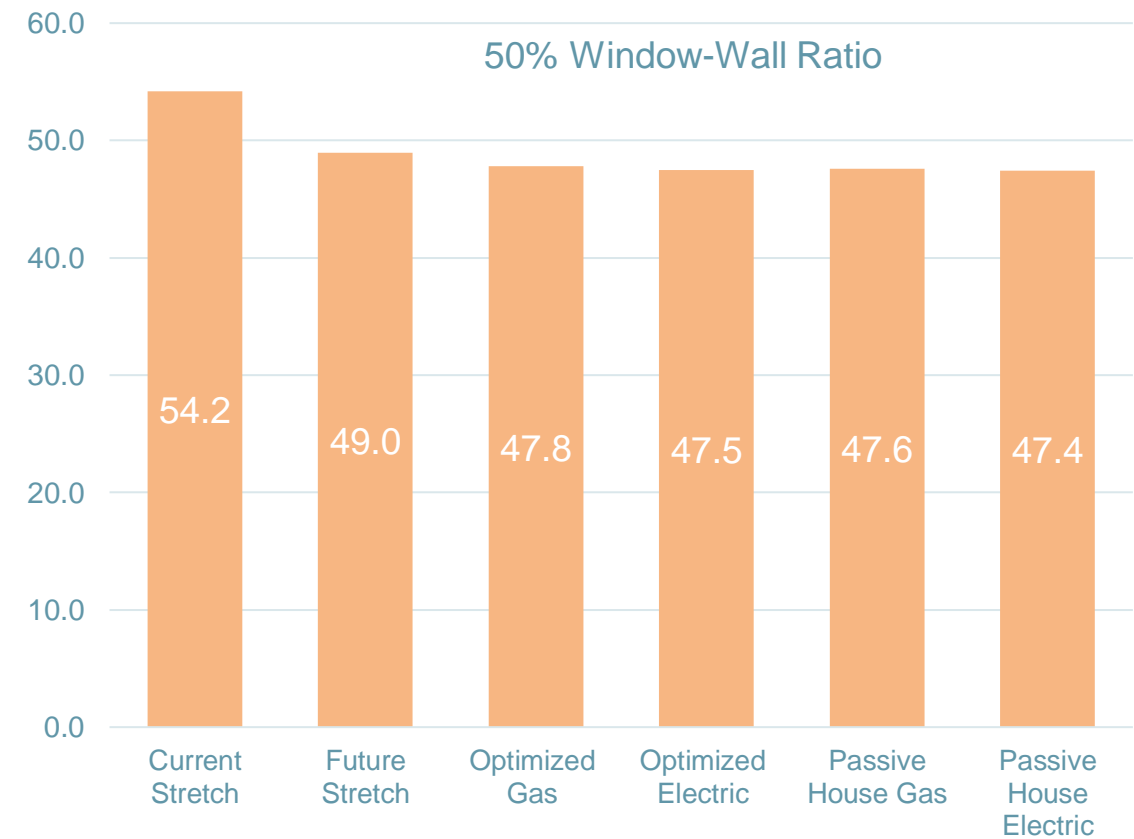
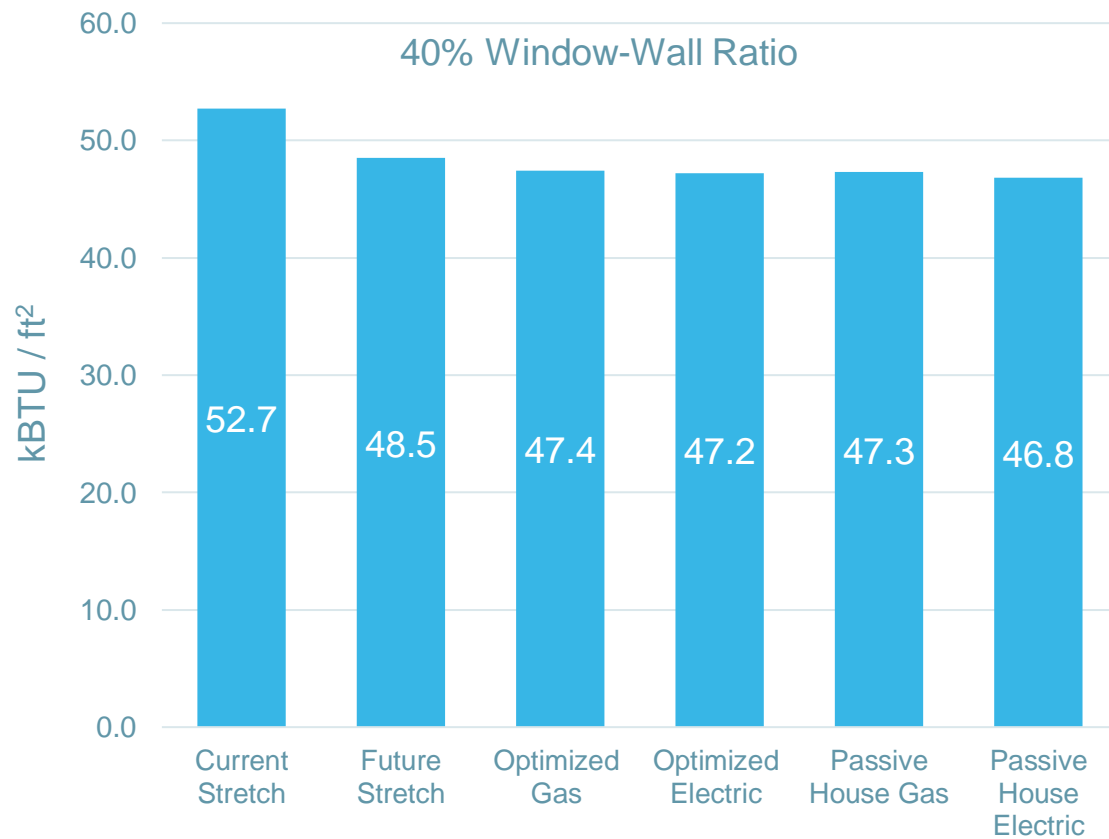


Large Office

Site EUI

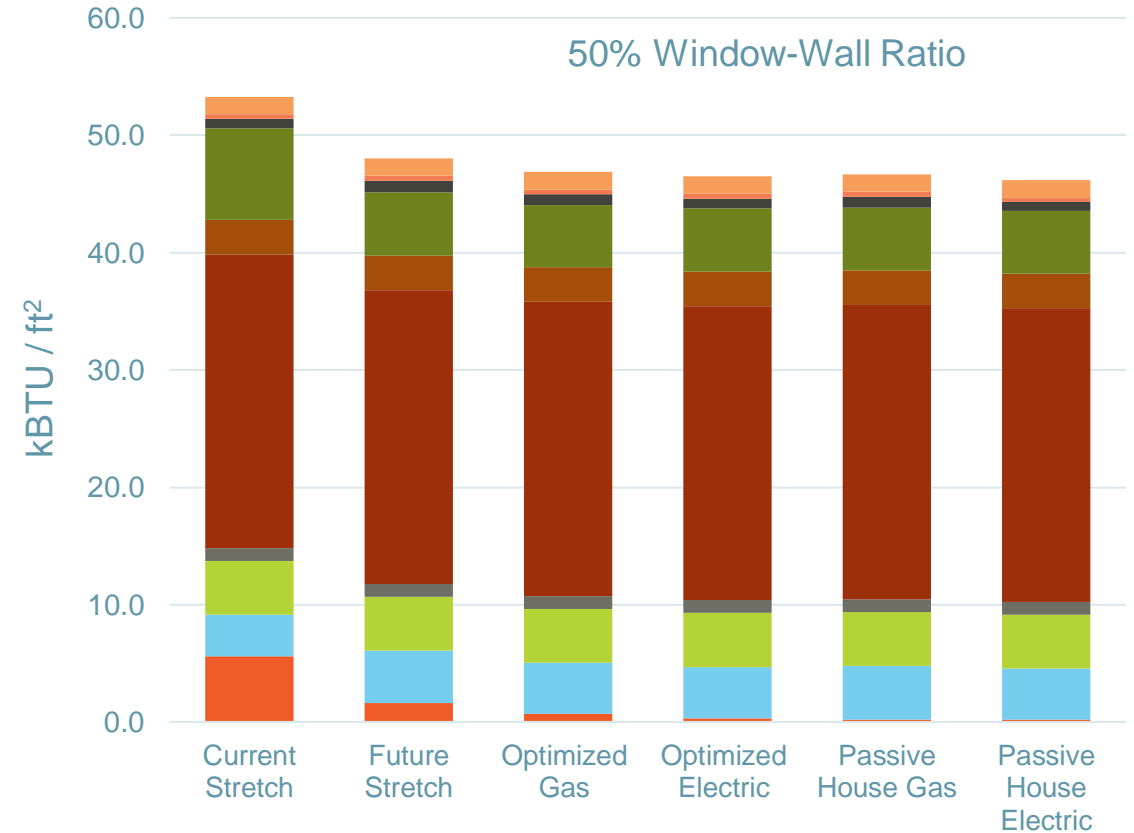
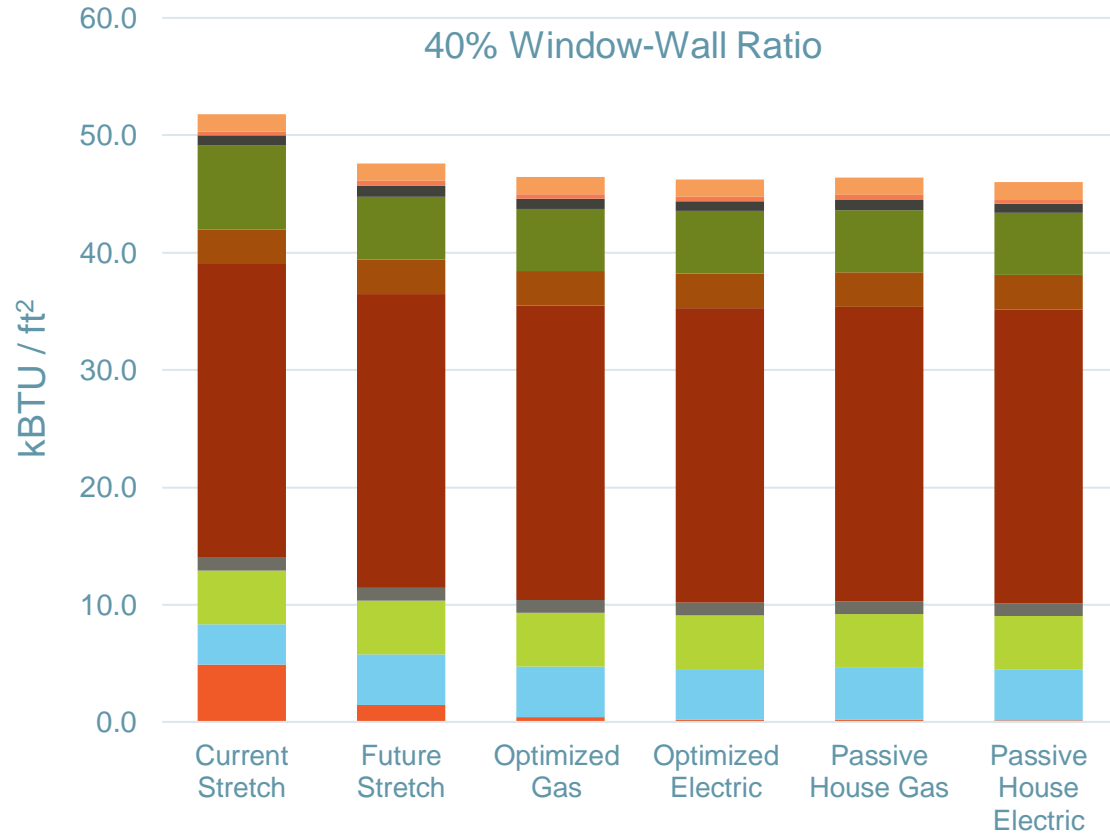


