

# Addressing Energy Consumption in Commercial Offices with Reduced Occupancy

*Johnathon Fata, Waypoint Energy*

*Jenn Loukotka, Waypoint Energy*

*Brian Keller, Waypoint Energy*

## ABSTRACT

As a result of the COVID-19 Pandemic, the commercial office sector has experienced a massive decrease in occupancy as remote and hybrid work have come to dominate office use in the United States. However, energy consumption did not fall commensurately, creating an opportunity to drive greater energy efficiency savings within the commercial office market. The commercial office market is still experiencing changing market conditions as employees and employers wrestle with return-to-office mandates, remote workers, and hybrid-work environments. The resulting market impact is a commercial office market with unique and different needs than it had only a few years ago. While challenging for the owners and investors within this segment, the resulting energy efficiency opportunity has not been addressed by electric and gas utilities and remains a n untapped energy savings market. In order to address this, Waypoint sought to develop a cost-effective engagement model that could be deployed through utility-funded energy efficiency programs in order to deliver energy savings to utilities and cost savings to customers. By understanding the underlying market conditions, value drivers, and current best practices in utility-funded energy efficiency program design, an innovative and effective engagement model was developed to address this newly created energy efficiency opportunity.

## Introduction

The COVID-19 Pandemic caused a massive shift in the way in which buildings and homes were utilized, occupied, and how they consumed energy. From the earliest work-from-home (WFH) orders that came out in March 2020, all buildings were now being utilized more (homes), or less (in-person offices), depending on the use type. While all sectors experienced massive shifts in occupancy and usage, few sectors experienced the same across-the-board shift in occupancy as the commercial office sector.

The commercial office sector experienced incredible changes in occupancy as a result of the COVID-19 Pandemic, and ensuing WFH mandates. The result was a massive decrease in occupancy within the commercial office sector. Nationally, commercial office occupancy dropped dramatically, from nearly 100% in 2019 to below 20% in April 2020 (Peck 2024). As the US Workforce adjusted to a new-normal that includes hybrid work, office occupancy leveled off around 35% (Krukowski 2024). However, during and after the Pandemic, buildings often failed to decrease energy consumption commensurately with occupancy or in many cases, increased energy consumption for a multitude of reasons, including lease structure, lack of knowledge, and ventilation guidance from industry (Corticosis et. al 2021).

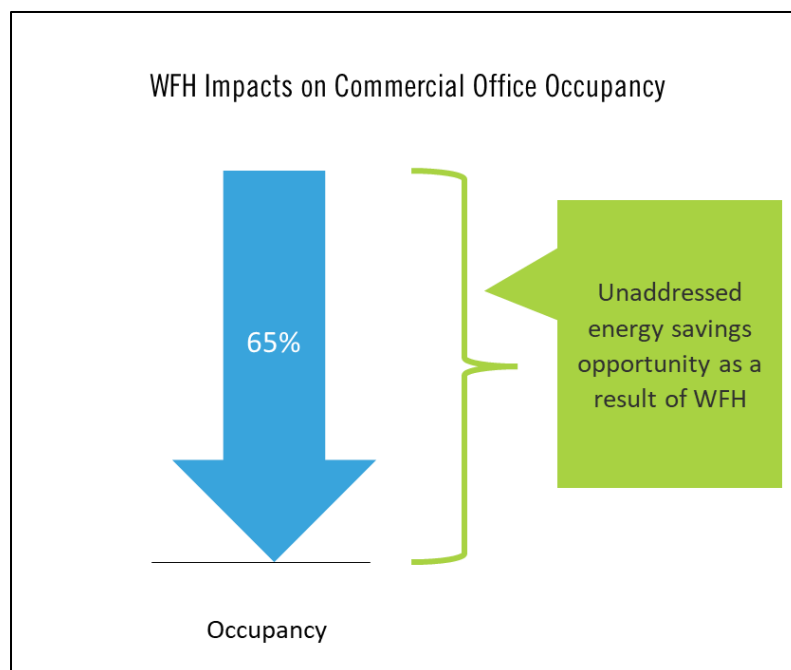


Figure 1: WFH Impacts on Commercial Office Occupancy.

With commercial buildings responsible for a significant portion of energy consumption and emissions, as much as 40%, this shift in occupancy represented a major opportunity to reduce energy use and curb emissions (Carlin 2022). Together, these factors presented a first-of-its kind opportunity to address occupancy within commercial buildings as a mechanism to drive reductions in energy consumption. As a result, Waypoint developed the Occupancy-Based Strategic Energy Management (OB SEM) Program to address this energy savings opportunity.

