



# Whole House Gas Tankless Market Assessment

> ACEEE Water Heater Forum  
June 2<sup>nd</sup>, 2008

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Research Sponsored by  
California Energy Commission

# Overview

## > Objectives

- Validate literature review findings
- Fill informational gaps
- Explore technical and market issues

## > Approach

- Telephone interviews
  - > Six (6) depth interviews with manufacturers (Dec06 – Feb07)
  - > Fourteen (14) depth interviews with Plumbers/Installers (Dec06 – Feb07)

# Manufacturers

## > Market Share

- US 256,000 (GAMA 2006)
- CA 40-50,000 (2006)
- Strong markets – CA, TX, Warm belt states

## > Future growth

- 30% (2007); 10 – 15% following
- CA 50-50 retrofit-new construction
- Southeast – new construction
- Northeast - retrofit

# Manufacturers

## > Key Market Drivers

- “Endless Hot Water”
- Consumer demand for lower energy bills
- Space saving attributes
- Efficiency

## > Market Limitations

- Installation costs
- First-cost
- Water quality
- Ensuring quality installations

# Manufacturers

- > Near - to Mid-term solutions (0-2 yrs)
  - Reducing electric power consumption
  - Enhanced back-up power options
- > Mid- to Long-term solutions (3-5+ yrs)
  - Reducing first cost
  - Expanding applications
  - Lowering installation costs
  
  - Tankless will always require installation and maintenance by a qualified professional
  - Total self-power cannot come without compromise to efficiency

# Manufacturers

- > Areas to focus Publicly-Funded Research
  - Retrofit cost reduction
  - Hot water distribution design and design tools
  - Burners

# Plumbers

## > Participants

- 10 – CA , 3 – AZ, 1-TX
- Years of experience – 255 (2 to 35 yrs)
- 1,566 installs in 2006, 344 (1/3) Tankless
  - > 72% residential
    - 64% retrofit
    - 36% new construction
  - > 28% commercial
    - 64% retrofit
    - 36 % new construction

# Plumbers

## > Tankless advantages

- Resolving customer needs for endless hot water
- Saving space
- Efficiency
- Lower energy bills

## > Other advantages

- Flexibility in installation location
- Progressive plumber tag

One plumber cited no advantage as 95% of his work were retrofits requiring modifications in gas and water piping, venting, and specialized training.

