

# OPALCO 2019 RATE ANALYSIS

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OPALCO

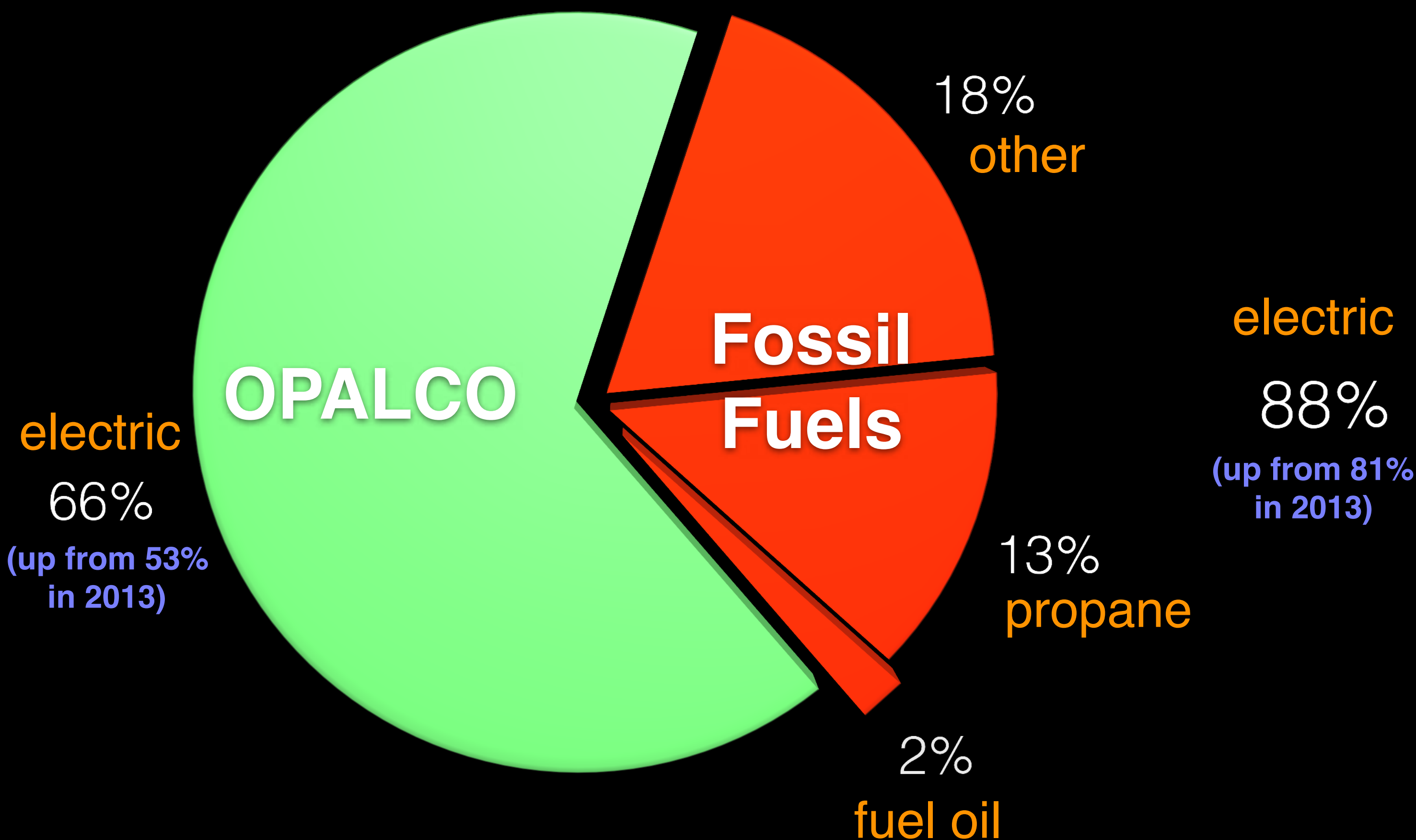
Board Meeting  
October 2018

# Electricity is the most popular form of heating in San Juan County

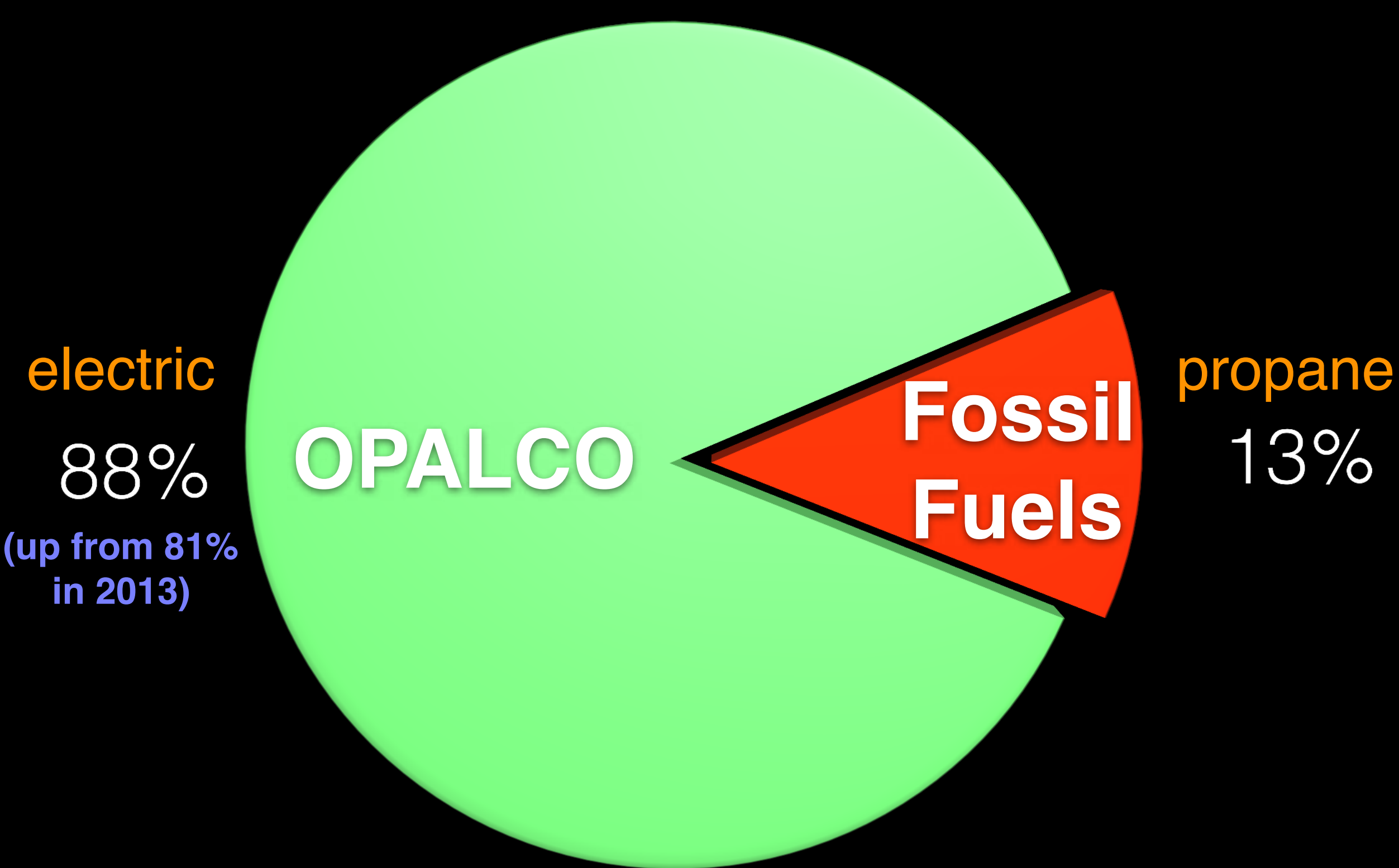
## 2016 Heating Fuels Market Share

*More people are converting to electric heating each year*

### Heating

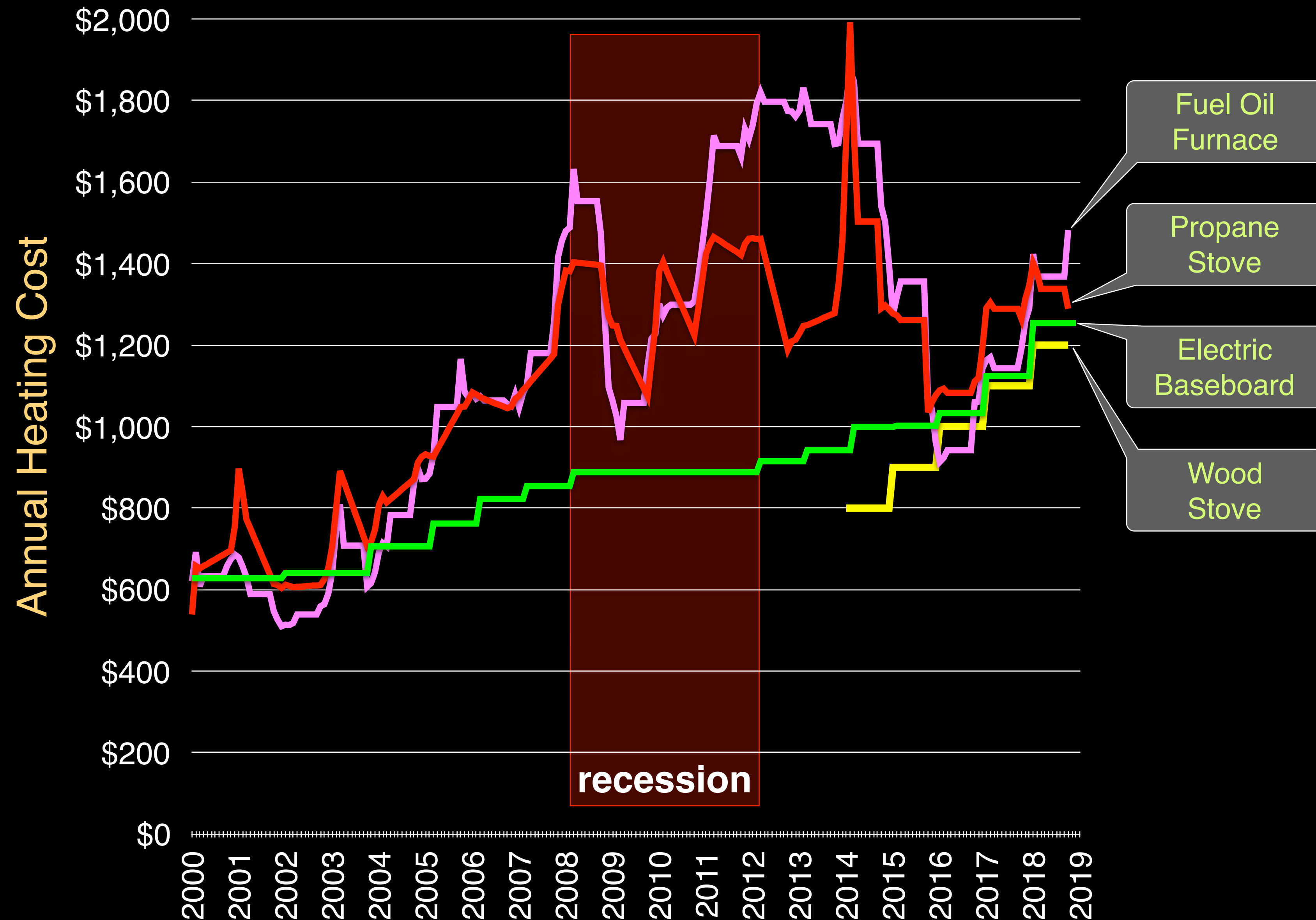


### Water Heaters



# Annual Fuel Cost of Heating a Typical Home

Comparing Standard Electric, Propane and Fuel Oil Heaters

