strova

by PREDIXON

Strova User Guide

Operator console and charging user app

For platform administrators, organisation owners and operations teams

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The platform is still in development; screens may change over time.

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A page-by-page walkthrough of the Strova operator console (app.strova.energy) and the charging user app. Written for platform administrators, organisation owners and operations teams.

1. Signing in, roles and switching organisation

Signing in: app.strova.energy › "Email code" tab › the email address you were invited with › "Send code" › the 6-digit code sent to your inbox. No password is needed. When you are invited to a new organisation, access opens automatically at your next sign-in; if you are already signed in, simply sign out and back in.

Switching organisation: choose it from the organisation box at the top left. Each organisation's stations, users and data are kept separate; one cannot see another. Underneath it reads "Your role: Owner". The EN / TR button at the top right changes the language.

Roles:

Role	What it can do
Owner	Everything, including inviting owners and transferring ownership
Administrator	All management, including the team (except appointing owners)
Operator	Day-to-day operation: remote commands, cards, sessions
Viewer	View only
Location manager	Only the locations assigned to them; optionally full rights on the stations there

Whatever the role, every change made is written to the audit log.

2. Menu map

The left-hand menu has five groups. Pages your role cannot access are not shown.

Group	Page	What it is for
Monitoring	Overview	Period summary: sessions, energy, charging time, revenue; station health
Monitoring	Stations	All devices with their live status; station detail and remote commands
Monitoring	Map	Stations on a map, coloured by status
Monitoring	Sessions	Every charge: energy, duration, amount, user/card/vehicle
Monitoring	Alarms	Open and closed alarms, "Seen" marking
Assets	Locations	Site/car park setup, position, power reserved for charging, tariffs
Assets	Vehicles	Fleet vehicles, number plate, linked RFID card and Autocharge ID
Assets	Depot	One screen for a fleet depot: which vehicle is on which socket, status
Assets	Compatible devices	Catalogue of charger models Strova recognises
Users	Charging users	People who charge through the app; announcements
Users	Invite codes	Codes that let people open their own account
Users	Pending requests	Join and card requests, approve/reject
Users	RFID cards	Adding and blocking cards, linking them to a vehicle or person
Reports	Reports	Fleet and energy reports, monthly cost-sharing statement, Excel export
Reports	Meter values	Raw energy/power readings sent by the devices
Reports	Profitability	Revenue, costs, shares and break-even by location
Management	Team	Members and roles; organisation settings; open data
Management	Audit log	Who changed what and when
Management	Device models	Organisation-specific model definitions and recommended settings

In the top bar: station search (name, ID or serial number), language, notification bell (number of open alarms) and sign out.

3. Monitoring

Overview

Number of sessions, kWh, total charging time and revenue for today / this week / this month; breakdown by station and user, plus a daily chart. Amounts are shown separately for each currency and never mixed.

Stations (list)

- Cards at the top: total, online, charging, faulted connector, offline. Clicking a card filters the list.
- Filters: search, location, status, registration (active/blocked), power type, connector type, manufacturer, model.
- The "Columns" button chooses which columns are shown; the choice is remembered in your browser.
- Labels: "No password" (the device connects without sending a password), "Awaiting first connection" (added but not yet connected; the record is removed if it does not connect within 14 days).

Station detail

At the top: status (Online/Offline), registration (Active), "New password", "Block", "Refresh", "Remove from organisation".

Live status card: the status of each connector; while charging, the power, energy, current, voltage and the charging user/card. If the device does not send current, the current is calculated from power and shown with the label **"calculated"**; if voltage is not sent it is shown as **"230 V – nominal value"**. It is never presented as if it had been measured.

Tab	Contents
General	Device information (manufacturer, model, serial, firmware), display name and location, technical details, model assignment, connectors, QR codes and 6-digit short codes, authentication, free use
Sessions	Every charge at this station
Maintenance and faults	Fault history, health note, reason for connection errors
Logs	Raw OCPP messages, newest first; passwords masked
Configuration	The device's OCPP configuration keys and change history; deviations from the recommended settings
Commands	Remote commands (below)

Remote commands: start/stop charging, restart (Soft/Hard), unlock connector, change availability (Operative/Inoperative), change a setting (ChangeConfiguration), request a message (TriggerMessage: status, boot notification, meter values), clear the card cache, send/clear a charging profile, query the scheduled profile, vendor-specific data (DataTransfer). Every command and its response is written to the audit log. Remote charging commands are not sent to a station that has not yet been accepted (Pending).

Map

Stations at locations that have coordinates; colour and icon show the status (available, charging, faulted, offline, unknown). Clusters open up as you zoom in; clicking a station brings up an info card and a link to its details. Location and status filters are available.

Sessions

Every charge: start/end, duration, kWh, amount (at the session's own tariff), user, card, vehicle, reason for closing. Idle minutes (when charging has finished but the plug is still connected) are also measured; no idle fee is currently charged.