To do this, Waypoint built off of the core components of a traditional Strategic Energy Management (SEM) Program and addressed broader market and CRE-specific factors in the program design intended increase the program uptake, drive greater energy savings, and specifically address occupancy. In order to provide the reader with the best insight into the factors involved in successful program design, we will review the current (2024) market forecast for the commercial office market, the value of energy efficiency and decarbonization to property asset value of commercial buildings, the pros and cons of traditional SEM Programs. Then, we will provide a thorough review of the OB SEM Program components.

## Forecast for the Commercial Office Market in the United States

The commercial office market in the United States is experiencing generational shifts driven by evolving workplace dynamics, technological advancements, and economic trends. As we look ahead to 2024 and beyond, several key factors will influence the occupancy and vacancy rates in the commercial office sector. These rates will ultimately impact property values across the country, and influence the sector's appetite and demand for energy efficiency. The following factors were taken into account when considering program design:

## Hybrid work models

**Continued adoption.** The widespread adoption of hybrid work models, defined as employees splitting their work days between at-home and in-office, is expected to persist beyond 2024. Employers and employees have embraced the flexibility and productivity gains associated with remote work, leading to a fundamental reevaluation of office space requirements. Hybrid work now represents 52% of office workers in the United States, with the remaining 48% representing full-time in-office (21%) or full-time remote (27%) (Gallup 2024).

**Flexibility in Office Space Utilization.** Companies are increasingly prioritizing flexible office space solutions, such as co-working spaces and on-demand meeting rooms, to accommodate fluctuating workforce needs. This trend towards agile and adaptable office configurations will influence occupancy patterns, with a greater emphasis on shared and collaborative spaces over traditional cubicles and private offices. Additionally, tenants are reluctant to sign long-term lease agreements, further necessitating the need for flexible utilization of office space by property owners.

## Economic Recovery and Business Expansion

**Resurgence in Demand.** As the economy continues to recover from the impacts of the COVID-19 Pandemic, businesses are expected to continue hiring and expansion efforts, driving increased demand for office space in key urban centers and business districts. However, this has been hedged against fears of a recession, slowing what would otherwise be a faster resurgence in demand.

**Sectoral Variances.** While some industries, such as technology and healthcare, are thriving and driving demand for office space, others, such as retail and hospitality, may face longer-term challenges that could impact office occupancy rates in certain markets.

## Remote Work Trends and Regional Disparities

**Remote Work Migration.** Remote work trends have led to population shifts, with individuals and families relocating from expensive urban centers to suburban and rural areas in search of more affordable housing and improved quality of life.

**Regional Disparities.** These population shifts may result in regional disparities in office occupancy and vacancy rates, with suburban and secondary markets experiencing stronger demand for office space compared to central business districts in major metropolitan areas.

## Implications for Property Values

Commercial offices are valued as a function of net operating income and capitalization rates, as shown in Figure 2 below. Decreases in rental revenue negatively impact net operating income (NOI) and directly decrease property values. The forecasted trends in commercial office occupancy and vacancy rates will have significant implications for property values across the United States.

$$\text{Asset Value} = \frac{\text{Net Operating Income (NOI)}}{\text{Capitalization Rate}}$$

Figure 2. Asset Value Equation for Commercial Offices

**Urban vs. Suburban Markets.** In urban markets, where office vacancy rates may remain elevated due to remote work trends and economic uncertainties, property values are already facing significant downward pressure as landlords and investors adjust to lower rental income and reduced demand. Conversely, suburban markets with lower vacancy rates and higher demand for office space may experience stable or even increasing property values as businesses seek out more accessible and cost-effective locations.

**Adaptive Reuse and Redevelopment Opportunities.** High vacancy rates in certain urban markets may create opportunities for adaptive reuse and redevelopment projects, repurposing obsolete office buildings into mixed-use developments, residential housing, or alternative commercial spaces. While these projects may initially result in lower property values due to depreciation and redevelopment costs, they can ultimately enhance the long-term value and viability of underutilized properties.

**Emphasis on Sustainability and Wellness.** The ongoing emphasis on sustainability and wellness in commercial real estate will continue to influence property values, with energy efficient and environmentally friendly buildings commanding premiums in the market (IEA 2024). Investments in energy efficient and green building certifications, such as LEED, WELL, and ENERGY STAR can enhance the attractiveness and value proposition of commercial office properties, particularly as tenants prioritize health and sustainability considerations in their leasing decisions.

**Adaptive Leasing Strategies.** Landlords and property owners may need to adopt adaptive leasing strategies to retain tenants and maintain occupancy levels in the face of changing market conditions. This could include offering flexible lease terms, tenant improvement allowances, and amenities tailored to the needs of remote and hybrid workforce models.

