



FLORIDA SOLAR ENERGY CENTER®

*Creating Energy Independence*

# Ducted Heat Pump Water Heater Cooling and Heating in Florida

Florida Energy Systems Consortium

FESC Workshop – May 21, 2015

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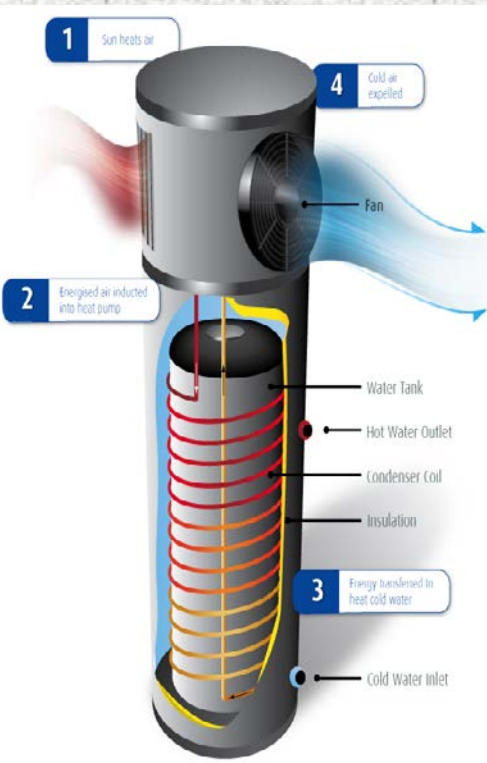


A Research Institute of the University of Central Florida



# Heat Pump Water Heater Options

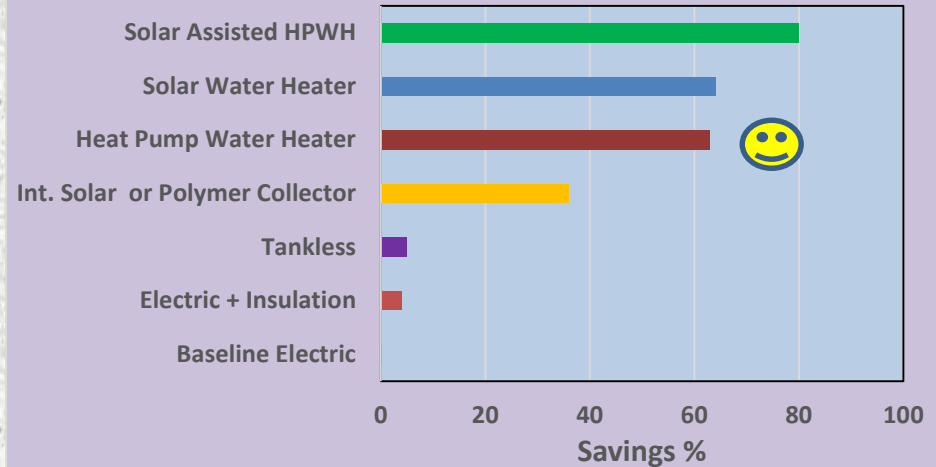
## HPWH Anatomy



Built-In Duct  
Capable  
HPWH (80 Gal.)