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Site EUI - by Energy End Use



- Space Heating
- Ext. Lighting
- Fans
- Humidification
- Space Cooling
- Int. Equip.
- Pumps
- Water Systems
- Int. Lighting
- Elevator
- Heat Rejection

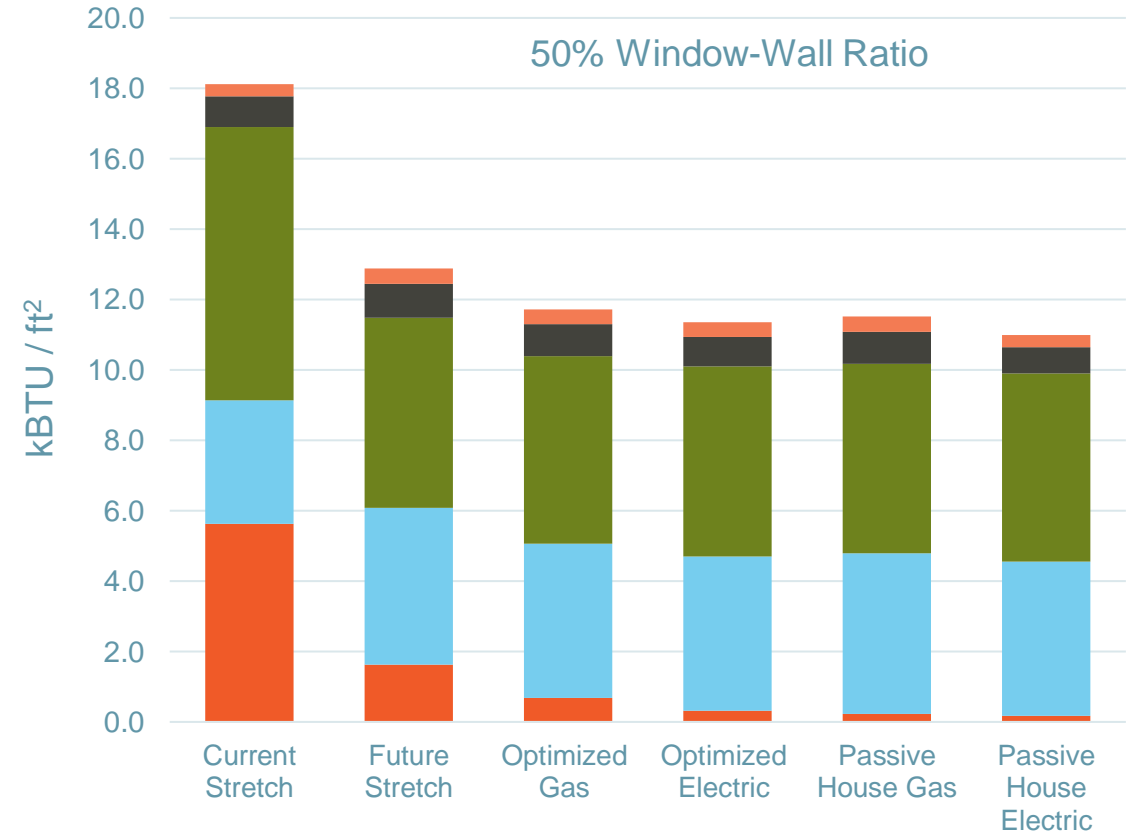
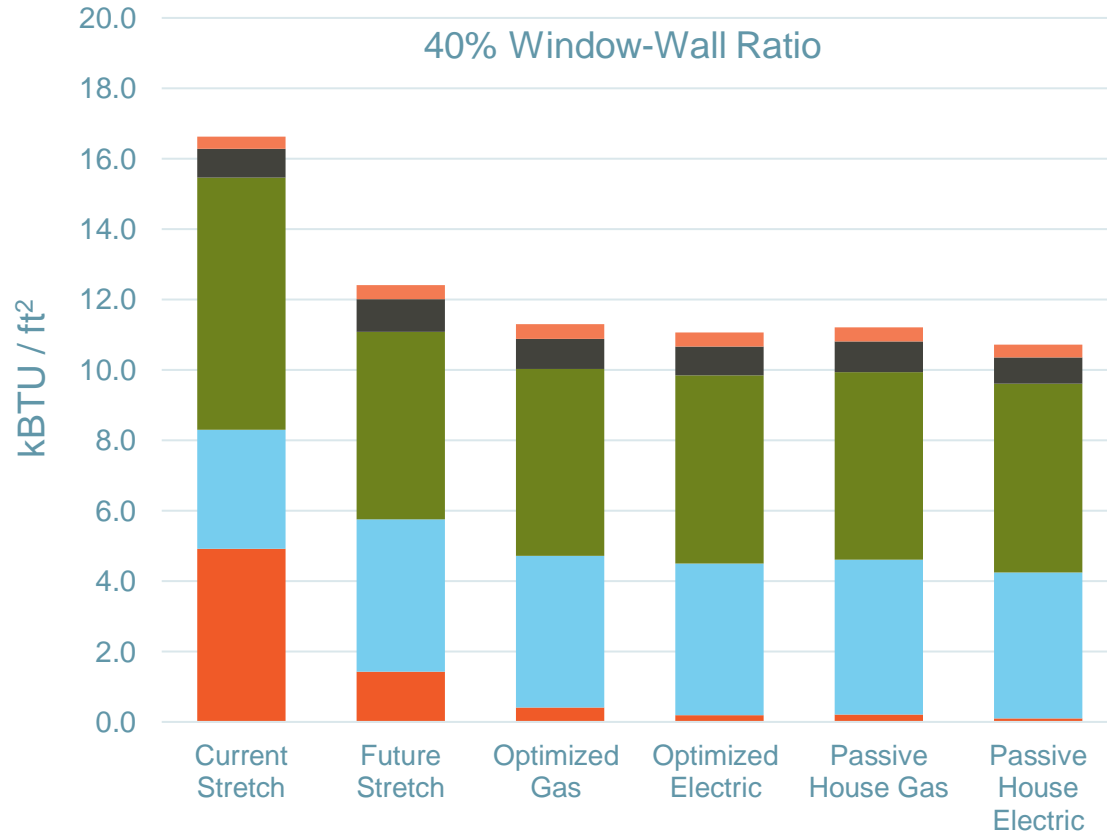


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Site EUI – HVAC End Uses



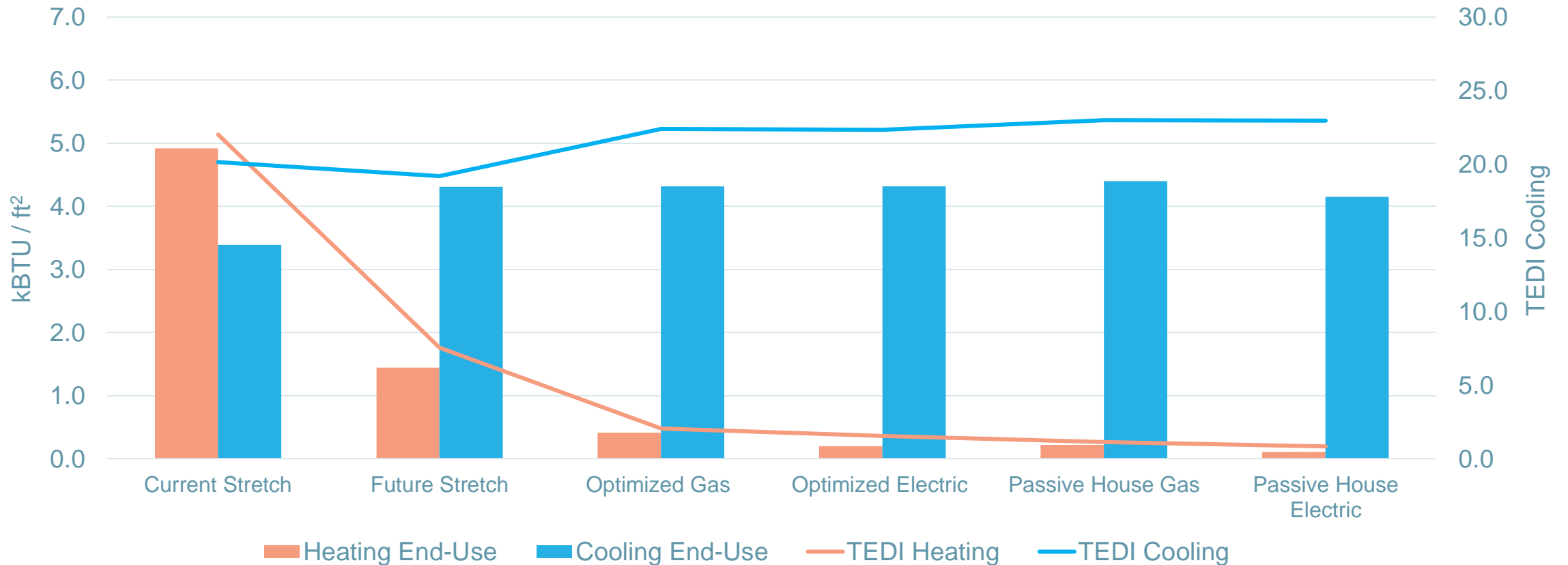
- Space Heating
- Space Cooling
- Fans
- Pumps
- Heat Rejection



