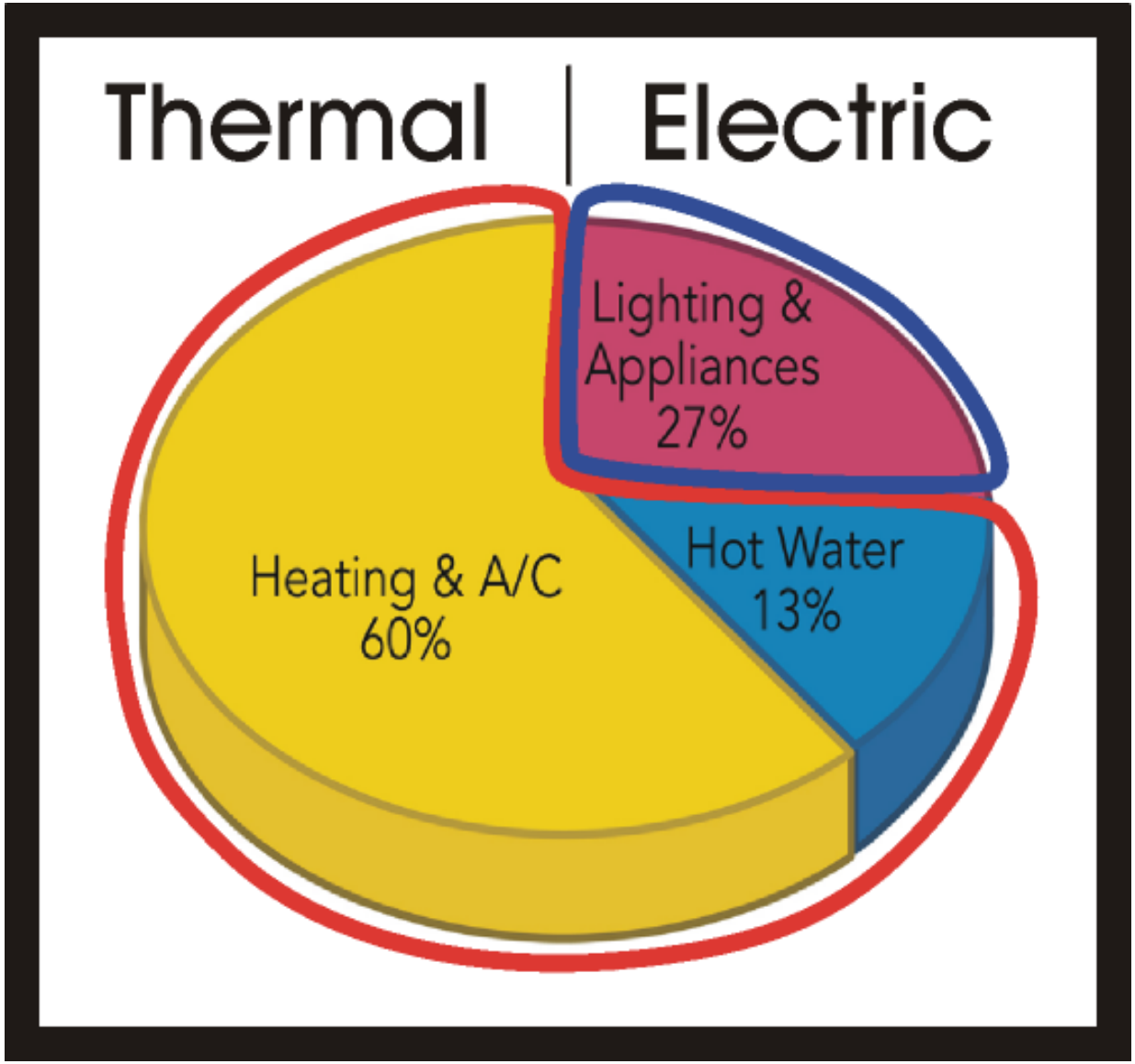
EITF Technologies Group

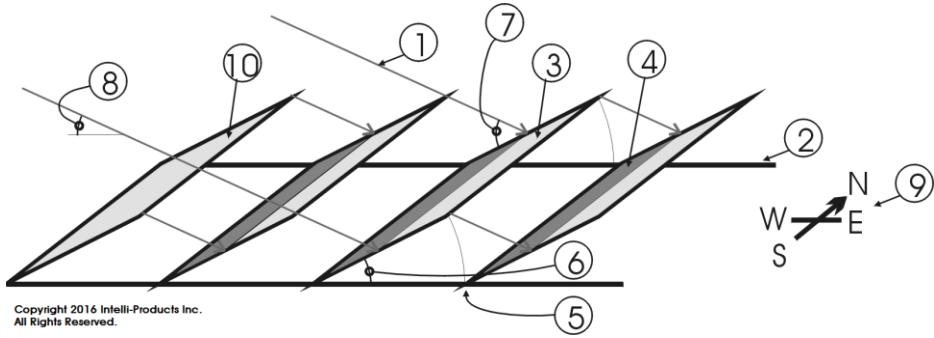
Team Presentation

September 2016

Typical Energy Loads (Residential)



