

# Autarco Energy Management

Beta Program  
V2.0

# 1 Introduction

This user guide takes you through the process of configuring your Autarco Energy Management System. The current version of this user guide is targeted to participants of the Beta Program.

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### 3 Requirements

In order to have your PV-system work optimally with Autarco Energy Management, the following requirements apply:

- **Stable internet connection**  
Autarco's Energy Management System will send commands to your inverter to react to the changes in the market and your consumption patterns. To make sure that this works correctly a stable internet connection is required.
- **Two-way communication stick**  
This allows us to retrieve and send commands to your system to react to the negative price and other Autarco Energy Management features.
- **Autarco inverter with internal PELD or an external PELD (for multiple inverters)**  
Required to limit the power exporting to the grid.
- **Smart meter connected**  
This is required for your system to register and communicate your own consumption patterns to optimize your energy management.
- **Dynamic energy contract**  
Autarco's Energy Management System allows for reaction to the dynamic price market. This is relevant for example when limiting power export during moments with negative grid prices.
- **Configured backflow power >0**  
If your system is already set to limit the backflow power fully, then the Negative Price Response will not function properly. Please consult your dealer/installer if you have questions.

## 4 Subscribing to Autarco Energy Management

### 4.1 Where can I find Autarco Energy Management?

Autarco Energy Management is a part of Autarco’s service and can be found in the MyAutarco web-environment (later it will also be available in the App; to be communicated). Make sure you are logged into your account and navigate to the overview of your installed system.

Here you can find two ways to navigate to Energy Management:

1. In the top bar on the right there is an Energy Management button.



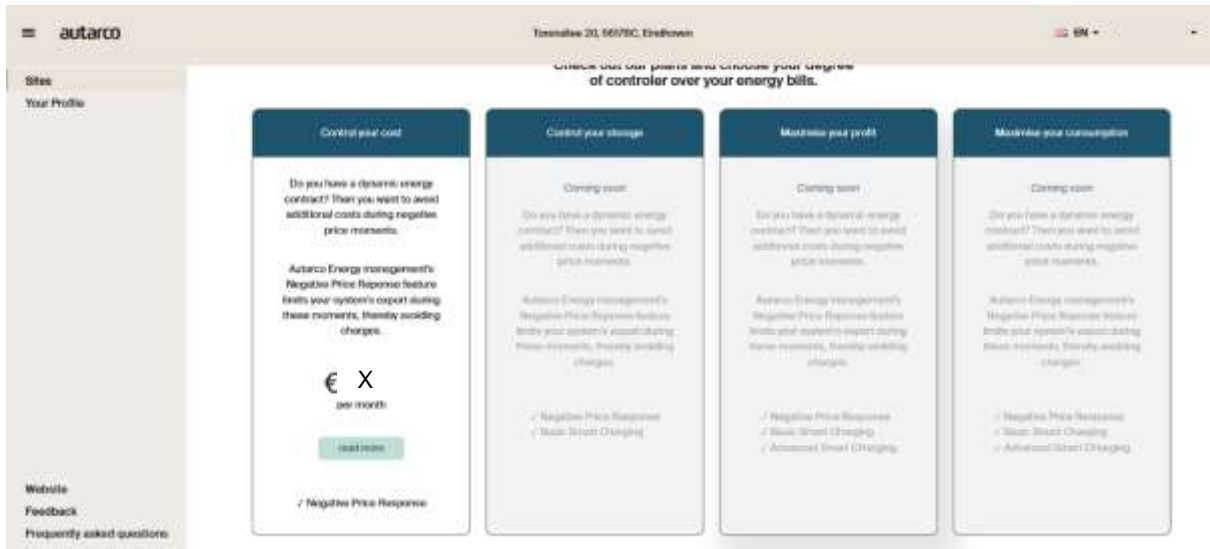
2. In the information cards there is an Energy Management card that, when clicked, will take you to the Energy Management page.



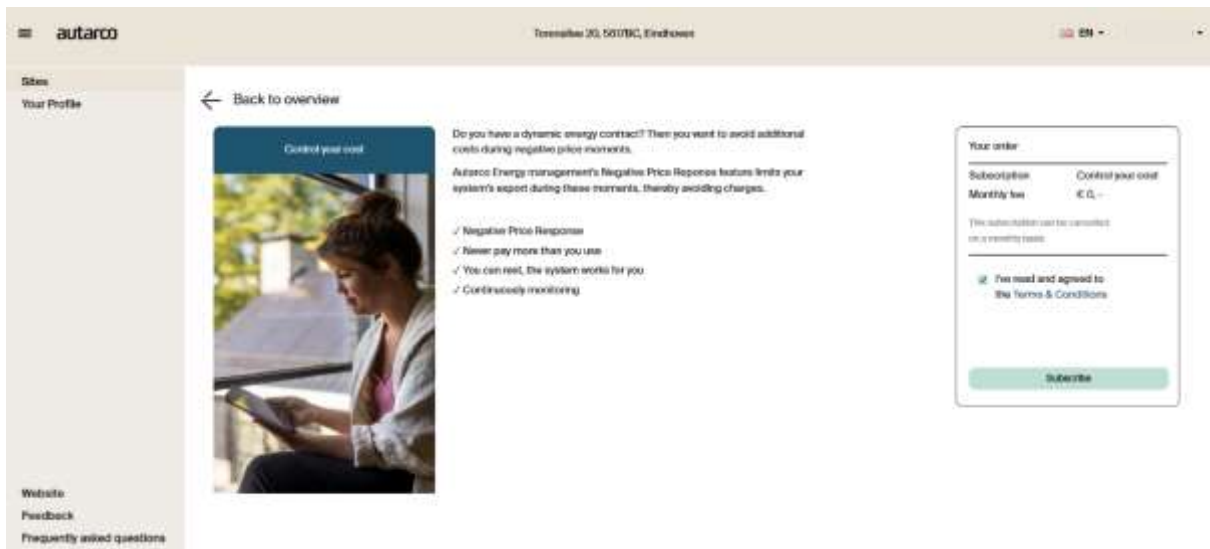
### 4.2 Select your subscription plan

Select the plan that you desire so you can access the right features.

