

Commercial SEM Final Participant Report 2019

Portland Community College

Renee Garrels
100 SW Main St. Ste. 1500
Portland, OR 97204

(503) 961-6117
renee.garrels2@clearesult.com





Table of Contents

1.	Energy Savings Summary Table.....	3
2.	Executive Summary	4
3.	Program Highlights	4
4.	Participant Energy Team	5
5.	Plans for Future Success	6

PORTLAND COMMUNITY COLLEGE

December 11, 2019

1. Energy Savings Summary Table

This table includes information related to each enrolled and modeled Portland Community College site. The "Electric/Gas Baseline" is the annual energy consumption during the baseline period in the model. "Modeled Savings" is the total savings for the current program year from the CUSUM; "Net Savings" is the "Modeled Savings" with all capital projects deducted that have been completed since the baseline was established, "Incremental Savings" is the SEM savings claimed and incentivized from the site for the current program year, and "Sum of Total Incentive" is "Incremental Electric/Gas Savings" multiplied by the per kWh/Therm incentive for current SEM Program Year.

Overall, Portland Community College achieved 2.9% incremental electric energy savings and 0.8% incremental gas energy savings compared to their baseline annual energy consumption. The energy savings and incentives for each site are detailed in the tables below.

Building Name	Electric				Gas				Total Incentive
	Electric Baseline (kWh)	Modeled Savings (kWh)	Net Savings (kWh)	Incremental Savings (kWh)	Gas Baseline (therm)	Modeled Savings (therms)	Net Savings (therms)	Incremental Savings (therms)	
Rock Creek 7	1,329,200	41,907	41,907	41,907	55,255	3,159	3,159	3,159	\$1,469.94
Rock Creek 9	1,001,932	-29,678	-29,678	0	14,785	-948	-948	0	\$0.00
Rock Creek Campus	3,247,032	218,642	218,642	218,642	148,930	24,930	-8,307	0	\$4,372.84
Sylvania Campus	10,197,334	192,915	192,915	192,915	483,257	2,563	2,563	2,563	\$4,370.90
Total	15,775,498	423,786	423,786	453,464	702,226	29,704	-3,533	5,722	\$10,213.68

2019 KPIs	
Milestones Achieved:	
<input checked="" type="checkbox"/> Annual Organizational Energy Plan	<input checked="" type="checkbox"/> EMA Action Plan (Implement)
<input checked="" type="checkbox"/> Performance Tracking	<input checked="" type="checkbox"/> Energy O&M Projects Part 1 6 /10 complete
<input checked="" type="checkbox"/> Operational Controls	<input checked="" type="checkbox"/> Energy O&M Projects Part 2 3 /10 complete
\$900 received of \$1,000 Possible*	
Milestones Incentive Amount:	\$4,900
Intern Incentive Amount:	N/A
Total Combined Incentive Amount	\$15,113.68
Percentage of Workshops Attended:	100%
EMA Total Score / Year over Year Score:	NA (2019); 44% (2018)

*Based on \$100 per opportunity register project completed, up to \$1,000.

2. Executive Summary

Portland Community College, 12000 49th Ave, Portland, OR 97219. Year 5.

Portland Community College (PCC) completed its fifth year in the SEM program. Currently, PCC has both the Rock Creek and Sylvania campuses enrolled. The organization's energy team pulls from both campuses and includes employees from several departments. The efforts of Elaine Cole, PCC Rock Creek's energy champion, and her core team have been the driving force in broadening the energy team and strengthening efforts and project completion rates at both campuses. This past year, PCC has seen broader engagement of the facilities and maintenance staff at both sites. Laura Ward, PCC Sylvania's energy champion, departed from the SEM program in September, but other key energy team members have stepped-up to take over her SEM responsibilities. Overall, the organization focused on boosting occupant engagement through communication of the energy conservation policy, general efforts, and SEM savings opportunities.

3. Program Highlights

PCC has been active in implementing both technical and organizational projects throughout 2019. In addition to the monthly operations call, SEM coaches met with Elaine Cole, PCC Rock Creek's energy champion, and Anna Brown, intern, to discuss organizational engagement efforts. The energy team attended all workshops, most operations calls, and submitted for all milestone incentive opportunities. Coaches also met with PCC for a Building Opportunity Assessment (BOA) in April.

- **Organizational Activities:**
 - Created a Standard Operating Procedure (SOP) to maintain efficiency of the Sylvania campus boiler through a preventative maintenance plan.
 - Developed and rolled-out leadership communication for both Rock Creek and Sylvania campuses to disseminate the PCC energy policy to employees and students.
 - Reviewed the energy team members' roles and responsibilities to reflect the changes amongst the team, projects, and sites.
 - Set a structured process to actively solicit employee and student ideas about improvements in energy performance and the energy program (suggestion box, campus newsletters, EcoChallenge, etc.).
 - Participated in the 2019 People's EcoChallenge in October.
 - Ensured energy team members were trained on SEM. Team members are encouraged to attend technical workshops, trainings, and leadership meetings. All team members attended the BOA webinars.
 - Scheduled quarterly SEM leadership team meetings to report out energy performance and achievements to executive sponsors.
 - Worked with IT to develop an approach to shut down all administrative computers at 11:00 PM each night.

