

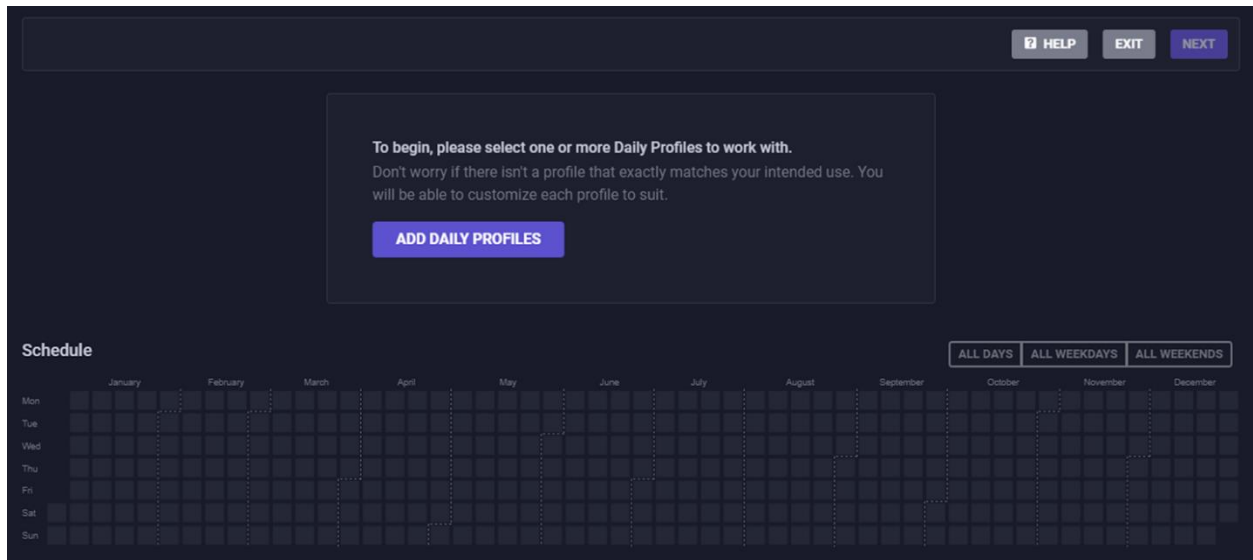
# Load Builder

## What is the Load Builder?

The Load Builder allows you to customize and specify load profiles with different time resolutions to use in your model. Several load profiles are provided as suggested starting shapes, which can then be modified through a drag and drop interface and then scaled to match your targeted site load. This document demonstrates the functionality of the Load Builder in Xendee.

## How to use the Load Builder in Xendee

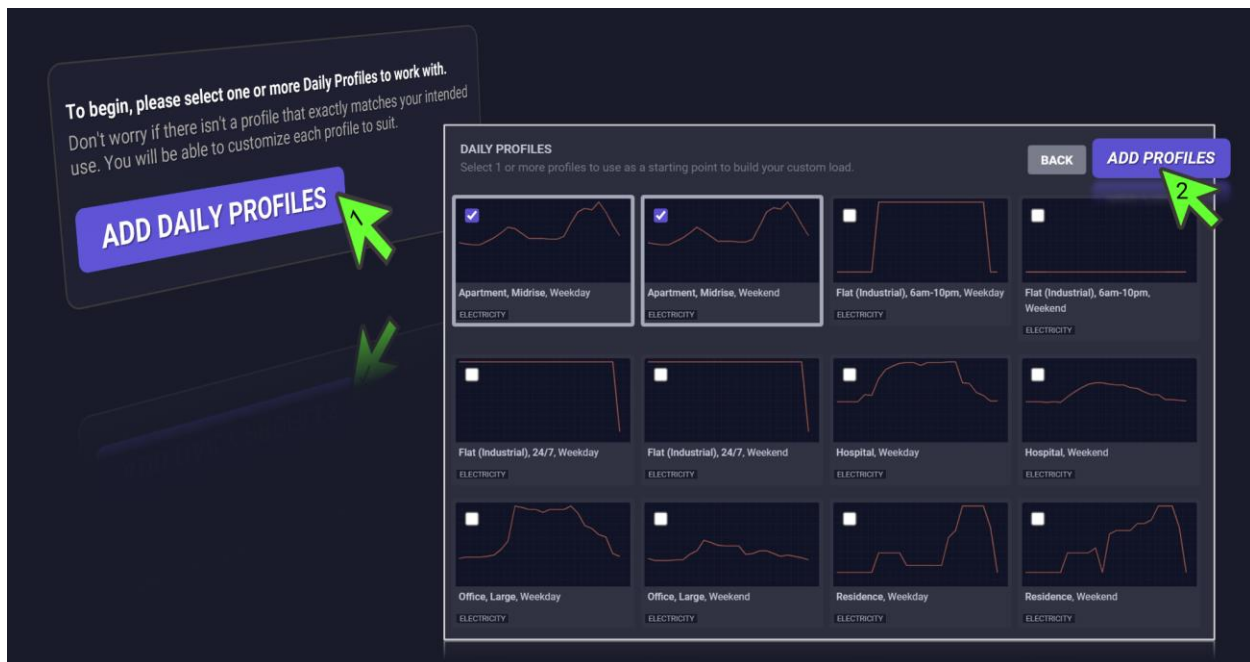
From the Load Builder landing page, follow the step-by-step instructions below.



