

Climate Zone Factors

CZF_n

CZF₁ = 1.330

CZF₂ = 1.118

CZF₃ = 1.019

CZF₄ = 0.883

CZF₅ = 0.815

Representative City

Minneapolis

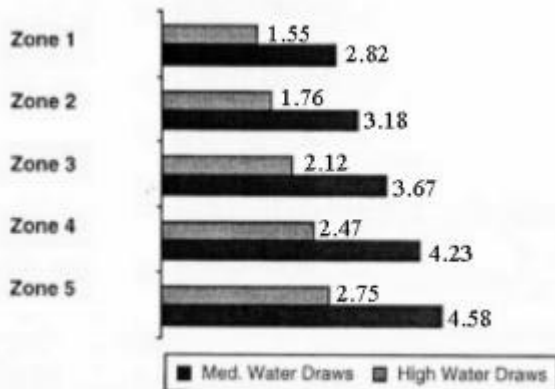
Detroit

NYC

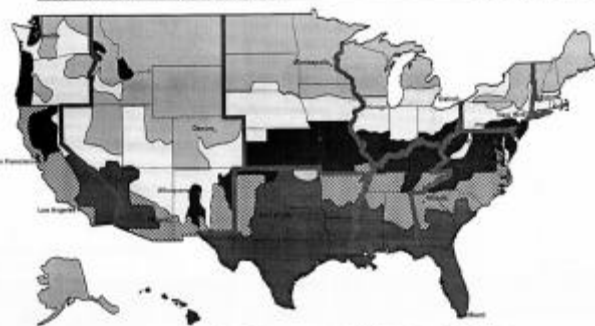
Atlanta

New Orleans

GFX Payback @ 8.5¢/kWh



Residential Water Heating Economics DOE Climate Zones



Arthur D Little

Residential Water Heating Economics Evaluation Approach

Performance was simulated based on detailed weekly draw profiles¹ using EPRI's WATSIM model.

- Typical fall/spring entering water temperatures and daily water draws (assumed constant year round)

DOE Climate Zone	Representative City	Water Temperature (°F)	Medium/High Draw ² (GPD)
1	Minneapolis	45.8	50/100
2	Detroit	49.9	45/90
3	NYC	57.6	40/80
4	Atlanta	62	35/70
5	New Orleans	64.9	32/64

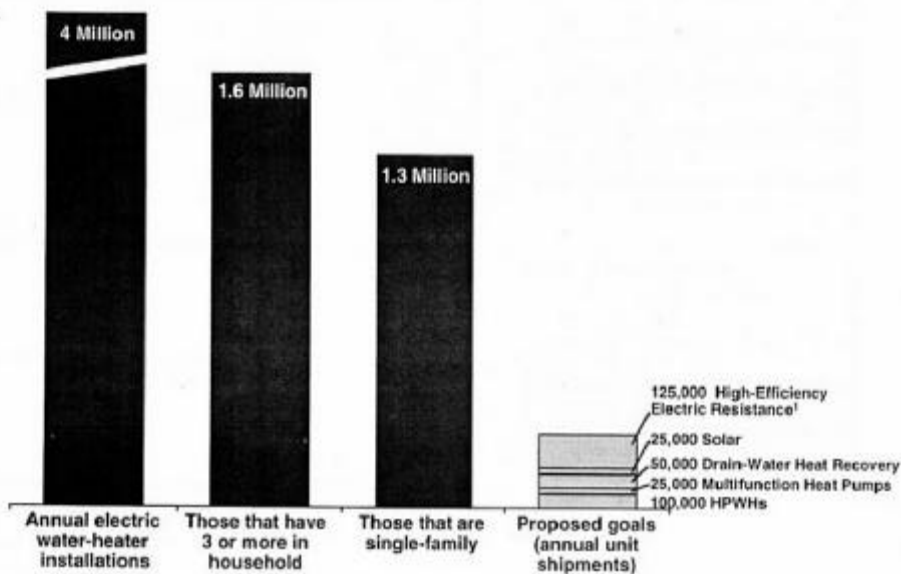
- 120°F (set-point) water delivery temperature

¹ Draw profiles developed from actual site measurements. See Appendix A for discussion of water draws.
² Households having low water draws were assumed to be of less interest (due to economics).

DOE-Approved Program To Install 325,000 Green Water Heating Systems/Year

Residential Water Heating Market Potential

Proposed program goals are based on realistic market penetrations.



¹ Includes standard-efficiency resistance with time-of-day controls, in applications where they can be shown to achieve at least 8-10% primary energy savings.