The forecast for the commercial office market in the United States in 2024 and beyond is characterized by ongoing shifts in occupancy patterns, driven by hybrid work models, economic recovery, and regional dynamics. While urban markets may face challenges stemming from remote work trends and economic uncertainties, suburban and secondary markets present opportunities for growth and investment, property values will continue to be influenced by factors such as location, adaptability, sustainability, and leasing strategies. This highlights the importance of strategic planning and adaptability for landlords, investors, and stakeholders in the commercial real estate sector, as well as the need for energy efficiency.

# The Value of Energy Efficiency and Decarbonization to Asset Value of Commercial Buildings

## Enhancing Market Competitiveness

**Increased attractiveness to tenants.** Energy efficient buildings are more attractive to tenants due to lower operational costs and improved indoor environmental quality. According to a meta analysis by the International Energy Agency, buildings with high energy performance ratings have higher occupancy rates and command higher rental premiums compared to their less efficient counterparts (IEA 2024).

**Market differentiation.** Commercial buildings with energy efficiency certifications, such as LEED (Leadership in Energy and Environmental Design) or ENERGY STAR, stand out in the market, attracting environmentally conscious tenants and investors. A meta analysis by the International Energy Agency found that buildings with green certifications achieve higher rents and sales prices, translating into enhanced asset value (IEA 2024).

## Cost Savings and Increased NOI

**Reduced operating expenses.** Energy efficient buildings benefit from lower utility bills and maintenance costs, resulting in higher NOI. The U.S. Environmental Protection Agency's ENERGY STAR website estimates that energy efficient commercial buildings consume significantly less, on average, leading to substantial cost savings over time (ENERGY STAR 2024).

**Improved tenant retention.** Energy efficient buildings offer a more comfortable and productive environment for tenants, leading to higher tenant satisfaction and retention rates. The U.S. Environmental Protection Agency's ENERGY STAR's *Marketing, Leasing, and Tenant Engagement Guidance for Your Energy-Efficient Building*, environmental quality, achieved through energy efficiency measures, contributes to increased tenant retention rates (ENERGY STAR 2024).

## Mitigating Financial Risks and Enhancing Long-Term Value

**Regulatory compliance.** Investing in energy efficiency and decarbonization measures helps commercial building owners mitigate regulatory risks associated with energy and environmental regulations. To date, 18 cities and 4 states have passed local mandatory benchmarking disclosure laws and 26 cities and states have passed building performance mandates, requiring improvements in energy efficiency (IMT 2023). By proactively addressing compliance requirements, building owners can avoid potential penalties and operational disruptions.

**Future-proofing investments.** Decarbonizing commercial buildings reduces reliance on fossil fuels and minimizes exposure to volatile energy prices. According to a report by the International

Energy Agency, investing \$1 in energy efficiency measures can yield \$4 in avoided energy costs over the long term, safeguarding asset value against future energy price fluctuations (IEA 2014).

## **Increasing Property Valuations and Investment Returns**

**Capitalization of Energy Savings.** Energy efficient buildings are valued higher in the real estate market due to their lower operating expenses and higher net cash flows. Appraisers increasingly consider energy performance and sustainability attributes when assessing property valuations, leading to higher capitalization rates and investment returns.

**Access to Green Financing.** Commercial buildings with strong energy performance ratings and green certifications are eligible for favorable financing terms and incentives. Green financing options, such as green bonds and energy efficient mortgages, offer lower interest rates and longer repayment periods, enhancing the affordability and attractiveness of energy-efficient investments (ENERGY STAR 2024).

Investing in energy efficiency and decarbonization measures is not only essential for reducing environmental impacts but also for maximizing the asset value of commercial buildings in the United States. By enhancing market competitiveness, reducing operating expenses, mitigating financial risks, and increasing property valuations, energy efficient buildings offer compelling value propositions for investors, owners, and tenants alike. As sustainability considerations become increasingly integral to real estate decision-making, integrating energy efficiency and decarbonization strategies into asset management practices will be essential for achieving long-term financial success and resilience in the commercial real estate sector.

## **Pros of Strategic Energy Management (SEM) According to ISO 50001 Standards**

When evaluating program design considerations for developing a commercial office-specific program to address energy consumption and occupancy, the process-based approach of SEM was identified as a framework for the program design. However, the SEM 50001 framework as defined by the U.S. Department of Energy is traditionally used to engage with industrial and manufacturing facilities with large process loads and different ownership and lease considerations than commercial offices.