# Plumbers

## > Tankless market limitations

### – Residential

> Installation costs

> Selling price

> Service life uncertainty

> Service technician qualification requirements

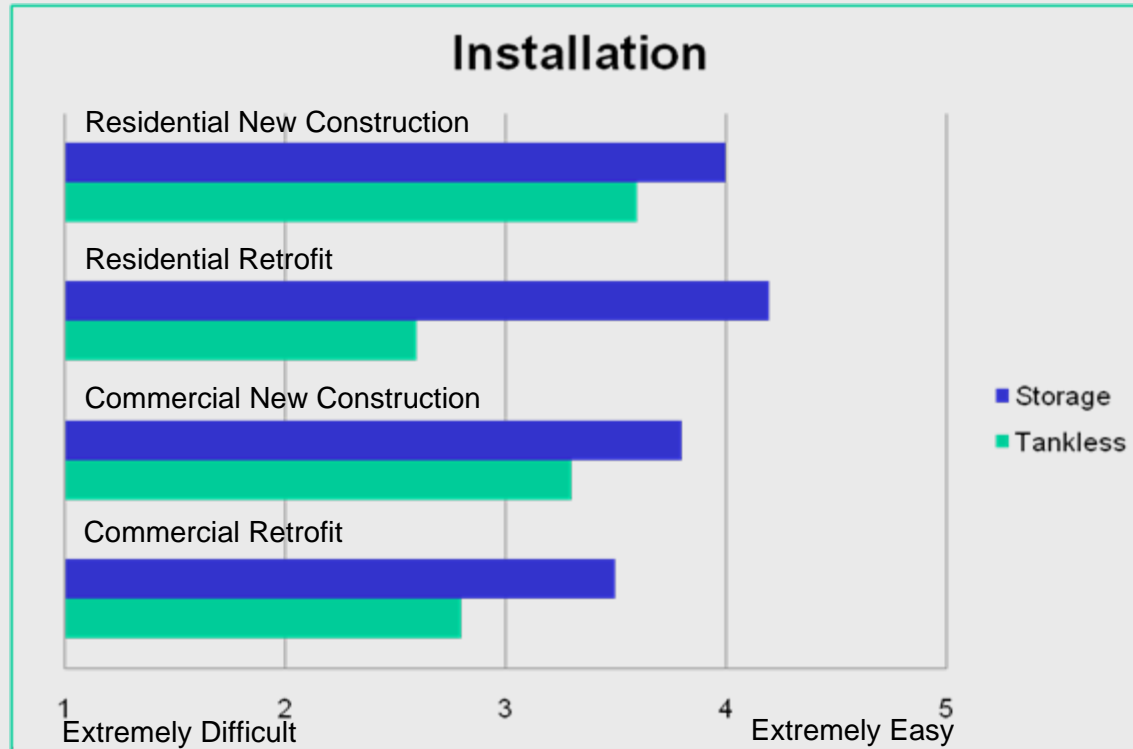
### – Commercial

> Retrofits

> Service life uncertainty

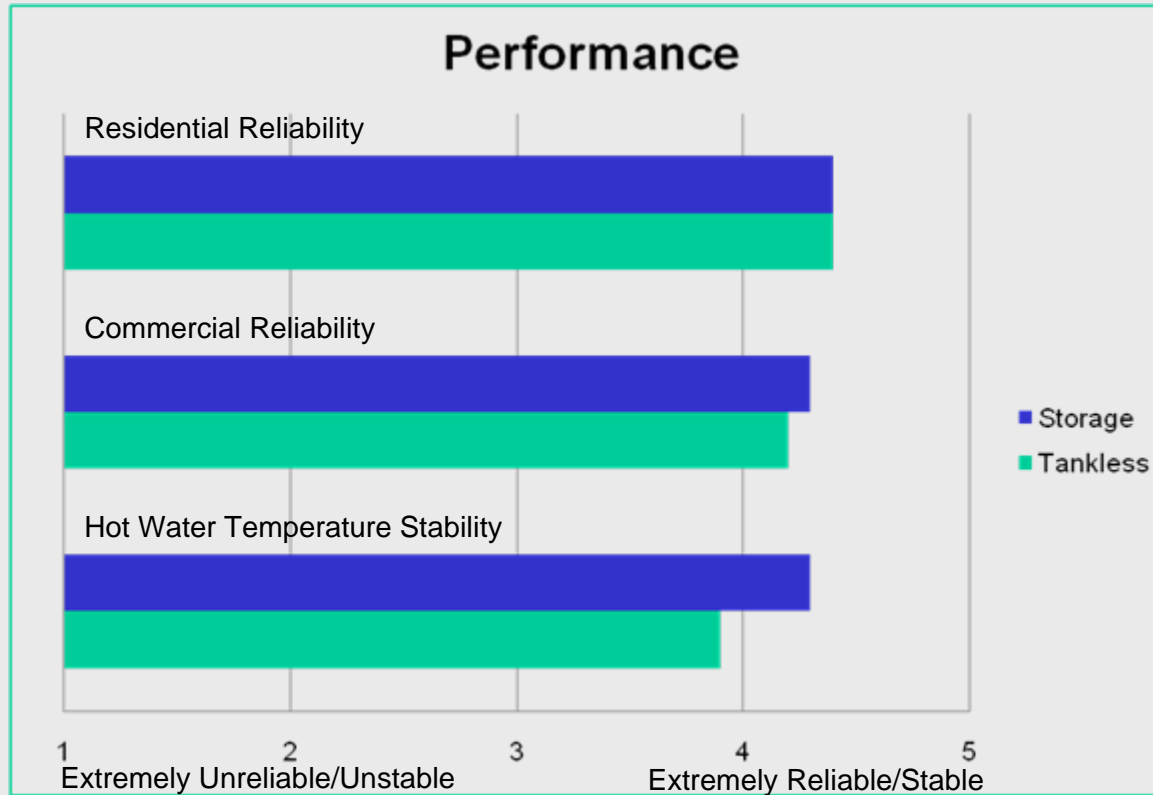
> Installation costs

# Plumbers



- Plumbers noted added retrofit costs (gas, water, and venting)
- CA plumbers noted easier compliance to Seismic Code

