

# Changing ASHRAE 118.2 Rating Methods?

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**Harvey Sachs**

**American Council for an Energy-Efficient Economy**

**Sacramento, CA**

**June 2, 2008**

# What do Consumers Want to Know (related to energy)?

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- Annual Operating Cost
- Relative Operating Cost
  - Within and between fuels
  - Within and between technologies
  - Within and between capacities
- Payback for efficiency
- Will it meet my hot water wants reliably?

# What do we rate now?

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- “EF” = Energy Factor.
  - Presumed index of efficiency, that is, proportional to  $1/\text{energy consumption}$
- First hour rating:
  - Ability to serve a concentrated need.

# What are the issues?

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- Reproducibility?
- Draw Pattern and Validity across technologies?
- Merit of constant HW daily production across all equipment capacities?
- Would a protocol based on steady-state measurements and computed consumer metrics work better?
  - Do we need intrusive measurements like Temperature profile in tank?

# ...And That's Just for Type 1

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Are there other issues for water heaters also used for (space) heating?

# My Recommendations (by priority)

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1. Make it technology-indifferent
2. Couple volume to capacity
3. Work toward “non-invasive,” steady-state measurements.
  - Just measure “goesintos” and “goesouttas”
  - Algorithmic conversion to consumer label units.

# Contact information

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Harvey Sachs  
Director, Buildings Program  
ACEEE

[hsachs@aceee.org](mailto:hsachs@aceee.org)

202-507-4014 (new)