## Step 1: BUILD LOAD PROFILES

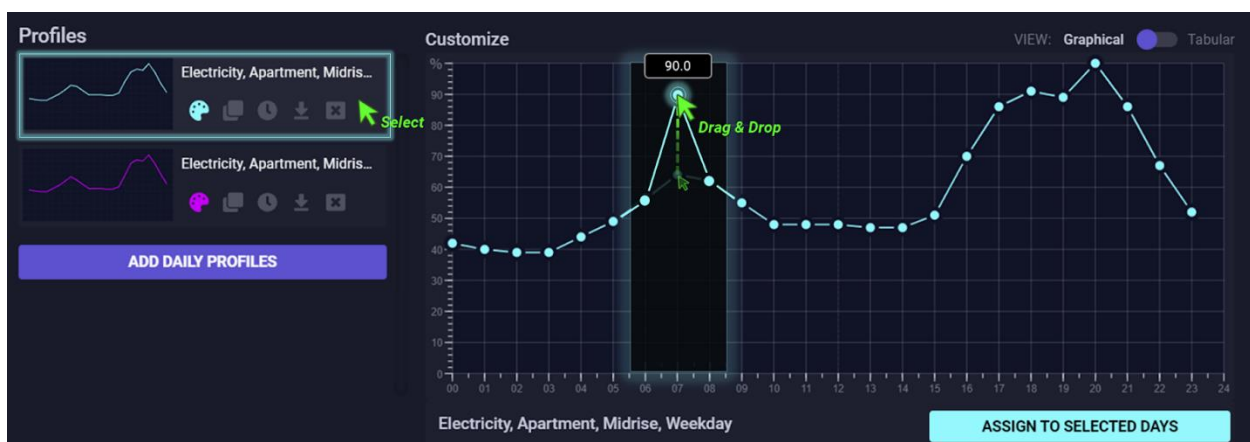
### Add daily profiles to the load Builder

Xendee provides daily load profiles for several sample building types. These are per unit (i.e., normalized) shapes that can be adjusted. To add a load profile(s), click the Add Profiles button. One or more profiles can be selected and brought into the Load Builder. Each profile has an associated load type (e.g., electricity, heating, or cooling) and day type (e.g., all days, weekdays, or weekends). After you select one or more profiles, click Add Profiles to import the load profiles. In the image below, two Apartment Midrise electricity loads were selected to import.