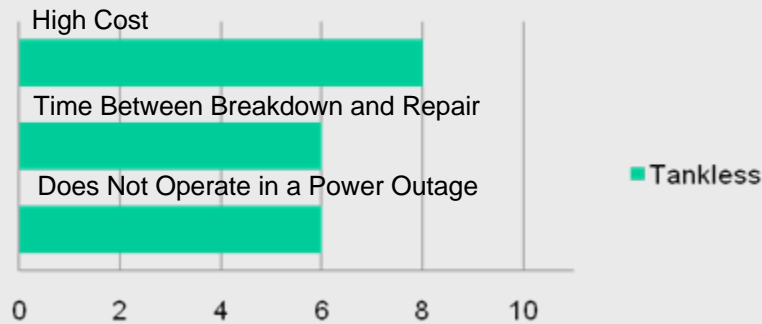
# Plumbers



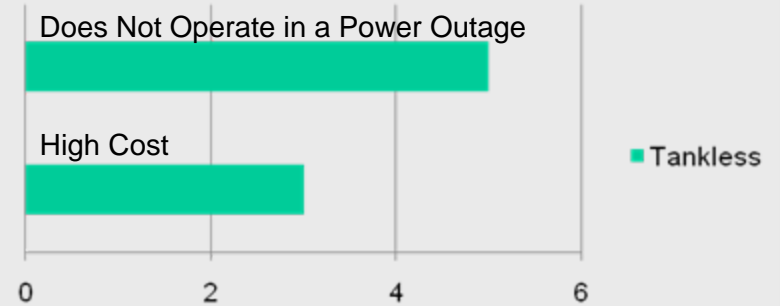
- One plumber noted stability it as his biggest customer complaint
- Deliming is the most frequent maintenance call
- Component failures have been rare

# Plumbers

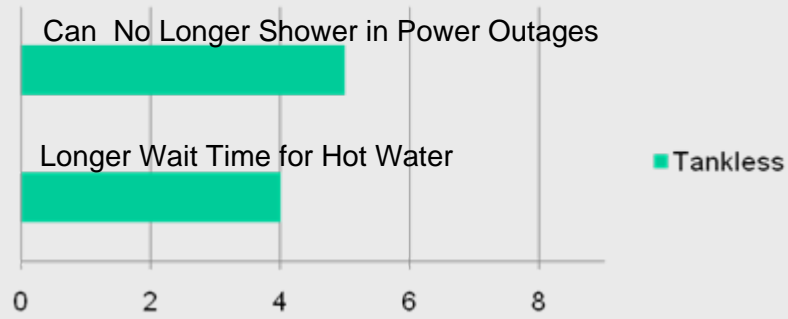
## Residential Dissatisfaction



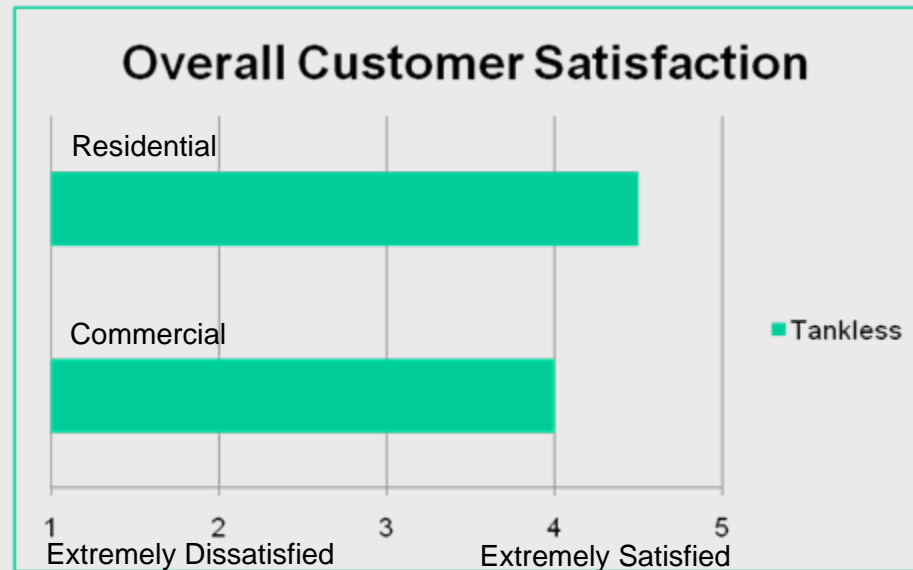
## Commercial Dissatisfaction



## Lifestyle Changes



# Plumbers



- All plumbers interviewed would recommend tankless

# Summary

- > Tankless market growth will continue to be strong in the near term
- > Market limitations
  - Installation costs (retrofit)
  - First-cost
  - Ensuring quality installations
- > Possible areas of Public-Interest Research
  - Retrofit cost reduction
  - Hot water distribution design and design tools
  - Burners