## Florida Electric Water Heater Options



50 gallon HPWH  
No Ducting Capability



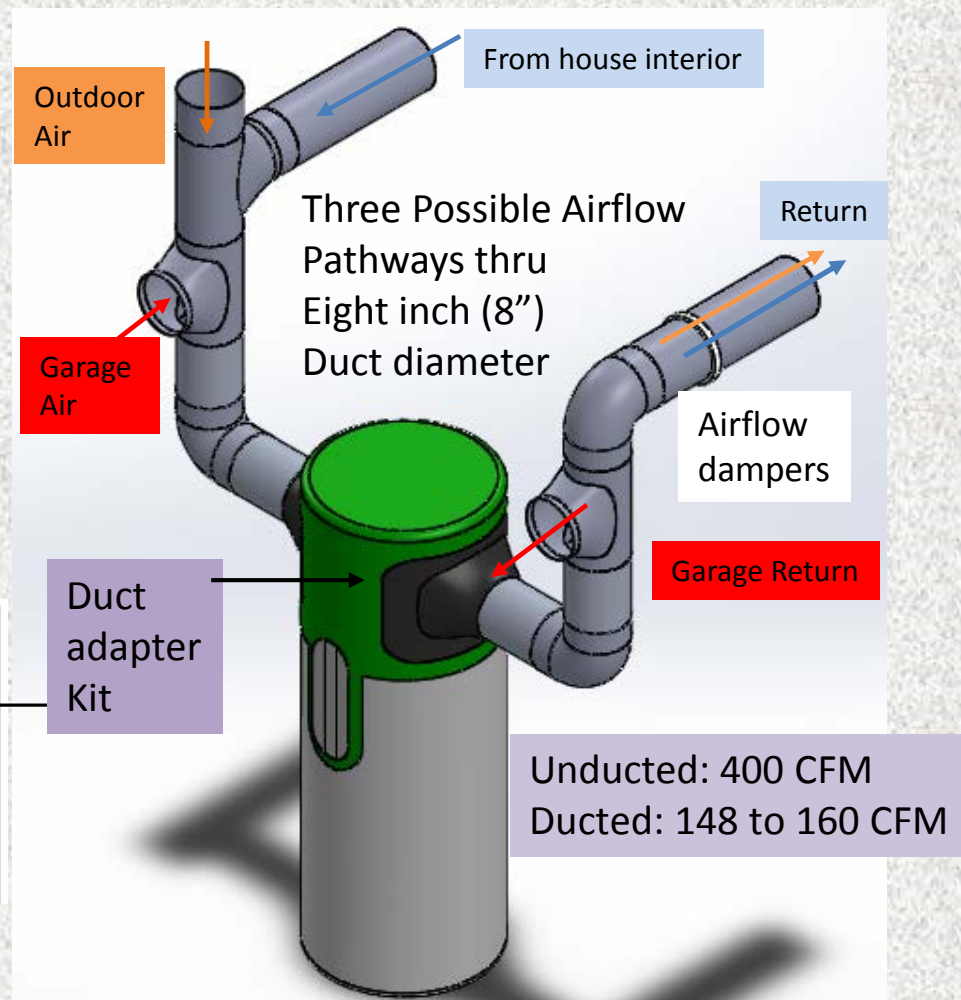
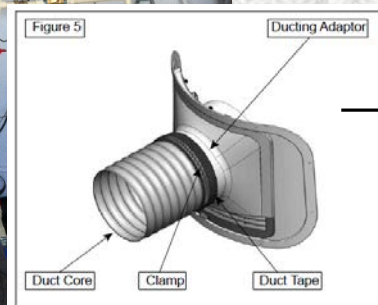
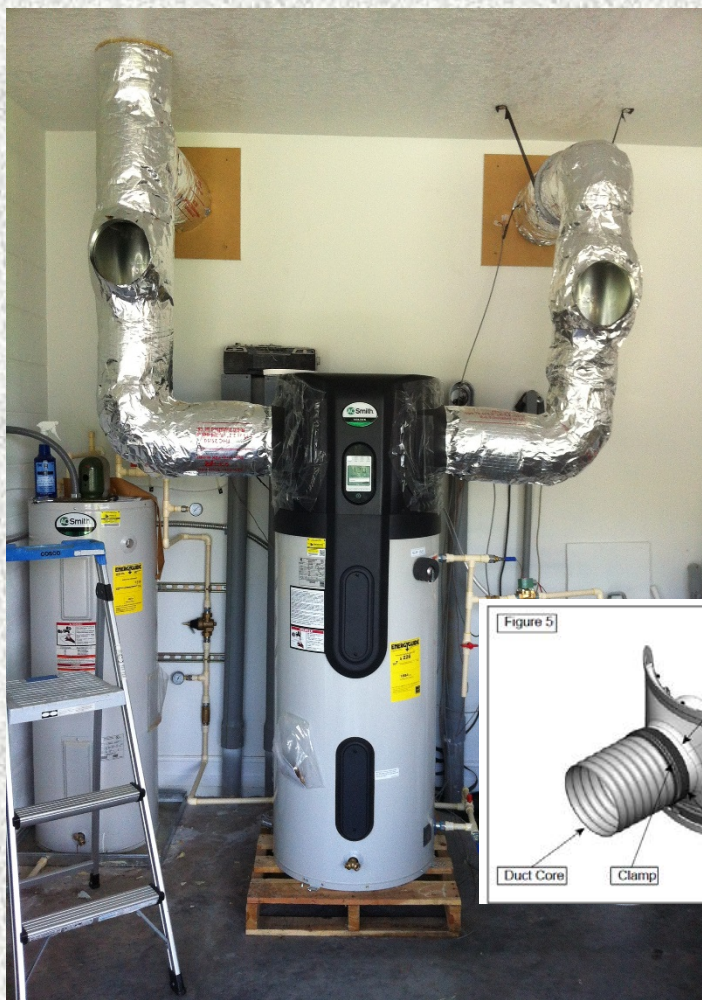
# Flexible Residential Test Facilities

