

## Commercial & Industrial Strategic Energy Management FAQ

Bonneville Power Administration, or BPA, has offered and supported Industrial Strategic Energy Management, or SEM, since 2009. As of December 2021, 16 different cohorts that included a diverse range of industrial sites across the Northwest have achieved 120,000 MWh of savings. While a relatively new measure to the Commercial sector, BPA has supported two separate multi-year commercial SEM pilot engagements with first-year savings results from one of the engagements (13 participants), they achieved over 2.6 million kWh of savings, which is a testament to the value of this measure.

Utilities are encouraged to review Section 10.3.2 of the [FY22-23 Implementation Manual](#) for current SEM requirements and guidelines. Below are some frequently asked questions about BPA's SEM measure:

### 1. What is SEM?

The core intent of SEM is to empower participants to reduce the energy intensity of facilities and/or production processes, while establishing a foundational system that allows the participants to track energy performance and savings over a multi-year period. Unlike traditional energy efficiency measures, or EEMs, SEM engagements have a minimum two-year performance period and emphasize savings from behavioral changes, no-cost / low-cost operational and maintenance, or O&M, improvements rather than capital investments.

### 2. How does BPA support Industrial SEM differently than Commercial SEM?

The guidelines and requirements for commercial and industrial, or C&I, SEM are aligned; however, the support infrastructure is different for each sector.

- **Recruitment and enrollment for Industrial SEM participation is often led by a utility-assigned Energy Smart Industrial (ESI) Partner, or ESIP, which serve as their primary point of contact.** BPA's ESI program also has SEM technical service providers, or TSPs, available to assist participants throughout the entire SEM engagement, which may include SEM planning support, development of predictive baseline energy models, assistance with using an appropriate Performance Tracking System, or PTS, the delivery of SEM training workshops, energy scans to identify O&M (and capital) measures, tune-up support, and the development and delivery of annual SEM completion reports.
- **Recruitment and enrollment for Commercial SEM is managed and driven by each utility.** Additionally, each utility will develop their own approach to delivering SEM and establish their own support infrastructure. Utility customers may wish to confer with other peer utilities that have Commercial SEM program experience, or

contract with an energy management consultant to design, develop and implement their SEM program.

### **3. What type of site would make a good SEM cohort candidate?**

Generally, organizations that have clear support from executive leadership, a designated energy champion to lead the implementation, and are willing to consider new methods and procedures to improve energy performance and reduce costs.

BPA has discovered over the years several desirable organizational characteristics that make successful SEM candidates, they have:

- Sufficient energy savings potential to warrant the required investment of program resources.
- Previous implementation of a custom project, lighting project or UES measure(s).
- Supportive management with the ability to form and articulate a connection between energy and a strategic business objective (e.g., sustainability, cost reduction, employee development).
- Recent success implementing continuous improvement in another aspect of the business (e.g., safety, quality, cost, lead-time).
- No major changes (organizational, process or structural) within the past or next 12 months (e.g., mergers/bankruptcy, new process loads, additions to the facility).
- A collaborative organizational culture, with recent examples of cross-functional initiatives involving operations-level personnel.
- Continuous learning and professional development are highly valued.

### **4. Can SEM participants utilize their own hardware & software solution for the Performance Tracking System?**

Yes. BPA designed the Performance Tracking System measure to be technology and vendor agnostic. Having the ability to track and monitor energy performance is a critical component to a successful SEM engagement. With the prevalence of AMI metering and other technologies, the ability for a SEM participant to receive energy consumption in real-time or near real-time is possible.

### **5. How is SEM different from other Commercial and Industrial measures?**

SEM is intended to be complementary to BPA's other measures. In fact, many end-users that participate in SEM, do so in conjunction with these measures; however, SEM can also be implemented as a standalone measure.

- Lighting, HVAC and custom measures generally target capital investment projects with more discrete scopes and costs. For example, if a prescriptive or custom project occurs within the two-year SEM performance period, the energy savings from that project will be calculated separately and the consumption

data related to the project will also be removed from the SEM model to avoid double counting the energy savings.

- BPA's Commercial and Industrial sector Energy Project Manager, or EPM, measure provides co-funding to end-users that dedicate a staff resource to focus on energy-efficient projects which they've identified in a comprehensive site plan. While no savings are directly attributable to the EPM measure it has been found to increase end-user participation resulting in more savings and provides utilities with greater visibility to future projects with key customers.

## 6. How does SEM calculate energy savings and incentives?

Energy savings resulting from SEM implementation are generally calculated using a regression model comparing the facility's adjusted baseline energy consumption with the energy use patterns observed during the performance period. Energy savings are calculated through a measurement and verification, or M&V, option described in the [Commercial and Industrial Strategic Energy Management Measurement and Verification Reference Guide](#). This guide is based on industry best practices and outlines recommended methodologies to establish baseline energy models at a whole-facility or subsystem level, quantify and track energy savings associated with the implementation of multiple energy efficiency measures, or EEMs, over a defined reporting period, and report energy savings from SEM projects appropriately to BPA.

- Annual SEM Completion Report: is used to document each performance period's SEM implementation achievements, energy savings, and participation payment amounts. (Note, an Annual SEM Completion Report template\* and sample report is available in the [Document Library](#))
- Incentives: are available based upon verified energy savings from SEM implementation (or SEM Verified Savings), and the [Strategic Energy Management Calculator](#) will determine any applicable incentive payment.

\*Any forms that meet BPA's required information outlined in the IM will be acceptable.

## 7. How do utilities claim savings from qualifying SEM measures?

Energy savings from SEM projects will be reported via an annual application within BPA's Energy Efficiency Tracking System, or BEETS, platform. At the conclusion of each performance period, the participant will provide their Annual SEM Completion Report and corresponding SEM calculator.

## 8. Should utilities report SEM engagements with zero to negative savings?

Yes. During a SEM engagement zero to negative savings may occur for a variety of reasons, which is often referred to as "backsliding." When a utility avoids reporting

zero to negative savings because an end-user backslides, it then skews the programmatic measurement and evaluation efforts and leads to incomplete records. Therefore, BPA highly recommends utilities report their customers' results even if they have zero to negative savings, additionally, doing so should not impact the portfolio-level reporting that are made to a utility's stakeholders, partners or States.

## **9. What happens at the end of a two-year SEM engagement?**

Serving utilities may re-enroll participants that have additional savings potential beyond the the two-year engagement period. Upon notification of re-enrollment, ESI will refresh the SEM engagement plan.

Participants who do not re-enroll, whether it is because they are no longer a good fit, or have successfully graduated from SEM, are encouraged to continue their energy management journey through Energy Project Manager or Custom Projects. Custom Projects is versatile program offering that includes capital improvement projects as well as operation & maintenance projects. At this time Performance Tracking System incentives are only eligible to active SEM participants; however, continued use of these energy management tools is highly recommended.

## **10. What is the measure life of SEM?**

Currently, the SEM measure life\* is one year. However, as an outcome to SEM process and impact evaluations, BPA is actively working with regional stakeholders to extend the measure life. A change to the measure life will impact the Implementation Manual (IM) and will be communicated through the IM change notice process.

\*Measure life is the number of years during which at least half the deliveries of a measure are in place and produce savings.

## **11. Who should I talk to if I have more questions about the new SEM measure?**

Utilities should contact their BPA Energy Efficiency Representative, or EER, about the Commercial SEM or their utility-assigned ESIP about the Industrial SEM.

All end-users should contact their utility or utility-assigned ESIP for more details.