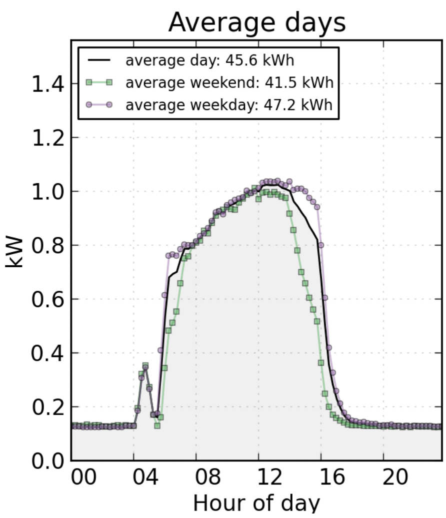
Building Energy Fingerprint

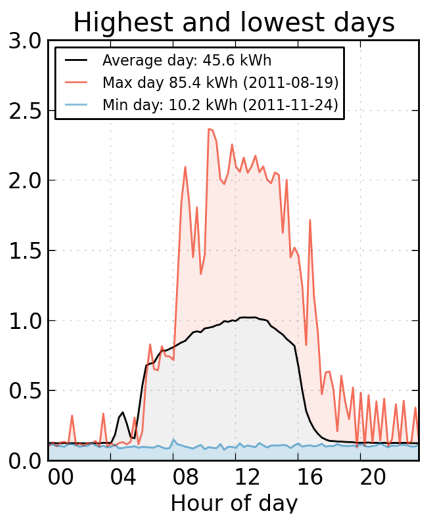
Green Button data analysis

Building fingerprinting report for 'Bakersfield example'

	A1 Bakersfield		
File name:	pge_electric_interval_data.xml	**Building type:**	Other commercial
Upload time:	07-30-2013 07:10 PM	**Floor area:**	2200 sqft (4 occupants)
Size:	8813770 bytes	**Year built:**	1930
Content type:	text/xml	**Zip code:**	93304
First reading:	04-04-2011 12:00 AM	**Heating/cooling:**	Non-electric heat / AC
Last reading:	05-02-2012 12:00 AM	**Weather station:**	MEADOWS FIELD AIRPORT (10.4 km away)

Metric	Value	Per sqft	Per occupant
Average daily min (W): This is the amount of power that the building typically uses at the lowest consumption time of day. Minimum usage is mostly driven by loads that run all the time, like refrigerators, ventilation, hallway lighting, and computers and other "vampire loads" from appliances and electronics that stay plugged in.	104	0.05	26
Average daily max (W): This is the amount of power that the building typically uses at the highest consumption time of day. The daily maximum could be dominated by a single large load, or could be the sum of several little ones, such as AC, TV, and various appliances.	1162	0.53	291
Average daily range (W): This is the difference between the average daily max and average daily min. It provides a rough estimate of the total load turned on and off every day.	1058	0.48	265
Average daily max/min ratio: Low values indicate that a greater proportion of items are being left on continuously. Values over 3 indicate significant loads are shut off for parts of the day. While this may indicate good control, it could also indicate excessive peak usage. To save energy, look to extend and deepen shutoff periods while also reducing peak usage.	11.3	NA	NA
Annual consumption (kWh): This is the annual electricity demand based on your data (projected if necessary). Annual kWh and annual kWh per sqft (also known as Energy Use Intensity) values are calculated nationally for residential and commercial buildings.	4165	1.89	1041





How to read this chart

***Average day** is computed by averaging all the readings available for each time of day, **Max day** is the single day when you use the most energy, and **Min day** is the single day when you use the least energy.*

