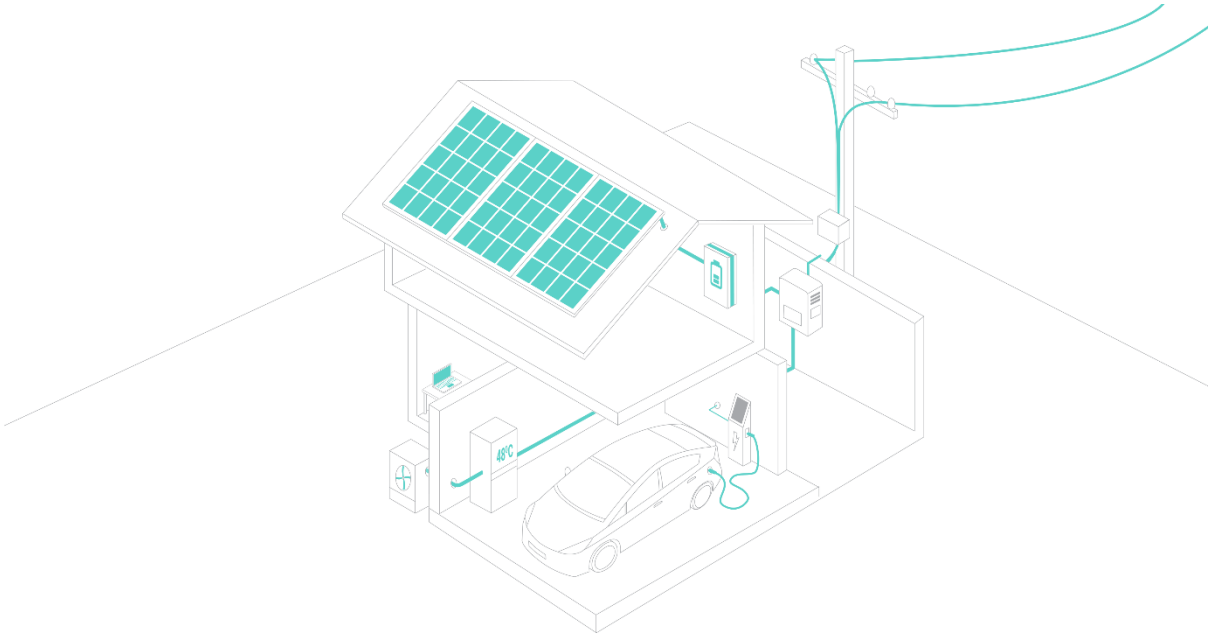

WHY DOESN'T BATTERY STORAGE OPERATE OPTIMALLY

OBJECTIVE

Reduxi regulates the battery storage in a way that during the day it is charged via the solar power plant, and at night, when the production of the solar power plant is not large enough to cover the consumers in the house, it turns on the electricity consumption from the battery storage, thereby increasing self-sufficiency.

PROBLEM

Why doesn't the battery storage operate optimally even though the state of charging (SOC) of the selected battery storage is relatively high – battery storage is almost always full (Figure 1)?

Figure 1: State of charging (SOC) is always high; web application Reduxi.

1. **Make sure the battery storage is connected correctly.**

Go to Reduxi Configurator. On the first page of Reduxi configurator (left menu), click:

- Devices.
- Battery storage for which you want a detailed insight into the measurements.

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If the selected battery storage is connected, under the Last measurement tab, you will see information about the state of estrange storage.

As the data for the selected battery storage is displayed, it means that the battery storage is correctly connected and is operating (Figure 2).