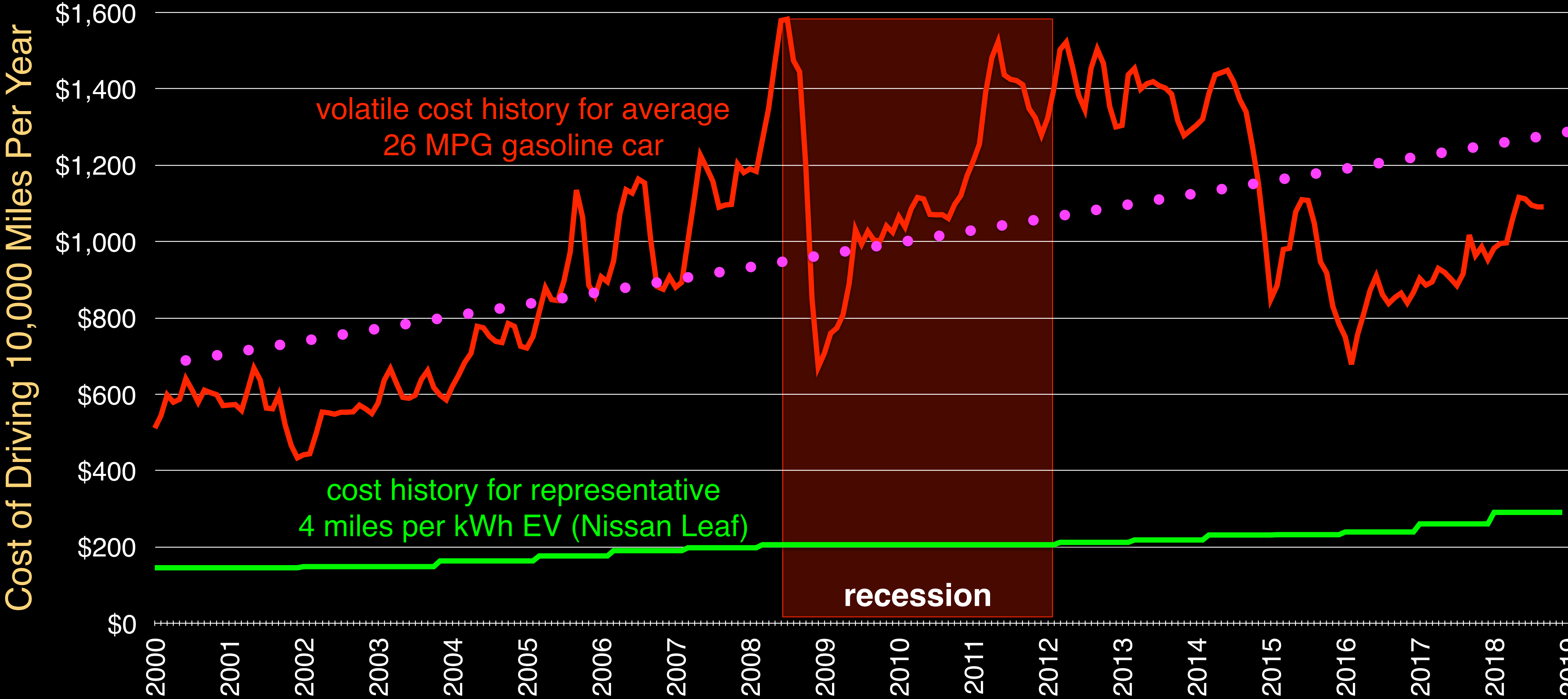


## Notes

- Fossil fuel pricing is US average, local pricing is typically slightly more expensive.
- Heating cost for typical 40 million BTU annual heat load SJC home.
- Heater Efficiency**
  - Electric baseboard: 100%
  - Propane stove: 81%
  - Fuel oil ducted furnace: 82%
  - Ducting: 80%
- Current Fuel Prices**
  - Electric: \$.1007 per kWh
  - Propane: \$2.50 per gallon
  - Fuel oil: \$3.00 per gallon
  - Wood: \$300 per cord