PV – Electric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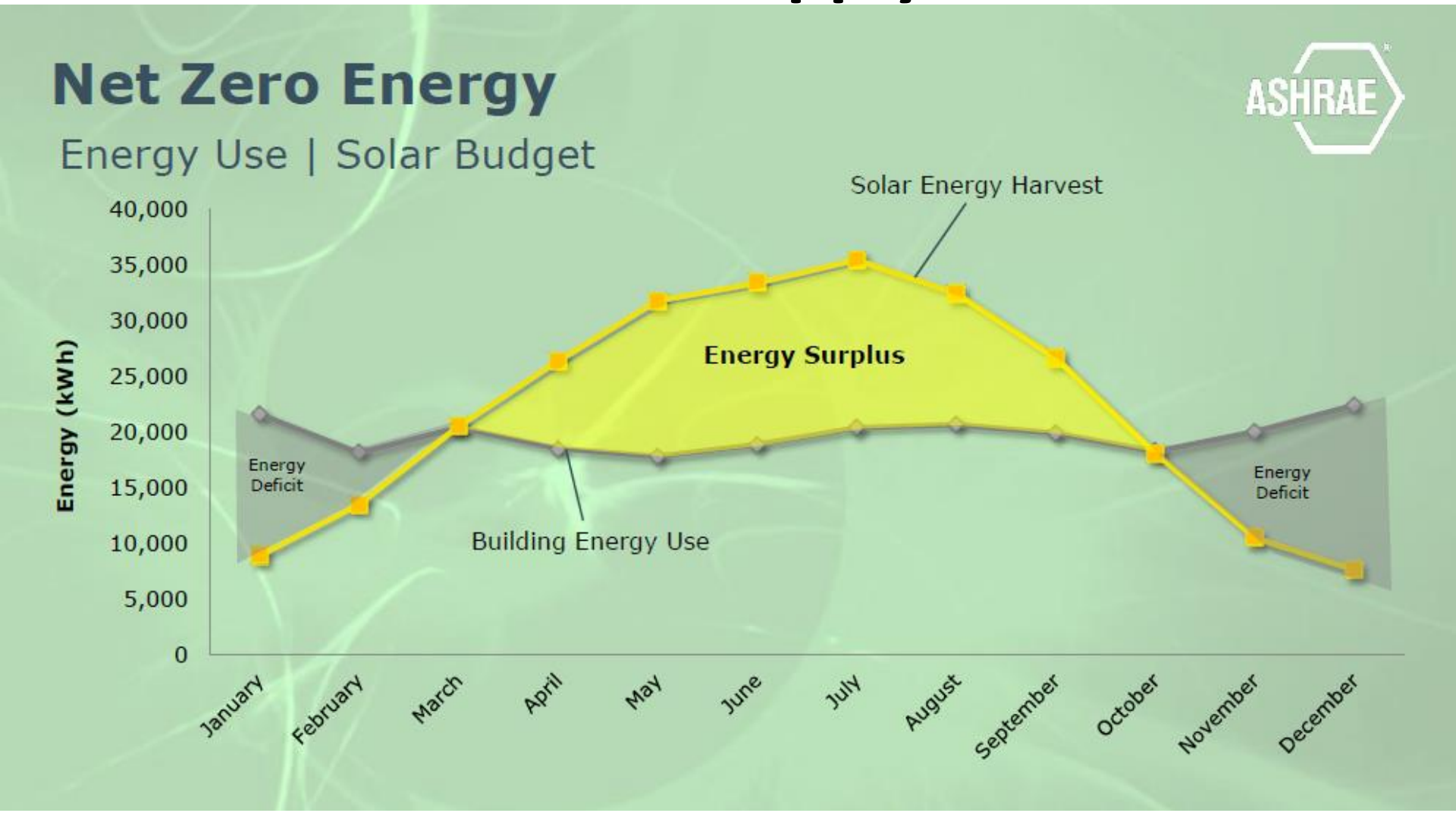
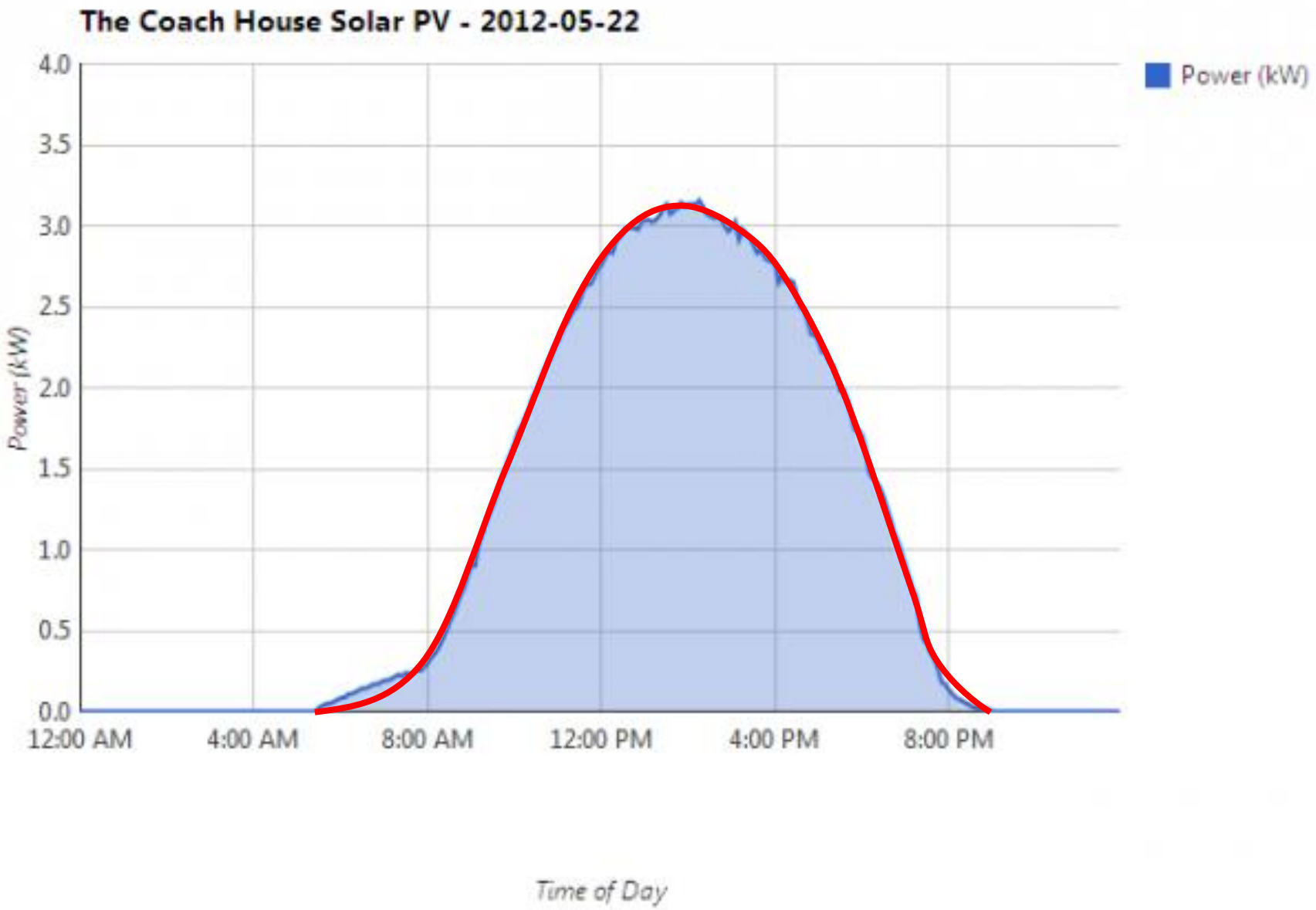
Reservoir Floating PV Arrays – Bee Tree?