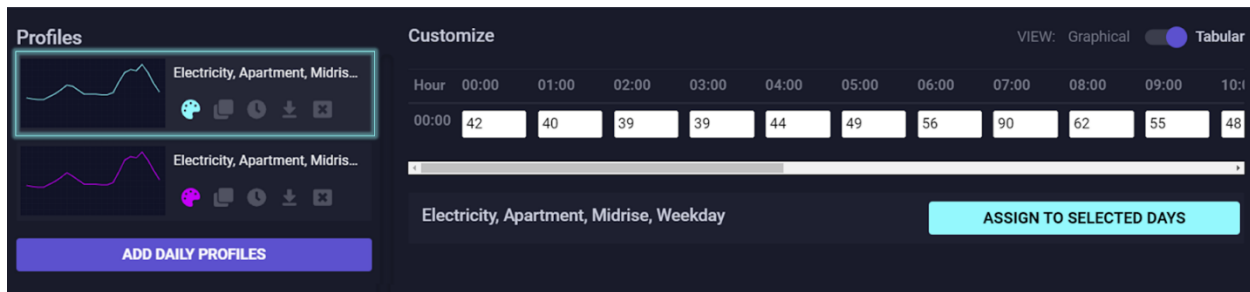


## 1.a. Select the imported profiles and edit: drag and drop, use arrow keys, or edit the data table

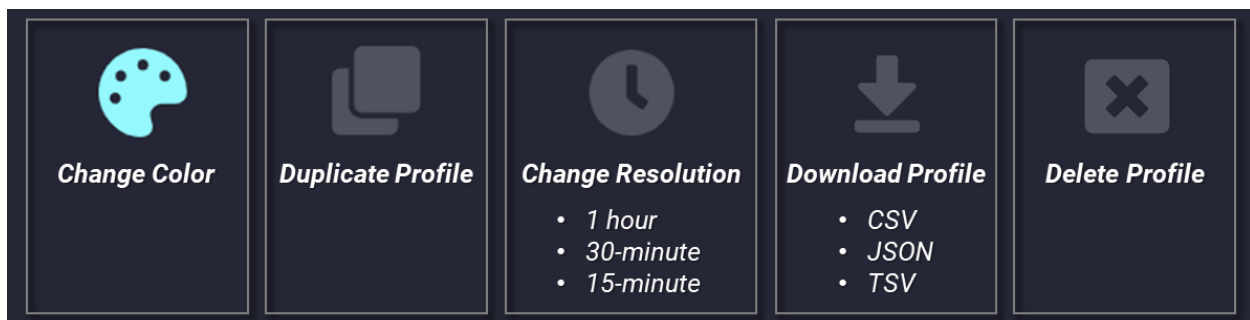
In the Graphical view, you can click on the imported profiles to edit the shapes by dragging and dropping points or by selecting points and adjusting them using the arrow keys on a keyboard.



In the Tabular view, you can edit the figures in a table by manually typing values. Note: the tables will contain different numbers of cells depending on the selected timestep for that daily profile (e.g., hourly, 30-minute, or 15-minute).



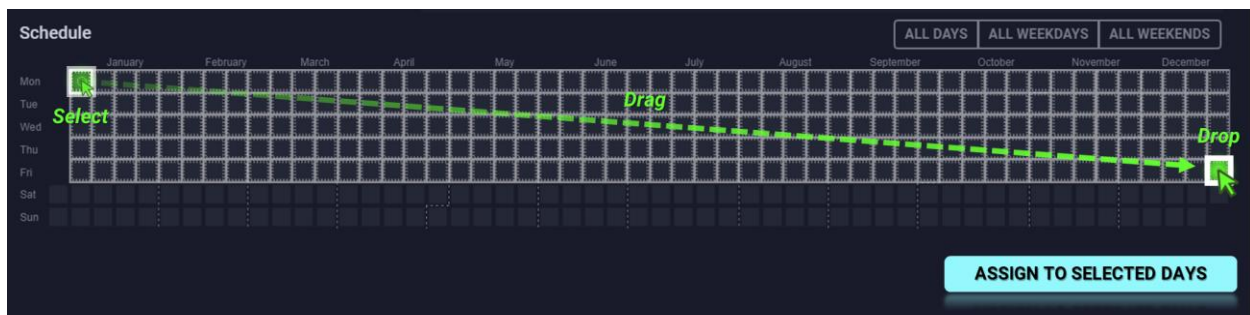
Additionally, Xendee allows you to change the color of the shapes and the time resolution; you can also create a duplicate of, delete, and download profiles. Moreover, you can always add additional profiles to the load builder by clicking on ADD DAILY PROFILES.