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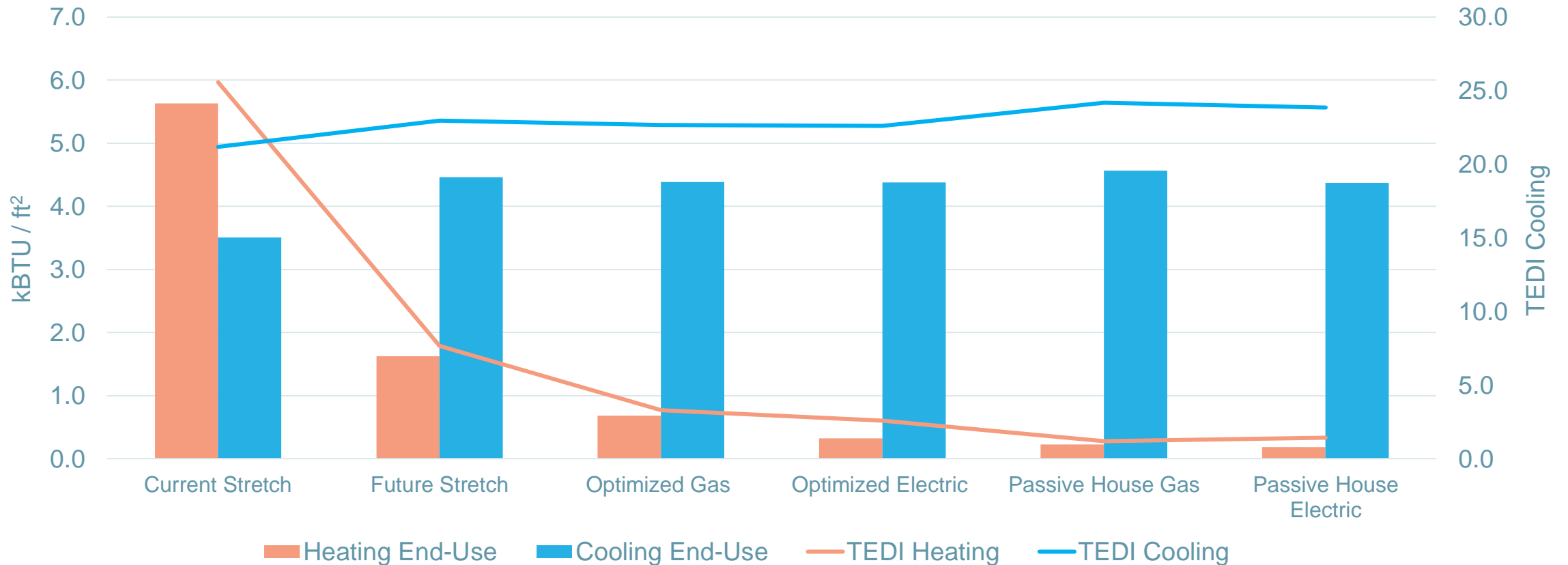
Heating / Cooling End Uses and TEDIs (40% WWR)



Large Office



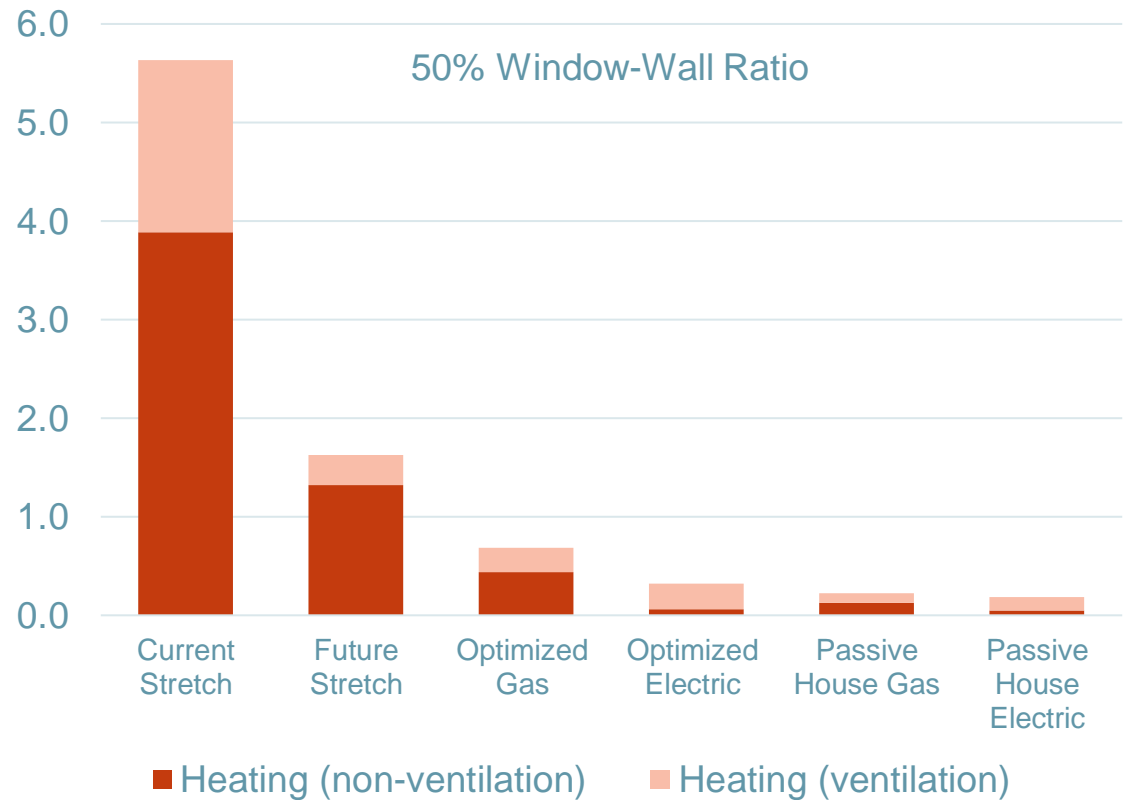
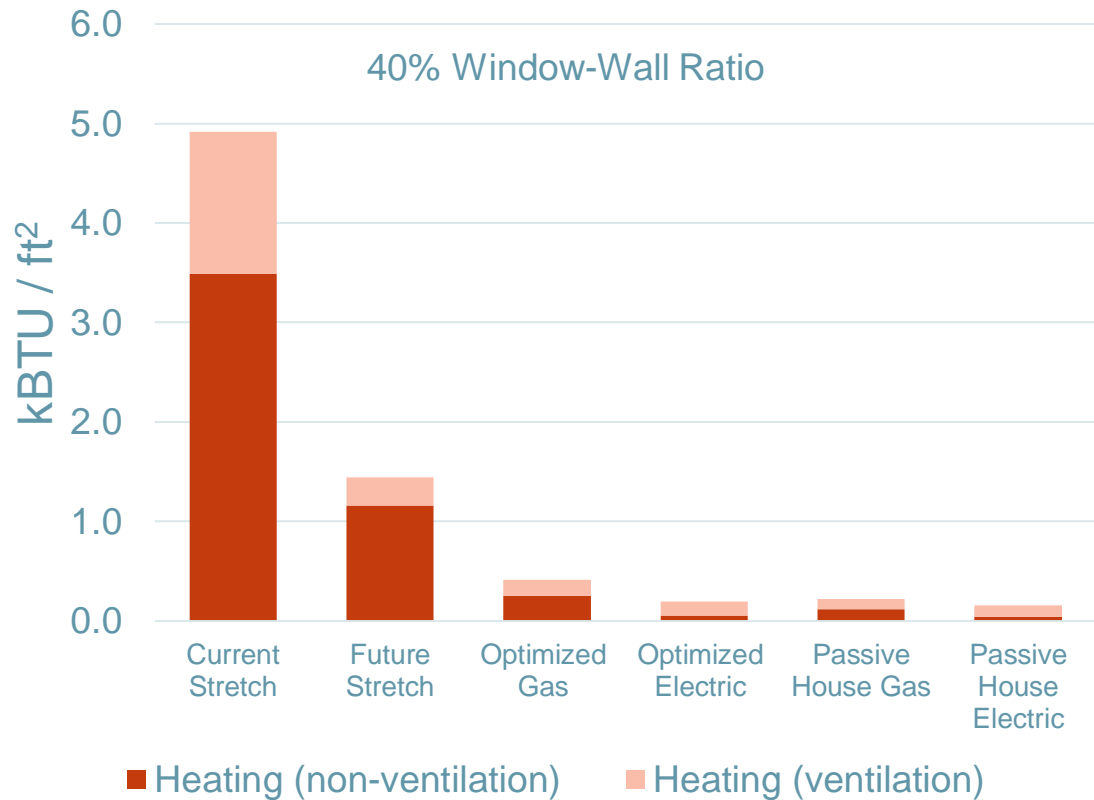
Heating / Cooling End Uses and TEDIs (50% WWR)