If you don't have a subscription, the application will show you the different options that are available to you.

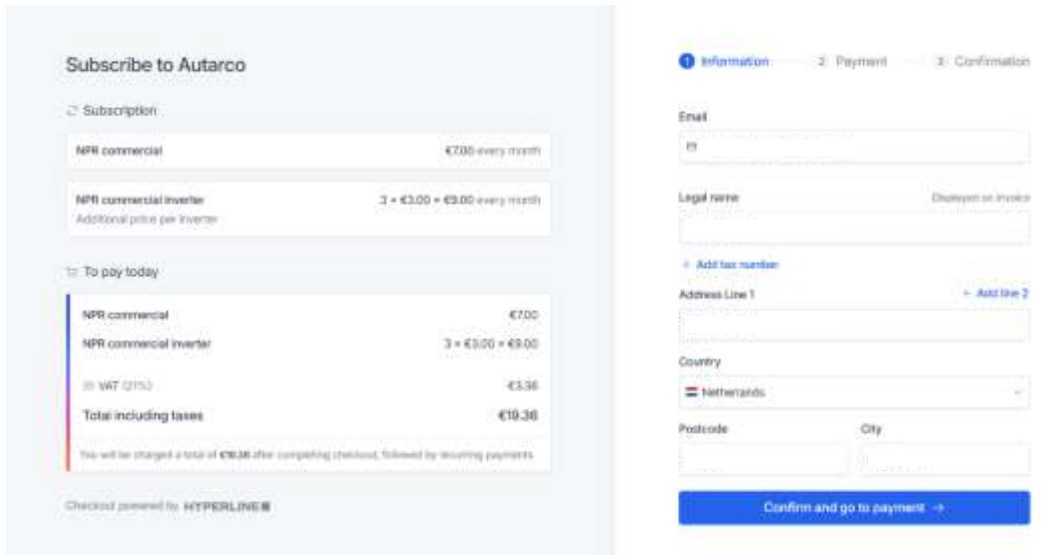


Once a subscription plan is selected, you can read the details about the plan itself. Make sure to check the “I've read and agreed to the Terms & conditions” and press the [Subscribe] button.

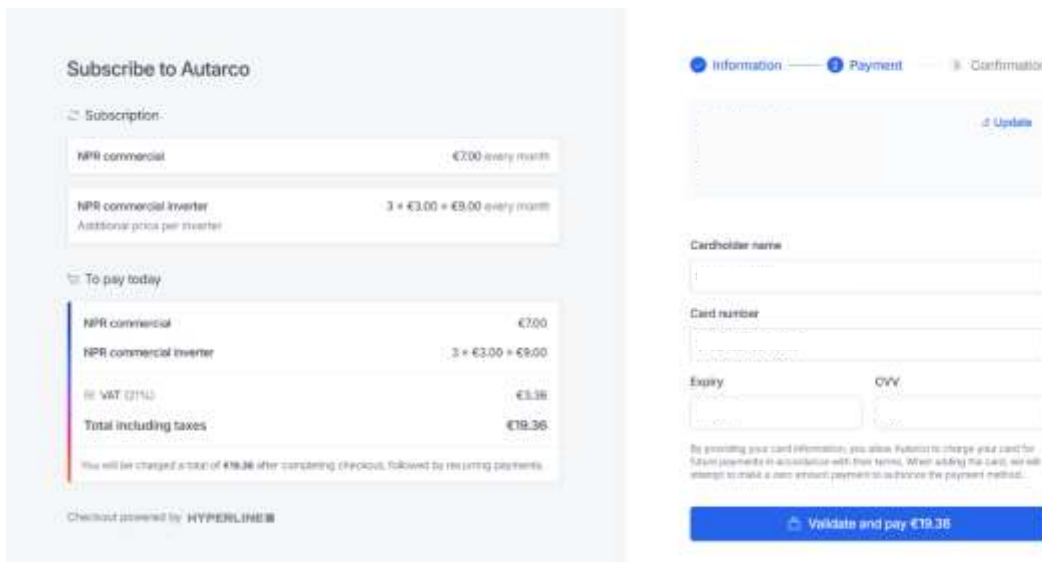


### 4.3 Payment

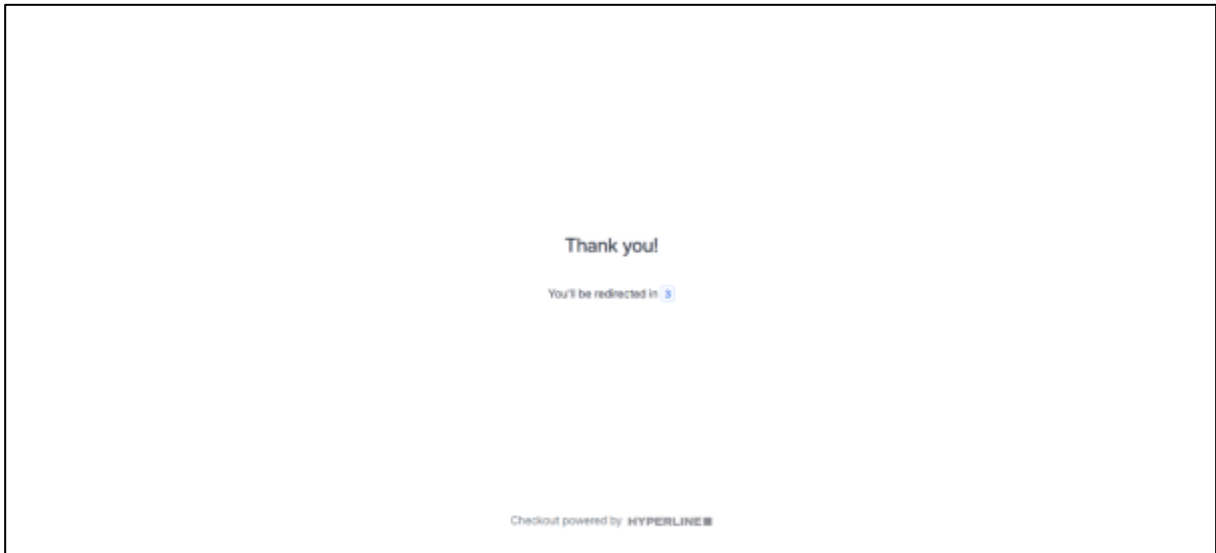
You will be redirected to the payment provider website with the selected subscription.



