



CleanVision
Energy Waste Reduction

DTE Commercial Strategic Energy Management (SEM) Program

DTE SEM January 11, 2023

Agenda

- What is SEM?
- SEM program benefits
- How SEM works
- Is SEM the right program for you?

What is Strategic Energy Management (SEM)

- A comprehensive approach whereby organizations systematically manage energy use to continuously improve energy performance.
- Focuses on improving business practices and establishing organizational cultures and mindsets to
 - Reduce energy waste
 - Improve energy efficiency
 - Verify results
- Engages and commits executives and facility management to long term strategic energy performance improvement.
- Holistic view of energy performance:
 - Understanding your energy use
 - Building Automation Systems (BAS) / control strategies
 - Reviewing and prioritizing energy efficiency projects
 - Implement low cost no cost operational improvements

Benefits of SEM

- Support and build upon existing or new programs
- Achieve between 2% and 8% energy savings
- Incentives and staffing grants!
- Support complex energy conservation measures
- Standardization of program across all facilities
- Creation equipment registers
- Use of regression models to visualize energy savings

SEM Incentives

Staffing Grant Activity Incentives (\$20,000)

- Up to \$10,000 year 1
- Up to \$10,000 year 2

Savings Incentives

- \$0.05/kWh Operational energy saved (DTE electric provider)
- \$0.30/Therm Operational energy saved (DTE gas provider)

- Customers may earn an annual maximum incentive up to \$125,000 for DTE electric energy savings and \$75,000 for DTE gas energy savings subject to change at DTE's discretion.

Example: DTE SEM Savings

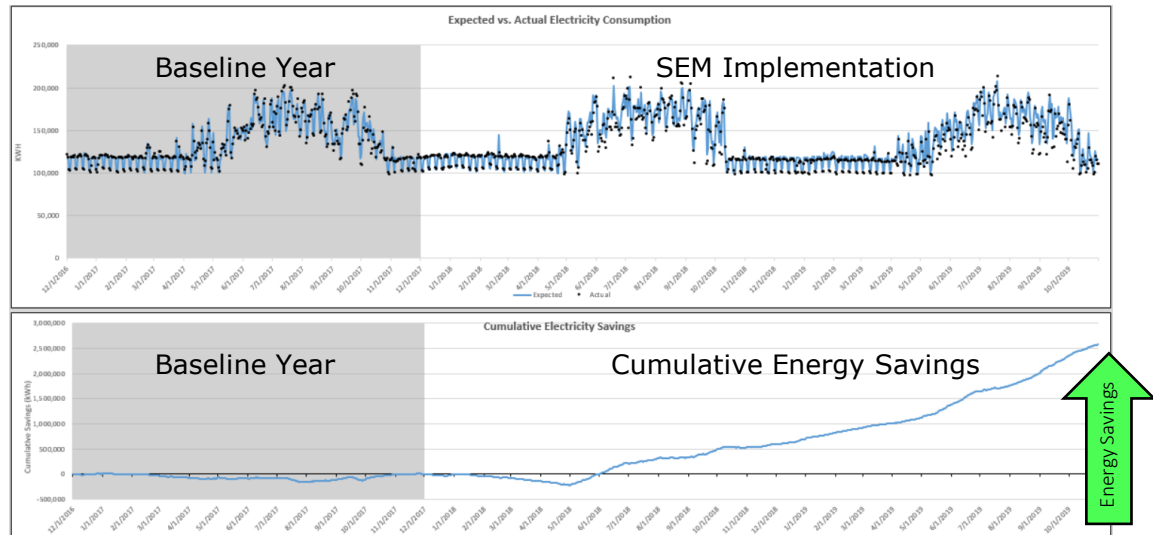
Participant benefits	Approximate SEM value Over \$200,000
DTE Provided SEM Expertise	\$50,000
DTE Provided Energy Savings Incentives \$0.05/kWh and \$0.30/therms	\$62,500 ⁽²⁾
DTE Provided Staffing Grants	\$20,000
Utility Energy Savings	\$100,000 ⁽¹⁾
Sustainable energy management system	Year over year energy savings

SEM Staffing Grants

SEM Activity	Incentive Value
1. Energy Team Monthly Meetings	\$250 per month over 2 years up to \$6,000
2. Energy Equipment and Operations Review	Year 1 - \$1,000 Year 2 - \$1,000
3. Establish Opportunity Register (Action Plan) <ul style="list-style-type: none"> - Develop and Document ECMs - Chiller/boiler/AHU specs - BAS Trends/Archiving - Remote BAS Access 	Year 1 – Q2 \$3,000 Year 1 – Q4 \$3,000 Year 2 – Q2 \$3,000 Year 2 – Q4 \$3,000
Total SEM Staffing Grants Incentives	\$20,000