Large Office



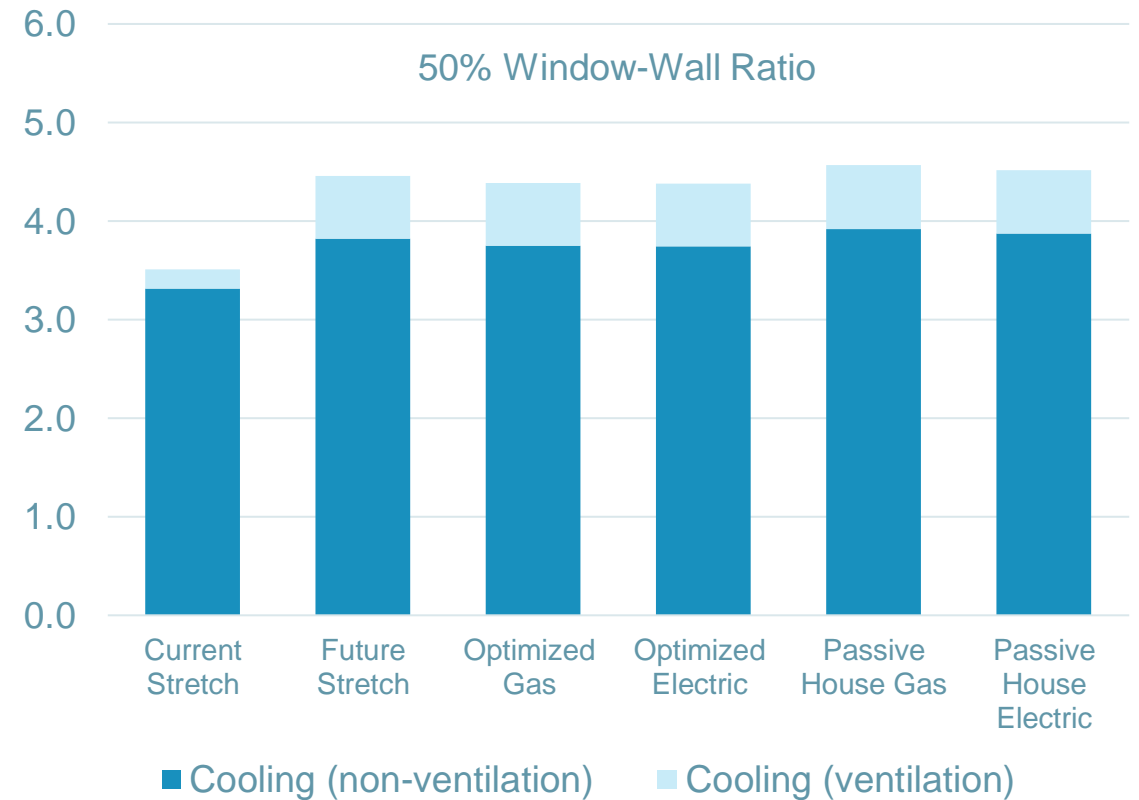
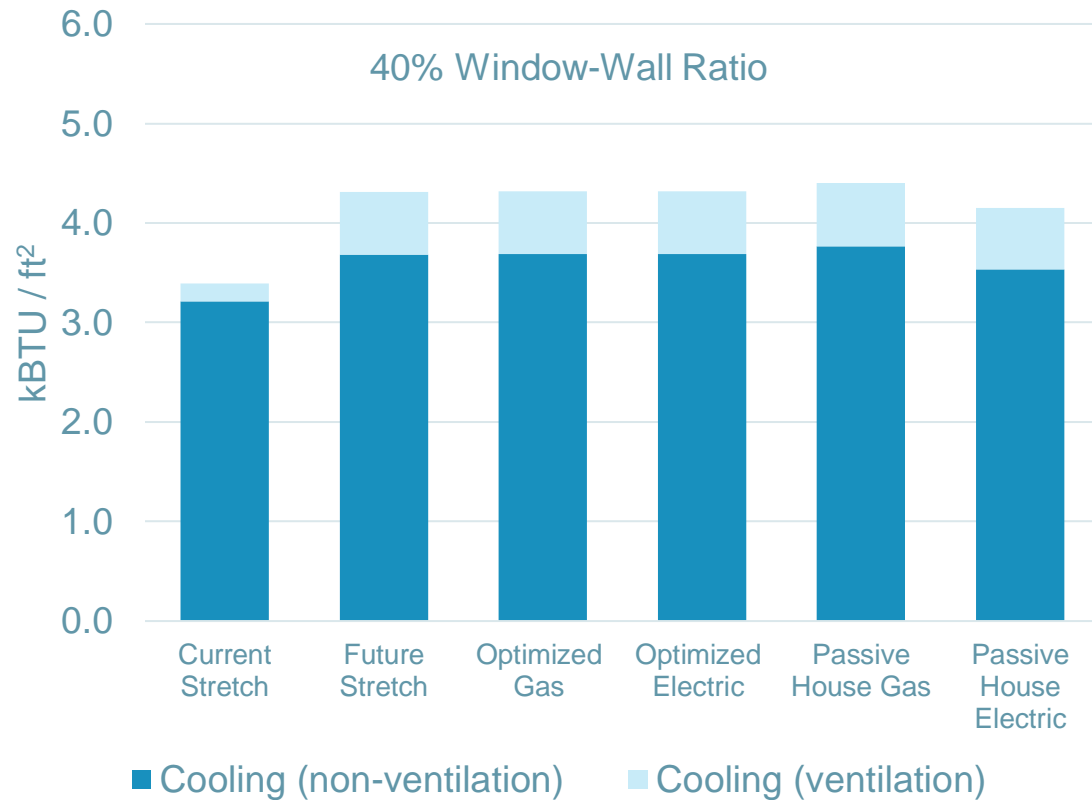
Heating – Ventilation Energy



Large Office



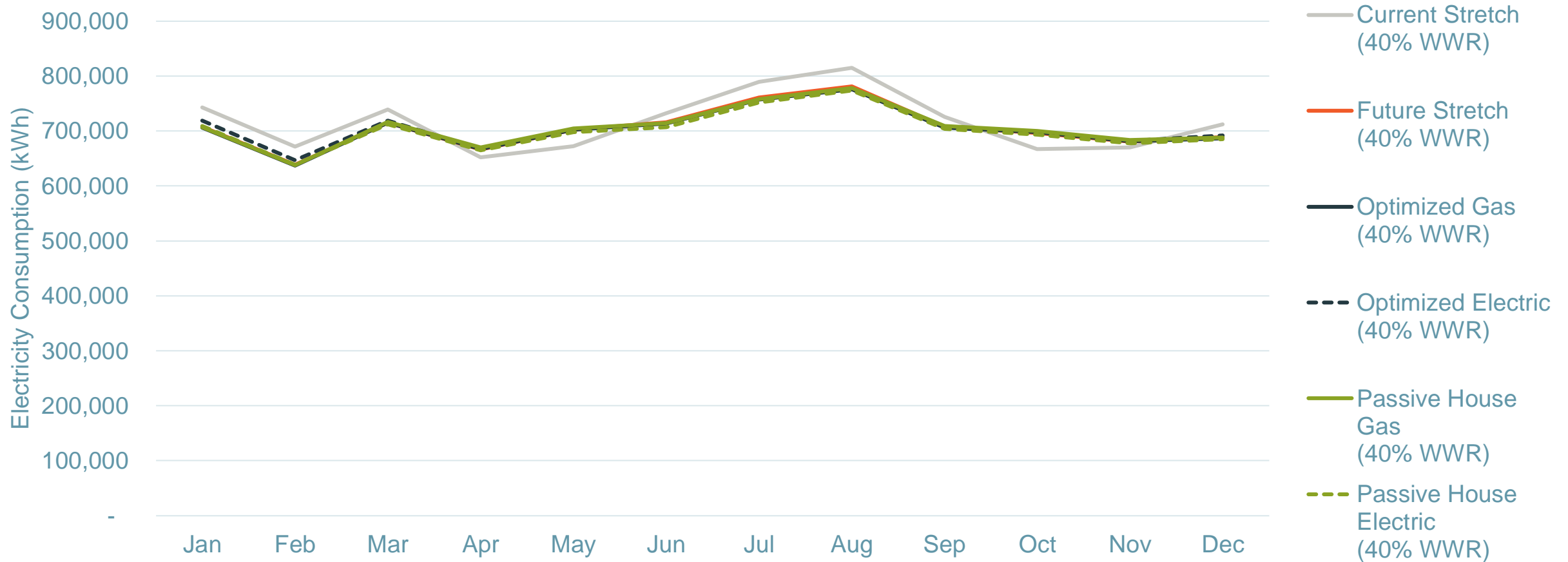
Cooling – Ventilation Energy



Large Office



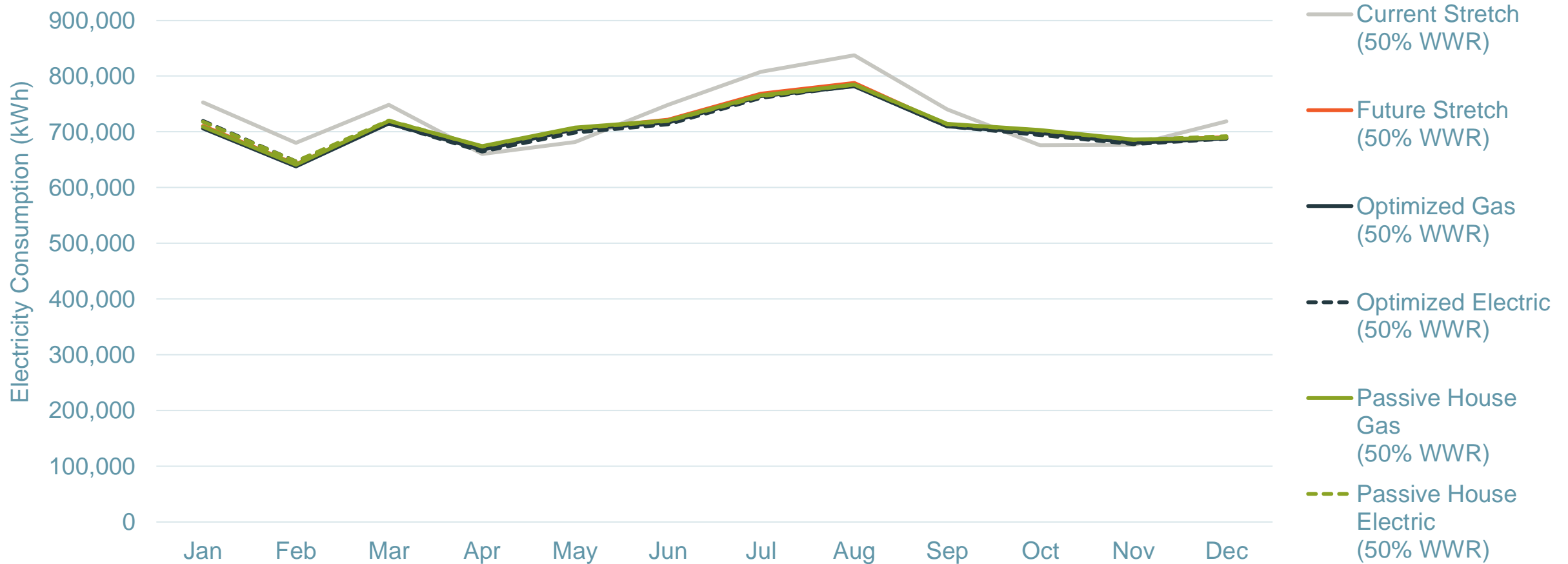
Electricity Consumption by Month (40% WWR)