Alarms

Strova opens an alarm automatically when a station is offline for more than 10 minutes, a connector reports a fault, a remote start fails, or a device's clock drifts by more than 5 minutes. When an alarm opens, owners and administrators receive an email. Once the problem clears, the alarm closes by itself and a **"back online / problem resolved"** email is sent. "Seen" does not close an alarm; it only shows that someone in the team is looking into it. For a station that keeps dropping and reconnecting, at most 2 "disconnected" emails are sent in 30 minutes.

4. Assets

Locations

- **Add location:** name (required), address (optional), **position (required)**: address search, clicking on the map, or latitude/longitude; coordinates in the form "40.000000, 29.000000" can be pasted into a single field, and the pin can be dragged for fine adjustment.
- **Power reserved for charging (kW):** the maximum power the chargers at the location may draw together; see "Power reserved for charging and load management" below for details. Required at a location with two or more stations.
- **Currency:** for a location billed in a currency other than the organisation default (TRY).
- **Tariffs:** the tariff button on the location row. Energy cost (TL/kWh, excl. VAT), AC and DC selling price (TL/kWh, incl. VAT), VAT rate. Every change is a new, dated version; sessions keep the tariff in force when they started. Under the EPDK rule, pricing is per kWh only; there is no per-minute or per-session fee.
- **Turkey pricing rule:** in an organisation whose country is TR, a new price takes effect at 00:00 the next day at the earliest and must be entered by 16:00 on the previous day. The form suggests the earliest permitted time itself. A location's first tariff, and a change to the energy cost alone, can take effect immediately.
- **Idle fee rule:** a per-minute fee definition for when a vehicle stays plugged in after charging has finished (measured, but not currently charged and not shown to the charging user).

Power reserved for charging and load management

The "Power reserved for charging" section on the location create and edit screen. Strova keeps charging below this value; it does not replace the main fuse or protective devices.

- **Separate meter or shared with the building?** If the chargers are on a separate meter, the value is that supply's contracted capacity. If they share the building's supply, enter the contracted capacity and the building's peak consumption; Strova suggests: contracted capacity − peak consumption × (1 + margin), with a default margin of 10%. You can accept the suggestion or change it up to the contracted capacity. Values are entered with at most 2 decimal places.
- **Phases and voltage:** the location's supply (single or three phase, 230 V). Strova applies the limit per phase; a single-phase device whose phase is unknown is counted on every phase, so that single-phase devices on the same phase cannot overload it.
- **Night value (optional):** a second value and a time window (default 23:00–07:00, organisation time zone). When the time comes, Strova changes the limit automatically; a reduction is applied immediately.
- **If power is not enough:** each session needs at least 6 A per phase (AC) or 5 kW (DC). If there is not enough power, one of the sessions is paused: first the vehicle with the highest state of charge (SoC), or, if unknown, the one that started last. When power frees up, sessions resume in reverse order. Power for devices to which Strova cannot send a limit is reserved in advance.
- **Warnings:** a location with two or more stations and no value entered appears in the list with the label "Power reserved for charging missing"; the value is requested when the second station is added. If the value is lower than the combined minimum of all stations, a "some charges will be paused" warning appears.
- **Phase of a single-phase device:** station detail › load management card, "Connected phase" (Unknown / L1 / L2 / L3). If the phase is unknown, Strova counts the device on every phase (safe but inefficient); if you enter the phase, single-phase devices on different phases can receive their full share. Enter the

phase according to the electrician's installation information: if the wrong phase is entered, that phase may be loaded more than Strova calculates in fixed-power mode. The field appears only for single-phase models at locations that are not single-phase; the right to change it lies with the organisation owner/administrator and the location manager.

- **Station busy:** Strova sends commands to a station one at a time. If a command cannot join the queue within 30 seconds while the station is processing another one, the warning "the station is processing another command; please try again shortly" appears. If a saved power limit could not be sent for this reason, the screen says so separately.
- **Building meter (Advanced):** if readings from the meter on the building's main supply are sent to Strova, charging power is adjusted live to the building's current consumption. If the meter goes silent for 60 seconds, Strova falls back to the power reserved for charging and a "Building meter offline" alarm is opened.
- **Statement email:** with "Statement email" on the location row, the monthly cost-sharing statement is sent on the 1st of every month to up to 5 recipients, individually, with a PDF attached. Off by default.

Vehicles

Fleet vehicles: name, number plate, fleet number; an RFID card kept in the vehicle or the vehicle's Autocharge MAC ID is linked, so every charge is recorded against that vehicle. A responsible charging user can be assigned to a vehicle; from the date of assignment, they see the vehicle's sessions in the app.

Depot

One screen for a fleet depot: sockets, vehicle charging, power, status. It can be left open on a large monitor as a depot display.

Compatible devices

The models Strova recognises (brand, power, connector, smart charging support, recommended settings). Choosing a model here when adding a station fills in the technical details; Strova can recognise a device by its model on first connection.