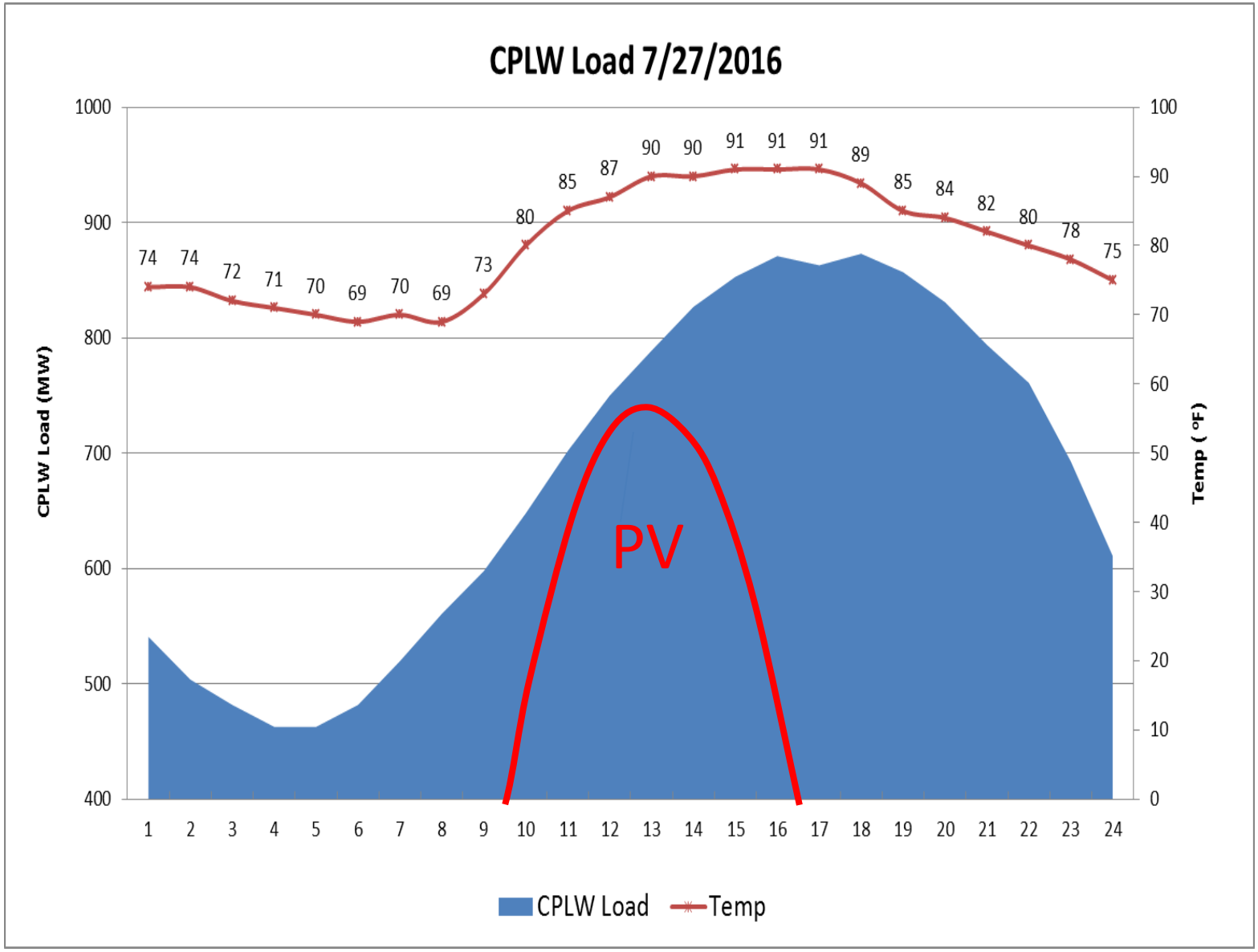
General PV Annual Supply Curve



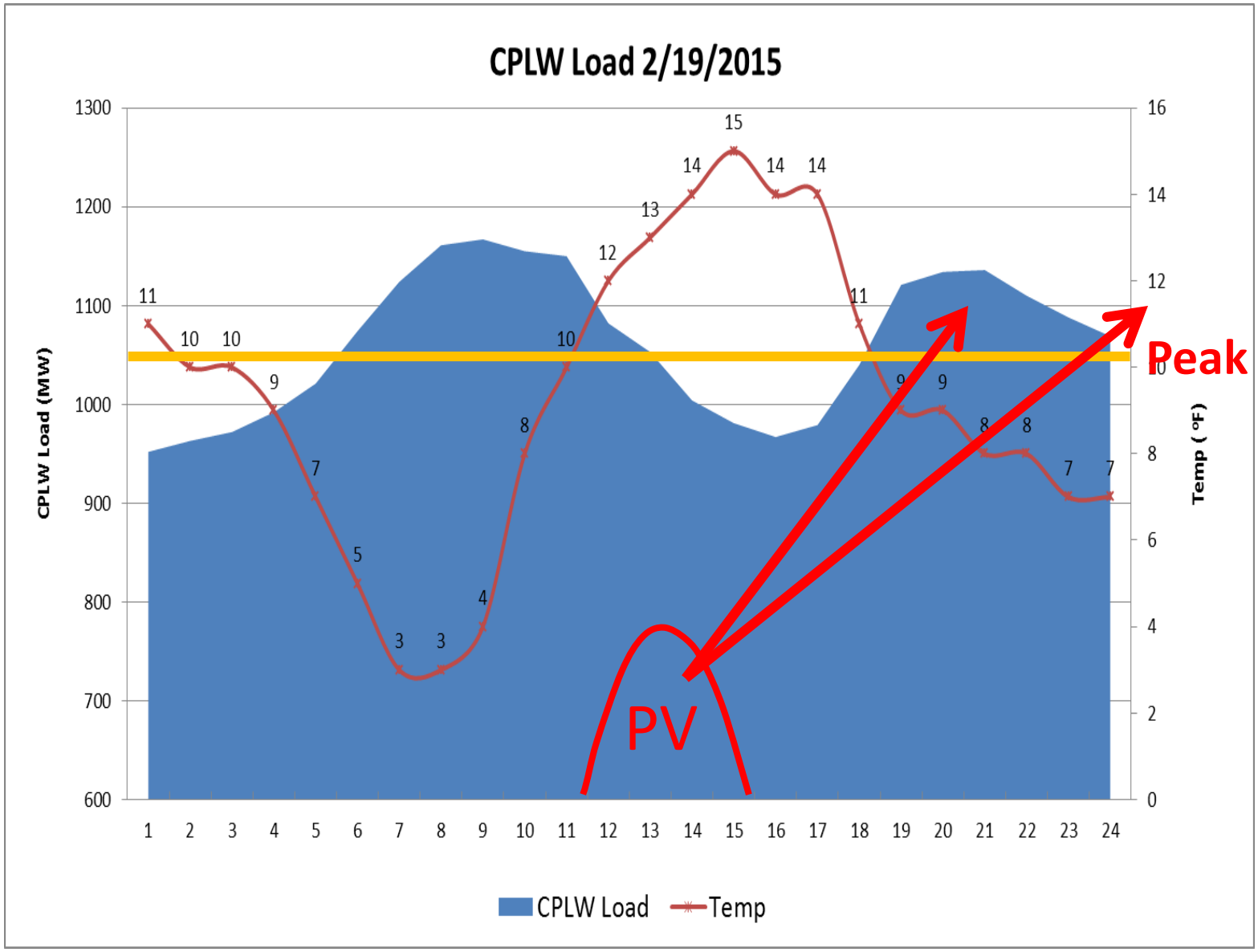
PV Output – Typical Summer Day



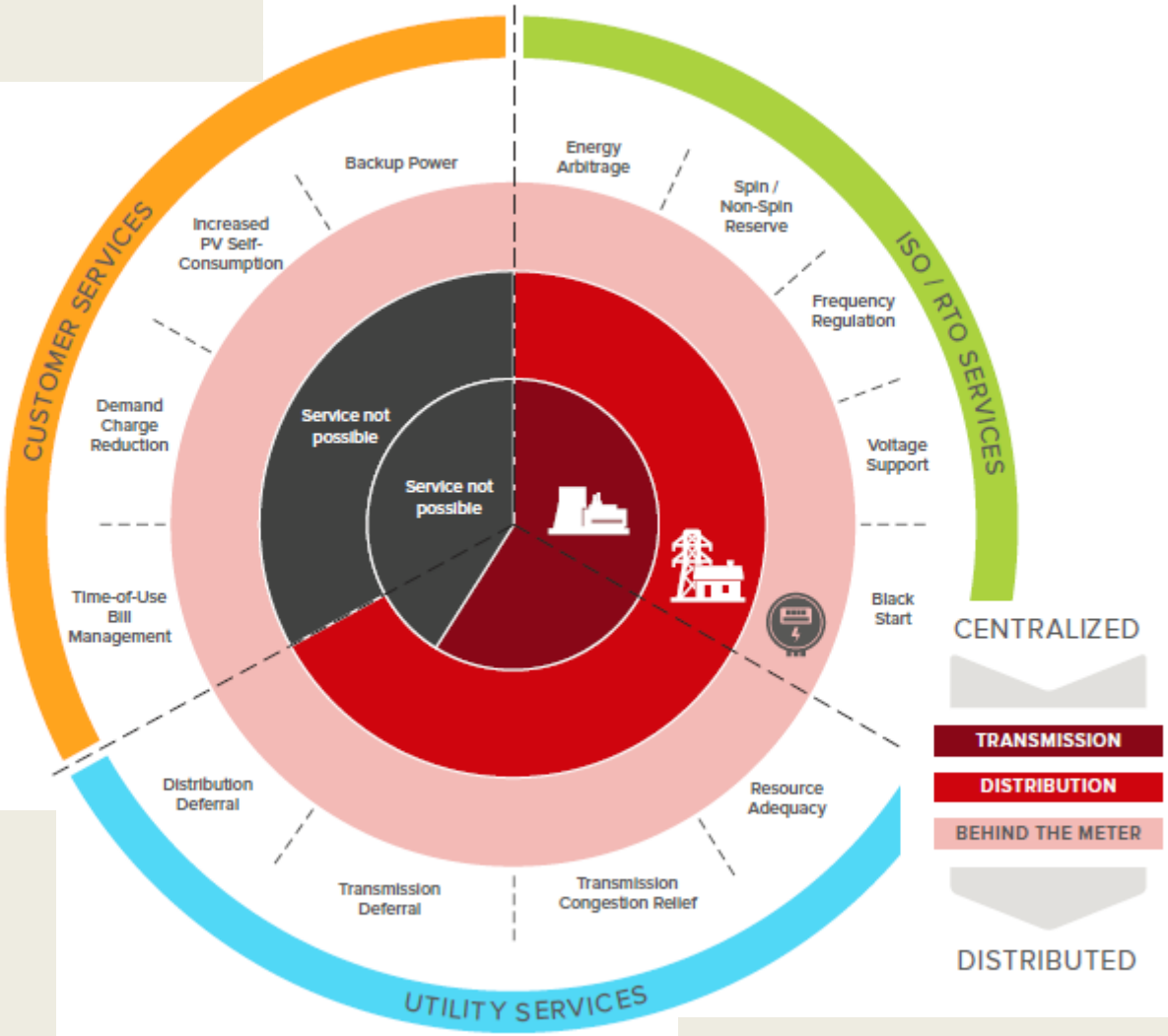
Power Demand – Typical Summer Peak



Power Demand – Typical Winter Peak

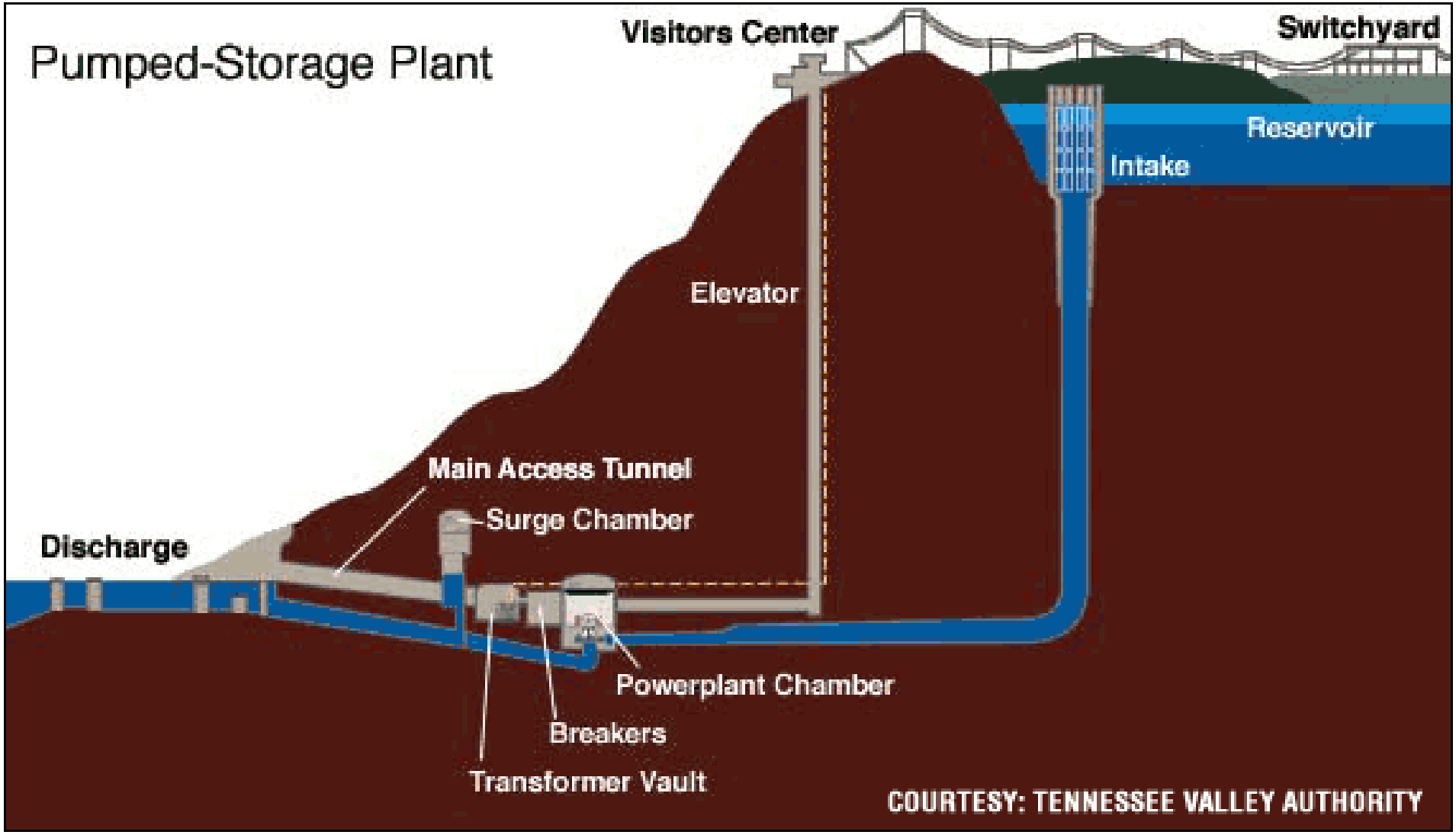