Large Office



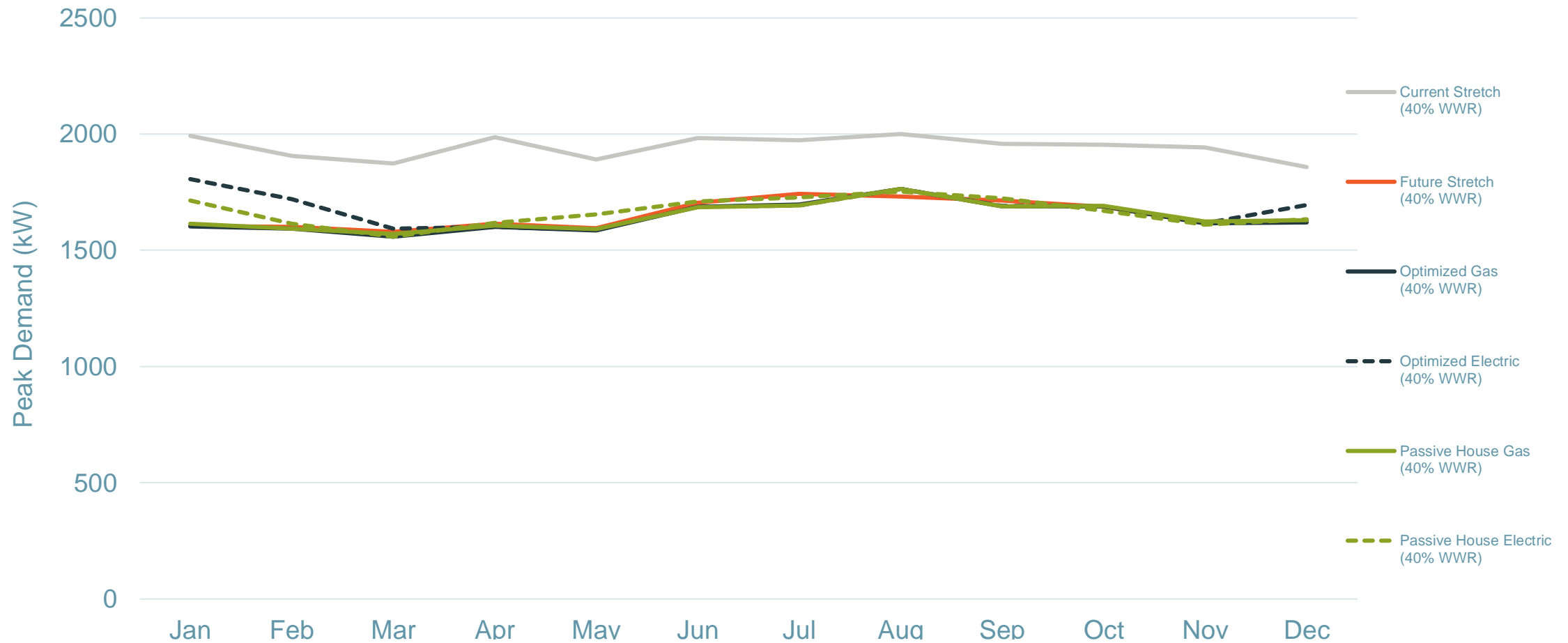
Electricity Consumption by Month (50% WWR)



Large Office



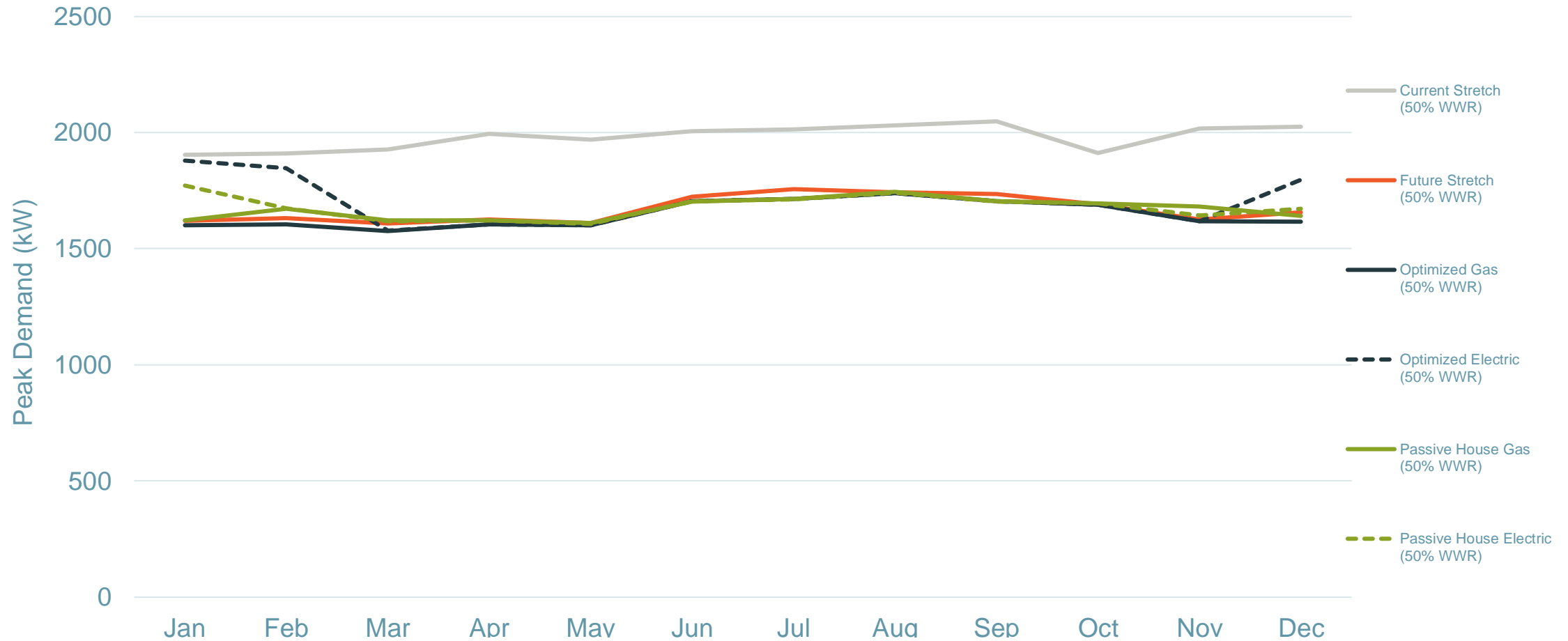
Electricity – Monthly Peak Demand (40% WWR)



Large Office



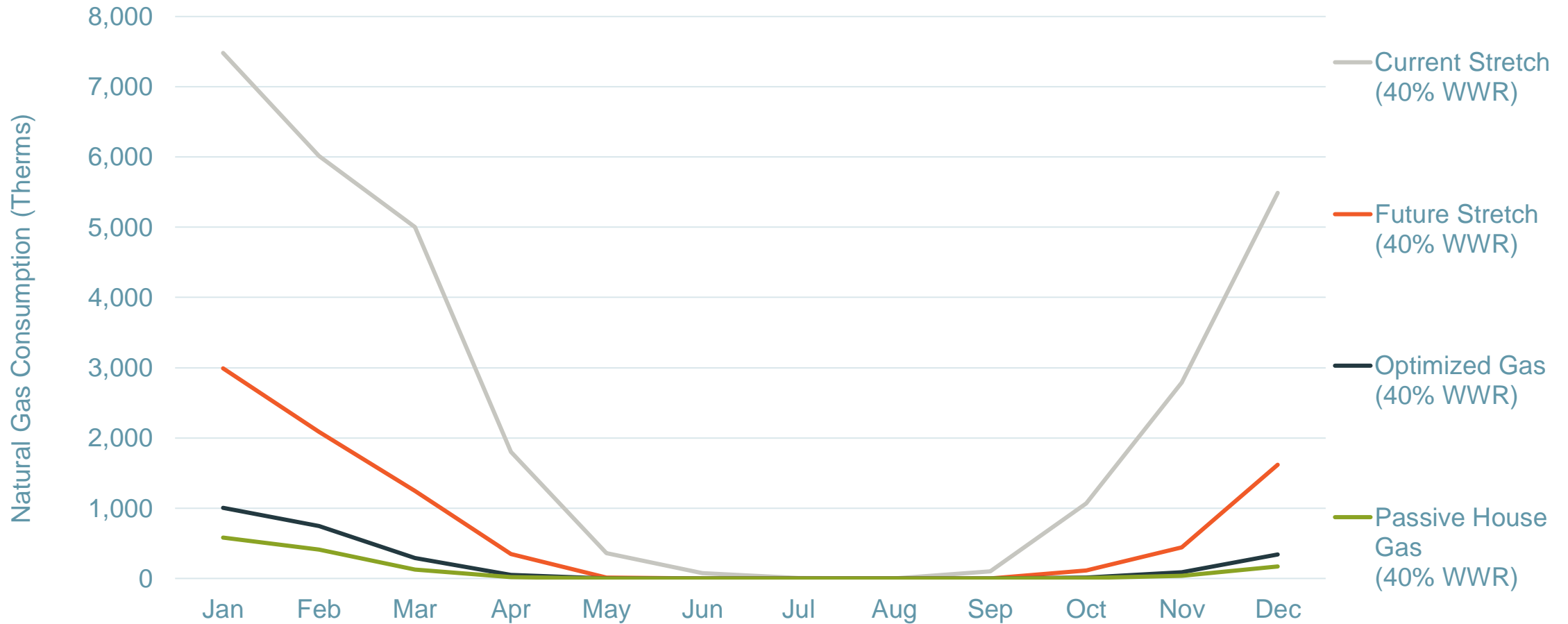
Electricity – Monthly Peak Demand (50% WWR)



