

Building Assessment Sample Report

We analyzed your energy usage and determined that your building has a potential savings of **\$217,166** per year. To learn more about how to achieve these savings contact your Outreach Representative. Your Outreach Representative's role is to guide you through the incentive application process.

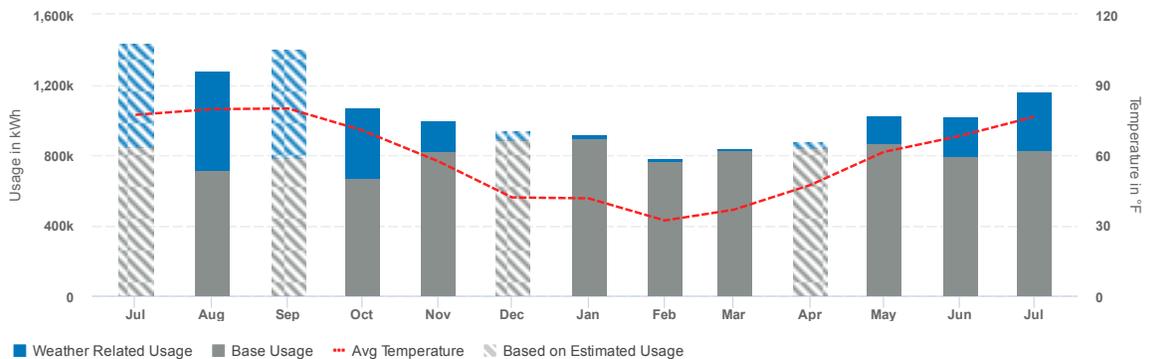
Energy Usage

Potential Annual Savings \$217,166	Annual Electric 12,569,245 kWh	Peak Demand 2,678 kW	Total Annual Spend \$1,156,371
Total Carbon Savings 1780.97 Tonnes / Year			

Your Potential Energy Savings

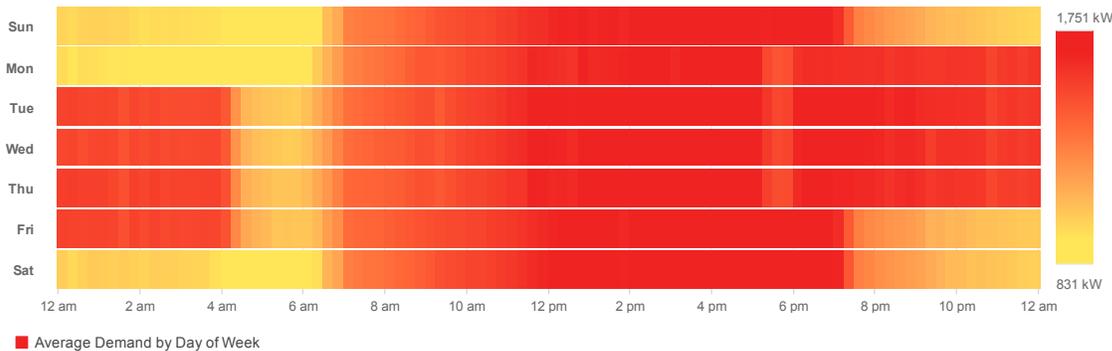
Recommendation	Type	Energy Savings	% Savings	Annual Savings
Adjust temperature setbacks in building management system	Electricity	515,339 kWh	4%	\$47,411
Use energy efficient air conditioners	Electricity	326,800 kWh	3%	\$30,066
Install a Variable Speed Drives (VSDs)	Electricity	301,662 kWh	2%	\$27,753
Modify schedules during unoccupied hours	Electricity	276,523 kWh	2%	\$25,440
Install advanced digital economizer controller	Electricity	248,871 kWh	2%	\$22,896
Modify night schedules	Electricity	163,400 kWh	1%	\$15,033
Install Demand Controlled Ventilation	Electricity	138,262 kWh	1%	\$12,720
Use energy efficient motors	Electricity	125,692 kWh	1%	\$11,564
Modify weekend/holiday schedules	Electricity	113,123 kWh	1%	\$10,407
Clean ducts and fans	Electricity	75,415 kWh	1%	\$6,938
Install self-closing doors	Electricity	37,708 kWh		\$3,469
Install energy efficient exit signs	Electricity	37,708 kWh		\$3,469

Weather Impact - Electricity
We've done some analysis showing how weather changes impact your energy usage to help you decide if you want to make changes to your equipment or set points.