Battery Services

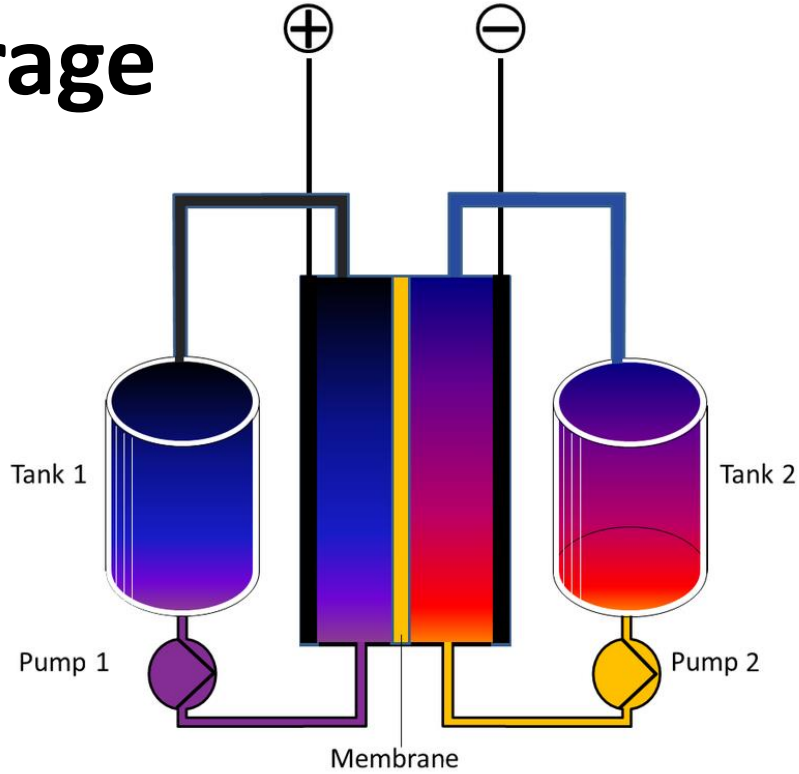


Source: RMI

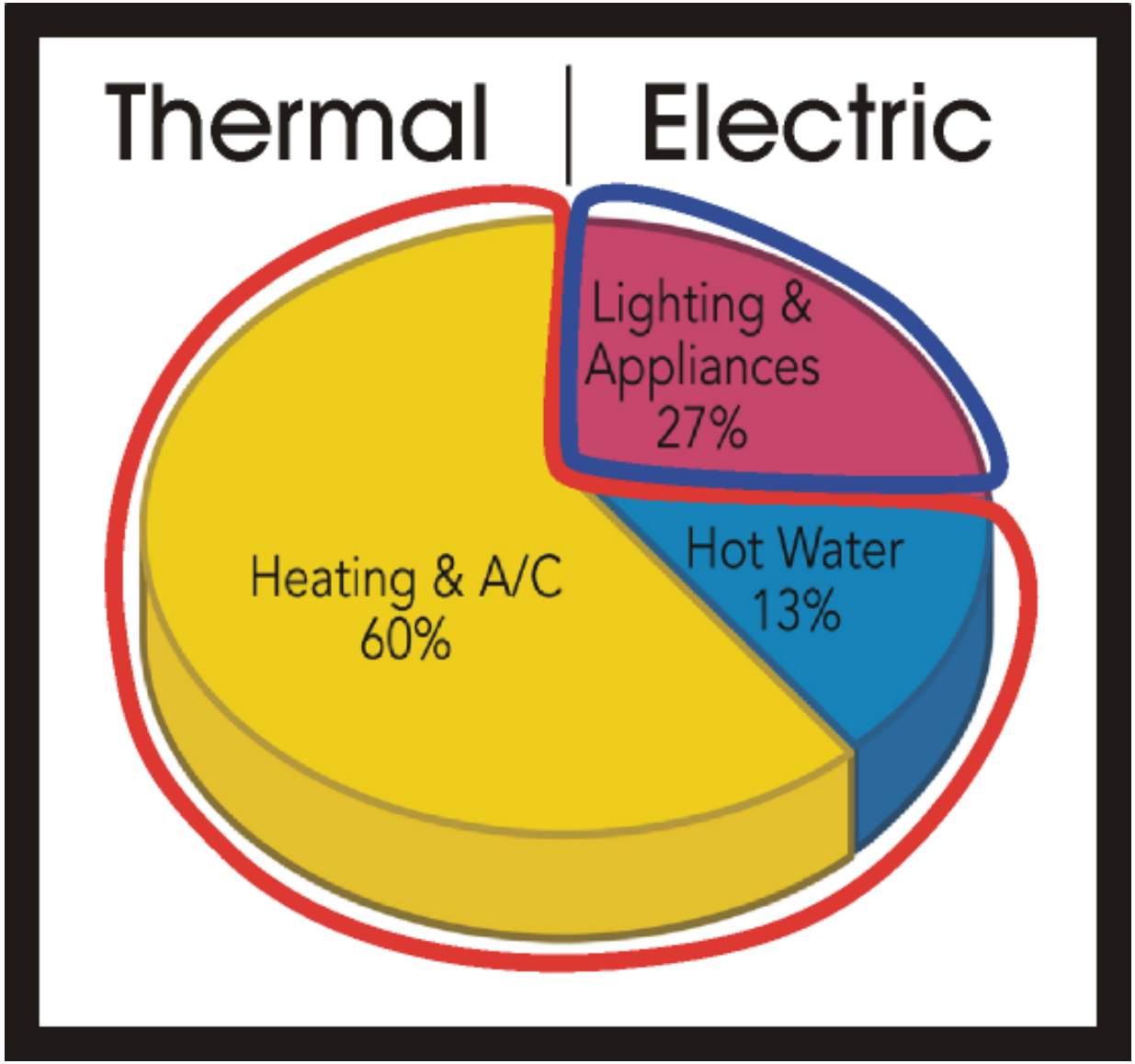
Battery – Pumped Storage (dams too!)



Batteries – Electric Storage



Typical Energy Loads (Residential)



Thermal - Heat Pump Water Heaters

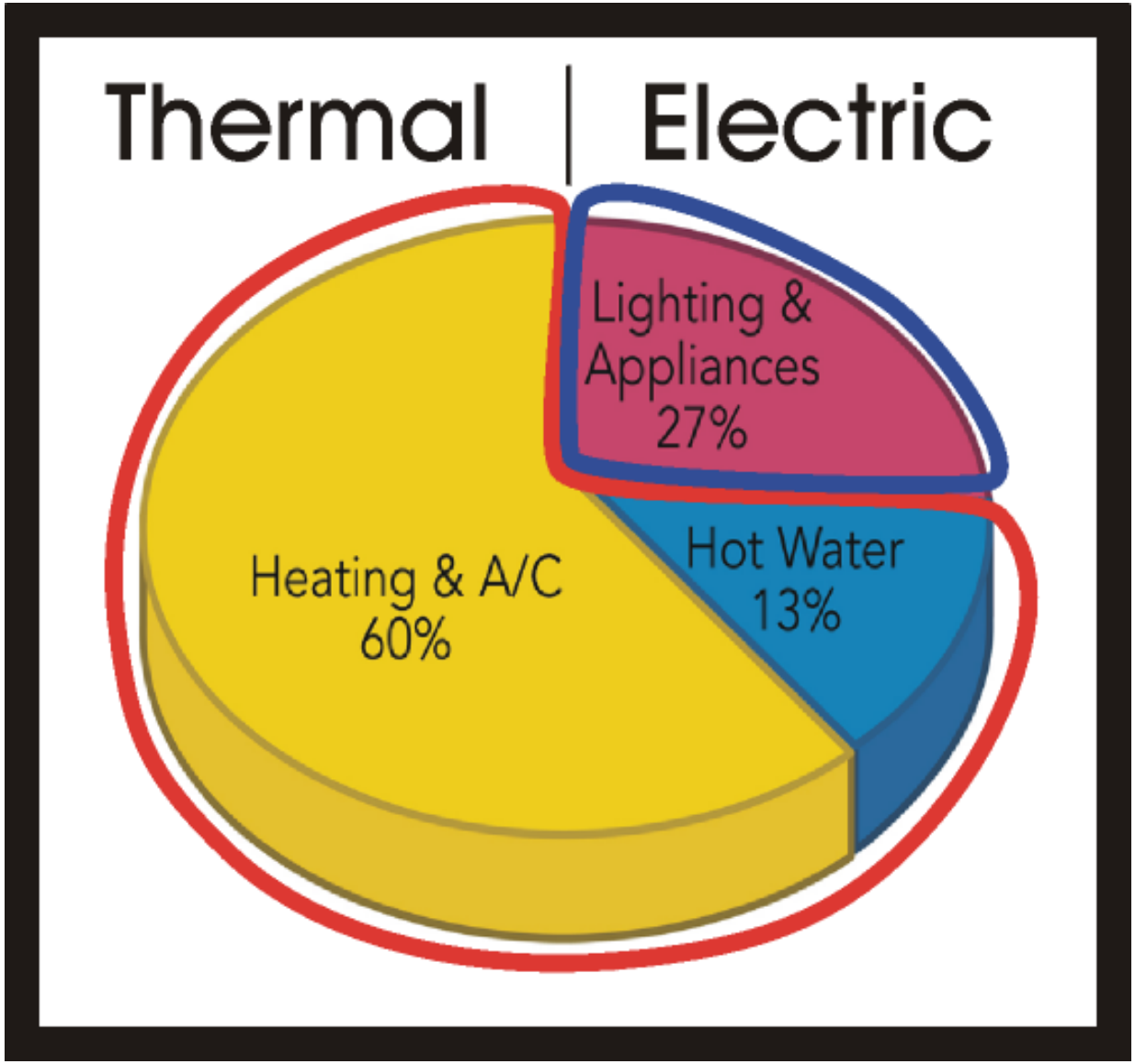
- COP ~ 2.0
- Cost: ~$1200 (verses ~$400)
- Per DOE: save >$3,400 over its lifetime (family of four)
- On-Demand Water Heater can save about $1,800 over its lifetime (family of four)
- $300 federal tax credit in 2016
- WH typically replaced every 10 years

Program:
"Energy Wise"

