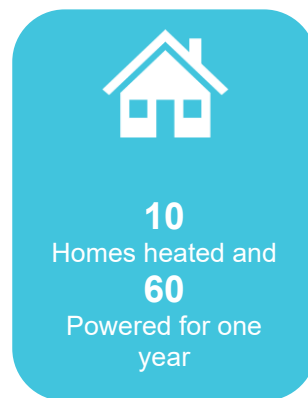
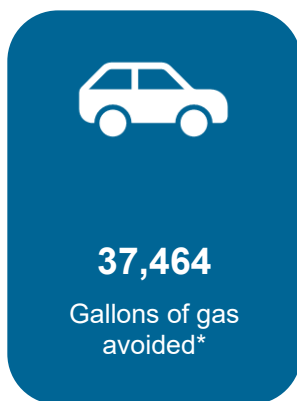


# Strategic Energy Management

## 2020 Impact Report

### Portland Community College



*\*Please note: Modeled Savings (Annual SEM and Capital savings) were used in these calculations. These are not additive. They offer various ways of looking at the same impact. Calculator reflects modeled savings and metrics associated with the Energy Trust Service Territories for the State of Oregon.*

# PORTLAND COMMUNITY COLLEGE

December 18, 2020

## 1. Executive Summary



Portland Community College, 12000 49th Ave, Portland, OR 97219. Year 6.

Portland Community College's (PCC) sixth year in the program proved to be unwavering and successful. The continued dedication of the energy team was evident as they adapted to the COVID-19 pandemic. The team's willingness to take on ambitious projects to better integrate energy conservation into all aspects of the college was continued throughout 2020. PCC's energy team includes staff from across the organization, showing what is possible when stakeholders from a broad cross-section work towards the same goal. The work PCC completed this year sets them up for continued success in 2021 and beyond. They are a model SEM program participant.

## 2. Energy Savings Summary



The extraordinary circumstances of 2020 have required Energy Trust to 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 – both before and after the stay-at-home policies were in place:

Following is a table showing Program Year 2020 savings, and below the table are notes describing what each column represents.

Building Name	Electric Baseline (kWh)	Modeled Savings (kWh)	SEM Savings* (kWh)	2020 Electric Incentivized Savings (kWh)	Gas Baseline (therm)	Modeled Savings (therms)	SEM Savings* (therms)	2020 Gas Incentivized Savings (therms)	2020 SEM Incentive	2020 Energy Avoided Costs
Rock Creek - Willow Creek	997,483	44409	63	63	19,247	-1282	241	241	\$49.46	\$3,449.01
Rock Creek 7	1,329,200	275653	-14367	0	55,255	12797	4257	1097	\$219.40	\$31,008.53
Rock Creek 9	1,001,932	93025	-69113	0	14,785	1811	-1200	0	\$0.00	\$8,583.33
Rock Creek Campus	3,247,032	1212041	180284	0	148,930	19000	-38444	0	\$0.00	\$108,386.12
SE Campus (CHA)	221,520	38693	7278	7278		0	0	0	\$145.56	\$3,005.08
SE Campus (Mt Tabor/Scott Halls)	1,372,745	359112	2381	2381	40,164	4886	-2512	0	\$47.62	\$31,555.68
Sylvania Campus	10,197,334	2279904	802027	609111	483,257	67779	6222	3659	\$12,914.02	\$227,914.28
<b>Grand Total</b>	<b>18,367,247</b>	<b>4302837</b>	<b>908553</b>	<b>618833</b>	<b>761,638</b>	<b>104991</b>	<b>-31436</b>	<b>4997</b>	<b>\$13,376.06</b>	<b>\$413,902.02</b>

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

**Modeled Savings** includes annual SEM and capital savings. This is calculated by taking the energy predicted by the model for the full year, minus the actual/billed energy used. The carbon footprint graphics on the title page and the Avoided Cost Savings are based on Modeled Savings.

\* **SEM Savings** includes savings specific to SEM activities that occurred in the current engagement year (does not include capital savings). In 2020, SEM Savings are determined as follows (contact your SEM Coach for details on the calculations):

- Electric: Program year SEM savings prior to March 23, 2020 are averaged and then projected out over a full year.
- Gas: Since most gas savings are related to heating and will have already happened in the months prior to stay at home orders (i.e. November through March), program year SEM savings are the savings achieved prior to March 23, 2020.

**Incremental (SEM) Savings** are the portion of SEM savings for continuation participants that are incentivized. These savings exceed the incentivized savings from previous years.

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

**Avoided Cost Savings** is the money saved based on multiplying your Modeled Savings by a blended Oregon utility rate (electric or gas) for all commercial Energy Trust customers.