# Annual Fuel Cost of Driving a Gas Car Versus Electric Vehicle (EV)

Driving 10,000 miles each year

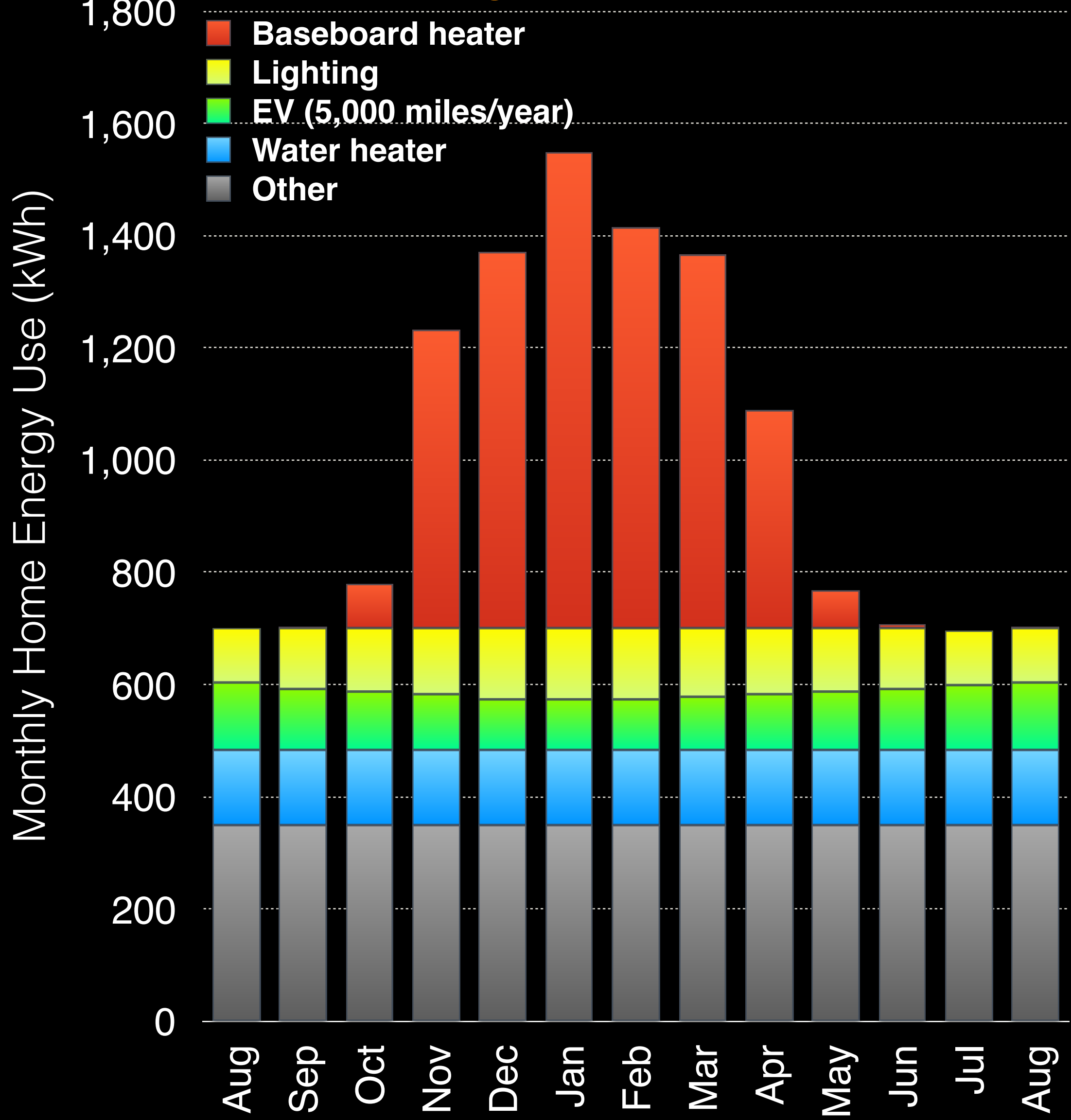


Electric price based on OPALCO rates through 2018. Gas price - regular octane gasoline, average US price. Island gas prices tend to be 10%+ higher. Representative EV gets 4 miles per kWh. Representative gasoline car gets US average 26 MPG.

