

**Strategic Energy
Management
2021 Impact Report
Klamath Community
College**

KLAMATH COMMUNITY COLLEGE

December 31, 2021

1. Executive Summary



*Klamath Community College
7390 S 6th St, Klamath Falls, OR 97603
Number of Years in the SEM Program: 4 (2021, 2020, 2016, 2017)*

After a brief hiatus, Klamath Community College (KCC) returned to Energy Trust's Strategic Energy Management (SEM) offering in 2020, and this year solidified its position as role model for others in the Southern Oregon Cohort and the higher education market sector. While facing multiple challenges because of the ongoing COVID-19 pandemic, and the efforts needed to reopen the school for in-person classes, KCC continued to hold energy team meetings, attend monthly coaching calls, Market-sector Forums, and SEM workshops. In 2021, KCC grew the impact of their energy team ensuring it became highly functional and self-directed. Led by Energy Champion Mike Homfeldt, this five-person team also updated their Performance Tracking Tool (PTT) to review the effects of their SEM actions and quickly learned to use the new online project tracking system in Smartsheet to track projects across the six buildings they focused on in 2021. They also took on larger energy related projects including initial work on electric vehicle charging stations and leveraged their SEM experience and tools to create an integrated plan for all aspects of energy use at the college. KCC earned \$15,290 in incentives in 2021, and we look forward to their continued success and SEM leadership in 2022.

SEM Program Incentives

	Milestone Incentive Amount	Intern Incentive Amount	Energy Savings Incentive Amount	Total
Year 1 (2016)	\$3,000	\$0	\$1,856	\$4,856
Year 2 (2017)	\$1,000	\$0	\$0	\$1,000
Year 3 (2020)	\$5,000	\$5,437	\$248	\$10,685
Year 4 (2021)	\$4,800	\$9,067.25	\$1,423	\$15,290
Total	\$13,800	\$14,504	\$3,527	\$31,831

2. Energy Savings Summary



This methodology uses engagement and program historical savings rates to determine savings for each site, which is the current basis for paying incentives. Engagement is assessed through Performance Tracking Tool (PTT) updates, workshop attendance, monthly call attendance, and the number of projects completed. To calculate energy savings, historical savings rates are determined by building type, model age, and fuel type which is applied to each enrolled site.

Normally savings are calculated with meter-level energy models in participant PTTs. The extraordinary circumstances of 2020 and 2021 have required that Energy Trust adapt commercial SEM savings methodologies and program offerings. Energy Trust is only permitted to account for savings and pay incentives for efforts that are directly attributed to participation in Energy Trust programs and will result in savings over future years. As a result, a new way to calculate savings and incentives for the full year has been developed. In 2021, SEM Savings were recognized and incentivized if you:

- Implemented at least five opportunities that were identified on your Annual Energy Plan
- **And** you completed at least two of the following:
 - Attended 50% of operations calls
 - Attended 50% of core SEM workshops
 - Updated all PTTs at least four times

Following are tables showing Program Year 2021 engagement criteria and savings, and below the tables are notes describing what each column represents.

Engagement Metrics for Program Savings Based Incentives	
Number of Workshops Attended	5/7
Number of Operations Calls Attended	11/12
Number of times Performance Tracking Tools Were Updated	6
Number of Completed Qualifying SEM Projects for Incentive	12

	Electric Baseline (kWh)	SEM Incremental Electric Savings (kWh)	Gas Baseline (therms)	SEM Incremental Gas Savings (therms)	Total Incentive
Building 2&3	155,200	6,265	7,017	0	\$125
Building 5	294,260	14,383	12,360	0	\$288
Building 6	694,800	28,048	1,071	0	\$561
Building 8&9	523,440	21,131	2,829	134	\$449
Grand Total	1,667,700	69,827	23,277	134	\$1,423

Electric/Gas Baseline is the annual energy use during the period prior to the program/model start date.

SEM Incremental Savings includes savings specific to SEM activities that occurred in the current engagement year (does not include capital savings). For continuation participants, this is your incremental incentivized savings that exceed SEM savings from previous years.

Total Incentive is the SEM Incremental Savings (kWh) x \$0.02 plus SEM Incremental Savings (therms) x \$0.20.

3. Program Highlights



In their second year back in the SEM program, KCC completed every milestone on time or early, continued to utilize their intern to help track projects, plus attended almost every workshop and monthly coaching call. The college also made updates to their energy policy which is now a model for community colleges around the state. In addition, Mike Homfeldt has quickly become a true SEM peer to other participants in both the cohort workshops, as well as in the state-wide SEM events, sharing insights and ideas for projects, Standard Operating Procedures (SOPs), and policy development.