Operating Schedule

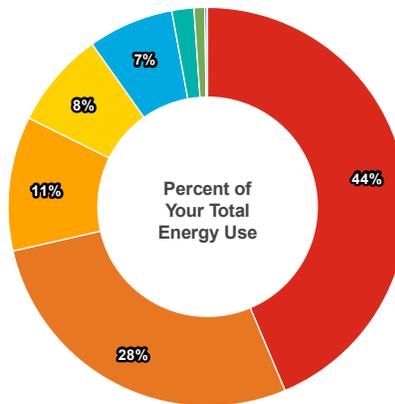
Your energy use compared with your operational hours. Startup/shutdown time may present opportunities for operational savings.



End Uses - Electricity

End-Use Analysis shows a breakdown of the major contributing components of the Facilities consumption.

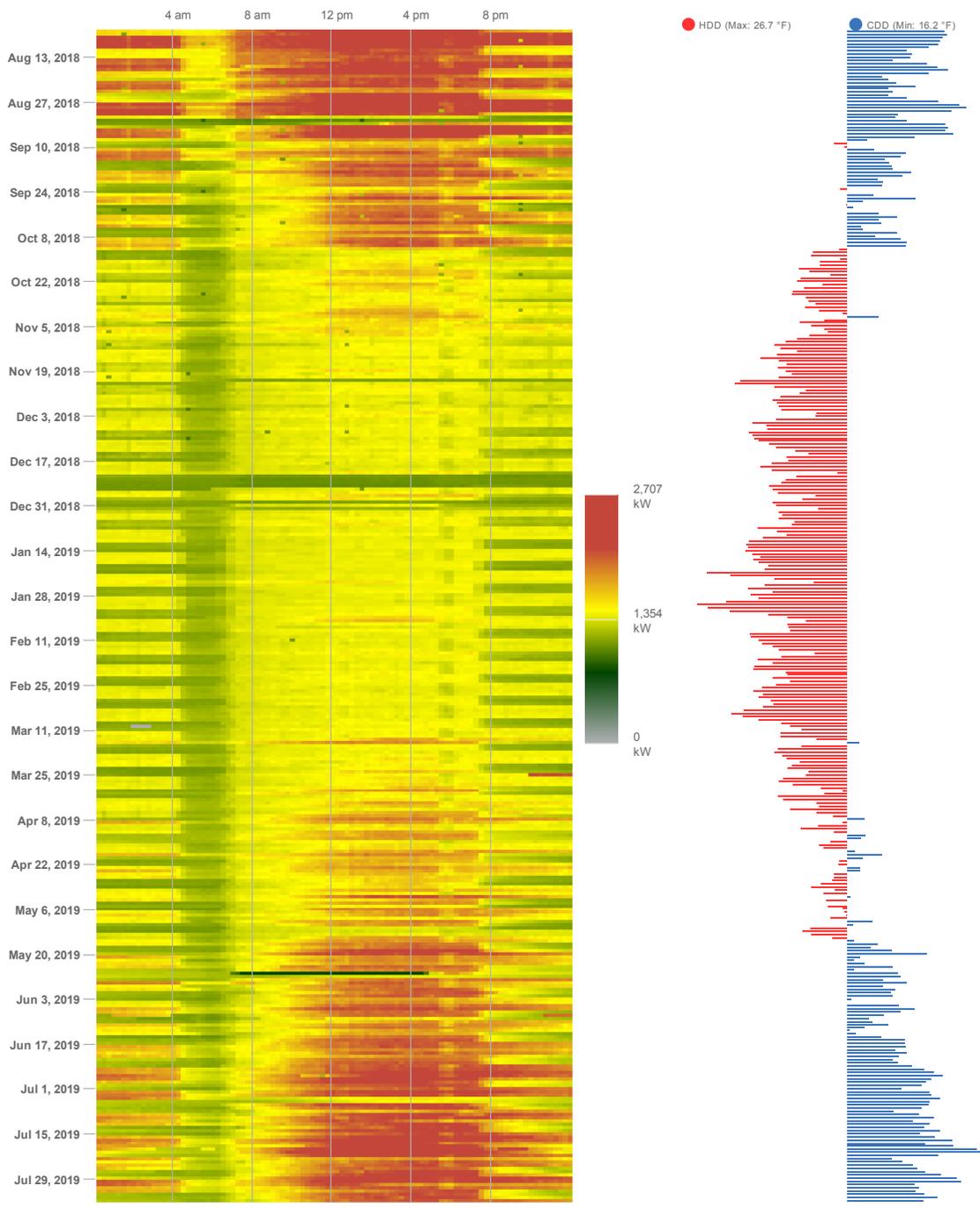
What Affects My Energy Usage?