# Typical Monthly Residential Energy Use: All Electric Home - Standard and Smart

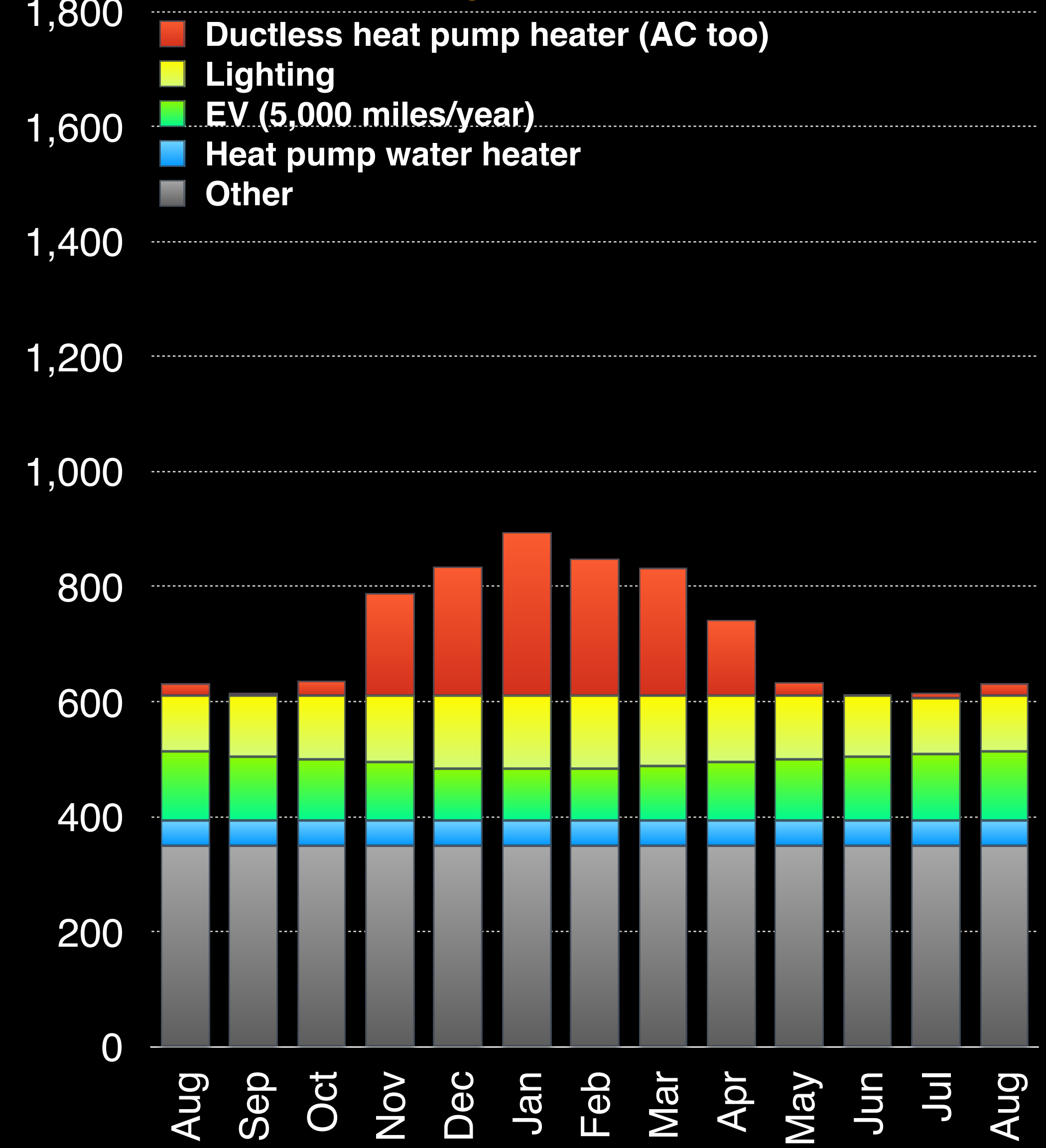
## Typical All-Electric Home

Avg. 1006 kWh/month



## Smart Electric Home

Avg. 717 kWh/month

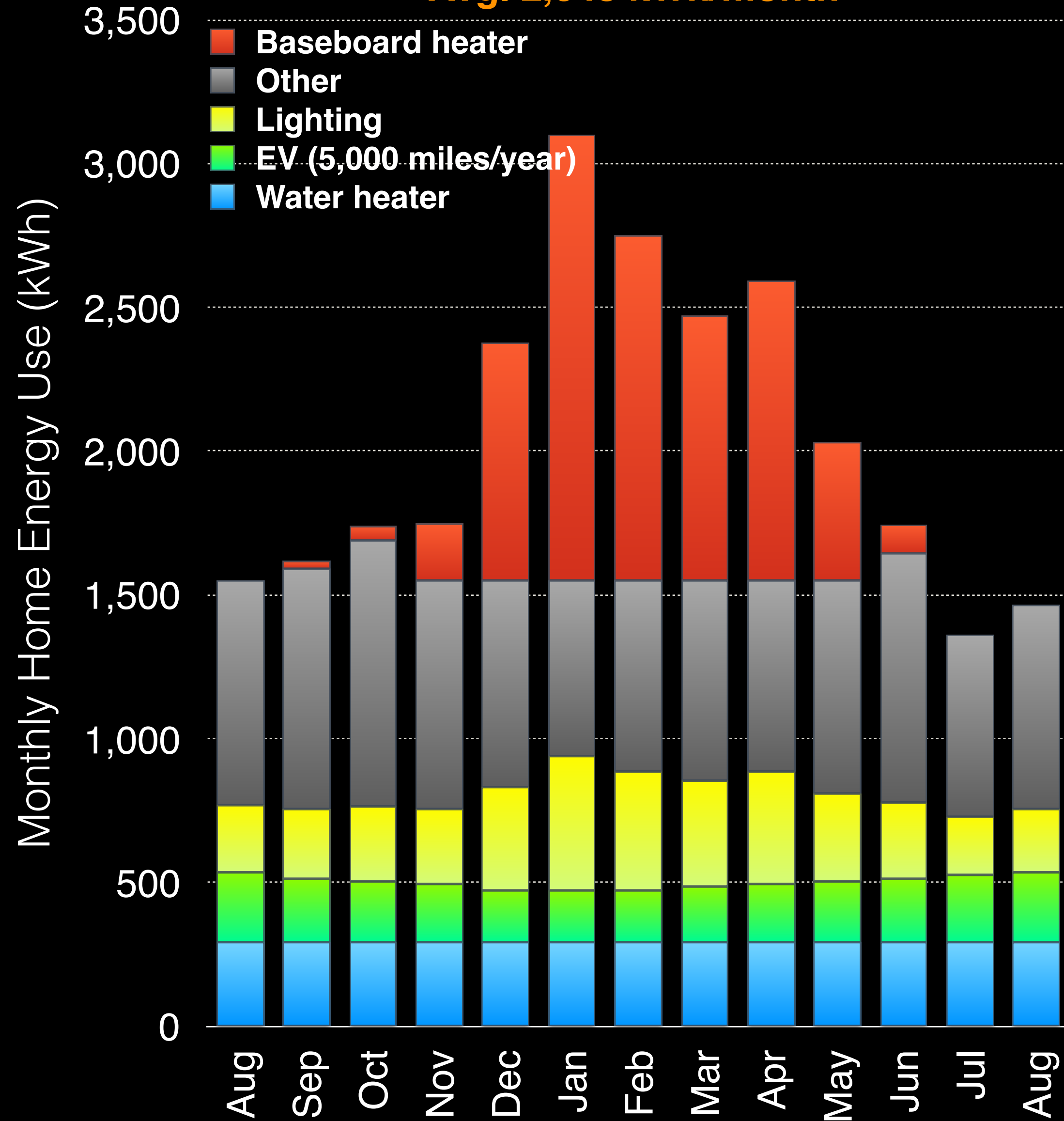




# Typical Family of 4 Energy Use: All Electric Home - Standard and Smart

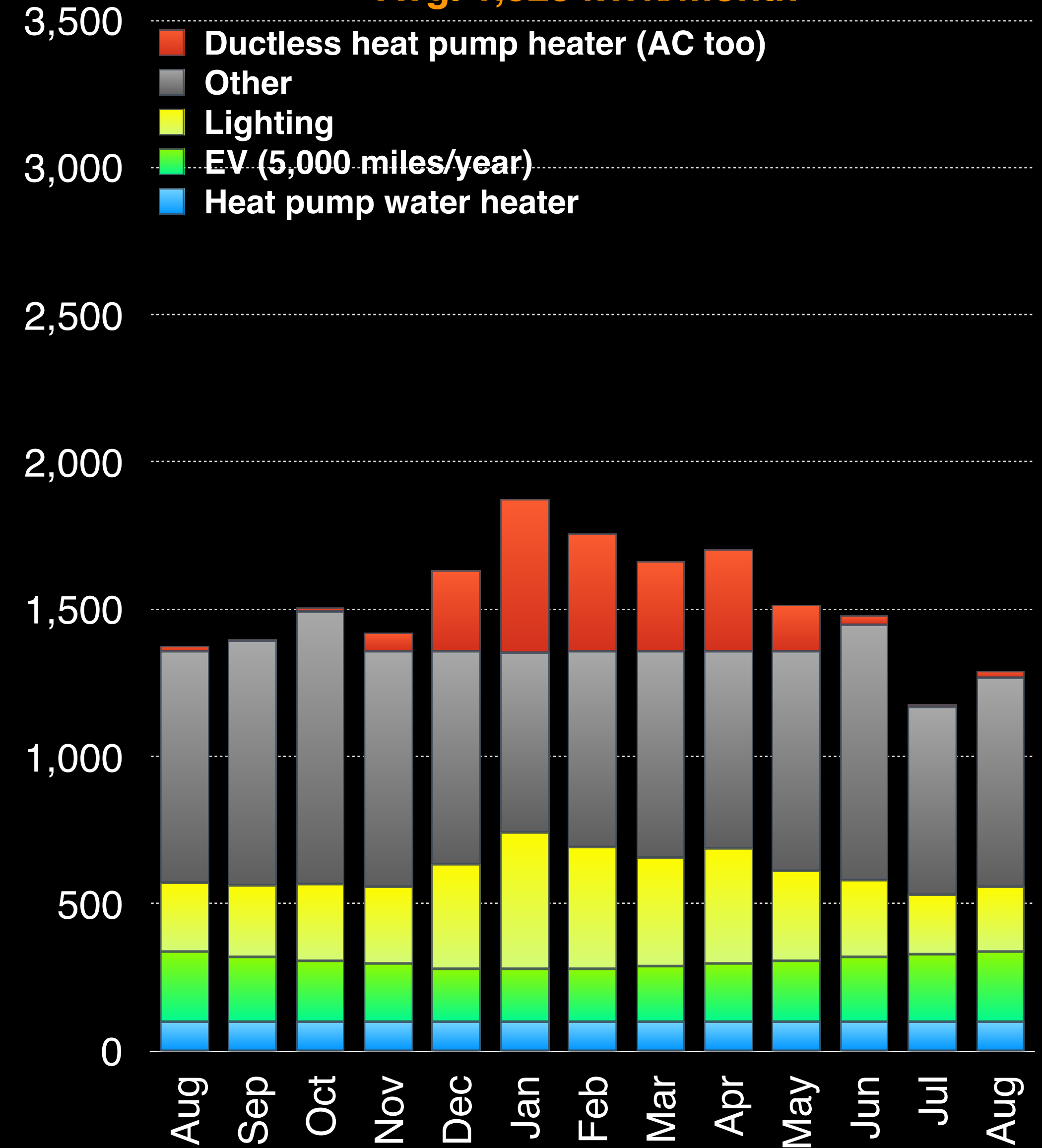
## Typical Family of 4 Home

Avg. 2,043 kWh/month



## Smart Family of 4 Home

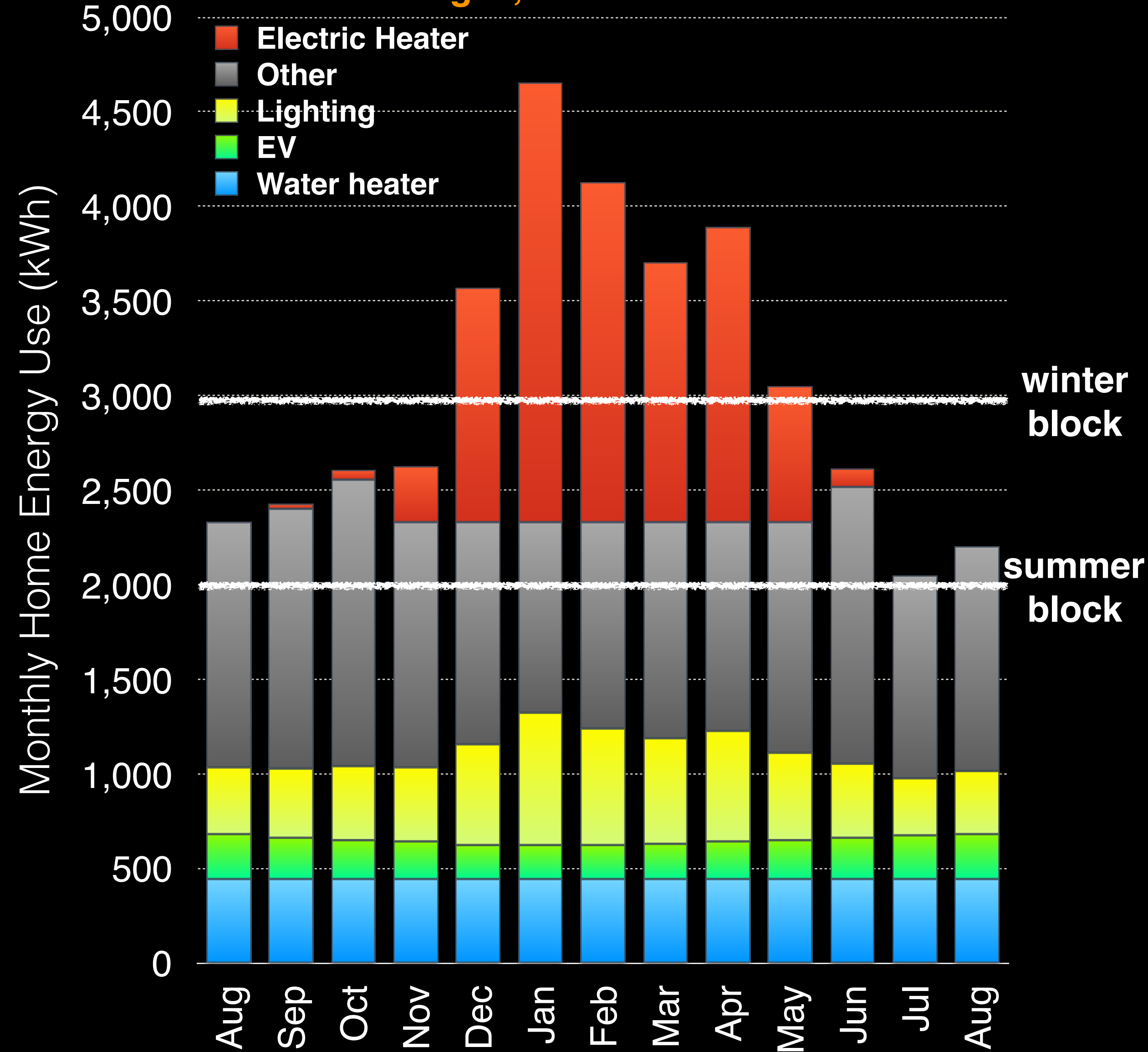