Fill in your information and press the [Confirm and go to payment] button. You will be asked to provide your credit card information. *Note: at the moment it is only possible to start a subscription with a credit card.*

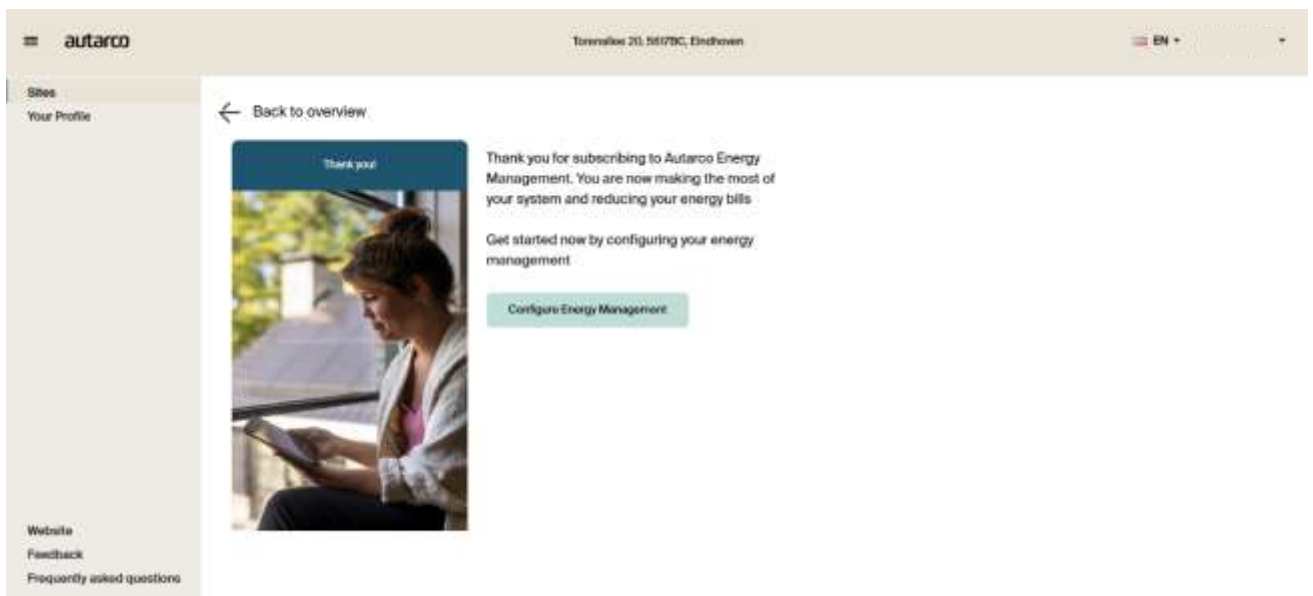


When you have provided your credit card information, press the [Validate and pay (your price)] button. Hyperline (our payment provider) will process your payment. When successful you will be shown the following page.



Afterwards you are redirected to MyAutarco so you are able to configure your Energy Management as desired

**4.4 Subscription successful!**



Pressing on the [Configure Energy Management] brings you to your Energy Management page to configure the settings as you would like to use it.

The subscription will also be confirmed via email.

## You are subscribed to Autarco!

Your checkout has been successfully completed, and you are now subscribed to Autarco.

You can review your subscription, update your billing information, and retrieve your related invoices on your portal page using the link below.

[Go to my portal](#)