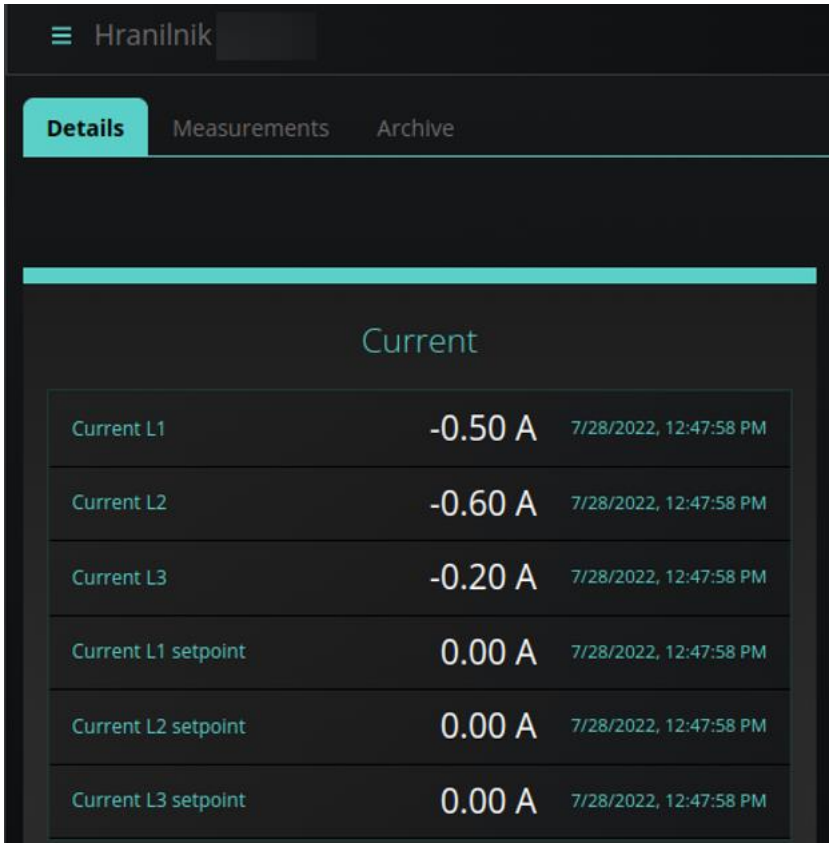

Figure 2: Battery storage is correctly connected and is operating, data is displayed; Reduxi Configurator.

1. **Check the settings of the selected battery storage**

Click:

- Settings (left menu).
- Devices.
- The battery storage for which you want to see the settings.

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The Configuration form shows that the basic settings have been edited. The permission to fill the battery storage to 100% and the permission to empty the battery storage to 100% are set (Figure 3).

