OAK RIDGE NATIONAL LABORATORY

MANAGED BY UT-BATTELLE FOR THE DEPARTMENT OF ENERGY

Buildings Technology Center (BTC)

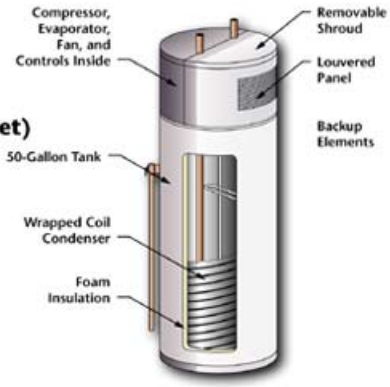
America's Premier Buildings Technology Research Center

• "Drop-In" Residential Heat Pump Water Heater

— Market-driven solution to efficient electric water heating —

- **Partners**
  - Enviromaster International
  - Arthur D. Little
  - Oak Ridge National Laboratory
- **Progress**
  - ORNL-measured efficiency (EF) of 2.5 as compared to 0.95 for best conventional electric water heater
  - National field tests launched with utility participants
  - Accelerated life/durability tests underway at ORNL
  - Market introduction late 2001

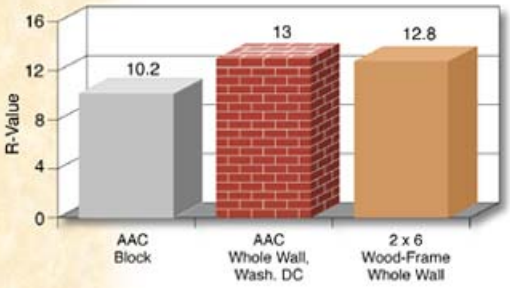
- **Benefit**
  - 2-3 year payback
  - By 2010 saves 9 MMTCE and 0.6 quad annually (with 50% capture of electric water heater market)



Could Reduce U.S. Energy Consumption up to 1%

• The BTC's Building Envelope Test Facilities

- A World-Class User Facility
- Envelope Test Capabilities
- The Web-Based Calculator
- Excellent Example of DOE's Partnerships with Private Industry



The 200th user of the BTC's thermal envelope test equipment is the Tennessee Valley Authority (TVA) and BAAB Lumber, whose interest is to further develop and deploy a building block made with 70 wt % flyash from TVA's coal-fired power plants.

UT-BATTELLE

ORNL 2002-01407B/web