Key Performance Indicators	
Milestones Achieved:	
<input checked="" type="checkbox"/> Annual Energy Plan	<input checked="" type="checkbox"/> Energy O&M Projects 8 /10 complete
<input checked="" type="checkbox"/> Standard Operating Procedure	<input checked="" type="checkbox"/> Executive Sponsor Engagement
<input checked="" type="checkbox"/> Energy Team	
Treasure Hunts Conducted	0
EMA Total Score / Previous Score	22% (2020)

Organizational Activities

- **Successes:**
 - The energy team meets regularly and communicates well on projects, priorities, and goals. Plus, their Executive Sponsor is very supportive of the team.
 - Aaryan Patel, the SEM Intern, returned for a second year to support the team. His work reduced the SEM administrative burden for KCC. He continues to make progress, learning and discovering ways to apply SEM across the campus.
 - KCC updated their Energy Policy in 2021 to reflect their continued focus on energy management, sustainable operations and their long-term goals.
- **Challenges:**
 - KCC's energy team consists primarily of personnel in the facilities department. While this makes them excel at project completion and other technical activities, they have not

been able to recruit a permanent member from marketing or a similar department and has had difficulty increasing awareness across the entire campus about their work in SEM.

- In 2021, KCC began a project to study the effectiveness of smart power strips in classrooms and offices and implement a campaign to use them at the college. Although they made progress in the research portion of the project, trying out eight different products, they have not been able to implement the campaign yet.
- Progress:
 - KCC networked with other SEM participants on a variety of topics including strategic building scheduling, community solar, and electric vehicle charging. This has increased both the knowledge and confidence of the team as they take on new projects.
 - As the KCC energy team continues to evolve, they can enhance engagement and reporting to include campus-wide communications such as a newsletter. They can also include “percentage to goal” updates to help staff and students connect the value of SEM to KCC’s educational mission.

Technical Activities

- Successes:
 - KCC reviewed controls on their HVAC system, working with their contractor to optimize VFD (Variable Frequency Drive) settings on multiple air handlers, as well as night purge sequences to both improved air quality and use cool night air in the summers to pre-cool buildings.
 - KCC added astronomical timers on select buildings to make sure lights were programmed to be on at appropriate times that change with seasons.
- Challenges:
 - KCC could not effectively implement a planned HVAC system schedule to match class schedules, but they have plans in 2022 to reach out to other community colleges like UCC and SWCC to glean successful strategies.
 - Much of the historical information regarding building operations resides individually with Jeff Kelley, Facilities Specialist, and needs to be better documented.
- Progress:
 - KCC continues to slowly add to their repository of Standard Operation Procedures (SOPs) for energy systems, helping to ensure consistent operation in their buildings.
 - The college is making progress on their EV charging project and expects to complete this in 2022. While not specifically an SEM project, the highly visible nature of the stations will act as a demonstration of KCC’s commitment to sustainable operations.

4. Participant Energy Team



Energy Champion: Mike Homfeldt, Facilities Director

Executive Sponsor: Tricia Fiscus, CFO & VP Administrative Services

Back-up Energy Champion: Mark Griffith, Physical Plant Specialist

Team Member: Jeff Kelley, Facilities Specialist

Intern: Aaryan Patel

Mike Homfeldt demonstrated exemplary SEM leadership in 2021, reinforced by project management support by Aaryan Patel, SEM Intern, and members of the

energy team, Mark Griffith and Jeff Kelley. The Executive Sponsor, Tricia Fiscus, has been a persistent supporter and promoter of the program. Despite the challenges faced in 2021, the team has shown dedication to SEM. The energy coaches consider the KCC energy team to be in the "Performing" phase of Bruce Tuckman's Forming-Storming-Norming-Performing model. This theory of group development proposes that each phase is necessary and inevitable for the team to grow, face challenges, tackle problems, find solutions, plan work, and deliver results. KCC is in the "Performing" stage of growth development, as the energy team is highly engaged with the SEM program and has completed many projects in 2021 despite competing priorities at the college.

Energy Team Phase

<input type="checkbox"/> Forming	<input type="checkbox"/> Storming	<input type="checkbox"/> Norming	<input checked="" type="checkbox"/> Performing	<input type="checkbox"/> Reforming
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5. Plans for Future Success



KCC is on track for continued SEM success going into 2022. Their strong foundation and effective energy team, combined with a committed Executive Sponsor, have already paid dividends in resiliency, sustainability, and cost control. This will continue to positively impact the college as they expand their reach across the campus. KCC will continue to develop SOPs and succession plans to prevent gaps in operational knowledge and ability. They plan to create long term energy improvement plans and add capacity to their team by making training resources available to staff around energy efficient operations and maintenance, and by engaging additional team members to support their engagement efforts at the college. We expect KCC to continue as a role model in SEM and look forward to working with them in 2022.

- KCC has discussed adding a building in 2022 but will work with their coaches to determine the most strategic plan for enrollment next year.
- KCC established energy reduction goals and KPIs in 2020 and calculated building EUIs in 2021. Committing to targets based on a reduction below ASHRAE Std. 100 EUI medians for each of the buildings would provide an external benchmark for KCC to pursue.
- KCC has plans to develop an internal newsletter where they can highlight their energy management program. Adding a team member with expertise in this area would help expedite this project and expand the effectiveness of their SEM team.

This report was prepared by:

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