## 5 Configuration Instructions

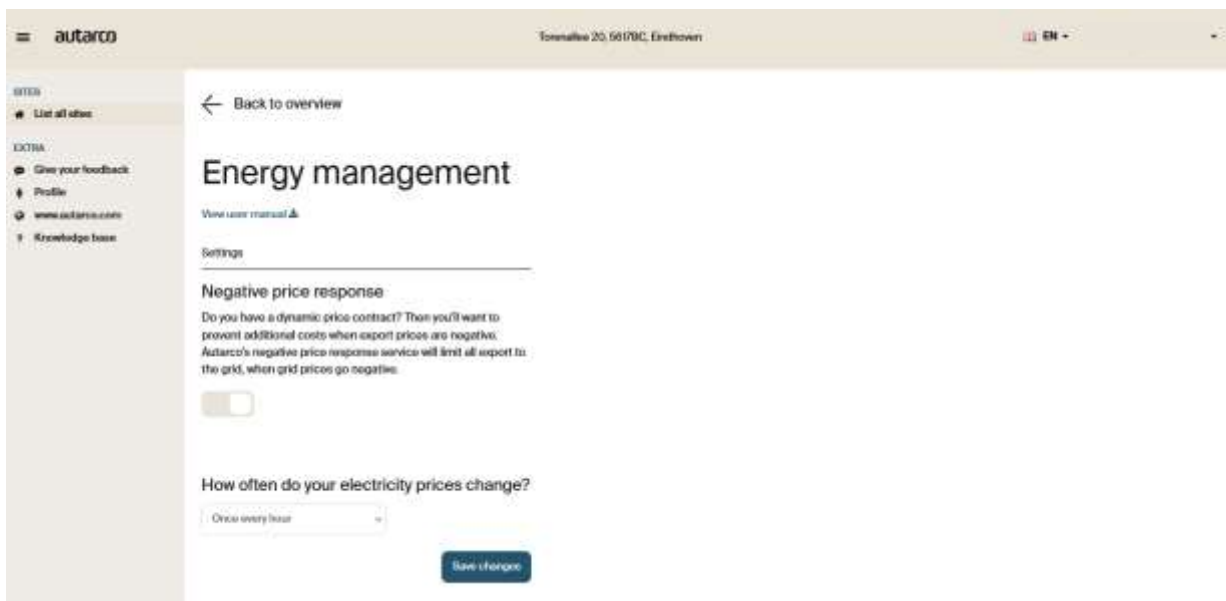
### 5.1 Accessing Energy Management

After completing the subscription process, you still need to configure the settings for your Energy Management. Go to the settings page:

- Access the Energy Management settings after you confirmed your subscription via the [Configure Energy Management] button, or
- Go to Energy management from your system page,
  - by clicking the Energy Management button in the top bar on the right, or
  - via the Energy Management card below

#### 5.1.1 Configuring Autarco Energy Management

In the Energy Management Settings page, when you have an active subscription, you will see the configuration options for the Energy Management for your Autarco system. The image below shows the configuration page.



#### 5.1.2 Configuring Negative Price Response

Negative Price Response (NPR) can be turned on/off as an individual feature within the Energy Management System. By turning the feature on or off, you can configure your system to react to negative wholesale prices of the energy market. This is why a dynamic energy contract is required, because you are actually charged according to these wholesale market prices.

Settings

Negative price response

Do you have a dynamic price contract? Then you'll want to prevent additional costs when export prices are negative. Autarco's negative price response service will limit all export to the grid, when grid prices go negative.



**Note:** To prevent issues, switching NPR on/off is allowed a maximum of 30 times a month.

5.1.3 (Optional) Pricing interval

MyAutarco will show you the option to select the pricing interval for your dynamic energy contract. Know that this option will only be shown when there are multiple intervals in the region of the installed system. When you don't see this configuration option (image above), this means that your region only has one interval and that will be used. In locations with multiple intervals, you have the option to opt for a different pricing interval if you prefer.



**Note:** To prevent issues, switching the interval is allowed a maximum of 5 times a month.

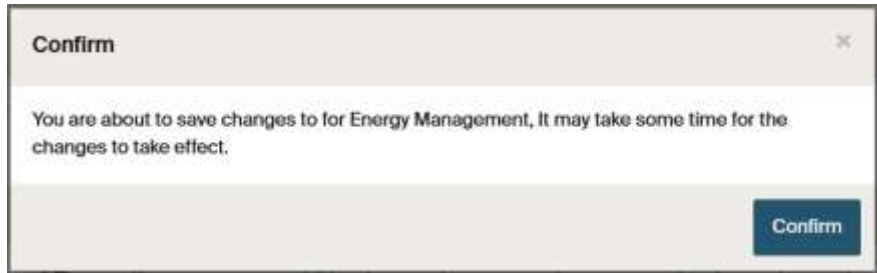
5.1.4 Save changes

After configuring your Negative Price Response settings, make sure to save by clicking the button.



### 5.1.5 Confirm changes

After turning on the feature and saving the settings, you will be asked for confirmation.



**Note:** Negative Price Response acts on day-ahead market prices. When turning it on, it takes effect the next day. When turning it off, it will stop any active event that is going on. When saving the settings you will receive a notification that the settings have been updated.

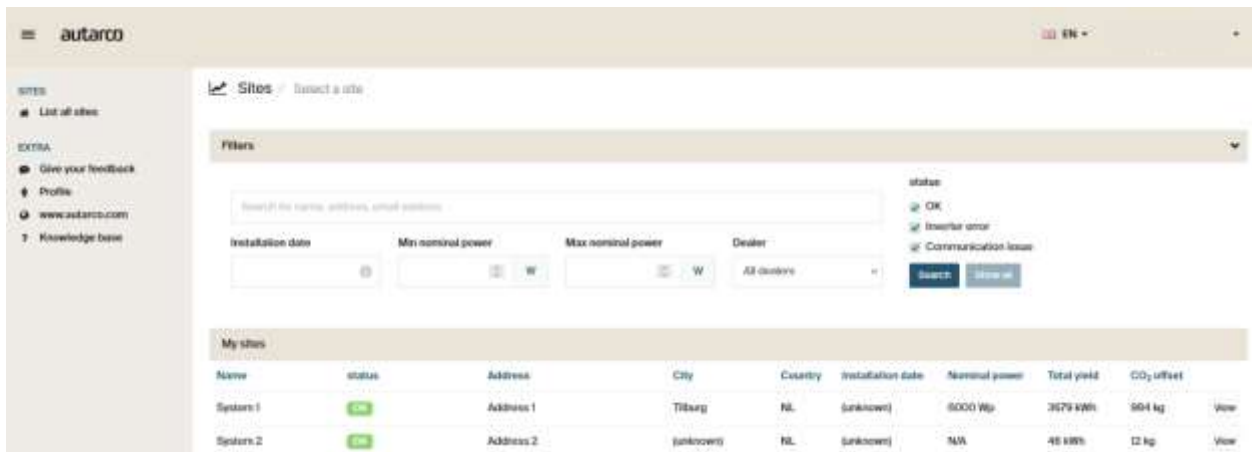


Now, you will be redirected to the system's overview.



### 5.2 (Optional) In case of multiple systems

Autarco Energy Management is configured per system. When you have multiple systems connected to a single account on MyAutarco, and you want to enable Energy Management for each of those systems, the previous steps should be repeated for each system. After logging into MyAutarco, you will be shown a list of your systems. Open the system you want to configure Energy Management for and follow the steps from Chapter 4.1. This way, you stay in control of your own systems and can choose for which systems you want to enable Energy Management features.