## FSEC Grounds, Cocoa, FL (east coast)



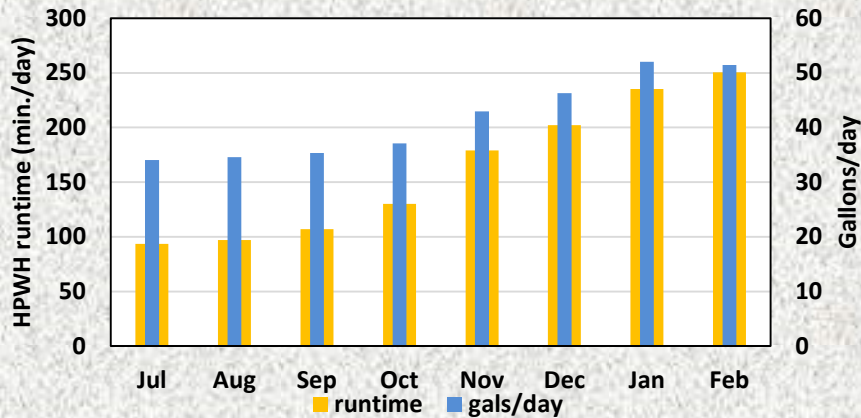


# Ducted Heat Pump Water Heater Installed in Garage

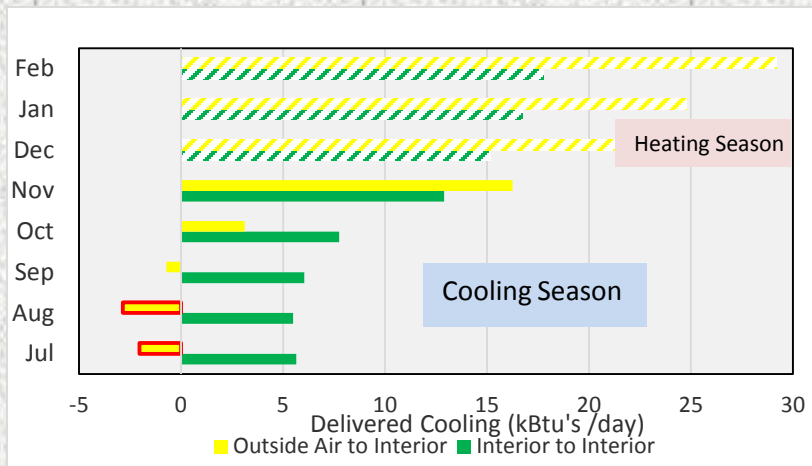
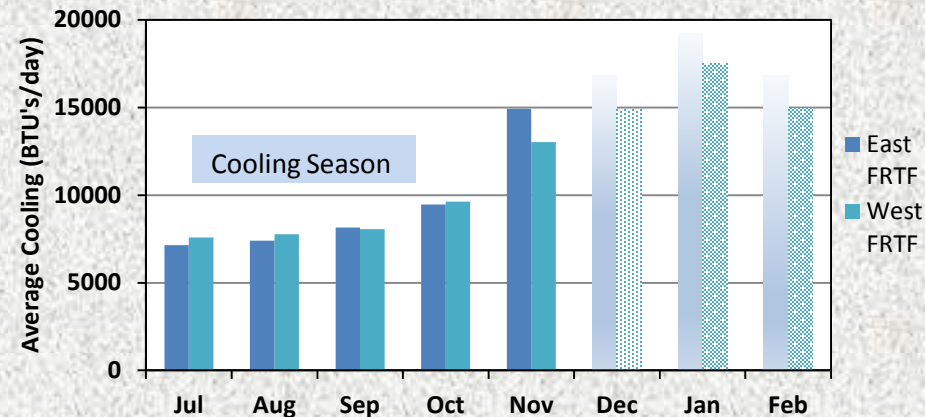


# Results (July 2014 – February 2015)

Runtime varies with season



Interior to Interior Airflow Path



Cooling	Savings kWh/day	Savings %	Savings \$/year
Indoor to Indoor	0.86	3.8%	\$22
Outdoor to Indoor	-0.26	-1.2%	(-\$7)

Heating	Heating Savings kWh/day	Heating Savings %	Heating Savings \$/year
Indoor to Indoor	-0.42	-5.9%	(-\$5)
Outdoor to Indoor	-1.38	-17.5%	(-\$17)

