

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

PORTLAND COMMUNITY COLLEGE

December 31, 2021

1. Executive Summary



Portland Community College, 12000 49th Ave, Portland, OR 97219. Year 7.

Portland Community College's (PCC) seventh year in the program once again brought new challenges that were met with dedicated and creative energy team members.

After the district was forced to cancel in-person learning that began March 2020, cross-section staff went to work to systematically address many of the new requirements from the state level and internal Covid Task Force. In preparation to return to in-person learning, the facilities and energy team were met with many obstacles to balance safety while minimizing the energy impact. Through much collaboration and effort, PCC was able to open its doors once again to in-person learning Fall 2021 that was met with enthusiasm and excitement.

Throughout the course of the 2021 program year, the energy team ambitiously worked together and kept to their Strategic Energy Management goals while meeting all milestones along the way and advancing new energy-reducing opportunities along the way.

SEM Program Incentives

	Milestone Incentive Amount	Intern Incentive Amount	Energy Savings Incentive Amount	Total
Year 1 (2015)	\$1,000.00	NA	\$18,803.87	\$19,803.87
Year 2 (2016)	\$1,000.00	NA	\$6,547.16	\$7,547.16
Year 3 (2017)	\$2,000.00	NA	\$0	\$2,000.00
Year 4 (2018)	\$5,000.00	\$10,843.75	\$10,030.14	\$25,873.89
Year 5 (2019)	\$4,600	\$0	\$10,213.68	\$14,813.68
Year 6 (2020)	\$5,000.00	\$7,000.00	\$13,376.06	\$25,376.06
Year 7 (2021)	\$5,000.00	\$10,000.00	\$17,856.00	\$32,865.00
Total	\$24,600.00	\$27,843.75	\$76,826.91	\$129,270.66

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	6/6
Number of Operations Calls Attended	12/12
Number of times Performance Tracking Tools Were Updated	12/12
Number of Completed Qualifying SEM Projects for Incentive	23

	SEM		SEM		Total Incentive
	Electric Baseline (kWh)	Incremental Electric Savings (kWh)	Gas Baseline (therms)	Incremental Gas Savings (therms)	
Cascade Campus - Cascade Hall	364,053	21,184	2,755	114	\$446
Cascade Campus - Jackson Hall	645,867	37,582	31,819	1,313	\$1,014
Cascade Campus - Student Services Building	588,480	34,243	29,773	1,229	\$931
Rock Creek - Willow Creek	1,001,932	48,151	17,319	976	\$1,158
Rock Creek 7	1,329,200	31,427	55,255	1,415	\$912
Rock Creek 9	1,001,932	23,689	14,785	379	\$550
Rock Creek Campus	3,247,032	76,772	148,930	3,815	\$2,298
SE Campus - Community Hall Annex	221,520	10,646	0	0	\$213
SE Campus - Library	378,597	22,030	0	0	\$441
SE Campus - Student Commons	595,721	34,664	13,849	572	\$808
SE Campus (Mt Tabor/Scott Halls)	1,388,550	66,731	40,164	2,264	\$1,787
Sylvania Campus	10,197,334	241,102	483,257	12,378	\$7,298
Grand Total	20,960,218	648,221	837,905	24,455	\$17,856

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



The PCC energy team has again shown a strong commitment to their self-imposed ambitious energy-reducing goals. The year began with a new intern who served throughout most of the program year and was soon succeeded by another new intern. In preparation to opening their doors once again to in-person learning, the energy team worked with the Facilities Maintenance Services team in balancing safety with energy awareness, and the college successfully opened their doors once again late summer 2021. This was in direct response to the reopening guidelines set forth by the District's Covid Task Force team. In addition, the Sustainability team updated the college's aggressive energy-reducing plan that establishes a 2040 carbon neutrality commitment throughout the district.

PCC was recognized and ranked nationally by the Association for the Advancement of Sustainability in Higher Education (AASHE) 2021 Sustainable Campus Index. This is a transparent and self-reporting framework for colleges to measure their sustainability performance. Near the conclusion of the program year, the Energy Conservation Revolving Fund committee was formed and not only drafted the funds disbursement process and procedure, but developed an online application form for requestees to submit their energy-reducing project for review and fund disbursement.

Key Performance Indicators	
Milestones Achieved:	
☒ <i>Annual Energy Plan</i>	☒ <i>Energy O&M Projects</i> <i>10 /10 complete</i>
☒ <i>Standard Operating Procedure</i>	☒ <i>Executive Sponsor Engagement</i>
☒ <i>Energy Team</i>	
Treasure Hunts Conducted	3
EMA Total Score / Previous Score	44 (2018) / 57 (2020)

- **Organizational Activities**
 - **Successes:**
 - *Electric Vehicle Transition Policy – submitted grant to Portland General Electric's EV Infrastructure Expansion offering. Grant submission still in process*
 - *Strategic Energy Management Associate (Intern) continued advancing 50001 Ready to bring 12 tasks to completion*
 - *New Executive Sponsor was quickly onboarded and participated in one SEM leadership meeting and SEM workshop*
 - *At the beginning of program year, hired intern who served throughout most of the year before leaving position for fulltime employment in energy-related field. New intern hired shortly after and currently being onboarded as new Strategic Energy Management Associate*
 - *Energy team revised SEM succession plan*
 - *PCC SEM webpage completed and is set to go live in early 2022*
 - *Participated in 2021 Peoples EcoChallenge*
 - **Challenges:**
 - *Occupant engagement when PCC not fully operational*
 - *Executive Sponsor turnover and getting new sponsor up to speed in time to make a difference*
 - *During district reorganization, getting management support and time to advance 50001 Ready*
 - **Progress:**
 - *PCC ranked top overall Associate College in the United States by the Association for the Advancement of Sustainability in Higher Education 2021 Sustainable Campus Index*
 - *Energy Conservation Revolving Fund committee designated. Fund process & procedure and digital application form is drafted. Expected to go live in 2022*
 - *Revised district energy policy and sent to cabinet for review and approval*
 - *2021 Climate Action Plan drafted and approved. This piece of hard and dedicated work establishes a 2040 carbon neutrality commitment. This will be accomplished through education, outreach, and scopes 1, 2, 3 greenhouse gas emission goals*

