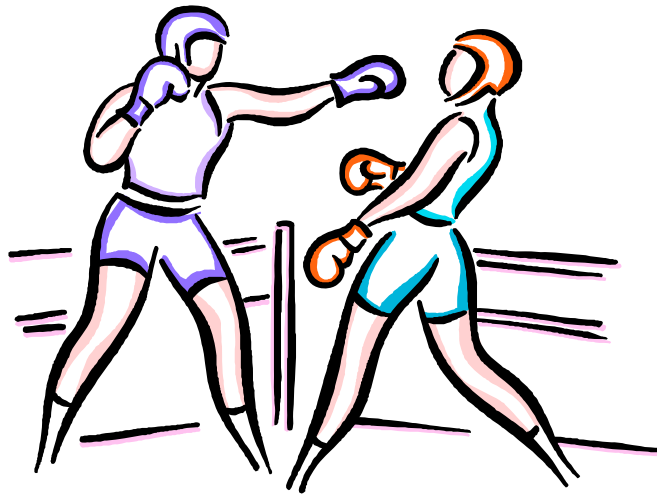




DHW: Tank vs. Tankless

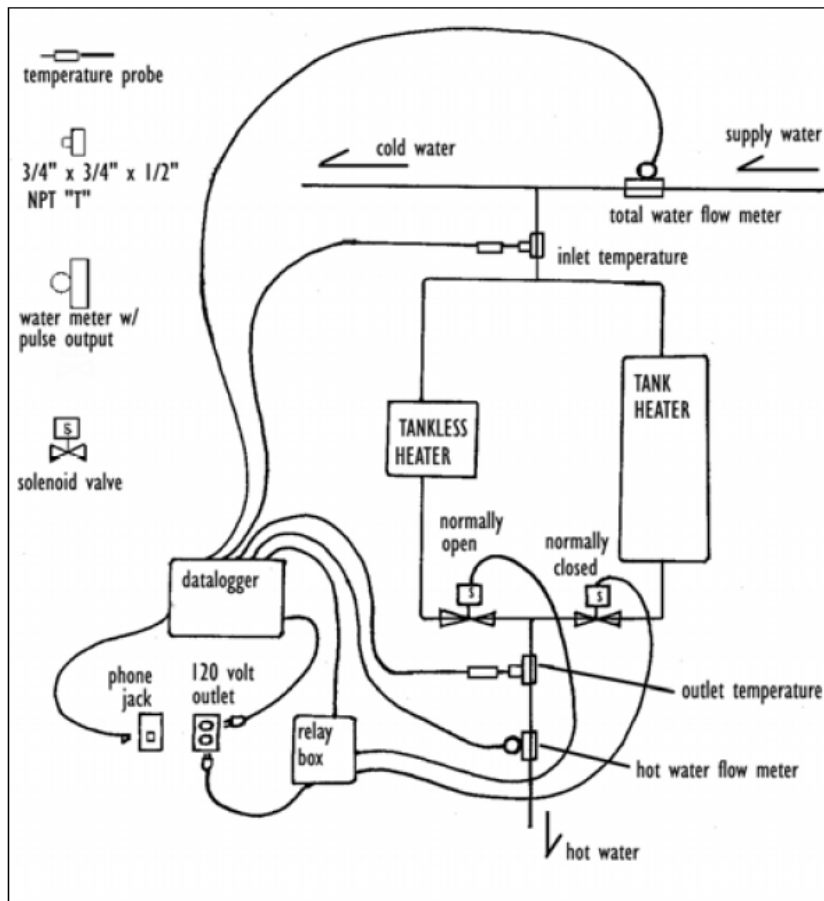


Craig Drumheller
Sr. Energy Engineer
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Affordable Comfort
April 24, 2007

Dedicated to improving home building since 1964.

Tank vs Tankless Test



Specifications and Equipment Cost (2001)

	Tank	Tankless
Mfgr./Model	A.O. Smith EEST-52	Microtherm Seisco [®] RA-28
Capacity	55 gallons	1 gallon
Maximum Energy Draw	4,500 watts	28,000 watts
Energy Factor	.86	N/A
Size	58.75" x 19.5"(dia)	15" x 15" x 6"
Weight (empty)	132 lbs.	23 lbs.
Weight (full)	588 lbs.	31 lbs.
Equipment Cost	\$188	\$585

