My review of Martin's great blog with my idea of what is a proper comparison. The tanks are all lifetime tanks in my group either stainless steel and or plastic with lifetime manufacturer's warranty. Marathon water heater may add $650 The best heat pump water heaters may add $500	**House A:** Electric resistance water heater plus a solar thermal system supplying 63% of the home's domestic water **Note: lifetime quality tank price used I.E. Marathon tank which matches the quality of a solar thermal tank**	**House B:** Electric resistance water heater plus a PV system supplying 63% of the home's domestic water **Note: lifetime quality tank price used I.E. Marathon tank which matches the quality of a solar thermal tank**	**House C:** Heat pump water heater plus a solar thermal system supplying 63% of the home's domestic water **Note: lifetime quality tanked heat pump price used which matches the quality of a solar thermal tank** **Note 2: Btus gathered from outside the thermal envelope such as the garage in my zone 6 may drop thermal COP annually to less than 2**
Installed cost of the electric water heater	$0.00 built into solar thermal tank system	**$1,850.00**	**$3,500.00**
Size of needed PV system	**NA**	**1.71 kW**	**1.28 kW**
Installed cost of the solar equipment	**$9,000.00**	**$6,395.00**	**$4,796.00**
Total cost of water heater plus solar equipment	**$9,000.00**	**$8,245.00**	**$8,296.00**
Projected costs if solar thermal was mass produced and had major market share verses today	**$6,500.00 (less than PV)**	**NA (Already major market share priced)**	**NA (Already major market share priced)**

Note 3: My adjusted guess for zone 6 where basements run below 50 degrees winters closer to 32 degrees in some cases that I know of with no basement furnace.