Avg. 1,523 kWh/month



# Typical Family of 4 Energy Use: All Electric Home - Standard and Smart

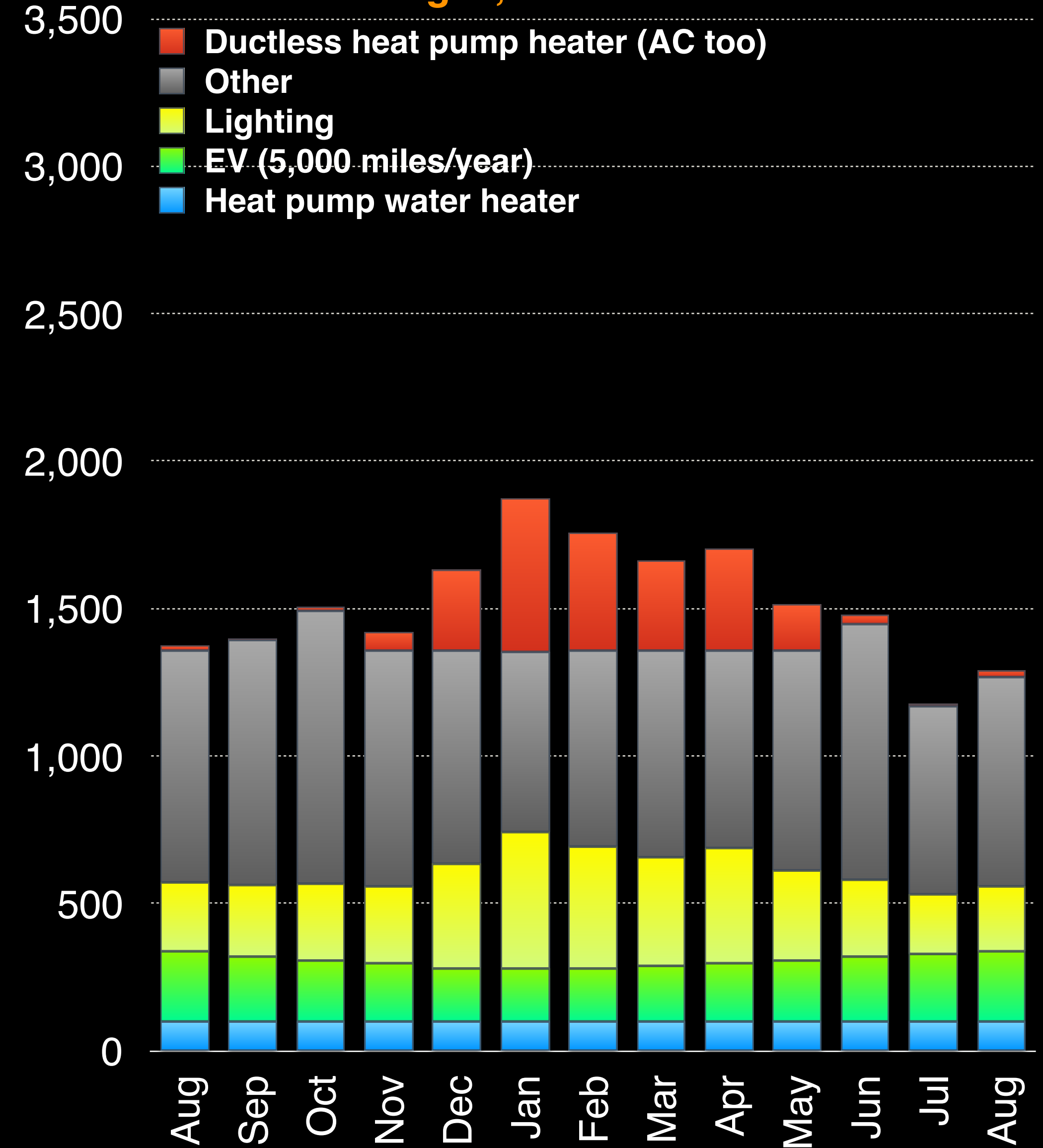
## Family of Four Home

Avg. 3,064 kWh/month



## Smart Family of 4 Home

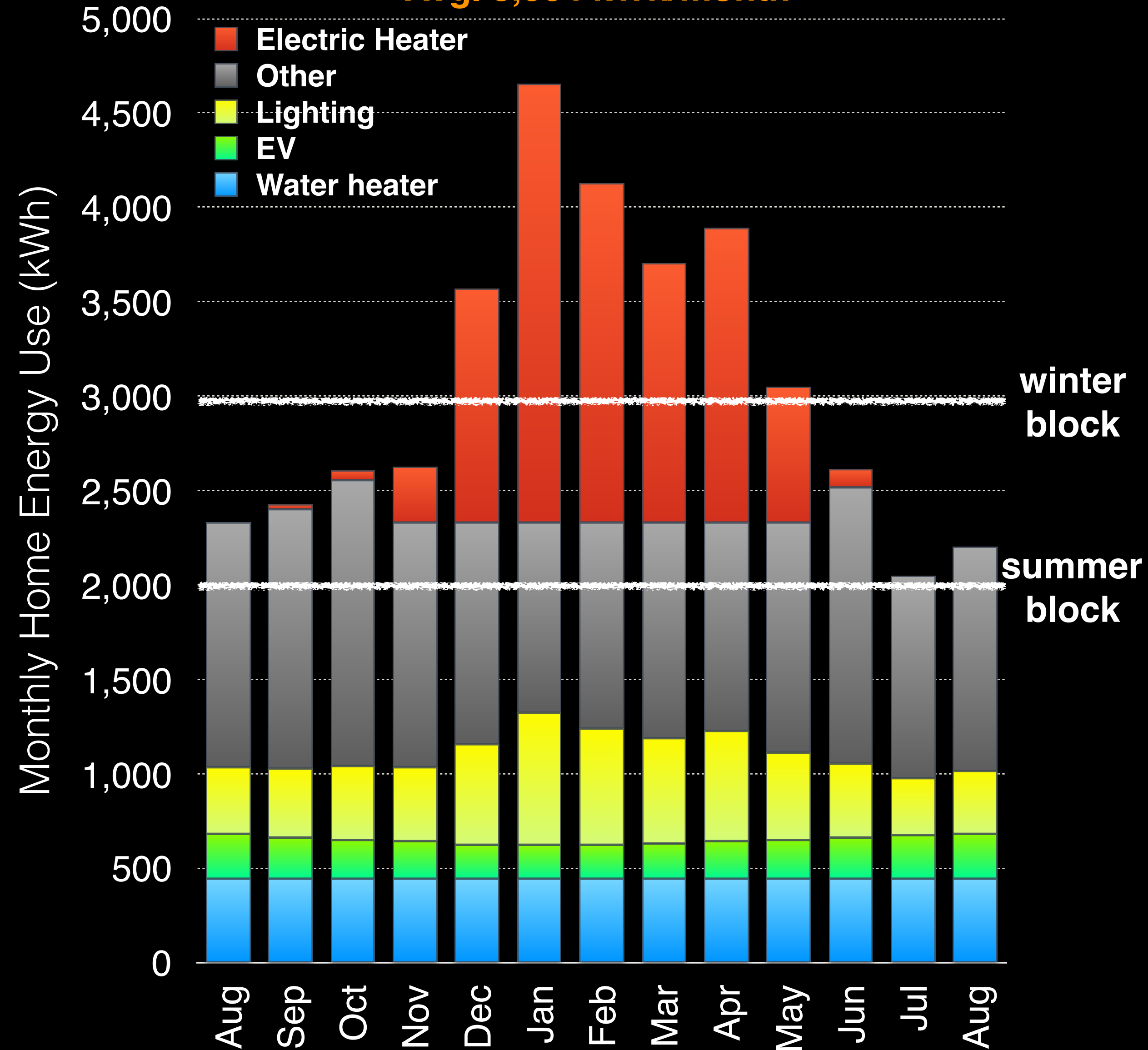
Avg. 1,523 kWh/month



# Typical Family of 4 Energy Use: All Electric Home - Standard and Smart

## Family of Four Home

Avg. 3,064 kWh/month

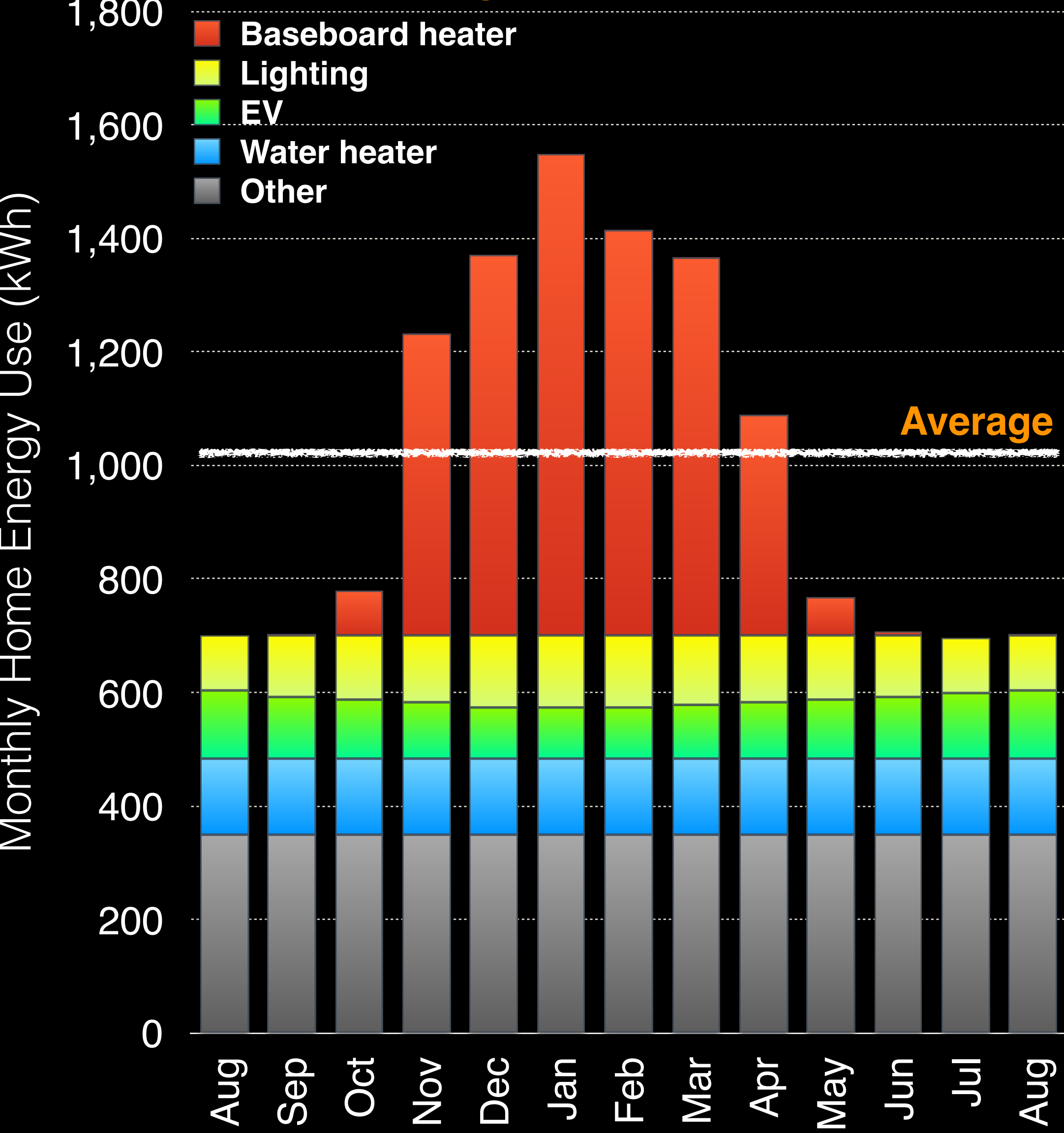