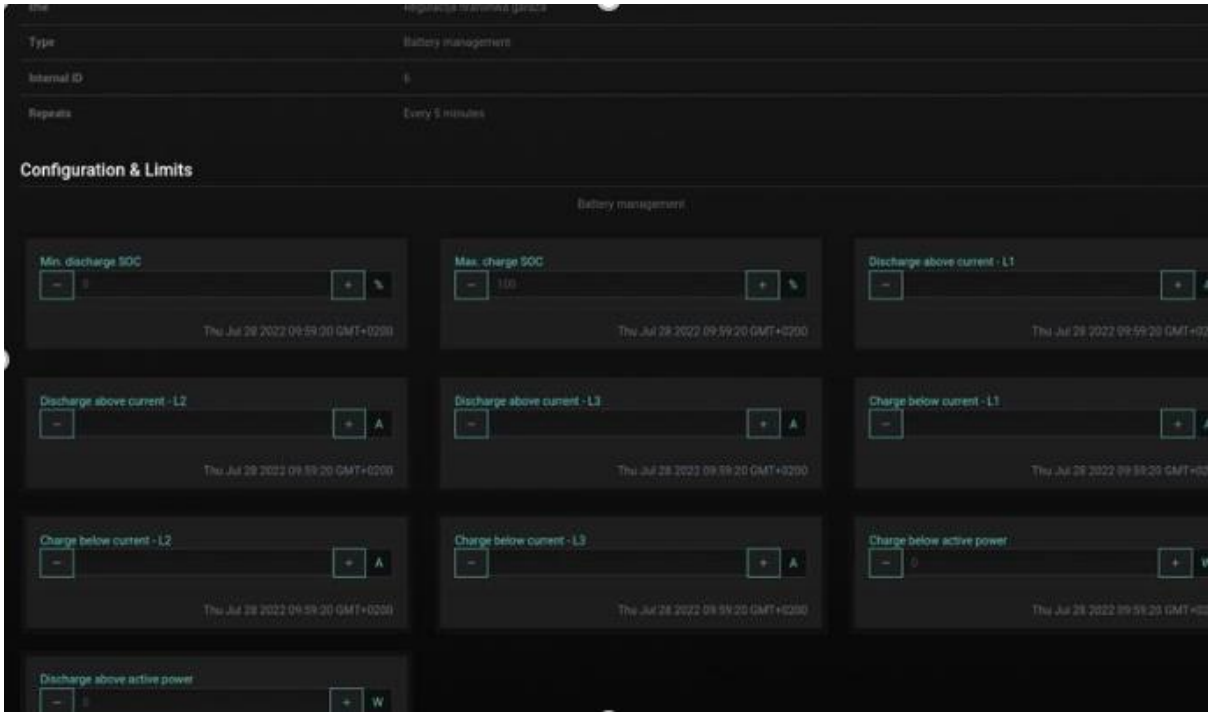

Figure 3: Configuration of the selected battery storage.

The battery storage is connected correctly, the settings in the Configuration form are edited. What is the reason that the operation of the battery storage is not optimal?

POSSIBLE CAUSES AND SOLUTIONS

There is a possibility that there are no electricity consumers. Therefore, electricity from the battery storage is not consumed.

The graph (Figure 4) shows that there are the electricity consumers. The orange colour on the graph, which indicates the selected battery storage, shows that the electricity is being consumed from the grid. Since the battery's state of charge (SOC) is high, electricity could be consumed from the battery storage instead of the grid.

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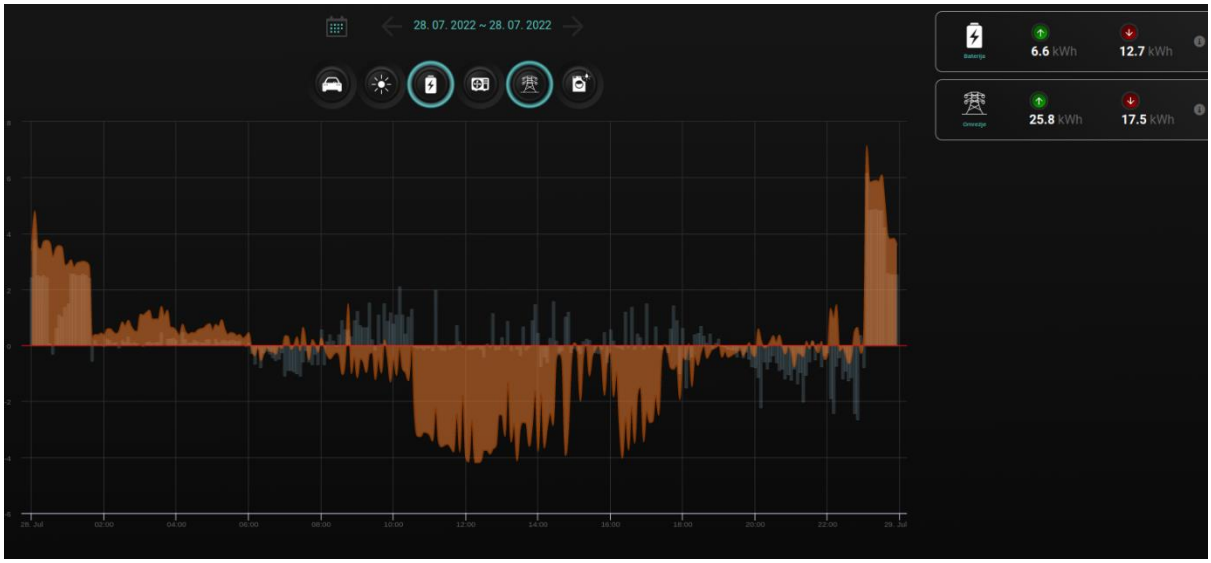

Figure 4: Display of consumption from the grid and the COF of the battery storage; web application Reduxi.

The grey color on the graph indicates the consumption of electricity from the battery storage. Below the orange line, for the time period from 10 am to 12 pm, it can be seen that the electricity consumption from the battery storage is minimal, despite the fact that the battery storage is almost full.

The reason for this could be the battery storage. It has its own system that does not allow it to be controlled by an external device. If the battery storage is working in stand-alone mode, it will not obey Reduxi's commands. In this case, the battery storage will not operate optimally, even though you have set optimization strategies in Reduxi. For example, Victron battery storages have ESS control algorithms (more can be found in the instructions for Victron batteries, 4.3.1. Mode).

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