Large Office



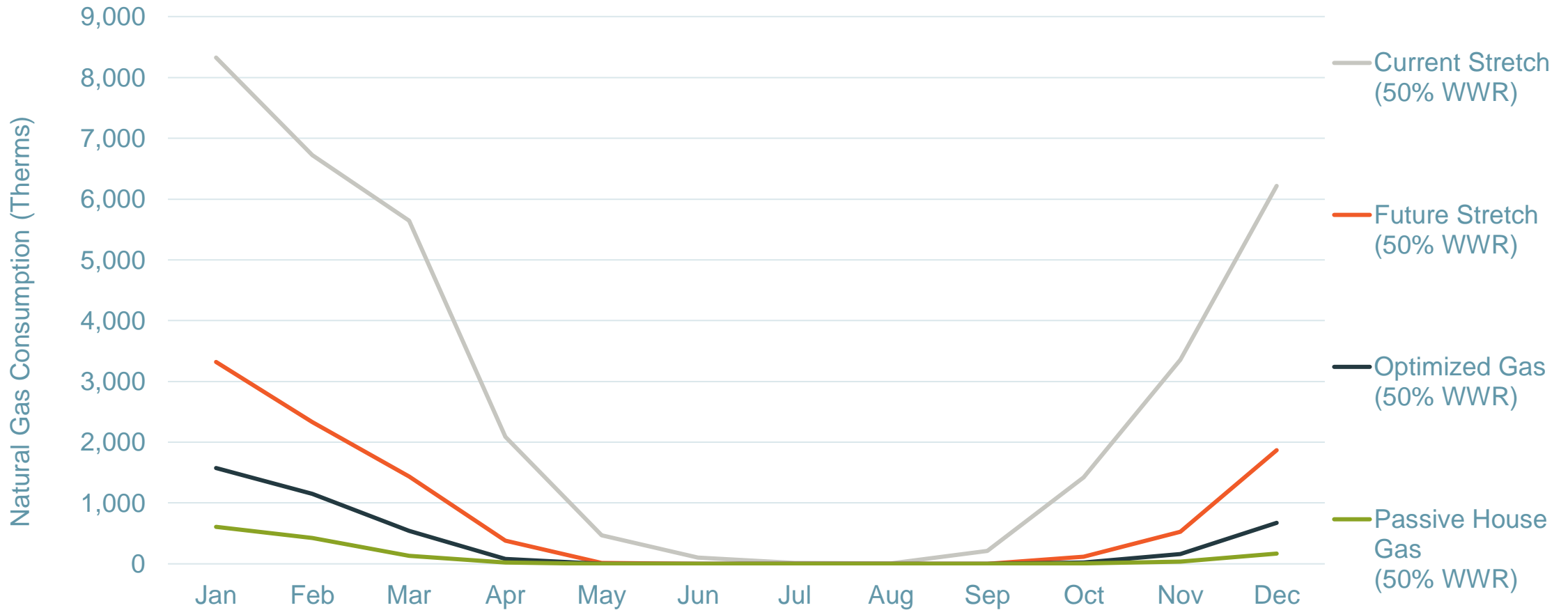
Natural Gas – Monthly Consumption (40% WWR)



Large Office



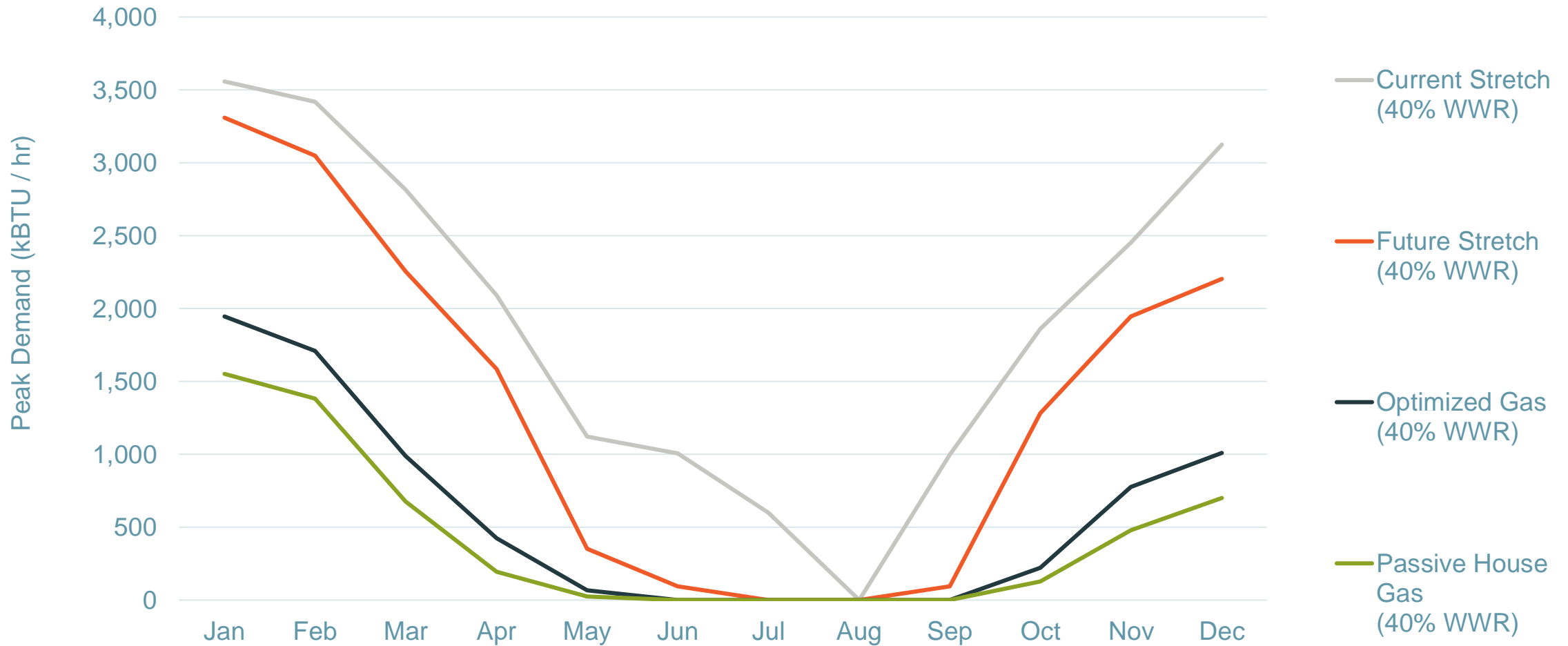
Natural Gas – Monthly Consumption (50% WWR)



Large Office



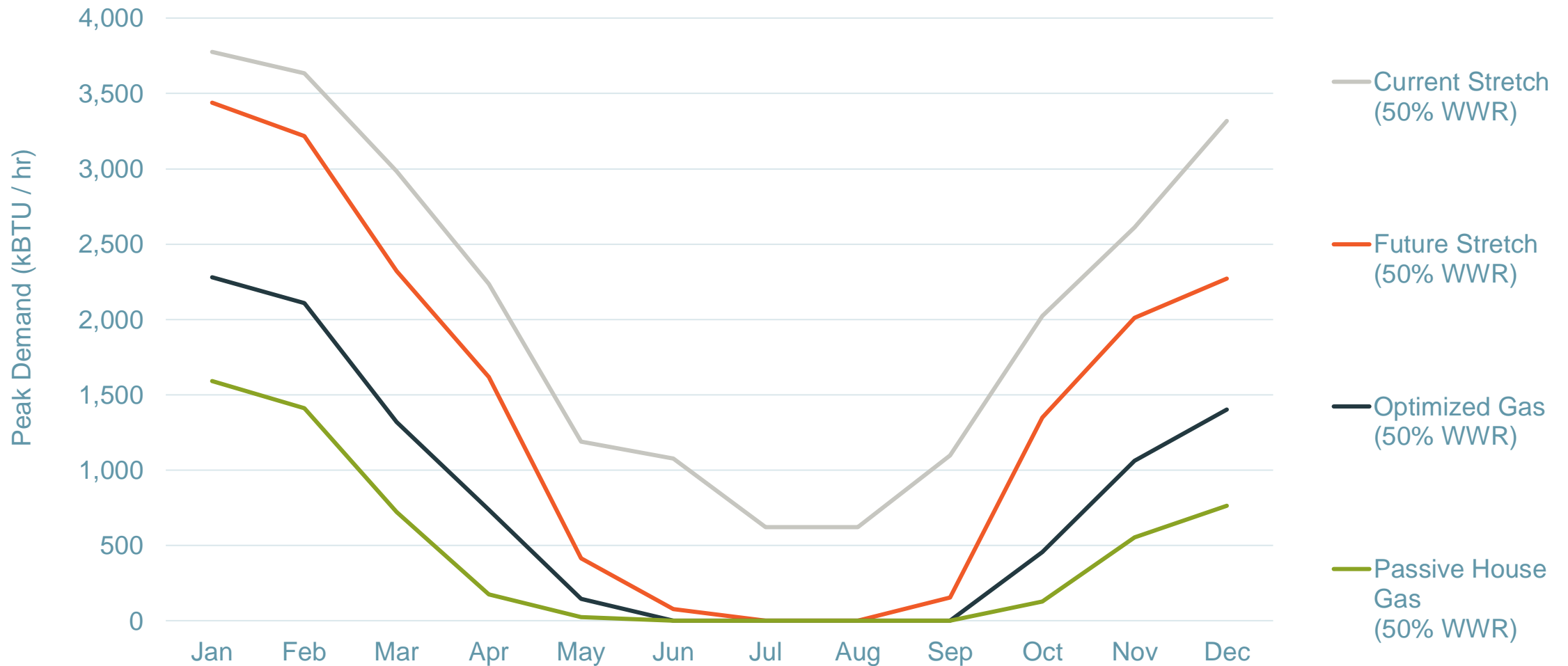
Natural Gas – Monthly Peak Demand (40% WWR)



Large Office



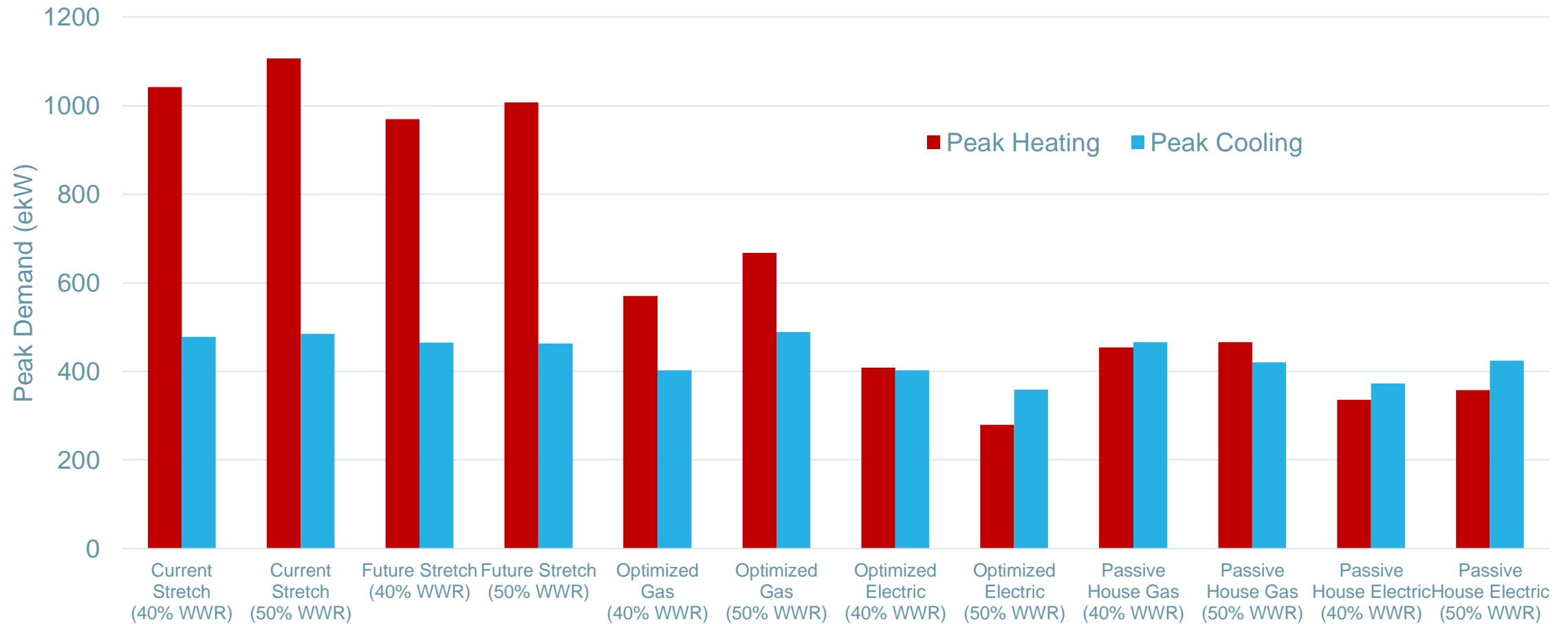
Natural Gas – Monthly Peak Demand (50% WWR)