# Typical Monthly Residential Energy Use: All Electric Home - Standard and Smart

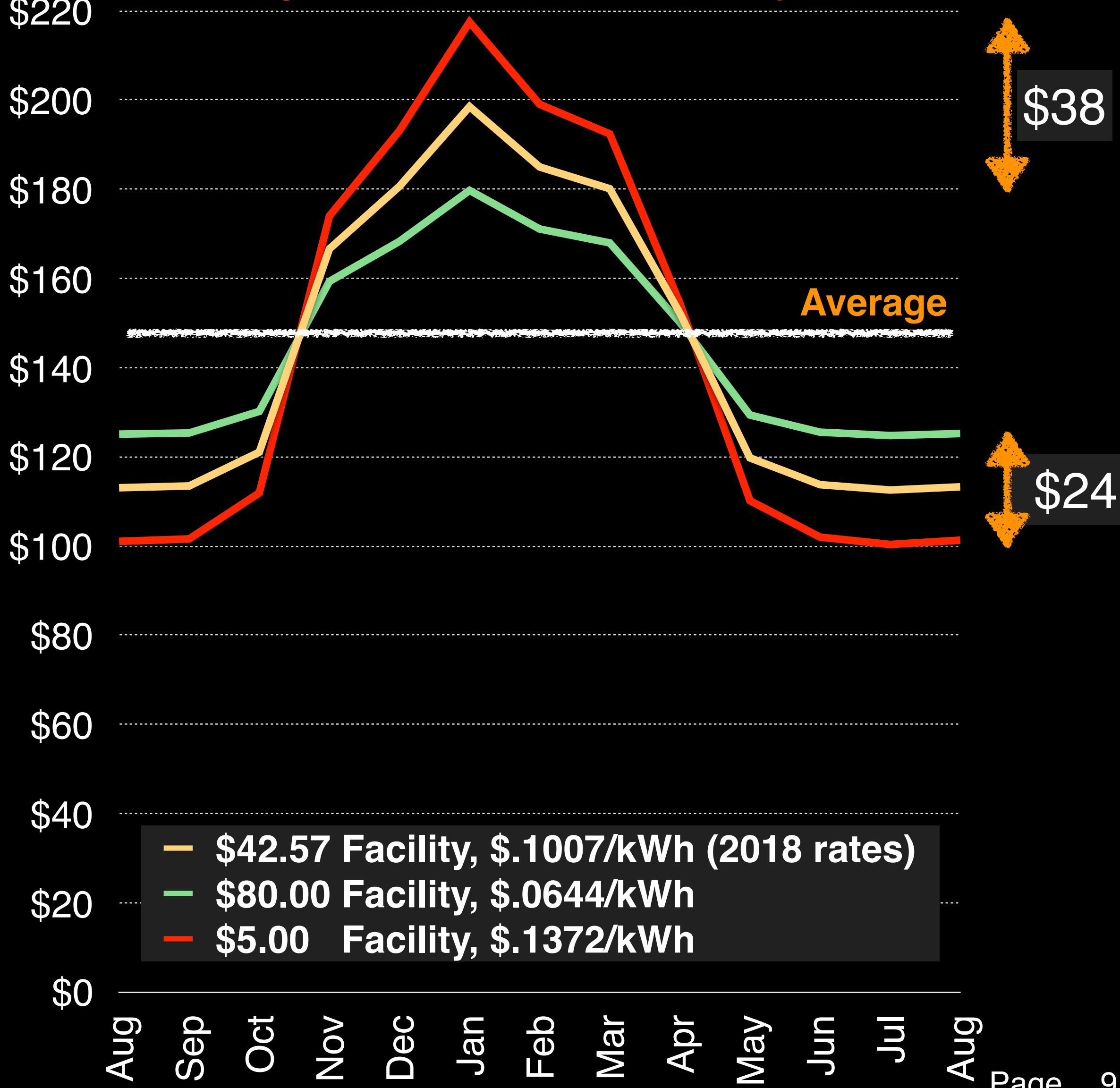
## Typical All-Electric Home

Avg. 1006 kWh/month



## Monthly Bill: 3 Rates

Avg. bill = \$146/month, \$1,757/year



# Typical All-Electric Average Monthly Residential Bill

## For various rates, loads, and winter conditions

		Average Monthly Bill			
Residential	Avg. kWh per month	2018	+5% Facility	+5% kWh	+50/50
Avg. Winter	1,055	\$149.30	\$156.62	\$156.82	\$156.75
Cold Winter	1,134	\$157.27	\$164.59	\$165.36	\$165.13
Warm Winter	989	\$142.59	\$149.63	\$149.63	\$149.71
Light User*	513	\$94.71	\$102.03	\$98.37	\$99.46

**Note:** Light User - Average winter. Typically a seasonal home or heating with fossil fuel, or very efficient, or solar member

# Billed Versus Actual Cost as a % of Total Cost

Typical OPALCO  
Residential Bill

Usage  
Charge

*top heavy -  
leads to over  
charging in cold  
winters and  
undercharging  
in warm winters*