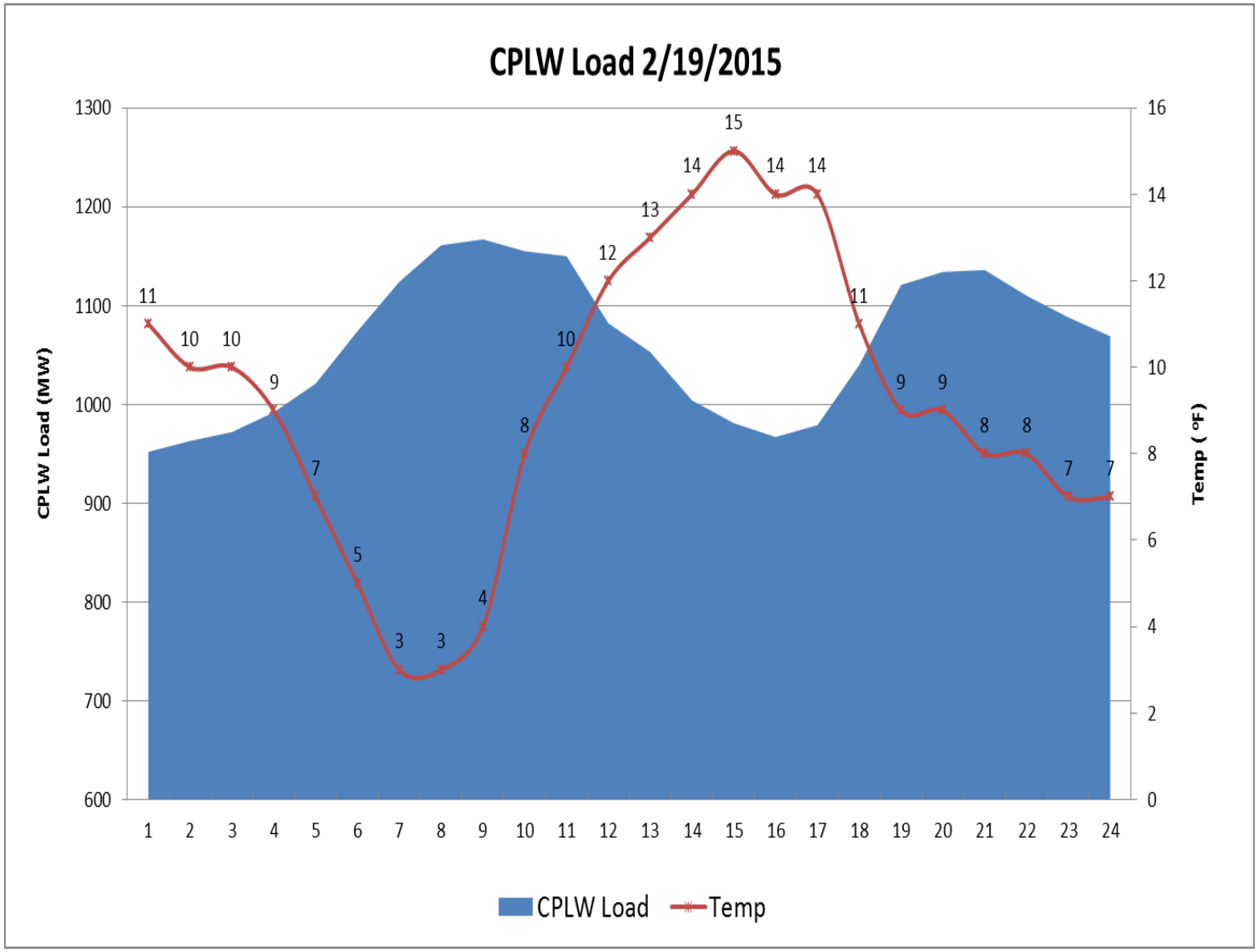
Thermal – Solar Hot Water

White Star Solar Energy, Asheville, NC

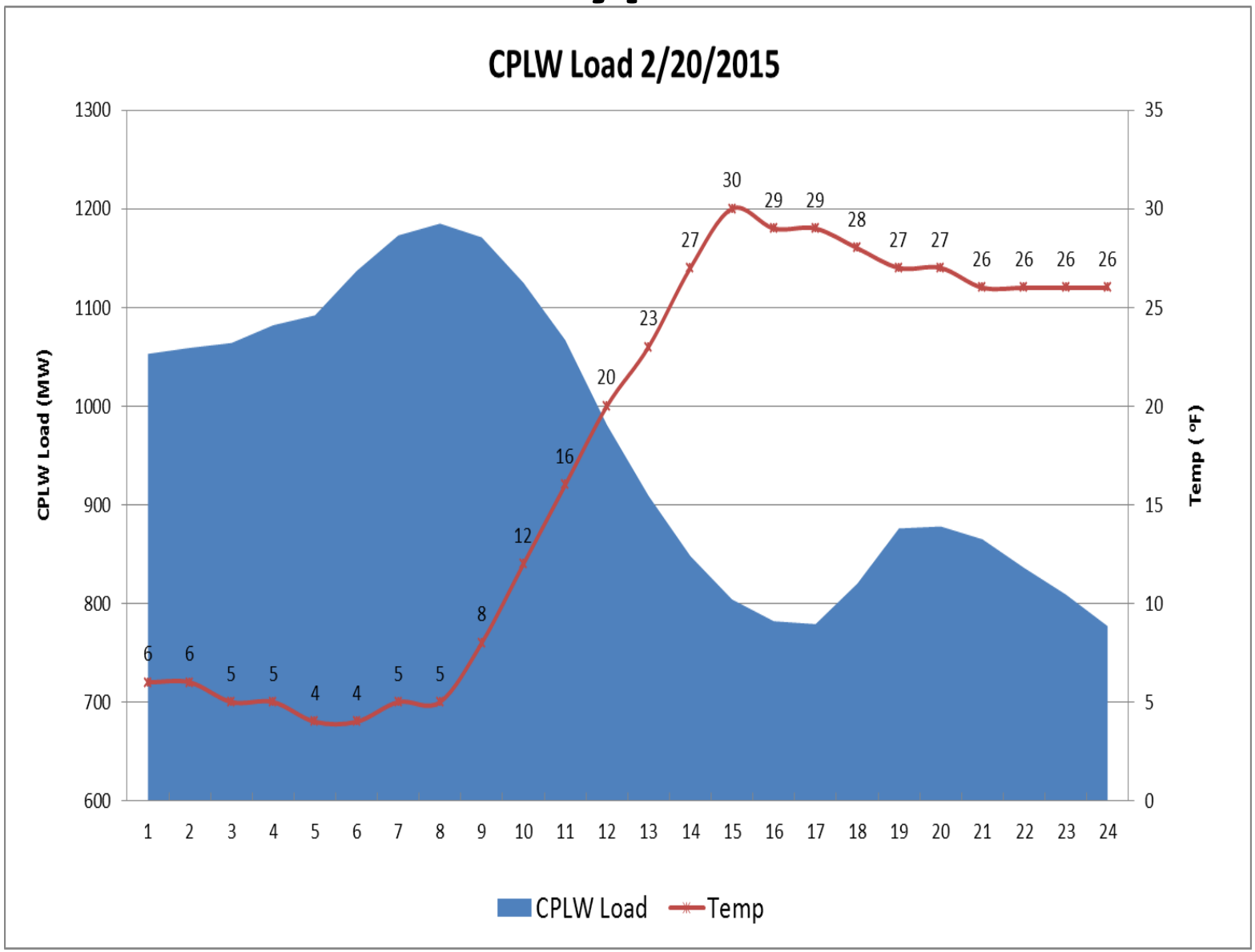
Typical Energy Loads (Residential)