End Use	Usage (kWh)	You (kWh / sq ft)	Similar Facilities (kWh / sq ft)	Efficient Facilities (kWh / sq ft)
Lighting	5,412,953	5.45	1.95	0.66
Space Cooling	3,477,262	3.5	0.43	0.05
Ventilation	1,310,270	1.32	0.4	0.08
Other and Process Loads	979,141	0.99	0.61	0.15
Refrigeration	870,348	0.88	0.54	0.13
Computing	217,587	0.22	0.14	0.03
Office Equipment	108,793	0.11	0.07	0.02
Space Heating	26,039	0.03	0.01	0
Cooking	0	0	0	0
Water Heating	0	0	0	0

Based on the information you have provided, your Facility is 992,531 sq ft in size and located in PHILADELPHIA, PA. Here is how its consumption compares to similar Facilities over the past 12 months. To update this information, please update your Facility Profile

Annual Demand Intensity - Electricity
 See energy usage for each interval throughout the year to visualize your building's profile. Determine if the profile aligns with expectations or requires further investigation. Heating/cooling degree days (HDD/CDD) help correlate the pattern with temperature.



Adjust temperature setbacks in building management system

It is possible that during unoccupied periods of the day, temperature setback is not being employed to properly schedule the run time of air conditioning and/or heating equipment. This means that equipment runs unnecessarily and therefore wastes energy. Proper night setback scheduling should be implemented across all zones of the building. We recommend 55 F heating unoccupied setpoint, and 85 F cooling unoccupied setpoint.

Potential Savings
\$47,411 / Year

Carbon Savings
388.82 Tonnes / Year



Use energy efficient air conditioners

Energy efficient air conditioners use about 15% less electricity than standard models. They also typically include additional temperature and timer controls. Advanced temperature controls let you have a more precise control of room temperatures while timer controls mean you only cool the space when it's being used.

The energy rating of all air conditioners should be clearly displayed. Units with an A+ rating are the most efficient models.

Potential Savings
\$30,066 / Year

Carbon Savings
246.57 Tonnes / Year



Install a Variable Speed Drives (VSDs)

Most motors are fixed speed devices. But for uses like pumping and ventilation, you can benefit from variable output if the system is not in constant use. VSD systems are more efficient than constant speed systems, because they can vary the speed of the motor based on the level of heating or cooling a building demands. With many applications power is proportional to the cube of the motor speed – so drop the motor speed by 20% and your power consumption falls by almost 50%.

Potential Savings
\$27,753 / Year

Carbon Savings
227.6 Tonnes / Year



Modify schedules during unoccupied hours

It is apparent that equipment in the building remains operational during unoccupied periods. The schedule should be modified to properly mimic the operating profile of the building.