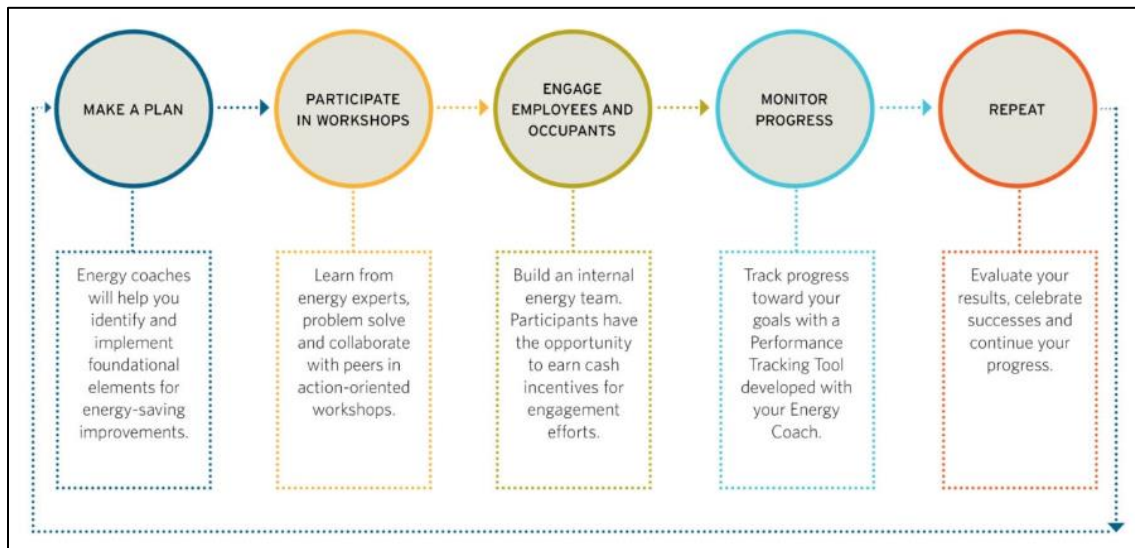


Figure 3: Traditional Strategic Energy Management Overview. Image Credit: Energy Trust of Oregon 2024

To identify the best program design, Waypoint evaluated the pros and cons of a traditional SEM approach to evaluate areas of strength and areas for improvement when engaging commercial offices.

### SEM strengths for commercial office

**Cost savings.** SEM, when implemented effectively, can lead to significant cost savings for organizations. By optimizing energy consumption and reducing waste, companies can lower their utility bills and operational expenses. ISO 50001 emphasizes the importance of setting energy performance targets and continuously monitoring energy usage to identify areas for improvement, ultimately resulting in financial benefits for businesses.

**Incorporating energy efficiency into business operations.** ISO 50001 standards provide a systematic framework for improving energy efficiency within organizations. By establishing energy management systems and processes, companies can identify opportunities to optimize energy use across various operations and processes. This typically takes the form of incorporating energy management best practice into building operations. This usually involves modifying operational practices to minimize energy consumption while maintaining productivity.

**Regulatory compliance.** By proactively pursuing energy efficiency via SEM, building owners can partially or fully comply with local benchmarking or building performance laws, avoid penalties, and ensure legal compliance. ISO 50001 provides a globally recognized framework for energy management that helps organizations meet regulatory requirements effectively. By adhering to ISO 50001 standards, companies can demonstrate their commitment to energy efficiency and sustainability, enhancing their reputation and credibility in the marketplace.

**Environmental sustainability.** Generally speaking, SEM aligns well with any corporate sustainability or environmental social governance (ESG) mandates that are increasingly common amongst commercial office owners. One of the primary objectives of SEM is to promote environmental sustainability by reducing greenhouse gas emissions and minimizing environmental impacts associated with energy consumption. Strategic energy management practices outlined in ISO 50001 help organizations identify opportunities to reduce their carbon footprint through energy efficiency improvements without requiring the need for new equipment, which may, in the short term, increase the carbon footprint of the building when accounting for embodied carbon and disposal of old equipment.

**Improved Organizational Performance.** Implementing strategic energy management practices can lead to overall improvements in organizational performance. By optimizing energy use and reducing waste, companies can enhance operational efficiency, productivity, and competitiveness. ISO 50001 encourages a culture of continuous improvement and employee engagement, fostering innovation and collaboration to drive sustainable business practices and long-term success.

**Emphasis on low/no cost operational and behavioral changes.** One of the primary benefits to a SEM approach is the low (capital) cost required for participation by building owners. By focusing on operational and behavioral changes that can be made at a property, SEM participants realize energy and cost savings with an almost instantaneous payback, as they are not required to replace equipment and deploy capital at the building.