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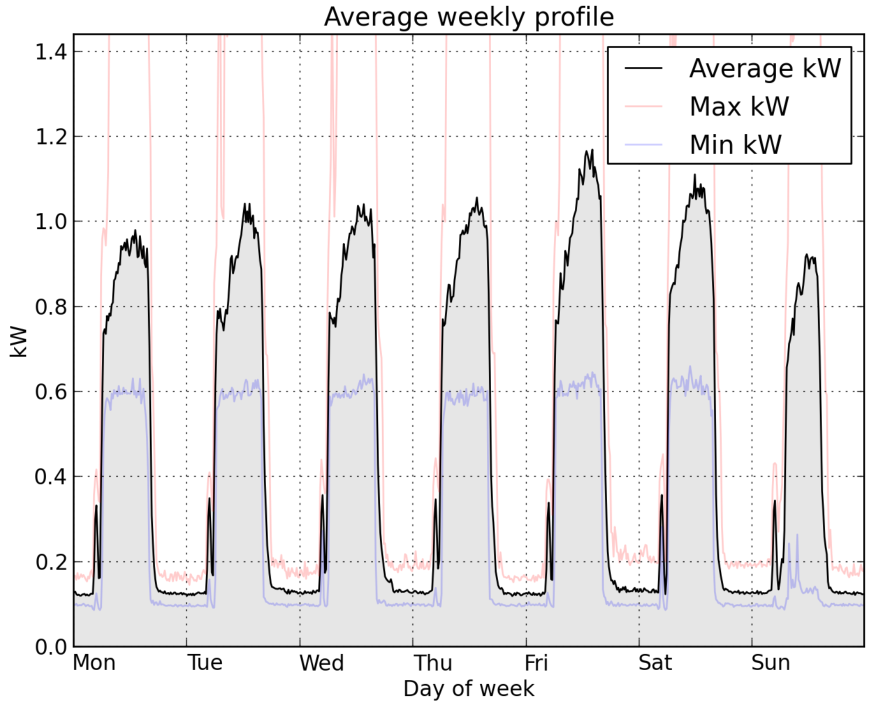
Typical Weekly Profile

This chart shows the power demand profile for a typical week.



How to read this chart

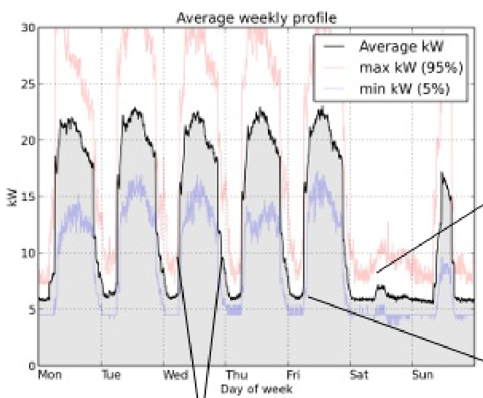
This chart displays the typical weekly profile of power intensity (in kW) over the time period of analysis. Power demand is shown on the vertical axis, and hours of the week are shown on the horizontal axis.

***Average kW** is the average of all power readings calculated separately for each hour of the week,* ***Max kW** is the maximum power reading calculated separately for each hour of the week, and* ***Min kW** is the minimum power reading calculated separately for each hour of the week.*

The weekly profile corresponds to the building's occupancy and use for each day of a typical week.

The slope of the ramp up and down each morning and evening reflects how quickly the building systems are turned on and off each day.

Instances where the load profile does not match the expected building operations may present opportunities for savings.



Loads should reduce during lower occupancy periods (e.g. overnight, weekends, or lunch breaks).

Minimums should occur overnight or during unoccupied hours and be as low as possible.

The daily curves' width should correspond to the building's occupancy schedule.

