

# VISUAL DESCRIPTION

## Visual 1

The simplest way to display the data is with a one-dimensional line chart covering the entire time span, allowing for a quick overview of data range and maximum values.

However, this approach can be too dense for detailed observations, making it challenging to relate specific behaviours to timestamps.

To address this, we calculated daily energy consumption, reducing data points by a factor of 96 (24 hours divided by 15 minutes). This adjustment provides a clearer view of trends across different seasons.

Another strategy to simplify visualisation involves focusing on just one week of data, revealing recurring patterns that unfold each day.

For a more insightful analysis of regularities, we calculated the mean consumption profile by averaging consumption at each time of day over the entire measurement period.

This approach highlights a notable nighttime peak in consumption, offering a clear understanding of daily energy usage patterns.

## Visual 2

The data frame includes total consumption measured at the meter.

Two additional columns contain separate measurements for the heat pump and all other appliances.

Stacked area graphs are useful for visualizing multiple time series data.

This type of graph can show individual data contributions to combined consumption.

The example demonstrates a stacked area graph for daily demand.

Similar graphs for other time frames can be created in a comparable manner.

Stacked area graphs are beneficial when dealing with data from multiple households.

They help analyse consumption relative to total demand at a transformer station.

This visualisation aids in understanding individual contributions to overall consumption.

