Welcome to the Workshop

Workshop on Modern Evaporative Cooling Technologies
Dick Bourne, PE, WCEC Director
07/10/07
Electricity Demand: Cooling is the Culprit

• July peak demand 30-40% above January
• Cooling loads cause the peak (duh…)
• Not enough past focus on applying public goods revenues to the cooling challenge
• Time to start thinking of cooling peak reducers as distributed generation
• Less expensive, better aligned than PV
Dry Climate Opportunities

• Growing recognition of climate-specific HVAC needs
• In the West we can:
  ▪ Reduce over-dehumidification
  ▪ Cool building mass at night
  ▪ Reduce blowers sized for peak cooling
  ▪ Apply direct & indirect evaporative cooling
  ▪ Efficiently apply chilled water thermal storage
The Western Cooling Efficiency Center

• Launched in April 2007
• Element of new UC Davis Energy Efficiency Center (EEC)
• EEC launched in 2006 with support from the California Clean Energy Fund (CalCEF)
• WCEC following successful model of the California Lighting Technology Center
• WCEC focus is helping emerging “dry climate” cooling technologies cross the “Valley of Death”
WCEC Activities

• Establish demand, energy goals; track progress
• Identify/nurture promising technology options
• Partner with Affiliates to achieve goals
• Plan and manage demonstration projects
• Educate-
  ▪ Host/support events
  ▪ Maintain “clearinghouse” database
• Institutionalize knowledge on water use and maintenance issues
WCEC “Western Cooling Challenge”:

- By 2020, reduce CA’s cooling demand and energy use, from 2007 baseline, by:
  - New buildings-
    - peak demand 100%
    - energy use 50%
  - Existing buildings:
    - peak demand 50%
    - energy use 25%
Let the Workshop Begin!

• **Goals:**
  - Partner for progress
  - Avoid “preaching to the choir”
  - Build continuing relationships
  - Identify missing partners and stakeholders
  - Develop an action plan
  - Consider need for a “next event”