

# Who's Afraid of a Swamp Cooler?

Addressing Market Barriers to  
Evaporative Cooling

Cheryl Winch

# Evaporative Cooling Advantage

- Negative incremental cost (compared to Central Air Conditioning [CAC])
  - Installation
  - Cost of unit
- Evaporative Cooling [EC] average savings per cooling season compared to CAC SEER 13 = \$287



# Evaporative Cooling Programs

- EC program incentives
  - Home owners: \$50 - \$1000 rebates (\$500 most common)
  - Commercial customers: \$100 - \$500
  - Builders: \$25 - \$1000
- Requirements vary by program:
  - Replacement vs. new installation
  - Type of Unit: Direct, Indirect, Closed system
  - Size: Flat rebate vs. per ton incentive
  - Thermostat control
  - Underwriters Laboratory (UL) components
  - On-site inspection/verification

# Colorado Residential Space Cooling Market

- Three out of four Coloradans have a cooling system
- Cooling represents two-thirds of residential electric peak demand
- History with EC in Colorado
  - 23% EC saturation in older homes
  - Average age of EC = 16 years
- “Colorado is my largest market for evaporative cooling” –National EC distributor

# And Yet...

- EC Sales have declined over the past two years (2008 – 2009)
  - Economy (fewer remodel/improvement projects)
  - Cooler summers
  - Low EC awareness vs. high CAC awareness
  - Building codes & design practices favor CAC/split systems
- Three out of four newer homes have CAC
- Half to two-thirds of EC rebate recipients are replacing older EC units

Why aren't more  
evaporative coolers  
selling?



# Swamp Cooler Rap

- Maintenance (weatherizing, draining, and filling)
- Indoor Air Quality (exposure to allergens)
- Capacity of unit to cool the whole house
- Humidity
- Mold
- Rooftop location
- Risk of leaks/water damage
- Noise
- Appearance of unit
- Water use (limited resource)
- EC is poor person's AC



# Other Market Barriers

- Retailers/suppliers also perpetuate the *swamp cooler* rap
- Financial disincentives for trades
  - Higher commissions on CAC
  - Taking time to educate customers on EC
  - Training and perceived time and expense to install
- HOA restrictions
- Economy: barrier or facilitator?
- Weather (when summers are cooler)



# According to EC Owners

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...it's not only about  
the energy savings.

# Non-Energy Benefits

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- Air flow
- Function
- Moisture
- Price
- Thermostat control features
- Easy to install and maintain
- Quiet
- Rebate

# Addressing Barriers

- Effective marketing for EC
  - Focus messaging on non-energy benefits
  - Challenge persistent negative perceptions
    - Controls
    - Improved absorption media
    - Design: options for locations other than rooftop
    - Lower water use
    - Capacity and comfort
    - Hybrid options
  - Target education to HOAs and building trades
  - By the way, they cost less to operate than CAC

# Addressing Barriers (cont'd)

- Focus on existing homes
  - Advantage for homes without ducts
  - Rebate new EC installation at a higher level
  - Maintenance and installation angle
- Consider 'upstream' incentives and education for EC suppliers and trades
- Promote EC where other programs intersect
  - Energy Audits
  - Home Performance
  - Low-income Weatherization
  - ENERGY STAR New Homes
- Include incentives for commercial customers

# Questions

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Cheryl Winch

[Cheryl.Winch@Cadmusgroup.com](mailto:Cheryl.Winch@Cadmusgroup.com)

(303)389-6519

# Evaporative Cooler Diagram