## **SEM Areas for Improvement to Address the Commercial Office Market**

**Time intensive implementation.** Implementing SEM standards and participating with a utility-funded SEM Program can be a resource-intensive process that requires dedicated time, effort, and expertise. Organizations may need to appoint energy management teams, conduct energy audits, develop energy management plans, and establish monitoring and reporting systems, which can strain internal resources and disrupt day-to-day operations.

**Cultural resistance and change management.** Implementing strategic energy management practices often requires organizational culture change and employee engagement. Resistance to change, lack of awareness, and insufficient training can hinder the adoption of energy efficiency measures and undermine the effectiveness of SEM implementation. Companies may encounter internal barriers, such as resistance from employees, lack of leadership support, and competing priorities, which can impede progress towards energy management goals.

**Technical approach.** Utility-funded SEM approaches are typically led by teams of engineers that engage with building engineers. This dynamic creates a highly technical approach that is challenging to apply to the commercial office market where decision making is done almost exclusively based on market and financial criteria. Commercial offices are less likely to participate in utility-funded programs that operate with a more technical than financial focus.

**Lack of consideration for CRE-specific factors.** SEM approaches only factor the operations of energy consuming equipment at a building when developing energy management targets and goals. By excluding CRE-specific factors, such as lease type, acquisition date, hold period,



disposition plan, commercial offices are less likely to participate given Program design does not align with asset level business plans.

**Cohort based approach of non-related buildings.** The SEM approach works with cohorts of buildings that are not related to each other by ownership or management. Cohorts are intended to work at the same pace and use the same decision making criteria for pursuing energy efficient measures at the building. This cohort approach is highly effective when working with technical audiences who are willing to cooperate and share best practices, however, it creates an essentially randomized population of buildings that may have vastly different ownership or management goals.

**Exclusion of capital expenditure energy efficiency measures.** SEM Programs focus on operational and low/no cost energy efficient measures that reduce energy consumption and cost. This is one of the primary benefits to a SEM approach for building owners as the cost of participation is low, essentially requiring only the time of staff to participate. However, when engaging with commercial office buildings, the time-commitment required from the customer is effectively the same to evaluate operational and capital measures (i.e. equipment replacement that requires a capital expenditure). By not including capital measures in program design, energy savings may be left on the table for commercial offices when utilizing a traditional SEM approach.

Strategic energy management offers numerous benefits and organizations must also consider the challenges and limitations associated with SEM implementation. As a result, SEM has not historically been used to target the commercial office market, leaving a large energy savings opportunity. By carefully assessing the pros and cons of SEM, Waypoint sought to develop a Program design that would maximize the benefits of strategic energy management while effectively addressing potential barriers and risks.

## **Occupancy-Based Strategic Energy Management**

Based on all of the factors above including forecast for the commercial office market, benefits of energy efficiency and decarbonization to the commercial office market, and an evaluation of the pros and cons of SEM for the commercial office market, Waypoint developed Occupancy-Based Strategic Energy Management (OB SEM). This approach was developed specifically to address the needs of reduced occupancy in offices and drive deep, cost-effective energy savings.

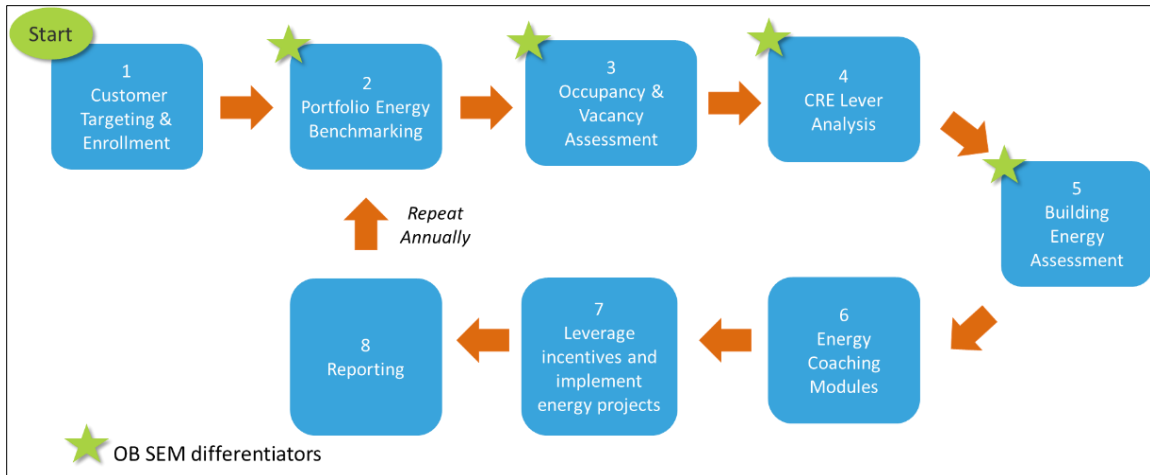


Figure 4. Customer journey overview for participation in the OB SEM Program

Below, we’ll look at the CRE-specific OB SEM Program components that differentiate this approach. In addition to the traditional SEM Components, the OB SEM Program includes the following:

**Employ a portfolio approach.** First, the OB SEM enrolls portfolios of buildings that are owned and managed by the same entity. This differs from the traditional SEM cohort approach which brings together different buildings with different owners and managers. The advantage of utilizing a portfolio approach for enrollment is that all the buildings within the portfolio are operating under the same management, decision making, and policies. This approach provides greater consistency of decision-making and increased uptake of measures as management is bought-in for the entire portfolio, which replaces the cohort.

**Occupancy & Vacancy Assessment.** The occupancy and vacancy analysis includes a review of the lease schedule and a lease-by-lease review of each tenant and their occupancy of their space. This process typically uncovers a lack of understanding by building management of how each tenant is using the space. Our analysis works with the landlord and tenant to collect tenant-level usage to help inform occupancy-based operating energy conservation measures (ECMs). Figure 5 below is a sample occupancy analysis showing varying occupancy levels Monday through Saturday throughout the day.

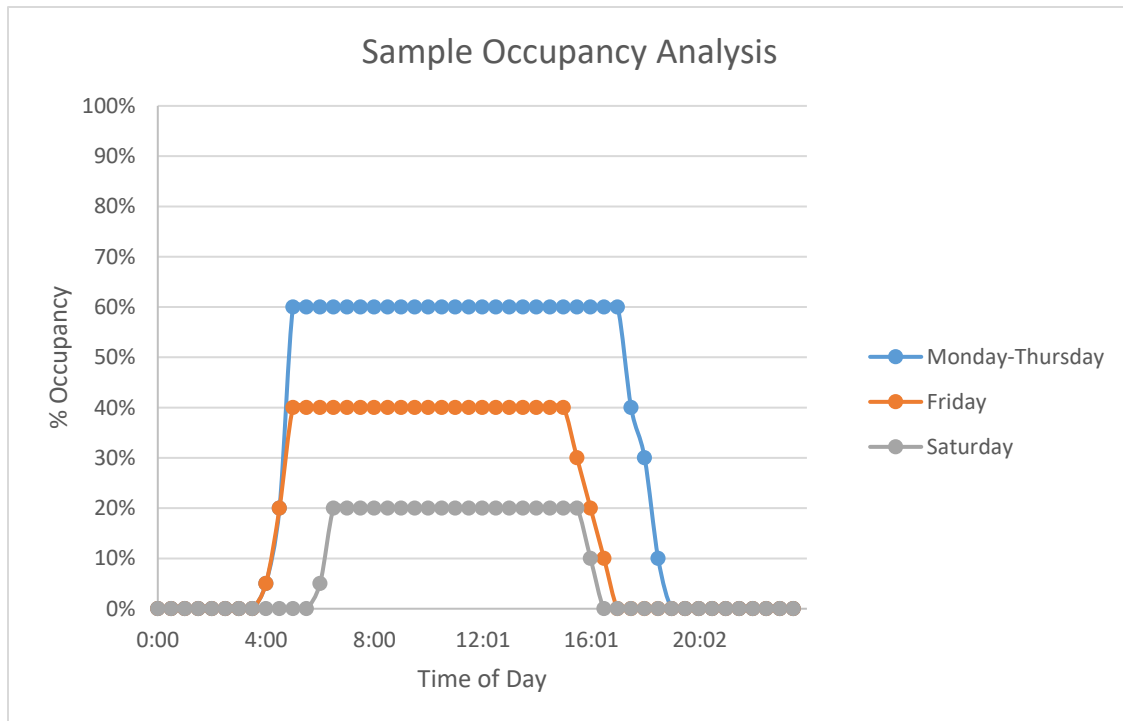


Figure 5: Sample Occupancy Analysis

The occupancy analysis, in addition to the on-site energy assessment informs the recommended ECMs. It is important to note that OB SEM ECMs are not unique in the sense that they are only applicable to commercial buildings with low occupancy rates. Rather, the low occupancy provides a customer engagement opportunity to deploy ECMs that address occupancy that would otherwise be unlikely to be deployed at a customer's building, but may be commonly recommended in buildings of all occupancy levels. Example occupancy-specific OB SEM ECMs include:

- Install and utilize occupancy sensors
- Utilize CO2 sensors to control HVAC in occupied suites
- Adjust unoccupied HVAC setpoints
- Daylight sensor controls
- Adjust unoccupied setpoints to 78-80 F for cooling & 60 F for heating