Facility  
Charge

2010  
2011  
2012  
2013  
2014  
2015  
2016  
2017

*Rule of Thumb*

**Bill = Rates x Weather**

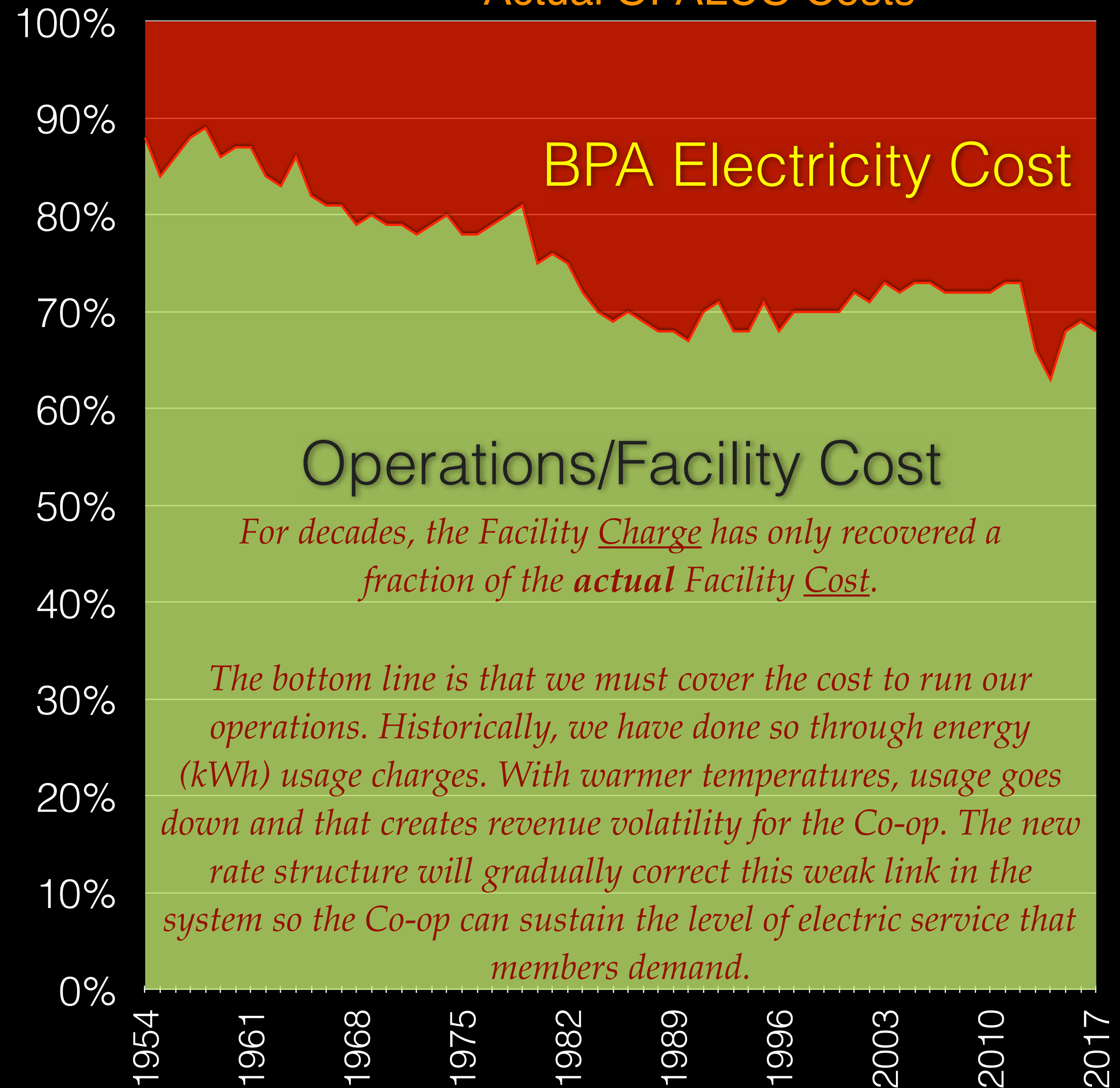
Actual OPALCO Costs

BPA Electricity Cost

Operations/Facility Cost

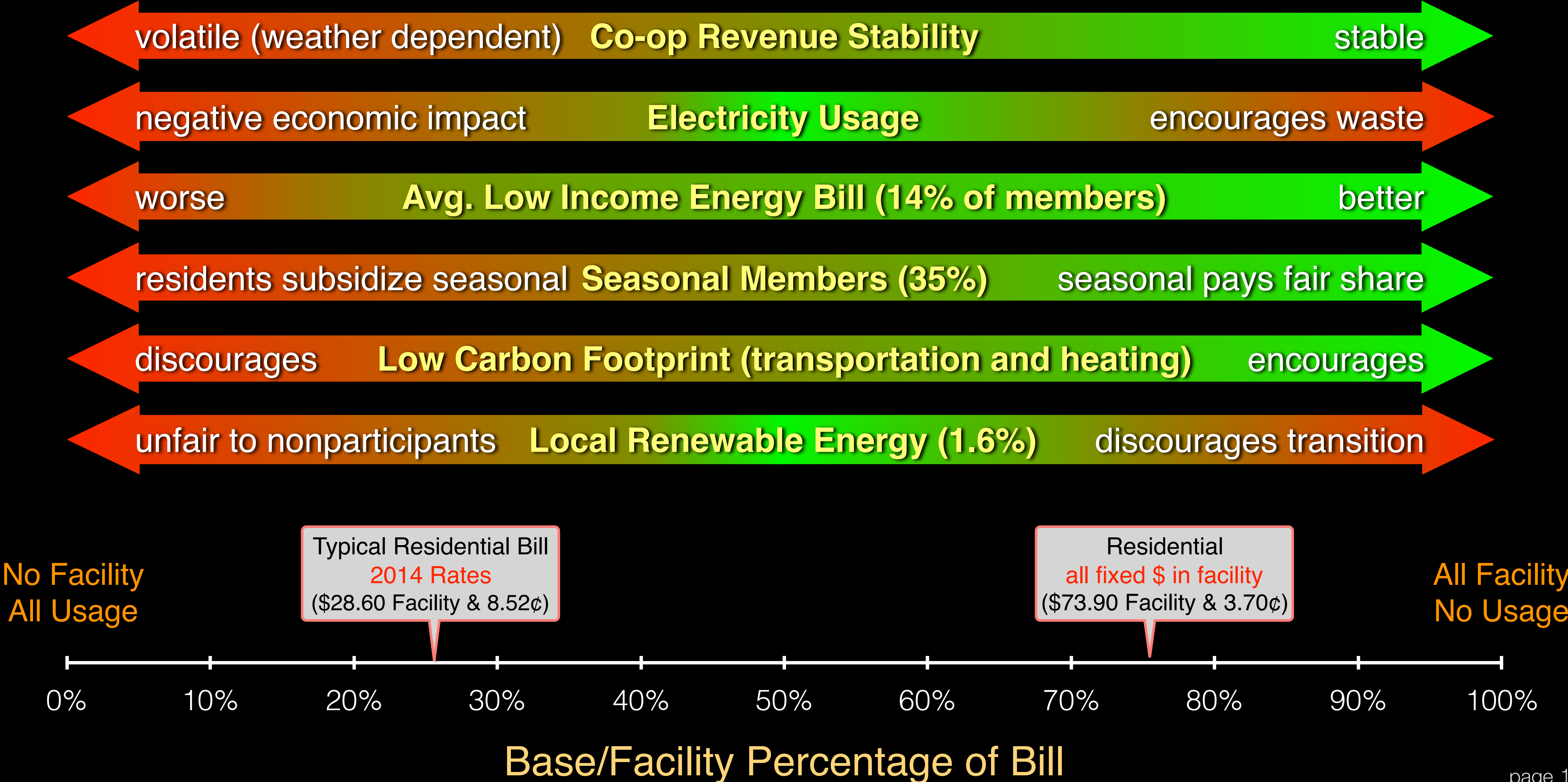
*For decades, the Facility Charge has only recovered a  
fraction of the **actual** Facility Cost.*

*The bottom line is that we must cover the cost to run our  
operations. Historically, we have done so through energy  
(kWh) usage charges. With warmer temperatures, usage goes  
down and that creates revenue volatility for the Co-op. The new  
rate structure will gradually correct this weak link in the  
system so the Co-op can sustain the level of electric service that  
members demand.*





# OPALCO Facility Charge Analysis



*Thank You!*