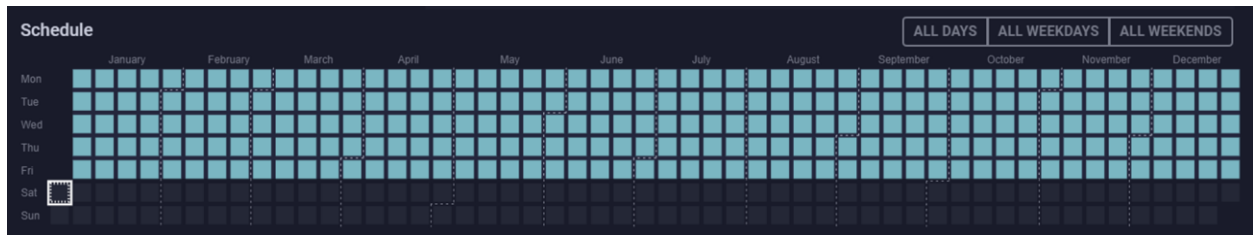
Pro tip: You can use the tabular view to create custom resolution by pasting in a comma separated list into the first text box of the tabular view.

## 1.b. Select Days in the schedule that the profiles should apply to and press the Assign

Each cell in the table in the Schedule indicates a day of the year. This table allows you to place a selected profile on a selected cell(s) in a single or multiple months by clicking, dragging, and dropping the cell where you want to change the section. You can also use familiar shift/ctrl+click keyboard functions.



After releasing the click to confirm your selection, the Assign To Selected Days button will place the profile in the selected cell(s).



You can overwrite the assigned cell(s) with other profiles in the Schedule table. Once you complete scheduling the customized daily profiles, click NEXT.



Note: You can also highlight cells based on day types for you by clicking ALL DAYS, ALL WEEKDAYS, and ALL WEEKENDS.



## Step 2: SCALE & REVIEW THE LOAD PROFILES

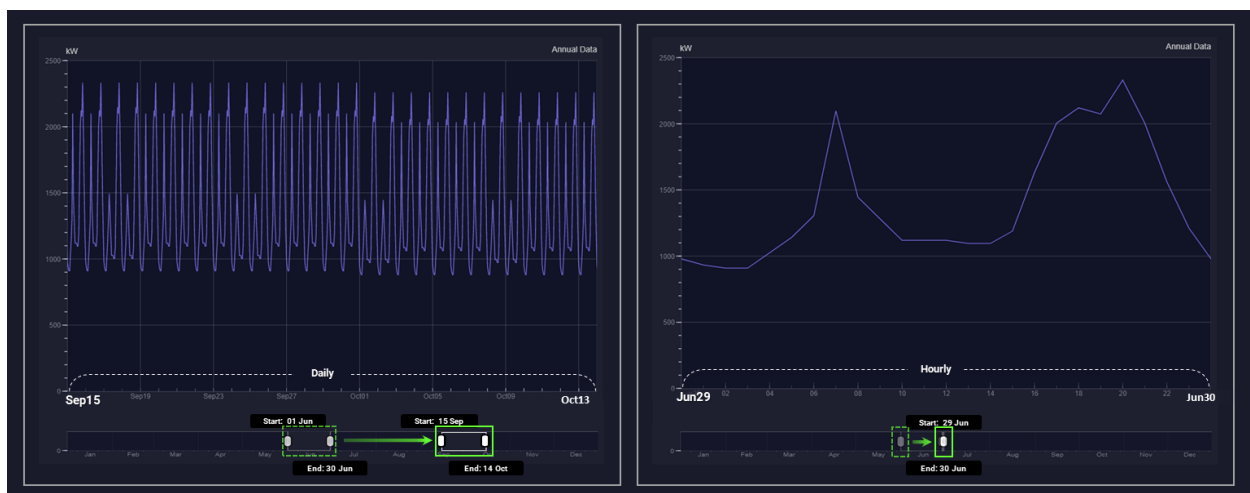
In this step, you will review the year of load data created in Step 1 using either the Time Series or Day Type view and apply scaling factors to get a model-ready output.

### Time Series View

In the Time Series view, Xendee allows you to view load data in a year, month, week, or day. The plot is automatically resized based on the chosen period; this can allow you to view data in greater detail.