**Portfolio Energy Benchmarking.** In addition to a building-level energy benchmark, the OB SEM Program conducts a portfolio-level benchmark to compare buildings within an ownership or management portfolio against one another. This provides multiple benefits compared to single-building benchmarking. First, a portfolio benchmark makes the benchmark much more personal and real to owners and managers who can see how their own buildings are performing compared to one another vs. national averages, which often feel too impersonal to building owners. Second, the portfolio benchmark enables building owners and managers to prioritize buildings within their portfolio that may be performing well against a national average, but are

still underperforming relative to their own portfolio. Finally, the portfolio benchmark is a great tool in supporting customer enrollment. By providing senior management a bird's eye view of how their buildings perform compared to one another, they are more likely to participate in a utility program, and direct their staff to do so.

**CRE Lever Analysis.** One of the most unique parts of the OB SEM Program is the CRE Lever Analysis. By leveraging the single-entity nature of a portfolio, the OB SEM Program prioritizes buildings for engagement based not just on their energy performance (as determined during the portfolio benchmark) but also CRE levers that affect the decision to pursue, or not pursue, an ECM, such as the acquisition date, hold period, lease expiration schedule, lease structure, refinance goals, and corporate sustainability targets. This allows for greater accuracy in targeting buildings that will implement ECMs at their site.

**Targeted Building Energy Assessment.** In addition to identifying the operational and behavioral measures that are sought in a traditional SEM Program, the OB SEM Program also identifies, quantifies, and builds a business case for capital expenditure (CapEx) projects. CapEx projects can be complimentary or stand-alone from operational measures. The benefit to including these is that you already have an engaged customer who is interested in finding ways to reduce their energy consumption. By building off of the operational measures found in traditional SEM Programs, and adding CapEx projects, the OB SEM Program can drive greater savings and maximize the value of a single customer engagement, improving cost-effectiveness.

## **OB SEM In Action**

The OB SEM Program has been deployed through a pilot program with a Midwestern utility with a Program enrollment of 58 buildings participating. Initial program results yielded energy savings of 5%-15% or more, which presents a promising opportunity for leveraging and building upon SEM best practices to generate energy savings for the commercial office sector. Furthermore, nearly 59% of energy savings identified were from operational measures, requiring no capital expenditures from the customer, making OB SEM cost-effective for both the customer and the utility.

Within customer buildings, OB SEM ECMs varied based on existing technology and controls and building occupancy. As a baseline, all buildings were experiencing less-than-full occupancy. Those with existing controls in place saw ECMS that trended towards increased control of HVAC and lighting schedules. Those with basic or non-existent controls trended towards installing occupancy or automated controls, in addition to occupancy-based HVAC and lighting schedules.

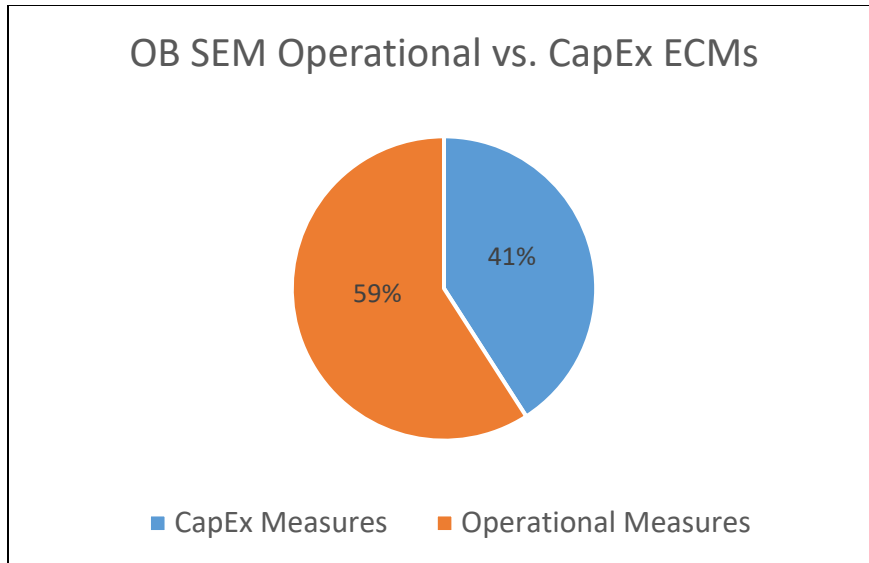


Figure 5: OB SEM breakdown of Operational vs. Capital Expenditures ECMs

## Conclusion

Based on this approach, Waypoint recommends that utilities adopt the OB SEM approach as a compliment to, rather than a replacement of, traditional SEM Programs. OB SEM delivers larger energy savings, but may have higher initial costs than traditional SEM programs. Furthermore, SEM Programs are well suited for industrial properties as-is and are a tried and true method for delivering persistent savings for that market segment. The OB SEM Program seeks to leverage tried and true energy management practices with CRE-specific design to increase uptake of ECMs with improved cost-effectiveness, although gross costs may be higher. By building a program that is designed to address the current (and evolving) needs of the commercial real estate market and office segment, the OB SEM Program can be leveraged by utilities throughout the country to address this unique energy savings opportunity.