- **Technical Activities:**
 - *Elaine Cole presented at the SEM Technical workshop. Her presentation detailed PCC's Strategic Scheduling Pilot. The presentation was very well-received by other SEM participants.*
 - *Laura Ward led a plant tour at the Rock Creek campus directly following the SEM technical workshop to look at the campus's upgraded boiler.*
 - *Conducted a BOA at the College Center and Automotive & Metals buildings in April.*
 - *Installed occupancy sensors in tunnel sections to automatically turn the lights off at both the College Center and Health Technology building.*
 - *Installed occupancy sensors in dental classrooms to turn lighting off while the spaces were unoccupied at the Health Technology building.*
 - *Created an HVAC control system capable of turning off the vacuum system in the dental lab at the Health Technology building.*
 - *Replaced remaining pneumatics with a Digital Direct Control (DDC) system using electronic actuators and decommissioned the air compressor at the Health Technology building.*
 - *Installed a DDC system instead of pneumatics at Building 2.*
 - *Calibrated sensors to assure accurate readings for DDC systems at both Building 2 and Building 9.*
 - *Controlled gym fans to turn off or go to low speed when the gym at the Health Technologies building was not in use.*
 - *Coaches met regularly with the Anna Brown, intern, to train her on how to both update and read the SEM models.*

4. Participant Energy Team

Rock Creek Energy Champion: Elaine Cole, Sustainability Coordinator.

Sylvania Energy Champion: Laura Ward, Energy Resource Conservation Manager (through September 2019).

Rock Creek Executive Sponsor: Dr. Chris Villa, Campus President.

Sylvania Executive Sponsor: Dr. Lisa Avery, Campus President.

Team Member: Briar Schoon, Sustainability Manager.

Team Member: Tony Ichsan, District Director, Facilities Management Services.

Team Member: Mitch Kilgore, Rock Creek, Associate Maintenance Manager.

Team Member: Joe Gamble, Associate Maintenance Manager, Sylvania.

Team Member: Brad Ortman, Facility Operations Manager.

Team Member: Sean Scorby, HVAC Technician, Sylvania and multiple locations.

Team Member: Larry Osborn, Associate Maintenance Manager, multiple locations (since August 2019).

Team Member: Stephania Fregosi, Sustainability Analyst.

Team Member: Joy Chausse, Administrative Assistant to the Director of Facilities Management Services.

Team Member: Krista Phillips, Manager, Bond Project II.

Intern: Anna Brown (beginning October 2018).

PCC is navigating the balance between a district energy team and a campus-specific energy team. Elaine Cole is the energy champion for the Rock Creek campus while Laura Ward was the energy champion for the Sylvania campus through September 2019. Laura remains at the organization but now solely works on capital-related projects. PCC has yet to identify a new energy champion for the Sylvania campus, but the rest of the energy team has stepped up to take on Laura's responsibilities. Elaine has consistently worked with SEM coaches and the entire energy team to move organizational and technical projects forward. For example, she was able to recruit over ten facilities and maintenance staff to attend the SEM Technical workshop in October, at which she also gave a resounding presentation about her efforts at PCC Rock Creek about strategic scheduling.

Phases reference Tuckman's stages of growth development. Forming-storming-norming-performing model 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. PCC belongs in the "Performing" stage of growth development, for energy champions can rally their large energy team to complete both organizational and technical projects, the energy team consists of employees from several departments, and the organization routinely delivers outstanding SEM results.

<input type="checkbox"/> Forming	<input type="checkbox"/> Storming	<input type="checkbox"/> Norming	<input checked="" type="checkbox"/> Performing	<input type="checkbox"/> Reforming
----------------------------------	-----------------------------------	----------------------------------	--	------------------------------------

5. Plans for Future Success

PCC is expected to re-enroll in the 2020 SEM program. Coaches anticipate the organization will continue its strong engagement with the SEM program. Coaches are also working with the site to develop a 2020 annual plan that will help prioritize key projects at both Rock Creek and Sylvania campuses. Moreover, coaches will work closely with the organization to either identify a new energy champion for the Sylvania campus or to help Elaine Cole take on both Rock Creek and Sylvania campuses as the sole energy champion.

- PCC's action items for 2020 include:
 - Maintain the two campuses enrolled in the program. Given the success they have seen at both enrolled sites, they would like to enroll an additional campus when the time is right.
 - Remove the organizational barriers identified when shutting down buildings for unoccupied seasons. This has proven to be a bigger issue than originally thought.
 - Continue connecting with the sustainability department to support efforts to both track and reduce PCC's carbon footprint.