## 6 User interface overview

### 6.1 Negative Price Response

When Negative Price Response feature is enabled, the following chart will be visible in your MyAutarco environment:



This graph shows you the wholesale electricity prices to help you understand what your system is reacting to. Negative Price Response, like other Energy Management features, is based on these prices. When your region does not have net metering, and you are on a dynamic contract, you will be paid the wholesale electricity prices when you export your excess energy to the grid. Meaning that if this price goes negative you have to pay that price to be exporting it to the grid. When hovering over the chart with your mouse you will be shown the details of the exact time/price.



When you want to know the wholesale energy prices of your region or want to see if a curtailment did happen in the past, it is possible to select a different date by either using the arrows or selecting a different date.



### 6.2 Curtailment period

When there is a negative price in the wholesale market, the Negative Price Response will limit your export to the grid to prevent you from additional costs. The graph shows the period during which the response occurs.



**Note:** Today and tomorrow's prices look slightly different from those in the past that you can see when looking at previous curtailment periods. This is because today and tomorrow are 'planned' curtailments, and everything prior is based on what actually took place, showing the actual curtailment.

## 7 The Autarco Energy Management System

This chapter describes the workings of the Autarco Energy Management System.

### 7.1 Negative Price Response

The Negative Price Response feature reacts when the wholesale prices are negative. Then it limits your export, because from that moment you could be paying a fee.

#### 7.1.1 How does the system know that the prices are negative?

The wholesale energy prices are calculated on a day-ahead basis, every day around 14:00 CET in Europe. The information provided is based on the region's interval (15min, 30min or 60min). The system knows from what moment the price will go negative and power export to the grid should be limited.

#### 7.1.2 What will happen during a negative price period?

At the moment the wholesale prices go negative for your region, Autarco Energy Management will send a command to your inverter to stop the exportation of excess energy. This means you keep enjoying the generated solar energy for your own consumption but prevent additional costs as a consequence of the exportation of energy to the grid.

#### 7.1.3 My power generation drops during a negative price moment, why?

This is the correct functioning during a negative price moment. The system will only generate power to fulfil your own consumption needs. You may notice this on the power chart by seeing a drop in solar power generation during a negative price period.

### 7.2 Recovery of failed communication

The Autarco Energy Management requires a stable internet connection so that we can command your inverter to stop power export at a negative wholesale price. When the connection is not stable enough and we try to connect to your inverter, you will be notified with an error.

When the Negative Price Response feature was/is active, but the system is experiencing communication issues, the following steps are taken for recovery:

- The Energy Management function will be automatically disabled.
- When communication issues persist, reach out to your installer/dealer to solve the communication issues.
- Once the connection is restored, reach out to the Autarco support team, so that they can manually correct the settings in your inverter or PELD when needed.

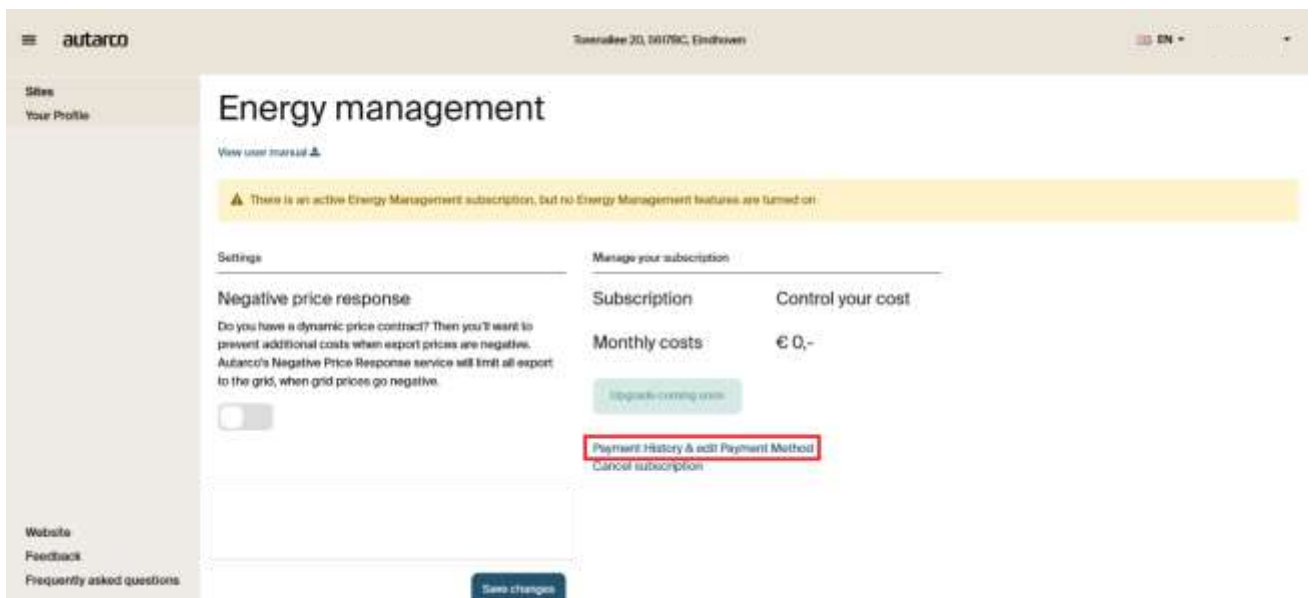
## 8 Viewing your Payment history & updating your details

### 8.1 Login

- Open MyAutarco and login as yourself.
- Open Energy Management, either via [Energy Management] on the top right,
- or via the Energy Management Card

### 8.2 Navigate to Payment History

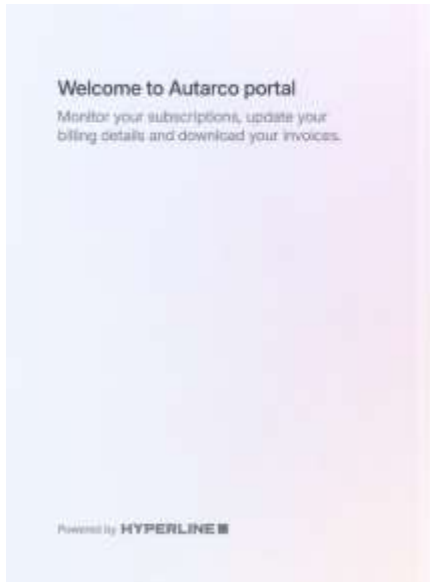
When you have your Energy Management page open and you have an active subscription, you will see the overview of your subscription and options to see the payment history and updating your method/details.