Large Office



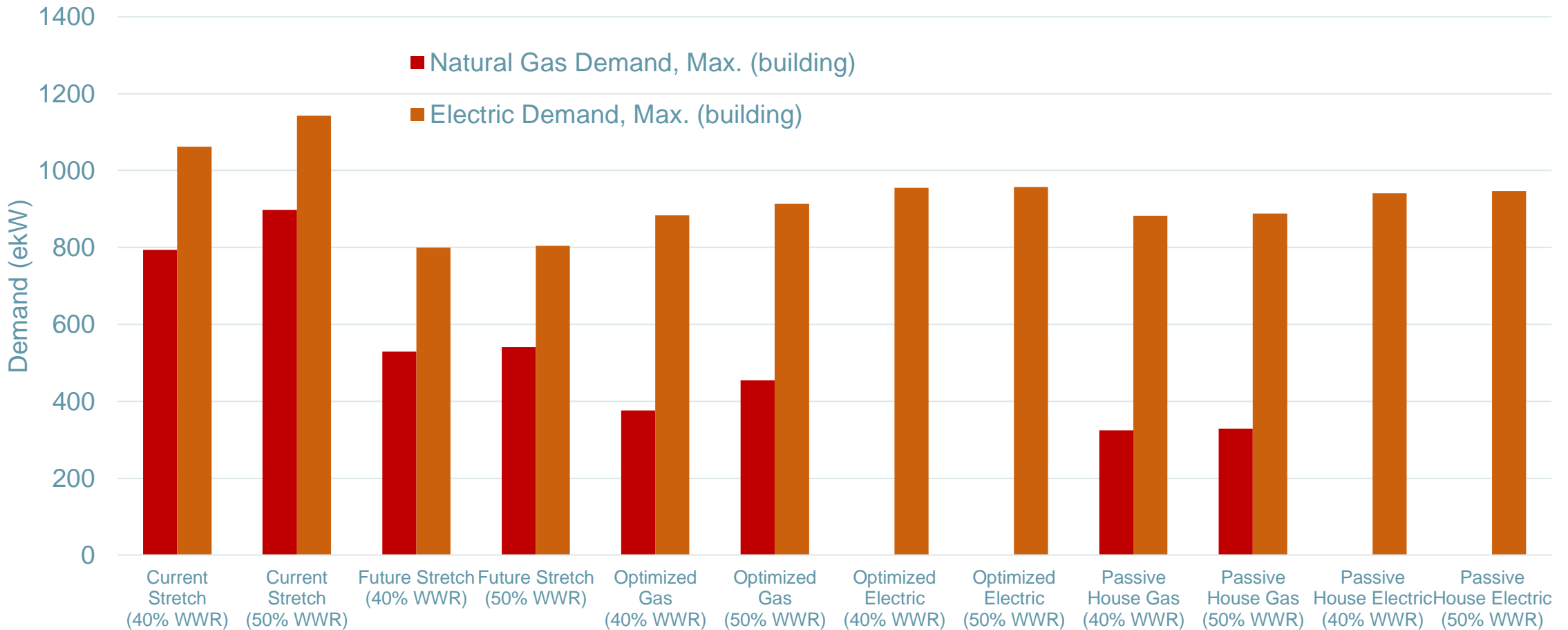
Annual Peak Cooling and Heating - Building



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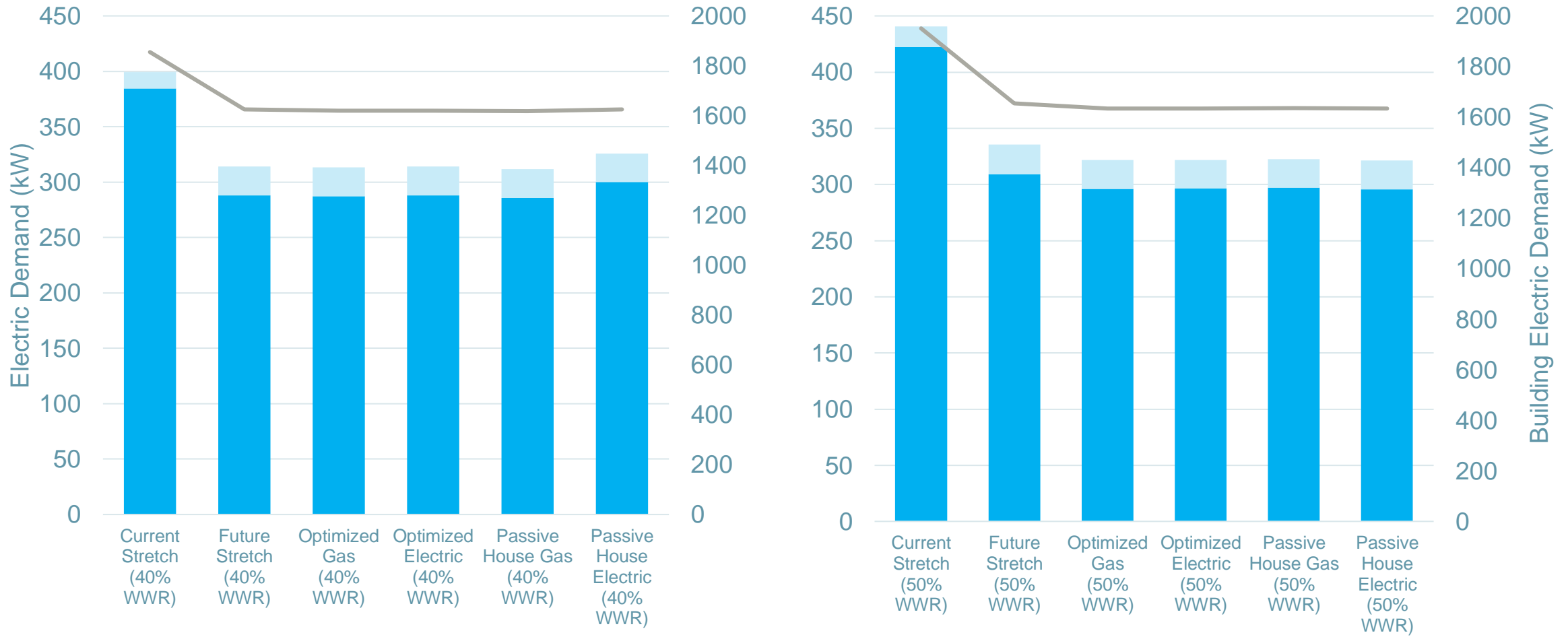
Heating Design (3-hour Coldest Period – January 30, 7:00am)



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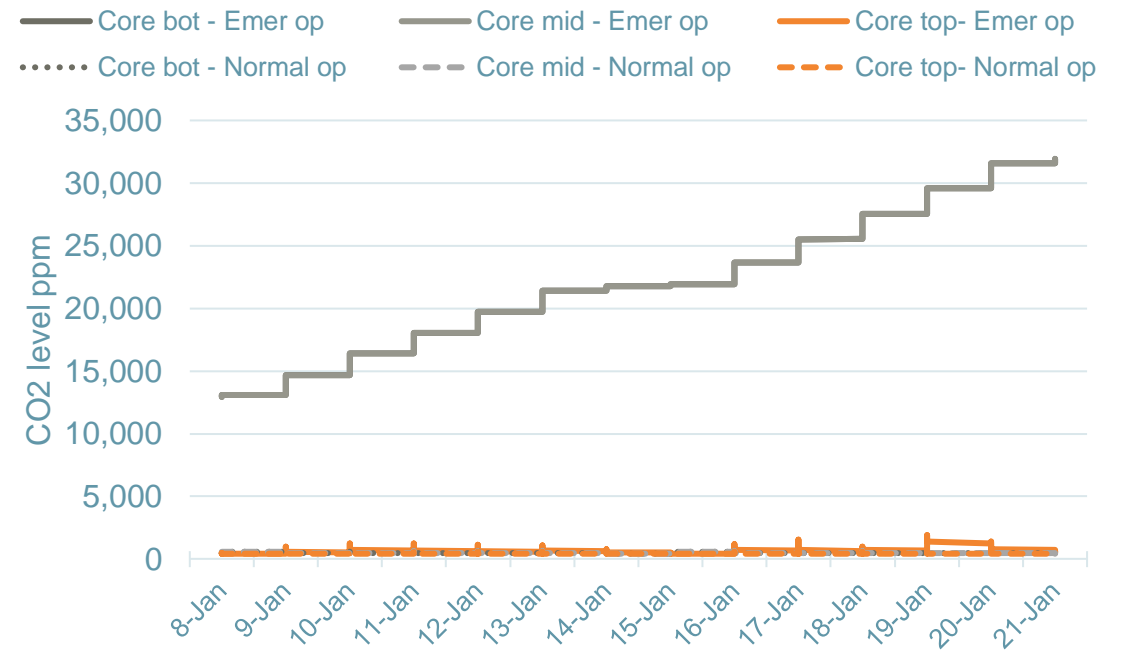
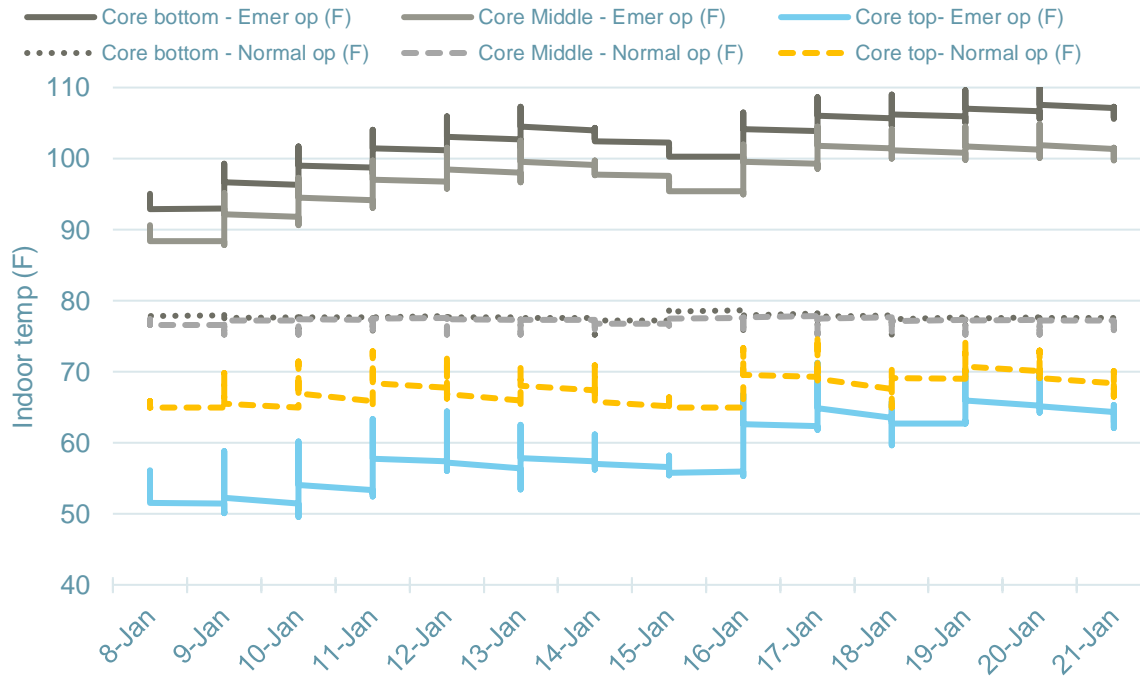