2020 Key Performance Indicators	
<b>Milestones Achieved:</b>	
<input checked="" type="checkbox"/> Annual Energy Plan	<input checked="" type="checkbox"/> Energy O&M Projects <i>10 /10 complete</i>
<input checked="" type="checkbox"/> Standard Operating Procedure	<input checked="" type="checkbox"/> Executive Sponsor Engagement
<input checked="" type="checkbox"/> Energy Team	<input type="checkbox"/> Internship Assistance Milestone
<input checked="" type="checkbox"/> Standard Operating Procedure - Resiliency	
<b>Percentage of Workshops Attended:</b>	100%
<b>EMA Total Score / Year over Year Score: (optional 2019)</b>	57% (2020)/ 44% (2018)
<b>Milestones Incentive Amount:</b>	\$6,000
<b>Intern Incentive Amount:</b>	\$0
<b>Energy Savings Incentive Amount:</b> (see table for details)	\$13,376.06
<b>Total Combined Incentive Amount</b>	\$19,376.06

### 3. Program Highlights



PCC enrolled two new sites in the program and added more energy team members. Intern Farid Kayali lead a process to investigate a strategic scheduling program. Farid also undertook PCC's efforts to achieve 50001 Ready recognition; the organization hopes to gain recognition in 2021. PCC completed several other technical projects throughout 2020. The energy team took extraordinary measures in maintaining diligence and resiliency in the SEM program.

The energy team was also heavily involved with an update to the PCC Climate Action Plan. This plan incorporated several energy efficiency practices. PCC should also be commended for its commitment to diversity, equity, and inclusion in their sustainability program, ensuring new voices were heard and included.

The organizational and technical activities in **bold** indicate items that were part of the organization's COVID (or wildfire) response.

- **Organizational Activities:**
  - Engaged with Facilities Management Services.
  - Completed a Climate Action Plan update that intersected with SEM.
  - Conducted and EMA with SEM coaches in October.
  - Identified and recruited a new executive sponsor.
  - Completed all milestones.
  - Hosted quarterly leadership calls.
  - Hired a new Facility Manager, Larry Osborn, at the Southeast campus.
  - Began ambitiously working towards the U.S. Department of Energy's 50001 Ready recognition.
- **Technical Activities:**
  - Consistently and meaningfully participated in monthly operations calls.
  - Enrolled three new buildings at the Southeast campus: East Tabor, Scott Hall, and Community Hall Annex.
  - Enrolled one new building at the Rock Creek campus: Willow Creek.
  - Conducted a Building Opportunity Assessment (BOA) at the Willow Creek building and implemented many of these opportunities.
  - **To respond initially to COVID-19, Facility Maintenance Services conducted an energy audit by turning off or minimizing significant loads and stand-alone equipment.**
  - Developed heat maps and daily load profiles using the Performance Tracking Tool's CuSum graphs and raw electrical interval data to evaluate building performance.
  - Researched several software platforms that perform strategic scheduling of HVAC equipment. The software tool integrates PCC's room scheduling software with Energy Management Software to automate on-demand scheduling.
    - **At this point, COVID-19 has delayed advancement, but a pilot program process is being developed to select one SEM enrolled building in 2021 to roll-out the software for one year to measure energy savings.**

## 4. Participant Energy Team



*Energy Champion: Elaine Cole, Sustainability Coordinator.*

*Executive Sponsor: Dr. Chris Villa, President, Rock Creek Campus (through summer 2020).*

*Executive Sponsor: Jennifer Piper, Dean of Instruction - District Projects (Nov. 2020 – present).*

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

*Team Member: Briar Schoon, Sustainability Manager.*

*Team member: Doug Jay, Facilities Operations Maintenance Specialist III.*

*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: Farid Kayali.*

*PCC has done an incredible job of integrating staff at each of their campuses into one energy team. Elaine Cole is a model energy champion, working hard to bring in new voices and thread diversity, equity, and inclusion throughout their energy planning. The energy team recruited Jen Piper to be the next executive sponsor after the departure of Dr. Chris Villa. Jen comes to the team with high energy and a passion for success.*

*PCC's energy team is an example of what success can look like in the SEM program. The team is made up of a diverse cross-section of campus staff, with each having a defined role. With the leadership of Elaine Cole as their energy champion, they saw terrific success in 2020.*

*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 clearly aligns with the "Performing" stage of growth development, as the energy team works cohesively and diligently, is able to complete several technical projects, and is highly engaged in the SEM program.*

Forming

Storming

Norming

Performing

Reforming

## 5. Plans for Future Success



*PCC has seen sustained success in the SEM program and is expected to re-enroll in 2021. SEM coaches hope PCC will use their strong energy team and updated Climate Action Plan to move forward with their goals. PCC's updated Climate Action Plan provides a structure for moving forward and should be leveraged as much as possible. SEM coaches are also confident that PCC will continue to complete several operations and maintenance projects throughout 2021.*

- *PCC's action items for 2021 include:*
  - *Enroll new campuses and buildings into the program.*
  - *Continue to move forward with the planned strategic scheduling software.*
  - *As students and staff return to campus, create an engagement plan to reestablish the importance of energy conservation and communicate successes.*
  - *Continue to move forward with the 50001 Ready program.*

### **This report was prepared by:**

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