- **Scope 1 and 2 Goals**
 - Goal 1** – Energy reduction by 2026, PCC has reduced college energy consumption per square foot by 6-% below 2006 levels
 - Goal 2** – Renewable energy by 2026, PCC has reduced its scope 1 and 2 greenhouse gas emissions by 75% below 2006 levels, through decarbonization of its energy sources
 - Goal 3** - Fleet emissions reduction by 2026, PCC has reduced college fleet fuel emissions by 25% below 2006 levels
- **Scope 3 Goals**
 - Goal 1** - Sustainable transportation and travel by 2026, PCC has reduced commuter and business travel greenhouse gas impacts per fulltime equivalent by 20% below the 2006 baseline
 - Goal 2** - Sustainable procurement by 2026, PCC purchaser and vendor contracts align with PCC’s diversity, equity and inclusion, sustainability and climate action goals and values to ensure long-term viability of PCC’s enterprise
 - Goal 3** - Water reduction by 2026, PCC has reduced the college’s water consumption per square foot by 10% below 2019 levels
 - Goal 4** - Waste diversion by 2026, PCC has reduced greenhouse gas emissions from solid waste by 50% below 2006 levels
- **Technical Activities**
 - **Successes:**
 - Rock Creek Building 2 welding shop – modernization project completed. This transformed the shop into a state-of-the-art welding facility that reduces energy over 260,000 kWh and 28k therms and annual avoided cost over \$40k
 - Two interns served consecutively and were quickly trained and updating PTTs each month
 - First intern accompanied energy coach on two Treasure Hunts and collaborated with facilities team to schedule and advance multiple energy reducing projects (e.g., incorporate lighting automation, repair failed economizer, repair hot water valve leaking-by)
 - Professional development - First intern completed BOC level 1 training
 - Professional development - First intern completed Oregon DAS Building Opportunity Assessment video training series and received Energy Trust of Oregon completion certificate
 - Where applicable, lighting automation is reprogrammed to meet safety and security concerns that resulted in fewer operating hours
 - **Challenges:**
 - Facilities staffing shortage and competing with higher paying private companies in recruiting and hiring qualified individuals
 - Having facilities representation from each campus consistently attend monthly operations calls
 - **Progress:**
 - Multiple lighting upgrade projects completed throughout district

- *General preventative maintenance tasks were enhanced to place more focus on energy-reducing opportunities (e.g., tighten HVAC schedules, scrutinizing position of outside air dampers)*
 - *Multiple HVAC equipment replaced with higher efficient equipment and incentivized*

4. Participant Energy Team



Energy Champion: Elaine Cole, Sustainability Coordinator

Executive Sponsor: Jennifer Piper, Dean of Instruction - District Projects

Executive Sponsor: Dr. Karen Sanders, Dean of Academic & Career Pathways

Back-up Energy Champion: Brad Ortman, Facility Operations Manager

Team Member: Alan Little

Team Member: Briar Schoon, Sustainability Manager

Team member: Doug Jay, Facilities Operations Maintenance Specialist III

Team member: Duane Johnson, Facilities Operations Maintenance Specialist

Team member: Evan Smith, HVAC Technician, multiple locations

Team Member: Jimmy Hood, Facilities Operations Maintenance Specialist

Team Member: Joe Gamble, Associate Maintenance Manager, Sylvania

Team member: Krista Phillips, Manager, Bond Project II

Team Member: Larry Osborn, Associate Maintenance Manager, Southeast

Team member: Mark Erickson, Facilities Maintenance Operations Specialist

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

Team Member: Sean Scorby, HVAC Technician, multiple locations

Team Member: Stephania Fregosi, Sustainability Analyst

Intern: Amelia Palmer Hansen / Kyler Woods: Strategic Energy Associate

Include team names and roles (above), any transitions that occurred, 3-5 sentences about the team to provide context for checked box below, plus this boilerplate to provide context.

Phases below 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 is in the Performing stage where consensus and cooperation have been well-established. The energy team is mature and organized to advance aggressive energy reduction goals into the new program year.

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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



Prior to the December SEM 2022 Planning Workshop, energy coaches reviewed SEM documents to provide Portland Community College with a variety of organizational and technical energy-related items to consider pursuing in 2022; these items were placed on a customized “Progress Poster” in the online collaboration tool Mural and this Mural Progress Poster was used by participants during the workshop. Below are a few of the actions that Portland Community College intends to implement in 2022.

- *Advance onboarding and training new intern*
- *Schedule two Treasure Hunts with energy coach*
- *Schedule quarterly SEM leadership meetings in advance to include new Executive Sponsor*
- *Work with Facility Maintenance Service team for higher participation in monthly ops calls*
- *Continue advancing and completing 50001 Ready tasks*
- *Continue advancing Climate Action Plan*
- *Release at least two “Potty Press” newsletters (e.g., Spring and Fall)*
- *Collaborate with Human Resources to incorporate energy awareness in new employee orientation*
- *Two FMS staff to attend BOC level 1*
- *Enroll additional buildings into SEM. Will select with energy coach at start of new program year*
- *Schedule and host informational tour of the Rock Creek Campus PV Array Farm*

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