You will be redirected to the Payment portal of Hyperline (our payment provider). Here you have all the insights on the invoices and your payment details.



### 8.3 Hyperline Portal



Subscription


#### Control your costs (commercial)

**€19.36** (Incl. taxes)

To pay on 12 Sept 2024

[Subscription details →](#)

Billing details

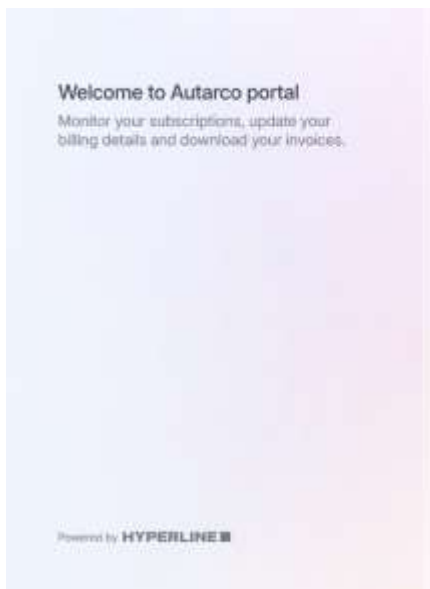
 \*\*\*\* 5 (Default)
   
[+ Add payment method](#)

[Edit information](#)

Invoices

12 Aug 2024	Paid	Invoice 221   12 Aug 2024 → 12 Sept 2024	€19.36
12 Aug 2024	Paid	Invoice 221   12 Aug 2024 → 12 Sept 2024	€19.36

You have here the option to go to [Subscription details] and view the actual build-up of your subscription.



[Back](#)

#### Control your costs (commercial)

Next payment

**€19.36** (Incl. taxes)

To pay on 12 September 2024

NPR commercial	€7.00
NPR commercial inverter	3 units = €9.00
<b>Total excl. taxes</b>	<b>€16.00</b>
VAT (21%)	€3.36
<b>Total incl. taxes</b>	<b>€19.36</b>

Subscription details

NPR commercial	€7.00 (excl. taxes) every month
NPR commercial inverter	€9.00 (excl. taxes) every month

