE Test Cloth



Real World Clothing

2. **Assess the performance of a super efficient dryer built for the North American market.**



For more information please feel free to contact the project manager:

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