How SEM Works

- Sign Up for SEM
- One day kick-off event
 - Energy review
 - Site walk-through
 - Equipment inventory
 - Opportunity review
 - Review energy model
 - Goals and objectives
- Monthly/Bi-weekly working sessions
 - Discuss and prioritize opportunities/action plan
 - Review BAS data and historical trends
 - Discuss performance model
- Semi-annual executive review
- Verify results and issue incentive checks



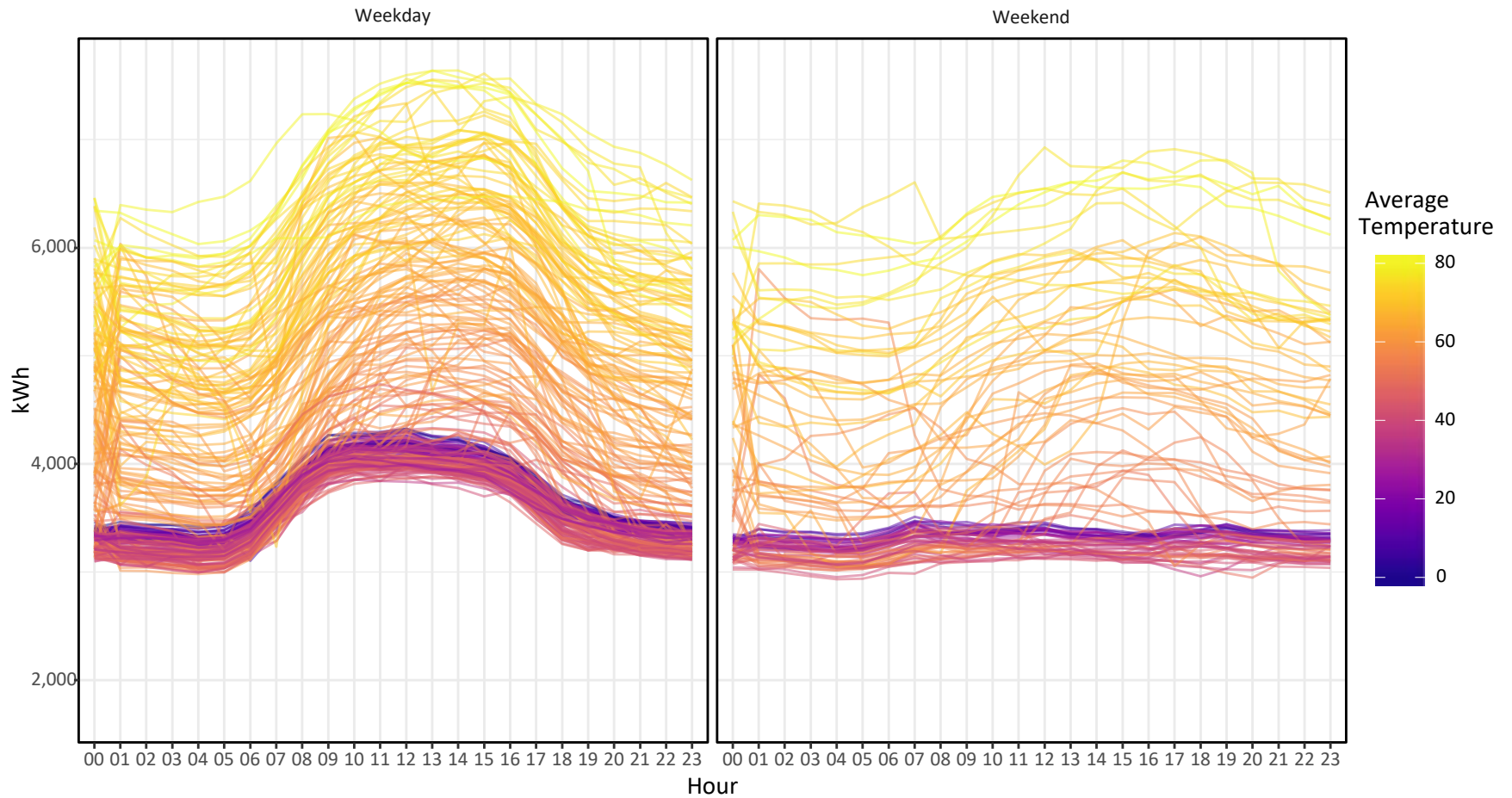
Projects and Opportunities

- Implemented Projects
- In-Progress Projects
- Future Projects
 - Planned
 - Considering

- Typical SEM Opportunities
 - Schedule AHU Off
 - Unoccupied Temp Setback
 - Economizer Optimization
 - Discharge Air Temp Reset
 - VAV CFM Setbacks
 - Duct Static Pressure Reset
 - CFM/ACH Setbacks
 - Chilled Water Reset
 - Condenser Water Reset
 - Chilled Water DP SP Reset
 - Hot Water DP SP Reset