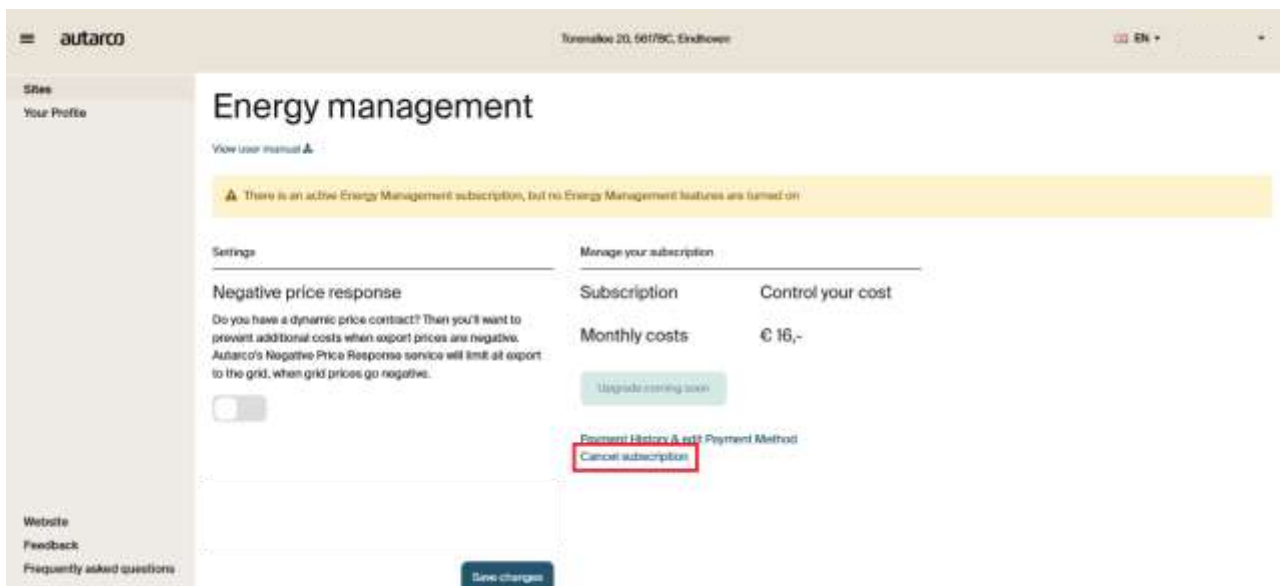
## 9 Cancelling a subscription

### 9.1 Login

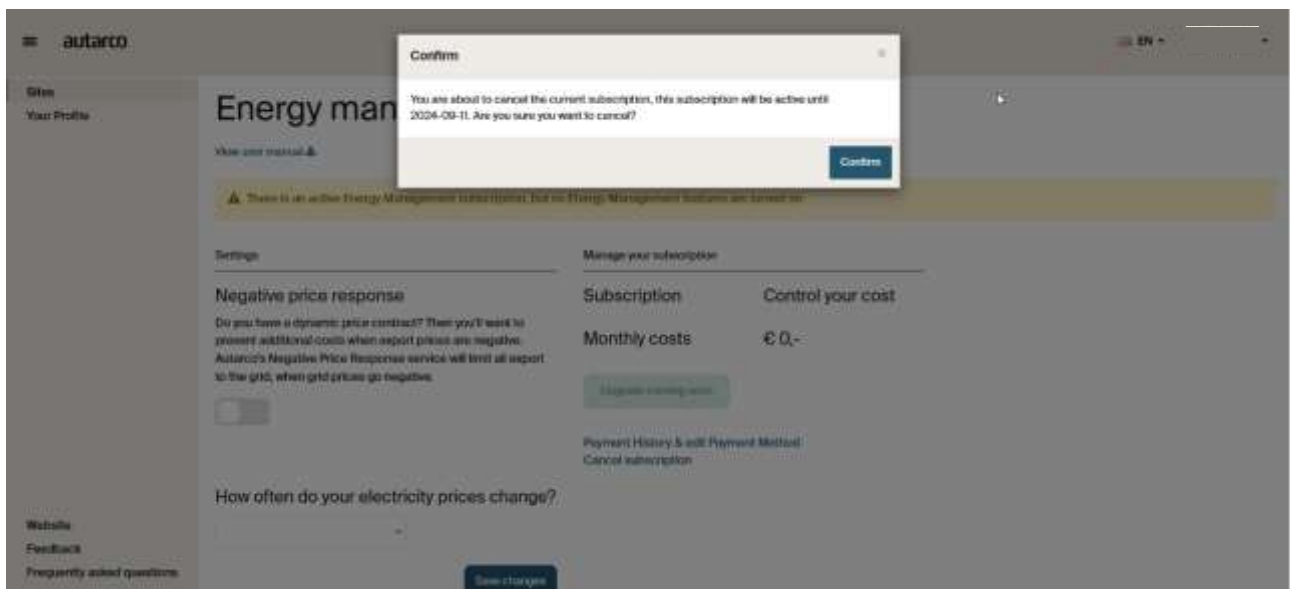
- Open MyAutarco and login as yourself.
- Open Energy Management, either via [Energy Management] on the top right,
- or via the Energy Management Card

### 9.2 Cancelling subscription

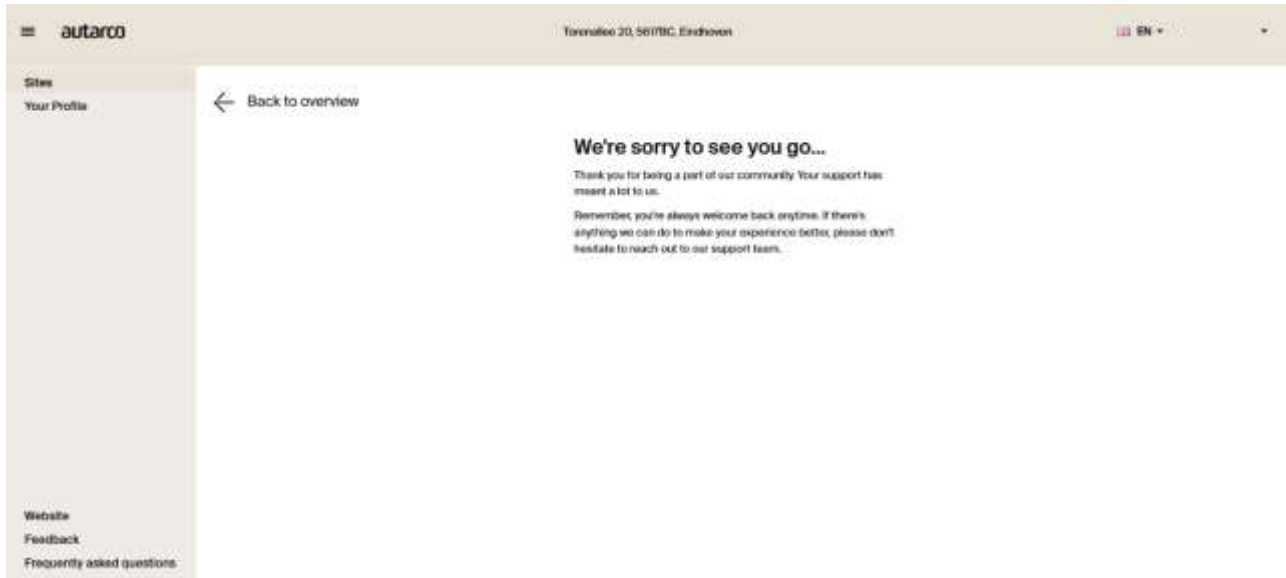
When you view your Energy Management page, you also see the cancel subscription option.