Potential Savings
\$25,440 / Year

Carbon Savings
208.63 Tonnes / Year



Install advanced digital economizer controller

An air-side economizer uses outside air to reduce cooling requirements. A fixed minimum of outside air is maintained at all times in all different types of weather, but the air-side economizer is an attractive option for reducing energy costs when weather conditions allow. The air-side economizer takes advantage of cool outside air either to assist mechanical cooling or, if outside air is cool enough, to provide total system cooling. Many packaged HVAC units have economizers with analog controls, which have limited accuracy and control points and do not provide fault detection. Malfunctioning economizers often go unnoticed because the building is still kept cool. Advanced Digital Economizer Control (ADEC) is a retrofit upgrade that can be added to a packaged HVAC unit or used to replace existing analog or nonfunctional economizer controls. The digital controls allow use of the economizer to be more precise. Multiple factors, such as temperature, humidity, and space set points, can all be considered when determining whether the unit should enter economizer mode. Dampers can be set to more positions to allow in more precise amounts of outdoor air. All of these factors help optimize control of the building's HVAC. These controls can also detect and report problems with HVAC equipment, including dampers and sensors.

Potential Savings
\$22,896 / Year

Carbon Savings
187.77 Tonnes / Year



Modify night schedules

It is apparent that equipment in the building remains operational throughout the night. Nights are likely unoccupied and the schedule should be modified to properly mimic the operating profile of the building.

Potential Savings
\$15,033 / Year

Carbon Savings
123.28 Tonnes / Year



Install Demand Controlled Ventilation

Demand control ventilation (DCV) is an advanced control strategy that measures real-time CO2 concentration in a space to determine the appropriate amount of outdoor air to bring into the space. Some ventilation air must be provided at all time that occupants are present, but supplying more air than is needed for the current number of people unnecessarily increases the heating and cooling loads on the equipment. By controlling the outside air damper position to meet a CO2 concentration setpoint, the AHU provides the minimum allowable quantity of outdoor air to the space. During periods of reduced occupancy, the AHUs can recirculate more air that is at a comfortable temperature for occupants without supplying inadequate ventilation.

Potential Savings
\$12,720 / Year

Carbon Savings
104.32 Tonnes / Year



Use energy efficient motors

Go for a high standard: motors are generally efficient devices (85% to 95% in most cases), but as their power to cost ratio is high, choosing a higher standard of motor that offers better performance can pay back very quickly.

Potential Savings
\$11,564 / Year

Carbon Savings
94.83 Tonnes / Year

Using energy efficient motors for your heating or cooling systems will yield the best annual savings, particularly on motors which are running continuously. Motors that run for long hours can cost more in annual energy use than their initial cost, making increases in efficiency worthwhile.



Modify weekend/holiday schedules

It is apparent that equipment in the building is starting up and remaining operational throughout the weekend. Weekends are likely unoccupied and the schedule should be modified to properly mimic the operating profile of the building.

Potential Savings
\$10,407 / Year

Carbon Savings
85.35 Tonnes / Year



Clean ducts and fans

Dust and debris can build up over time, making fans work harder to move air. Cleaning ducts and fans will reduce pressure in the system, making it run up to 40% more efficiently.

Duct cleaning will also improve the air quality in your building, and help ensure a safe working environment for employees.

Consider hiring a professional duct cleaning company as they will typically perform an inspection of your system for a nominal fee.

Potential Savings
\$6,938 / Year

Carbon Savings
56.9 Tonnes / Year



Install self-closing doors

Use doors that close themselves, either automatic or spring hinged. This will keep cold out in the winter and the heat out in the summer.

This is particularly important for doors that lead to the outside or unconditioned spaces. High-traffic businesses, such as retail or quick food service, see the greatest savings, although benefits are also seen in small office buildings and sit-down restaurants.

Potential Savings
\$3,469 / Year

Carbon Savings
28.45 Tonnes / Year



Install energy efficient exit signs

Exit signs need to be lit all of the time for safety and use more energy than you think. Efficient LED models can last up to ten years and help you use less than a quarter of the energy of older models while still meeting safety requirements.

Instead of replacing the whole sign, consider more affordable LED retrofit kits. These plug into older exit signs and convert them to an energy efficient model.

Potential Savings
\$3,469 / Year

Carbon Savings
28.45 Tonnes / Year

Please verify program eligibility for specific measures by contacting your Outreach Representative.