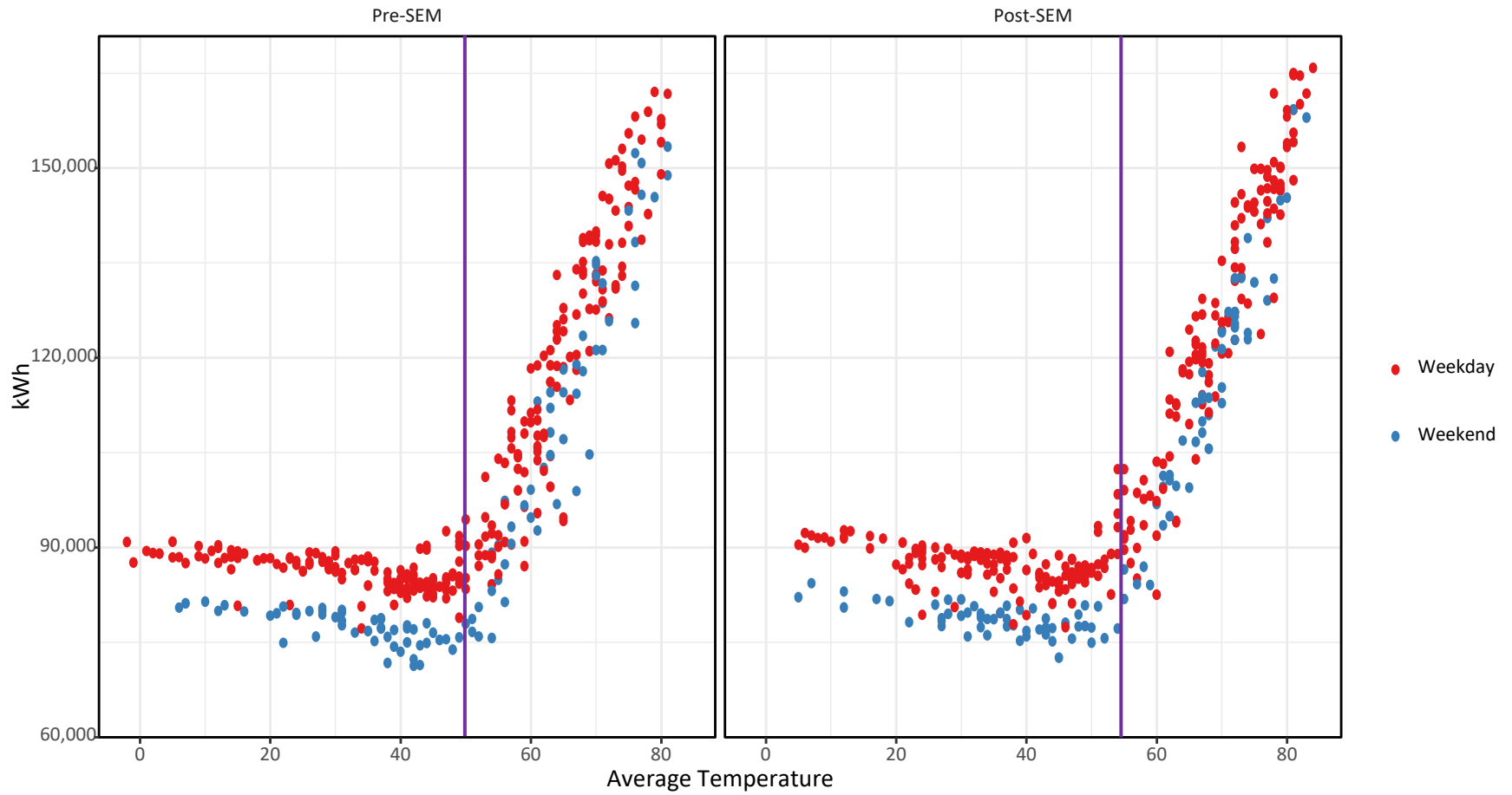
Analyzing Energy Performance Data

Electricity Consumption by Hour



Analyzing Energy Performance Data

Daily Electricity Consumption vs. Temperature



Requirements for Enrollment in SEM

- Program duration is 12-24 months with option to extend
- Enrollment requires
 - Signatory support of a top-level site representative
 - Signatory commitment of a day-to-day site contact who will be available throughout the SEM participation period
- Customer must be willing to share daily or weekly energy data on a monthly, confidential basis with the DTE Energy SEM Program.
- Customer will ideally have a functioning Building Automation System (BAS) or equivalent.
- Annual electric energy use greater than ~15,000,000 kWh.

Participant resource commitments

Who	Role	Estimated Time Commitment
Management	On-going commitment to SEM	1 hour per quarter
Energy Champion	Key person responsible for SEM initiative	~10-15%
Energy Team	Support the Energy Champion throughout the program	4 hour per month for meetings, plus 2 to 4 hours per month to implement Plan

Question?

Feras Karim

Program/Operations Manager

DTE Consultant

feras.s.karim@leidos.com