You can use the timeline bars to set and view a specific timeline of the load data by clicking and dragging the bar(s) left or right to pan through the timeline field. By using this feature, you can view data at any granularity.



## Day Types View

In the Day Types view, the monthly load shapes are displayed, and you can select and deselect one or multiple months to view a selected month(s). Moreover, select the day types as a week, weekend, and peak to see the load profile for that type of day.

**Enable the Day Types Toggle**

Time Series ☐ Day Types ☒

**Select or Deselect Month(s)**

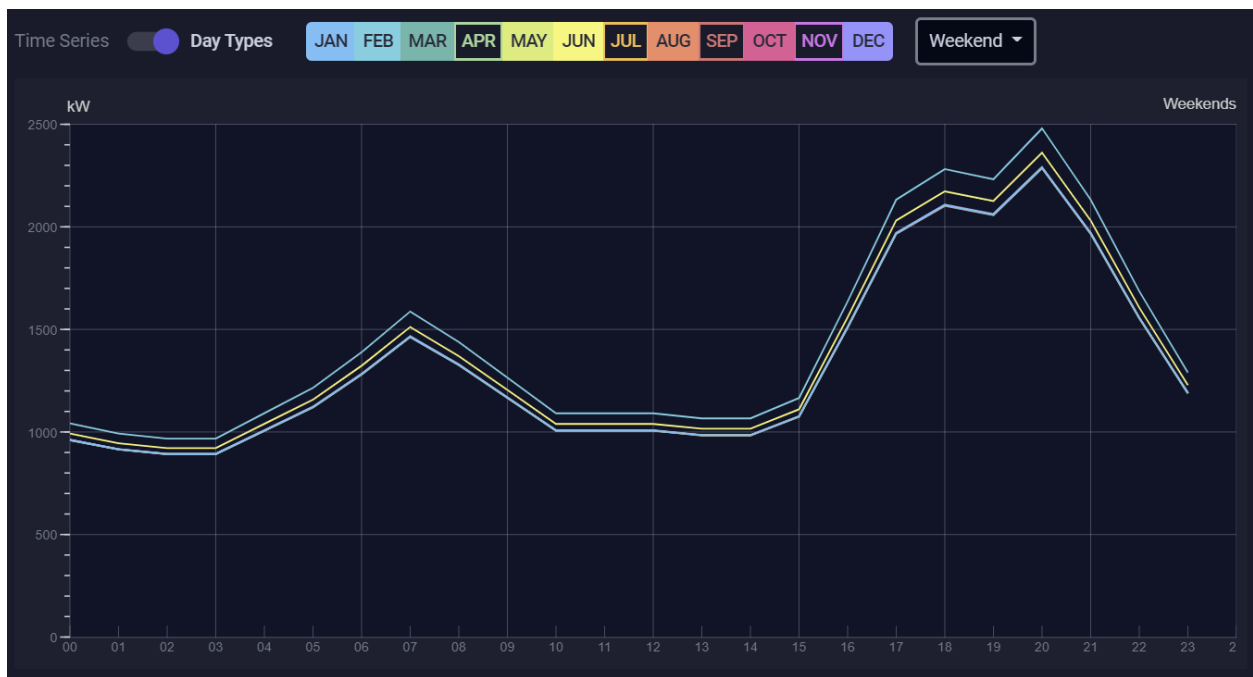
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Deselected Months

**Select Day Types**

Weekday Weekend Peak

For example, if you choose the weekend and select those months in the image above, the load shape in the Day Types view is shown below.



### **Scale Annual or Monthly Usage (Consumption and Peak Demand)**

Next, apply either Annual or Monthly scaling factors and select the time step of the file that will be generated. The Preserve Peak menu is only visible when selecting sub-hourly time steps (30-minute and 15-minute). Then, scale annual or monthly usage.

End Use: Electricity Only ✓

Output Resolution: 1 hour ✓

Set Scale: **Annually** ☒ Monthly

	Consumption (GWh)	Peak Demand (MW)
2022	<input checked="" type="radio"/> 12.000	<input type="radio"/> 2.303

Lastly, select Download to create a single column csv file of your new load shape.