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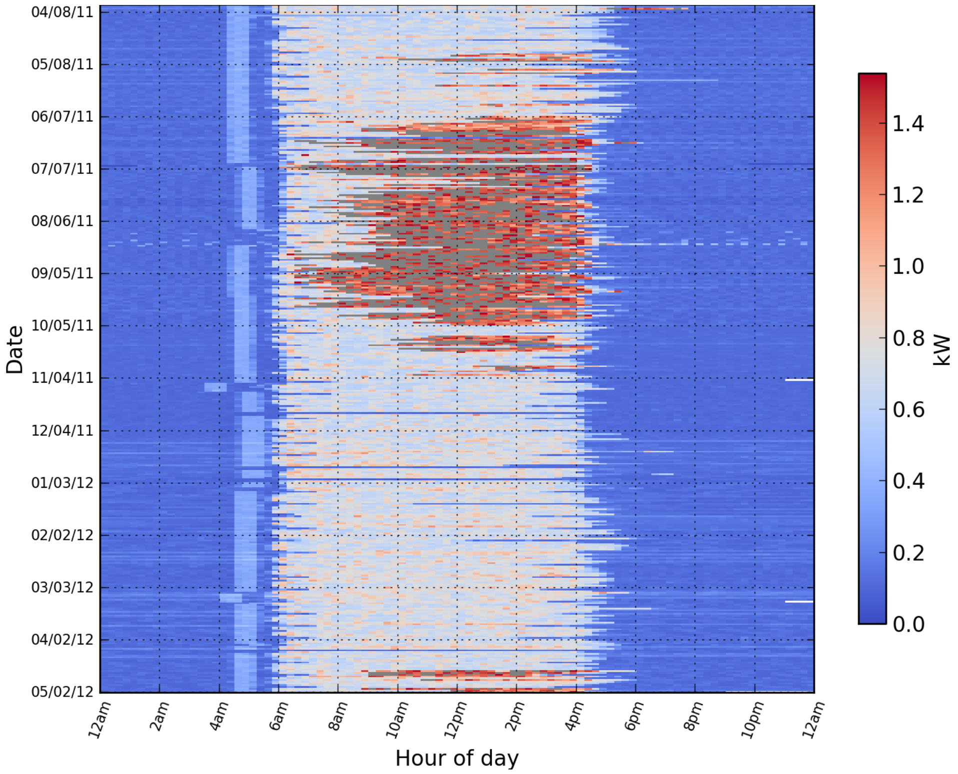
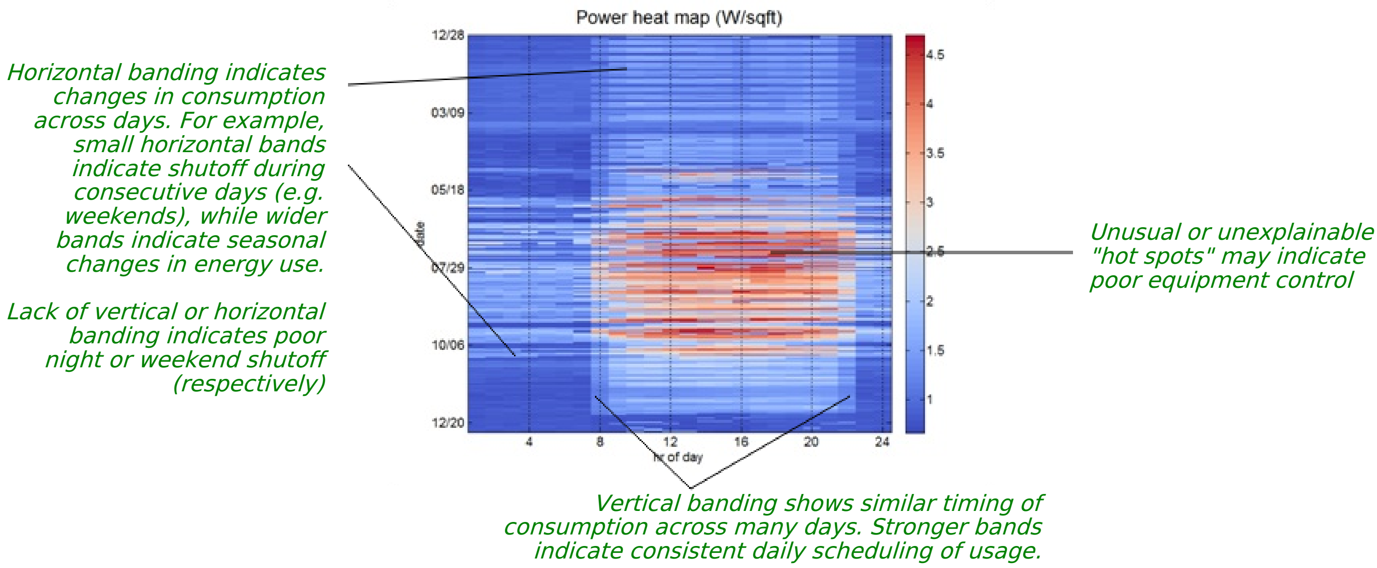
Power Heat Map

This chart color codes the energy consumption for every meter reading.