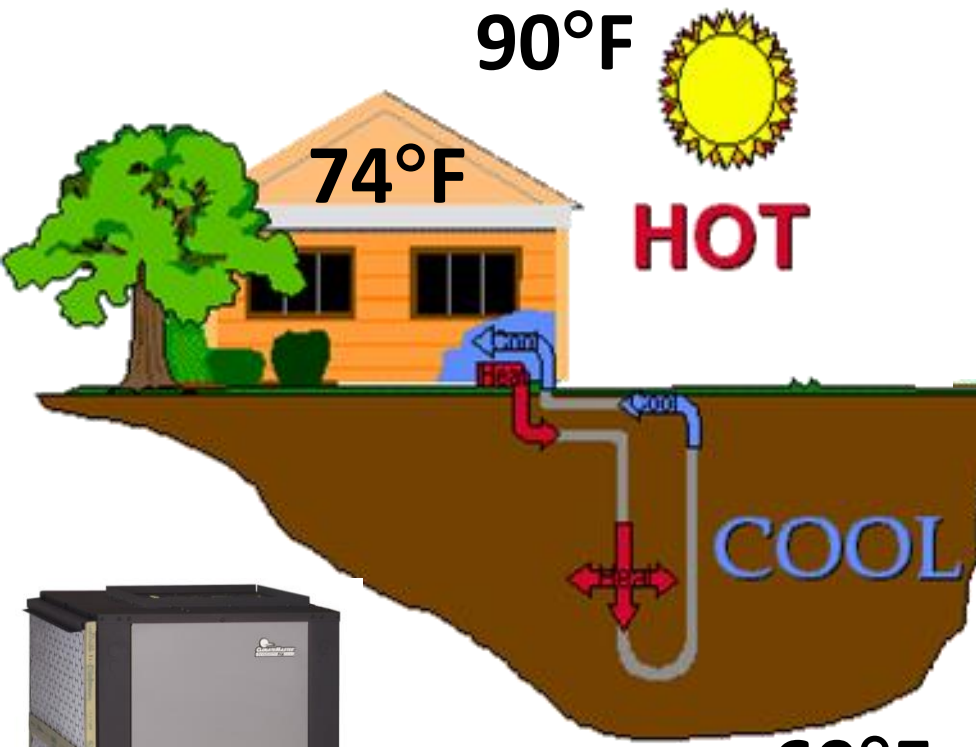
Power Demand – Typical Winter Peak #1

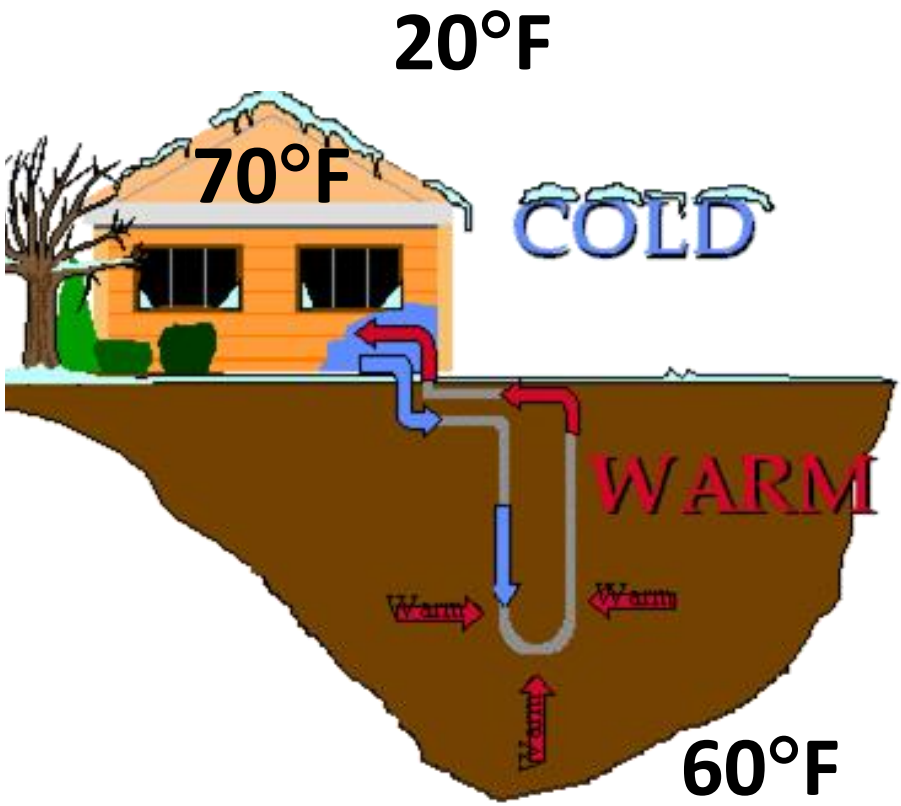


Power Demand – Typical Winter Peak #2

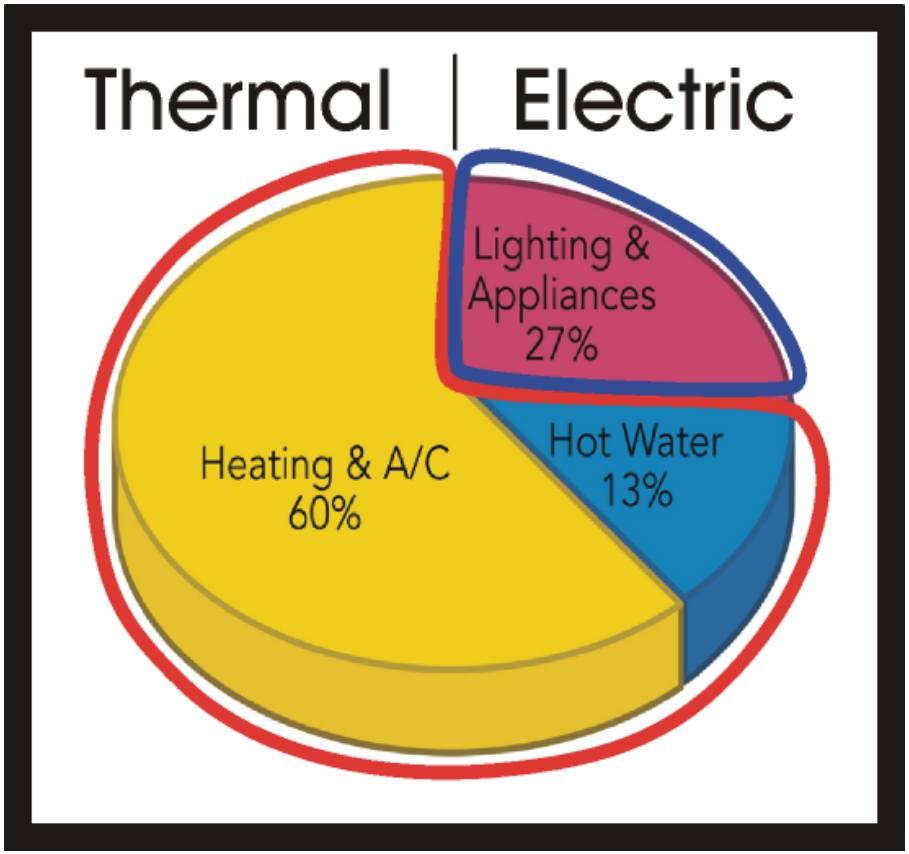


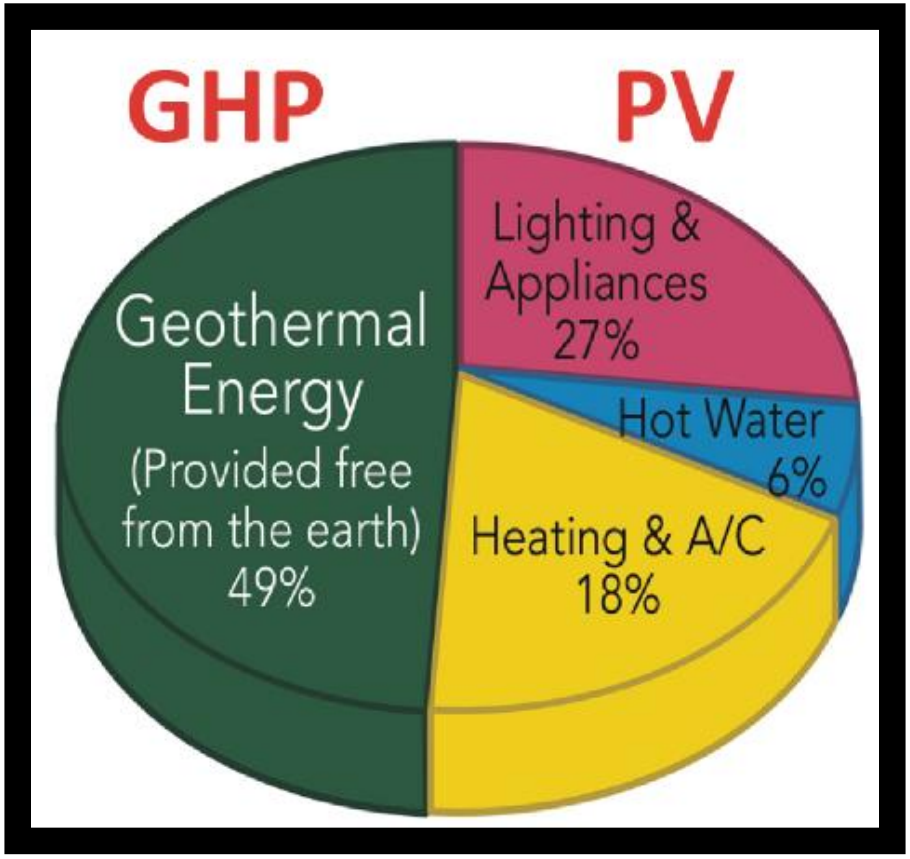