Cooling Design (Warmest Period – July 20, 2:00pm)



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Resiliency- Occupied, no HVAC

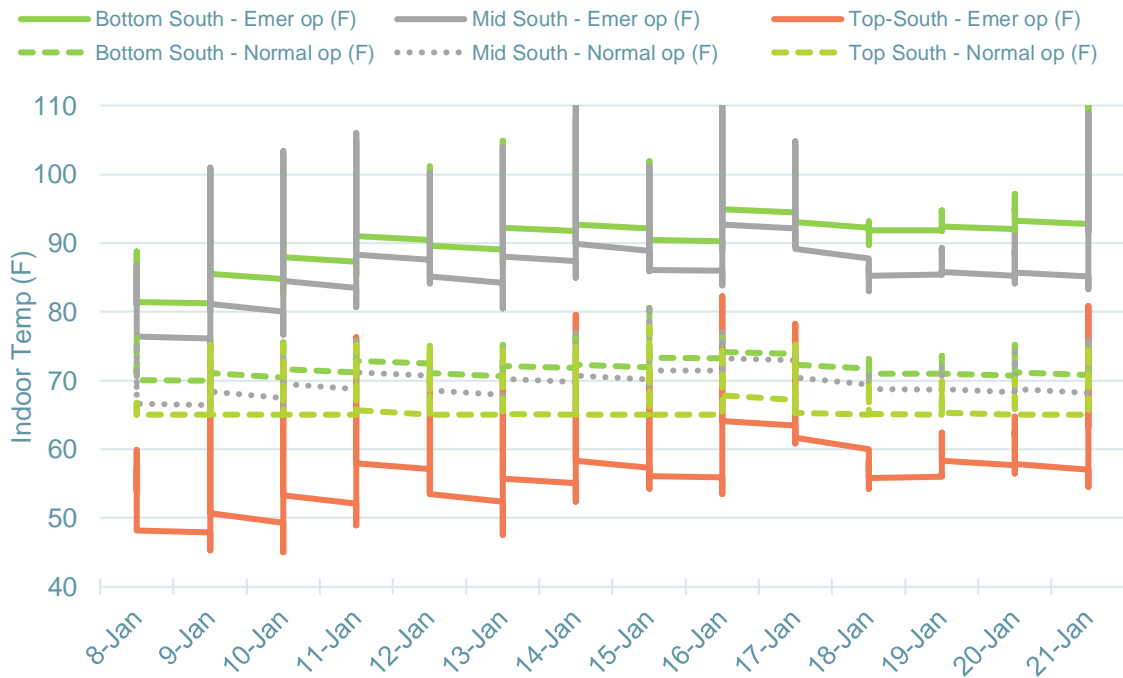


Large Office

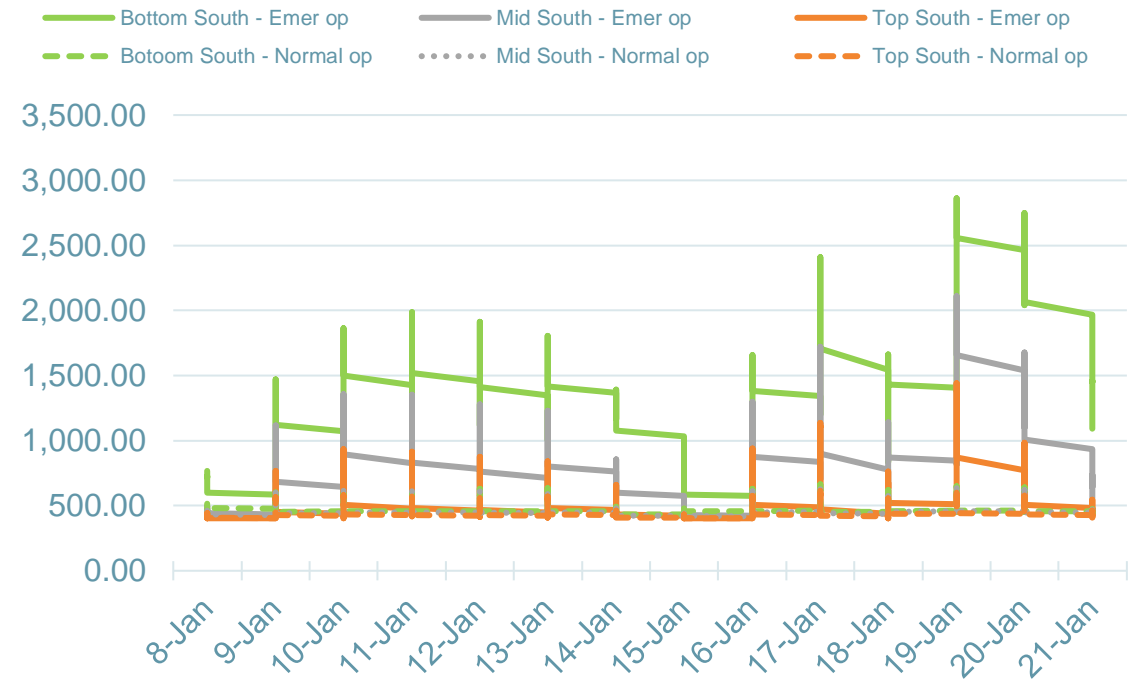
Resiliency- Occupied, no HVAC



South zones

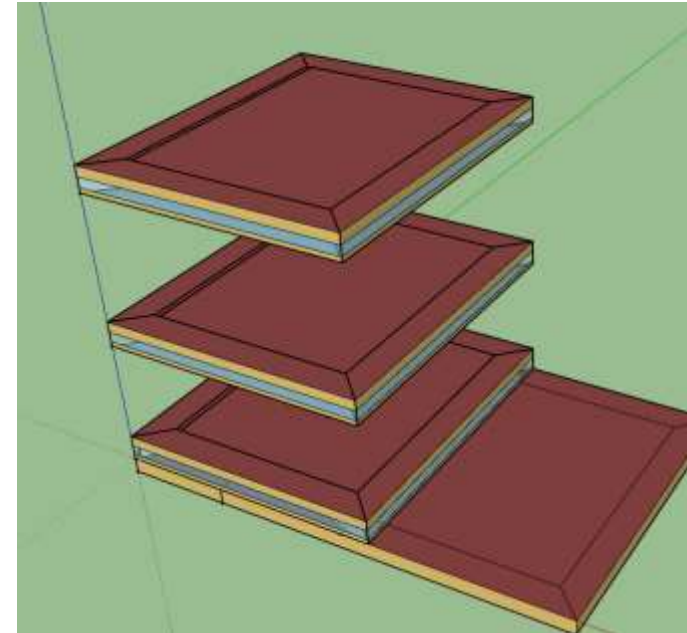
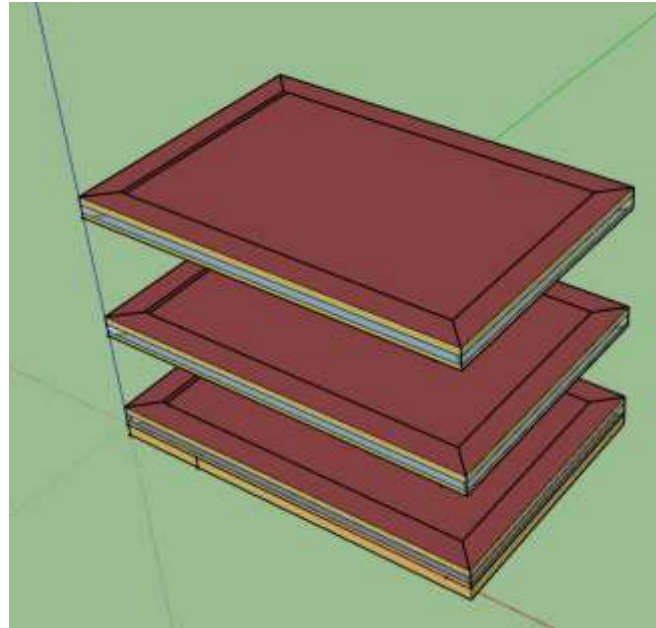


CO2 trends- South.



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Stress testing- Form
15 floors



	Optimized 40% WWR- Gas 613,707 sf.	Optimized 40% WWR- Gas 365,620 sf.
TEDI Heating	0.48 kbtu/sf./yr.	0.58 kbtu/sf./yr.
TEDI Cooling	21.9 kbtu/sf./yr.	26.4 kbtu/sf./yr.