How to read this chart

This chart color codes the power demand of every meter reading provided. Each row is a full day, with dates running from top to bottom of the vertical axis. On the the horizontal axis, each column corresponds to an hour from midnight to midnight. This creates a grid of pixels, one for every reading provided. The pixels are colored to indicate the power demand (in kW) during each time, with lower energy consumption shown in blues and higher energy consumption in reds.



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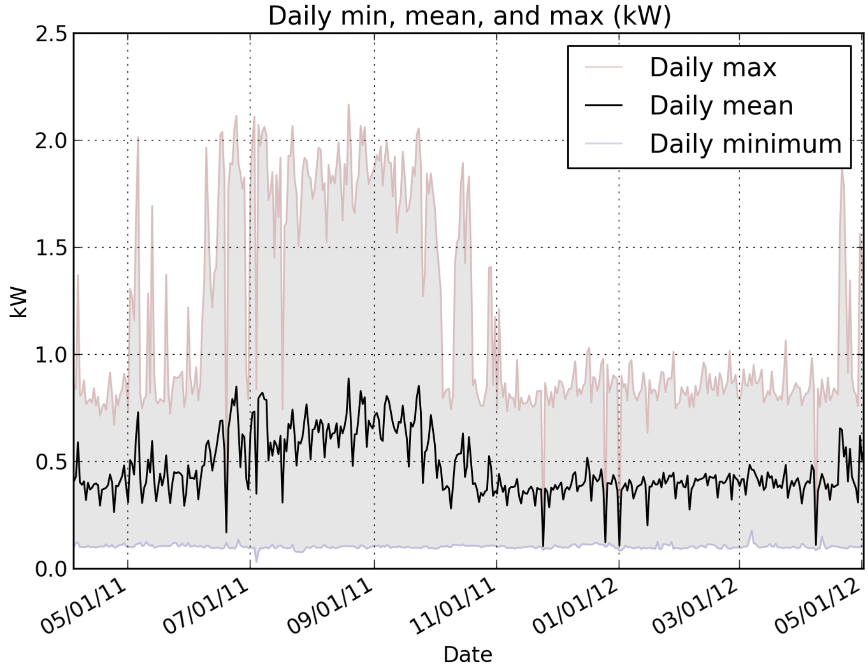
Daily Mean & Extremes

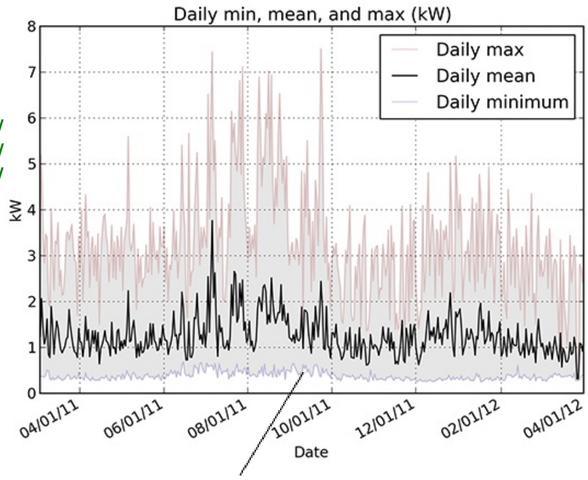
This chart shows the seasonal variations in daily mean, maximum and minimum.