Thermal HVAC - Geothermal Basics



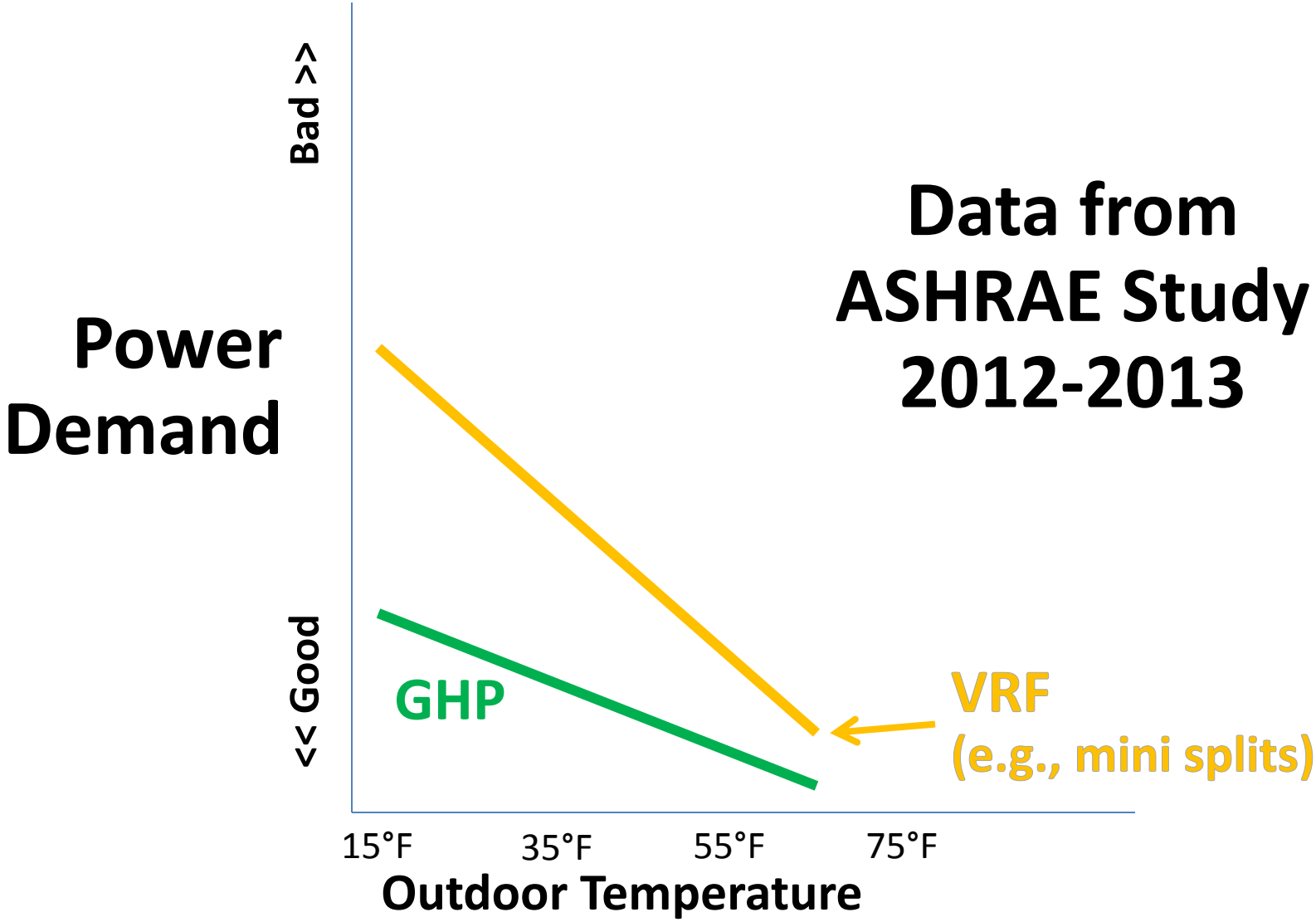
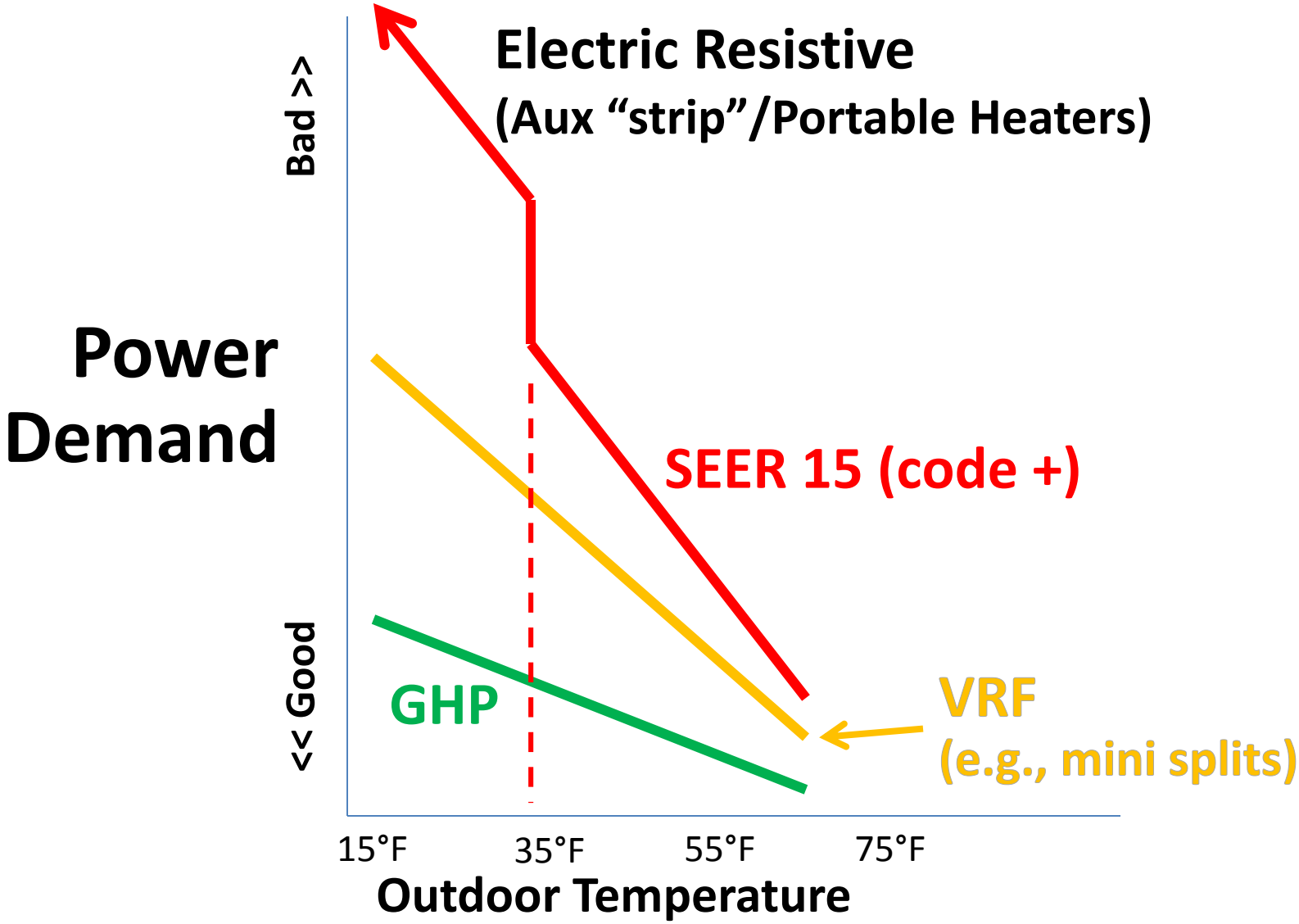


Thermal With Geothermal (GHP)





HVAC Comparison (heating only)



HVAC Comparison (heating only)