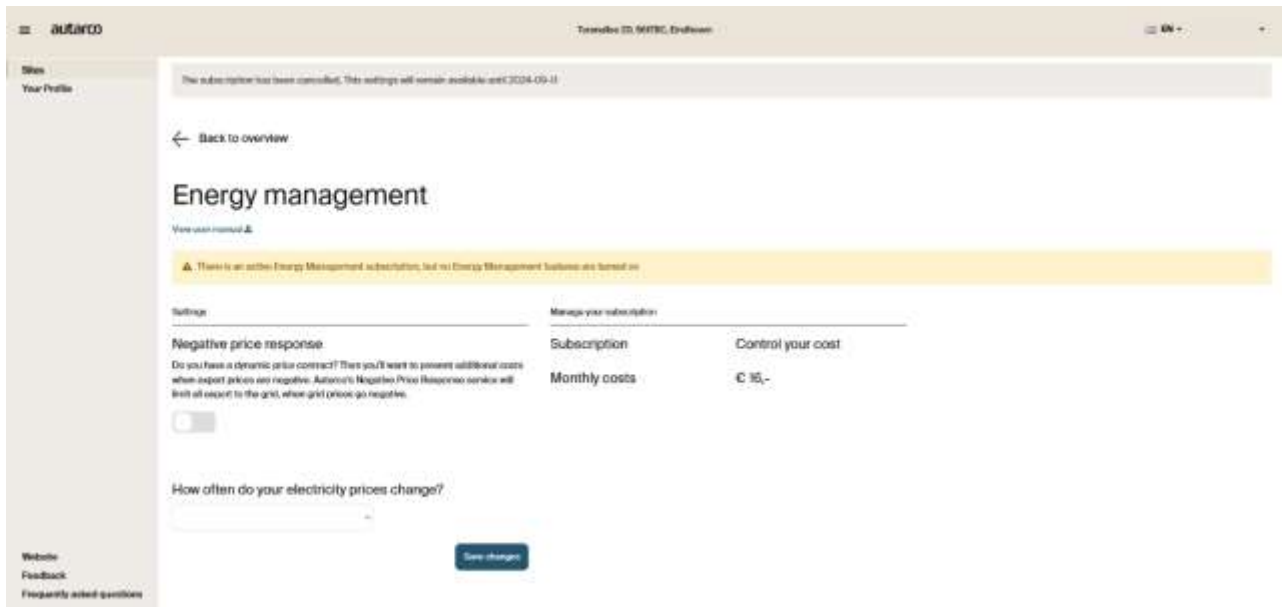
When pressing this option, you will be asked to confirm your choice.



Once you confirm, we will cancel your subscription.



Note that you will keep access to the subscription until the end of the current paid period. This will be shown in your Energy Management page.



## 10 Frequently Asked Questions (FAQ)

### 10.1 General questions

#### **What is an Energy Management System (EMS) provided by Autarco?**

Autarco Energy Management is a technology platform that monitors, controls, and optimizes the performance of your solar system, battery storage and energy consumption to maximize efficiency and reduce costs.

#### **How does Autarco Energy Management benefit me as a solar system owner?**

During the Beta Period of the Negative Price Response (NPR) feature, you can benefit by avoiding costs associated with negative energy prices. With the future addition of more features, Autarco Energy Management will help you optimize energy usage by charging your batteries when energy prices are low and discharging them when prices are high, creating savings in energy costs.

### 10.2 Technical questions

#### **How does Autarco Energy Management control my solar inverter remotely?**

Autarco Energy Management connects to your solar inverter via the internet. Using real-time or day-ahead data on energy prices and your energy usage, the system can remotely turn your inverter on or off to optimize cost savings. During the NPR Beta Period, this functionality will be tested and optimized. Other features will be introduced soon, like smart management of battery charging and discharging, and can be controlled through the same connection.

#### **Will Autarco Energy Management interfere with my solar system's normal operation?**

Autarco Energy Management is designed to enhance the functionality of your solar system by optimizing when your inverter operates, based on real-time energy prices and consumption. For Negative Price Response, it can limit or turn off your solar system to avoid any energy feeding back to the grid during negative price events, which is a key aspect of the Beta testing. Later features, like Smart Charging, will optimize the moments when your batteries charge and discharge.

#### **Is my data secure with Autarco Energy Management?**

Yes, Autarco uses advanced encryption and security protocols to ensure that your data and the control of your system are secure.

### 10.3 Financial questions

#### **How much can I save with Autarco Energy Management?**

Savings vary based on your energy usage patterns and local energy prices, as well as your system size and properties. Autarco Energy Management helps to lower your energy costs by optimizing when your inverter operates and later when your system charges and discharges batteries. During the NPR Beta Period, you may experience additional savings by avoiding costs during negative price events.

**Are there any upfront costs for integrating my solar system with Autarco Energy Management?**

No, there are no upfront costs or setup fees for integrating your solar system with Autarco Energy Management. You only need to pay a monthly subscription fee, which will be introduced at a later stage. The first part of the Beta Period will be free of charge.

**What are the subscription fees for using Autarco Energy Management?**

Subscription fees vary depending on the chosen Autarco Energy Management features and the size and type of your system. More details on subscription fees will be shared at a later moment.

#### 10.4 Operational questions

**Can I override Autarco Energy Management settings if needed?**

Yes, Autarco Energy Management allows users to manually override the settings if needed. However, keeping the automated settings usually provides the most optimal cost savings.

**What happens when there is an internet outage?**

In the event of an internet outage, the Autarco system will continue to operate based on the last-known settings until the connection is restored. Some advanced systems may have local backup control systems.

**How often does Autarco Energy Management adjust the inverter and battery settings?**

Adjustments are planned a day in advance based on the day-ahead energy price data and usage patterns.

**How will the Negative Price Response (NPR) feature be tested during the Beta Period?**

During the Beta Period, Autarco will closely monitor the system's response to negative price events, gather data on performance, and make any necessary adjustments to optimize savings and functionality. Participants will receive updates and may be asked to provide feedback.

#### 10.5 Compatibility and installation questions

**Is my current solar system compatible with Autarco Energy Management?**

Currently, Autarco Energy Management only works with Autarco inverters. For the Negative Price Response functionality, the only requirements are a 2-way communication device and a smart meter. Please contact your Autarco Dealer to get equipped with the right materials.

**How do I get started with Autarco Energy Management?**

Contact Autarco to discuss your needs. They will guide you through the setup process, which involves configuring your system for remote control.

**Will the installation of Autarco Energy Management cause any downtime for my solar system?**

Installation is usually quick and should not cause significant downtime. Any interruptions will be communicated in advance by Autarco.

**When will Autarco Energy Management support other inverter brands?**

Autarco is actively working on expanding compatibility to other inverter brands. While we do not have a specific timeline, we are committed to providing this functionality in the near future. Please stay tuned for updates from Autarco.

**11 Contacting support**

In case you have any remaining questions, or experience difficulty during the configuration, please feel free to contact us via: [ems-beta@autarco.com](mailto:ems-beta@autarco.com)