How to read this chart

This chart displays the mean daily consumption (back line) and maximum (red) and minimum (blue) consumption for each day. Long term trends and seasonal patterns in usage should be visible here. Weekly patterns can also appear as repeating humps.

Means and maxima should be consistent with seasonal variations in weather and use.



Weekday and weekend means and maxima should be consistent with occupancy and use.

Unusual changes in minimum may indicate over night usage of equipment, like air conditioning. Trend in minimum may reflect new equipment or overnight scheduling.

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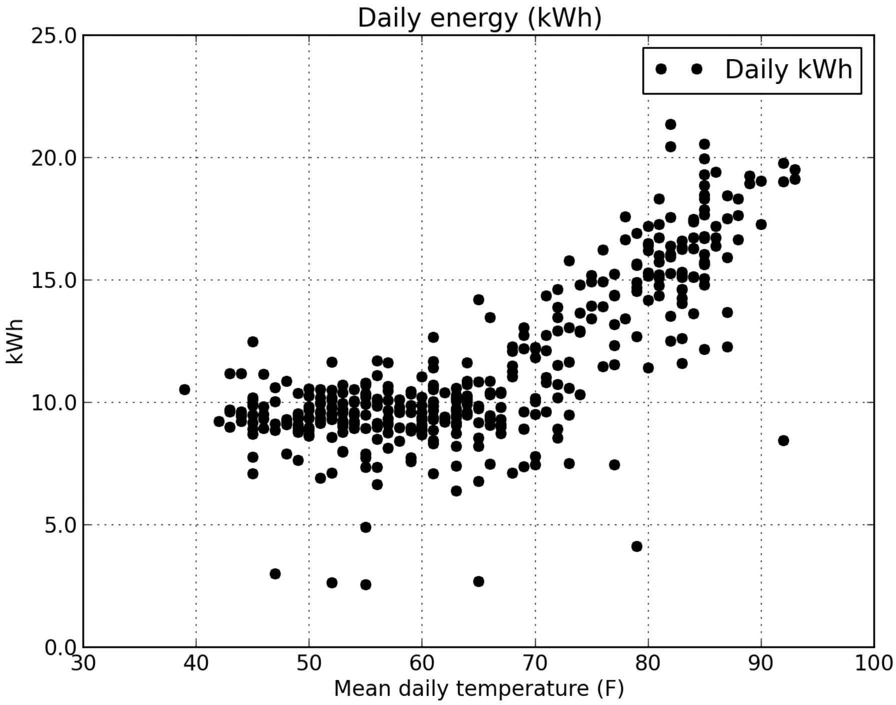
Thermal Response

Analyze the relationship of power intensity to outdoor temperature.

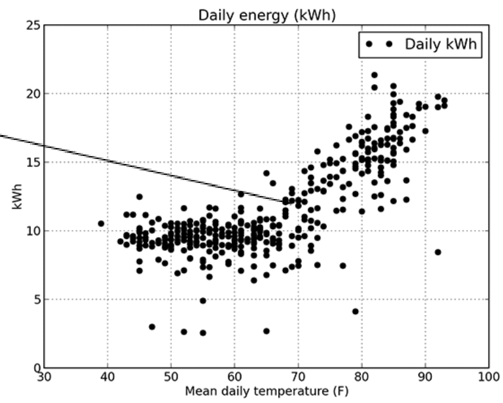


How to read this chart

This chart plots the daily energy use on its vertical axis against daily average temperature on the horizontal axis, with one point for each day in the time period of analysis.

The cooling "balance point" temperature is the outdoor temperature at which energy use starts increasing with higher temperatures.

The heating "balance point" temperature is the outdoor temperature at which energy use starts increasing with lower temperatures.



Insulation, efficient windows, weather sealing, and thermostat settings can increase the cooling balance point and lower the heating balance point.

The slope, or rate of increase, beyond the balance point(s) is determined by the combination of how well sealed and insulated your building is and the efficiency of the heating and cooling equipment used.

Buildings whose readings lack a pattern in this plot likely do not have electric heating or cooling.