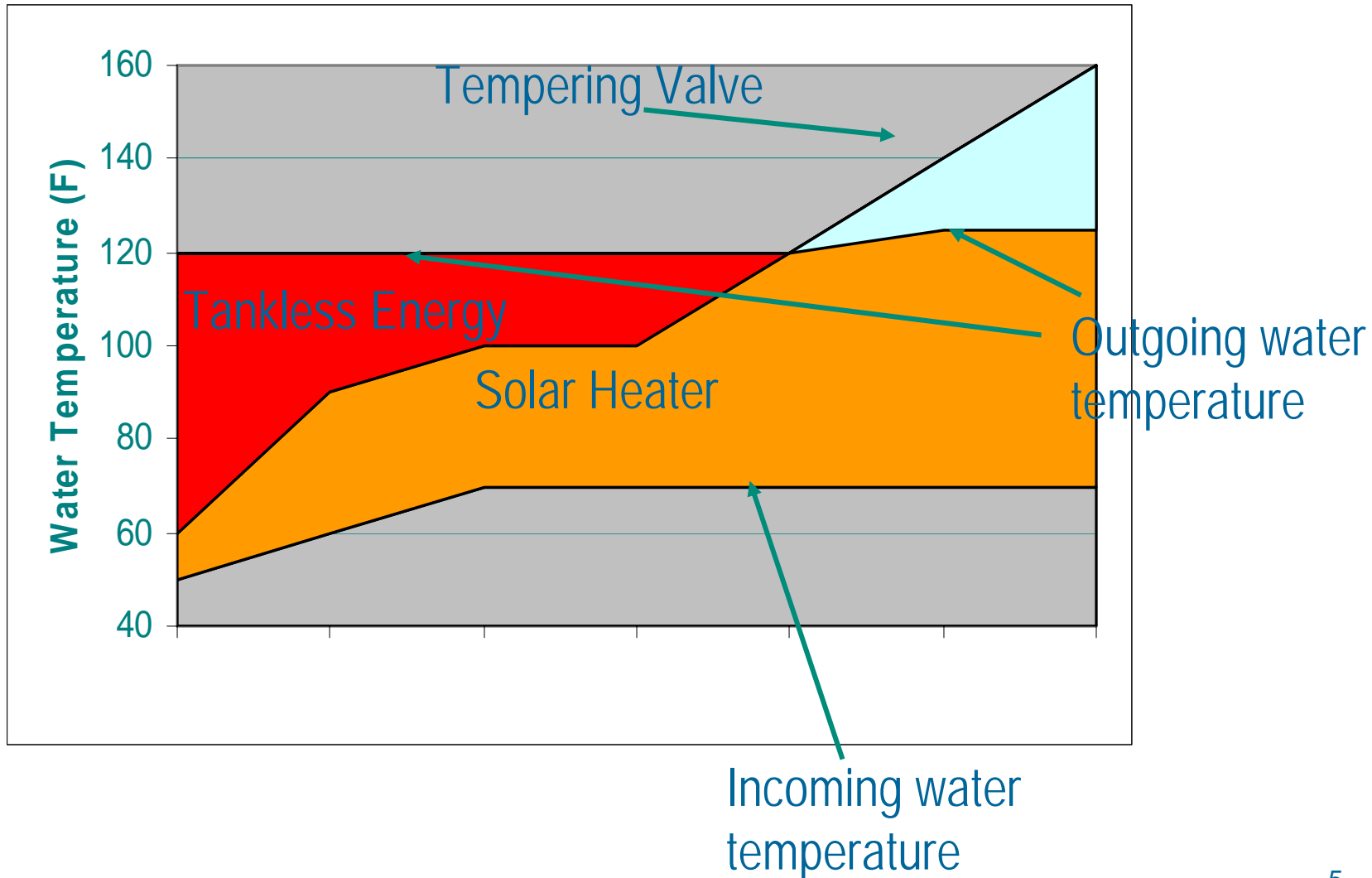
Tank/Tankless Test Results

Location	Tank Eff	Tankless Eff	% better
NY (Gas)	48%*	83%	73%
NC (Ele)	83%	96%	14.8%
TX (Ele)	84%	95%	11.8% (23.6%**)

* Estimated Efficiency from combustion test and estimated tank losses

**Included reduced energy use due to delayed start of tankless unit

Tankless Assist of Solar Pre-heat



Solar Preheat

- Preliminary Results - Winter Months

	Tank/ Solar System	Tankless/ Solar System
Solar Contribution	30%	33%
Standing Losses	1.8 kW/day	< 0.2kW/day

Special Concerns

Electric Whole House Tankless need around 120 Amps at 240 volts. May require an increased capacity electric service.

Gas Tankless heaters may require a larger diameter gas service pipe in the house

When Tank?

When Tankless?

■ Consider Tankless when:

- Space is a premium
- Large homes with diverse points of use
- Extended draws of hot water
- Extended periods of little or no usage
- Solar pre-heat
- Expensive energy
- Concerned about impact of water heaters in landfills

■ Tank Preferred

- Available Space (basement, garage)
- Traditional Usage Patterns
- Short/Medium Duration at High Capacity
- First Cost is important (1/2 to 1/3 of tankless installed cost)



And The Winner is...



YOU DECIDE!



S. Craig Drumheller Sr. Energy Engineer

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