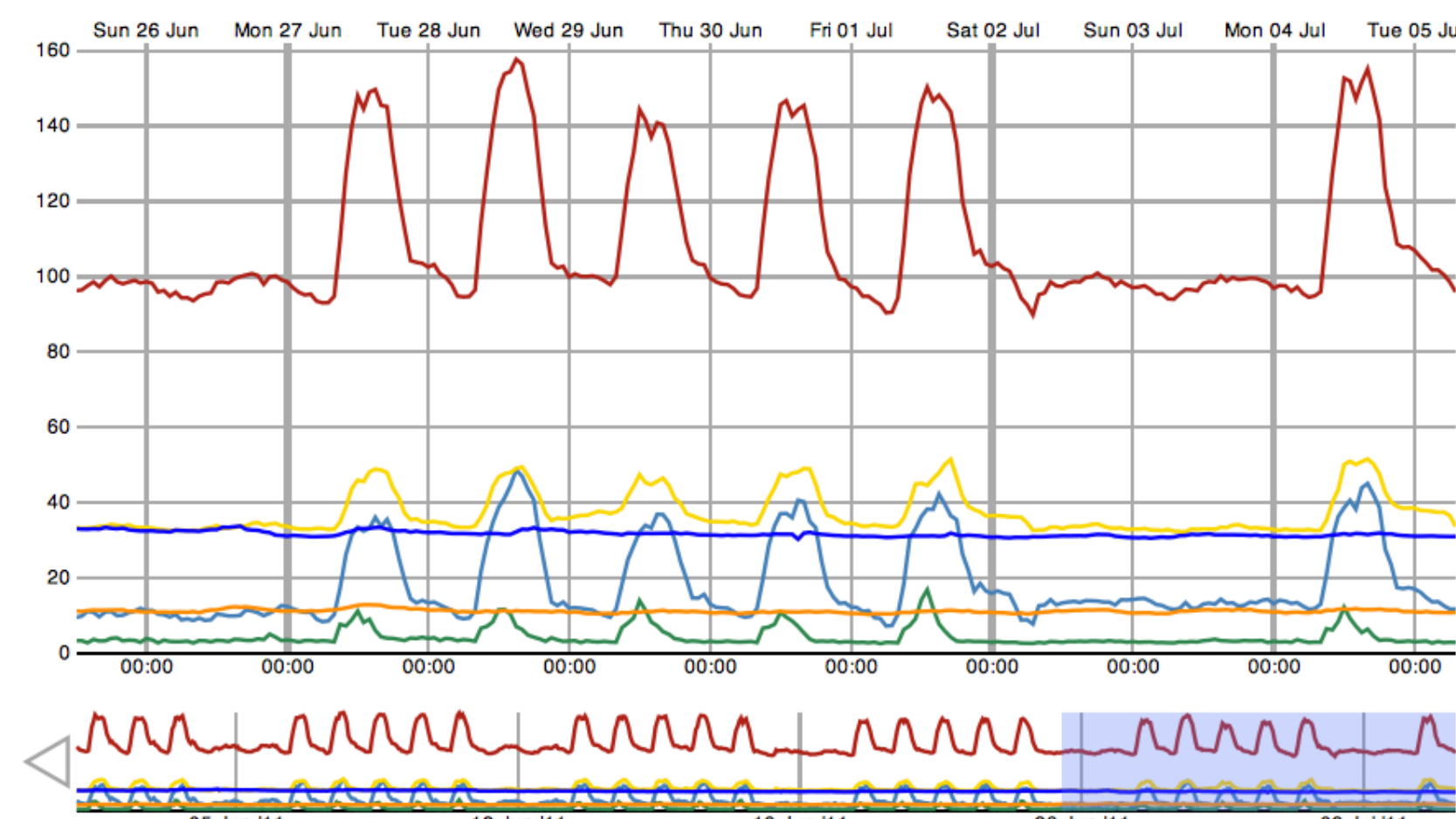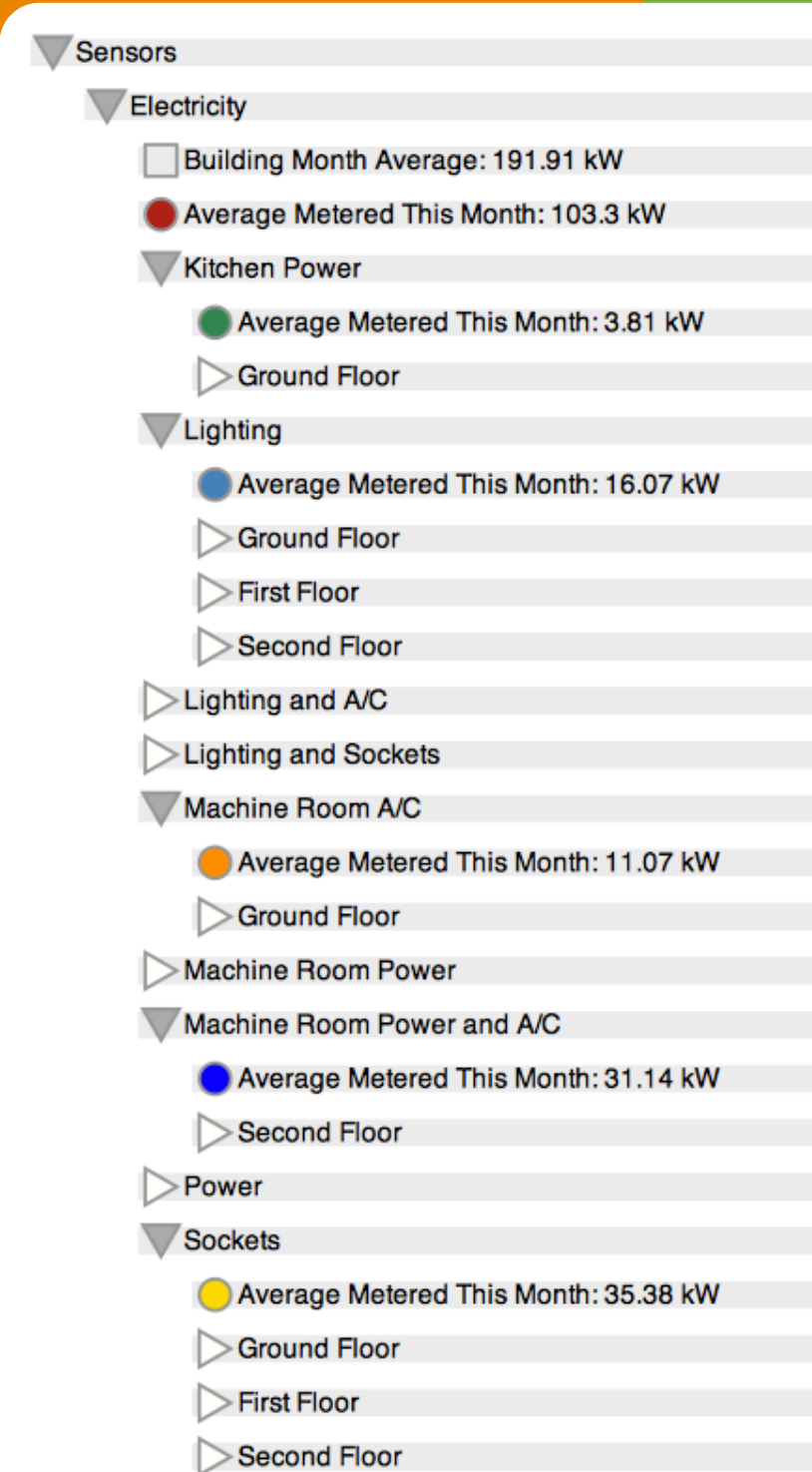# How Much Electricity Does This Building Use?

The C-Aware project aims to not only answer this question, but provide tools for people to explore their own electricity use and carbon production.

One of the tools we created is a web application to visualize the electricity used by this building and allow you to explore consumption by function, or location.

The tree on the left of the tool lets you select data to plot, such as the lighting on a certain floor, the A/C and power in a server room, or the energy use in the Cafe kitchen.

This visualization shows the electricity consumption of various circuits in a week at the end of June. As you can see, things like lighting vary significantly, doubling during the day. The consumption in the server rooms tends to be much more consistent.

The data for these visualizations are collected from many sensors in the building, large meters for the overall power use like the one shown here, and much smaller ones for individual rooms, lights and sockets.

We also use sunburst visualizations to show how the different circuits compare between each other. These two show the overall electricity use at night and during the day. You can see during the day we use almost as much electricity lighting the building as powering the servers and A/C, where as at night it's only about half. This is a young project, and we have only just begun to collect meaningful data.

2:00 AM Average

2:00 PM Average

C-Aware: Enabling Consumer Awareness Of Their Carbon Footprint

UNIVERSITY OF CAMBRIDGE
Computer Laboratory