## References:

Carlin, D. 2022. *40% Of Emissions Come From Real Estate; Here's How The Sector Can Decarbonize*. [www.forbes.com/sites/davidcarlin/2022/04/05/40-of-emissions-come-from-real-estate-heres-how-the-sector-can-decarbonize/?sh=3a9ba72763b7](https://www.forbes.com/sites/davidcarlin/2022/04/05/40-of-emissions-come-from-real-estate-heres-how-the-sector-can-decarbonize/?sh=3a9ba72763b7).

Corticcos, Nuno D. Duarte, Carlos C. 2021. *COVID-19: The impact in US high-rise office buildings energy efficiency*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8205289/>

ENERGY STAR. 2024. *The Business Case for Energy-Efficient Buildings*. [www.energystar.gov/buildings/save-energy-commercial-buildings/comprehensive-energy-management/business-case#:~:text=Quantifiable%20Costs%20Savings,%2C%20high%2Dperforming%20buildings%20save%3A&text=%240.60%20per%20square%20foot%20on,foot%20on%20utility%20expenses%20annually](https://www.energystar.gov/buildings/save-energy-commercial-buildings/comprehensive-energy-management/business-case#:~:text=Quantifiable%20Costs%20Savings,%2C%20high%2Dperforming%20buildings%20save%3A&text=%240.60%20per%20square%20foot%20on,foot%20on%20utility%20expenses%20annually)

ENERGY STAR. 2024. *Marketing, Leasing, and Tenant Engagement Guidance for Your Energy-Efficient Building*. [www.energystar.gov/sites/default/files/asset/document/Small%20and%20Medium%20Buildings\\_Marketing\\_Leasing%20Guidance\\_Final.pdf](https://www.energystar.gov/sites/default/files/asset/document/Small%20and%20Medium%20Buildings_Marketing_Leasing%20Guidance_Final.pdf)

Krukowski, J. 2024. *The Return To Office Has Stalled. Here's What Is Next*. [www.bisnow.com/national/news/office/office-flexibility-serendipity-labs-studiob-122750?utm\\_source=outbound\\_pub\\_75&utm\\_campaign=outbound\\_issue\\_74982&utm\\_content=outbound\\_link\\_14&utm\\_medium=email](https://www.bisnow.com/national/news/office/office-flexibility-serendipity-labs-studiob-122750?utm_source=outbound_pub_75&utm_campaign=outbound_issue_74982&utm_content=outbound_link_14&utm_medium=email).

Gallup. 2024. *Work Locations for U.S. Employees With Remote-Capable Jobs*. [www.gallup.com/401384/indicator-hybrid-work.aspx#:~:text=Line%20graph%20showing%20current%2C%20expected,employees%20work%20on%2Dsite%20currently](https://www.gallup.com/401384/indicator-hybrid-work.aspx#:~:text=Line%20graph%20showing%20current%2C%20expected,employees%20work%20on%2Dsite%20currently).

IEA. 2024. *Multiple Benefits of Energy Efficiency – Asset Values*. [www.iea.org/reports/multiple-benefits-of-energy-efficiency/asset-values](https://www.iea.org/reports/multiple-benefits-of-energy-efficiency/asset-values)

IEA. 2014. *Capturing the Multiple Benefits of Energy Efficiency*. [iea.blob.core.windows.net/assets/28f84ed8-4101-4e95-ae51-9536b6436f14/Multiple\\_Benefits\\_of\\_Energy\\_Efficiency-148x199.pdf](https://iea.blob.core.windows.net/assets/28f84ed8-4101-4e95-ae51-9536b6436f14/Multiple_Benefits_of_Energy_Efficiency-148x199.pdf)

IMT. 2024. *Map: U.S. City, County, and State Policies for Existing Buildings: Benchmarking, Transparency, and Beyond*. <https://www.imt.org/resources/map-u-s-building-benchmarking-policies/>

Peck, E. 2024. *Weekly peak office attendance is still nowhere near pre-pandemic levels*. <https://www.axios.com/2024/03/15/weekly-peak-office-attendance-is-still-nowhere-near-pre-pandemic-levels>