5. Users

Charging users

- **Adding:** enter an email address with "Add charging user"; the person signs in to the app with a code sent to that address. There is no password.
- **Blocking:** a blocked user cannot start charging from the app; their cards and vehicle tag must be blocked separately; a charge in progress is not stopped.
- **Announcements:** "Send announcement" emails the organisation's (or a single location's) charging users. The number of recipients and a preview are shown; plain text only. Rules: at most 3 announcements a day (per organisation and per person), and there must be at least one active station; they go only to people who have actually charged in that organisation or sent a join request themselves, whose email is verified and who have announcements switched on.

Unit label

The "Unit" field on charging user, RFID card and vehicle rows (e.g. "Block A Flat 12", up to 40 characters). It is entered by an administrator or location manager. In the monthly cost-sharing statement, rows appear with this label; charging users see their own label in the app but cannot change it.

Invite codes

A code that lets people open their own charging user account. A code can be limited to certain locations, given an expiry and a usage limit, and have "auto-approve" on or off. With the code's share link, the person signs up in the app; if auto-approve is off, the request goes to "Pending requests".

Pending requests

Join requests and card requests (a charging user asking to add their own RFID card number from the app). Approve or reject, with an optional note. If the requested card number already exists in the organisation, a warning appears; an existing card can only change hands with an administrator's approval.

RFID cards

Adding cards (number, label), linking them to a person or vehicle, restricting them to a location, blocking. The card pool belongs to the organisation; cards can be distributed to locations, and a pool card returns to the pool only when an administrator returns it manually. A location manager manages only cards restricted to their own locations.

Guest tabs (hotel)

For adding a hotel guest's charging cost to their room bill. Strova does not take payment; when charging ends it sends a **charge slip** (PDF) to reception, and the hotel adds the amount to the room bill and collects it with its own invoice. The charge slip is for information only and does not replace an invoice.

- **Turning it on:** Locations › location › "Guest tabs (hotel)": switch it on and enter the email addresses (up to 5) the charge slip should go to. When it is switched on, the card cache of the devices at the location is turned off (where supported). The organisation's own cards (staff) keep working as before.
- **Check-in:** "Guest tabs" › "New tab": room number, and optionally the guest's name and email. Pass the **PIN**, shown on screen only once, to the guest.
- **Registering a room card:** in the tab, "Register room card" › choose the device (or any device at the location) › tap the card on that device within 2 minutes. The last 4 digits of the card read are shown; if it is the wrong card, use "Not this card, undo". The card is linked to that room until the tab is closed and works only at this location.

- **If the card cannot be read:** the guest scans the QR code on the device and starts with the room number and PIN. After many wrong PIN attempts, that room's PIN is locked; reception unlocks it with "Issue new PIN".
- **End of charge:** the charge slip (room, device, time, kWh, unit price, amount, ADS number) is emailed to reception and, if given, to the guest. In the console, mark it as "Posted to room bill".
- **Check-out:** "Close tab" › all of the room's charges are sent in one statement, the card link ends, and the devices are asked to delete the stored cards. If a charge is still in progress, an updated statement is sent separately when it finishes.
- **Things that need your attention:** a notice appears on the page when an unregistered card is tapped, when a charge could not be posted to a tab, or when a PIN is locked. The daily Excel statement is for accounting.
- **Access:** used by the owner, administrator, operator and that location's manager (reception). A location that has charge slips cannot be deleted.

6. Reports and Profitability

Reports

Fleet and energy reports: choice of period (day, week, month), with breakdowns by vehicle, user, station and location; downloadable as Excel. Charging users also receive their own summary by email every month (users can switch it off).

Monthly cost-sharing statement

Reports › Monthly cost-sharing statement: for site or apartment building management, who used how much in a month. Choose the month and location. Each row shows the unit label, charging user / card / vehicle, number of sessions, energy (kWh), amount (including VAT and idle fees, in its own currency) and free use. Sessions with no identified user are in the "Unassigned" row. A session is recorded in the month in which it ended (organisation time zone). Downloadable as PDF and Excel. Amounts are calculated from the tariff in Strova; this is not an official invoice. A location manager sees only their own locations.

Meter values

Raw readings sent by the devices (energy meter, power, phase values). Used to check what a device actually sends; for example, if current/voltage is not shown, this is where you can see that the device does not send it.

Profitability

- Two views: **Operator view** (the organisation's own profit) and **Predixon view** (software fee and shares).
- Choose the start/end month; summary cards: net revenue, gross profit, operator contribution, energy.
- **Profitability waterfall:** gross revenue › VAT › net revenue › energy cost › payment fees › gross profit › location owner's share › other shares › software fee.
- Insights by location and the break-even point; a scenario calculator shows the result if price or usage changes.
- "Print" and "Download Excel".
- An unknown amount is shown as "—" and is not counted as zero (for example, sessions with no tariff). Currencies are never mixed.
- Contract rules (location owner's share, revenue share calculated on the amount excluding VAT after deducting energy cost, software fee) are entered under "Profitability settings" on the Team page. A closed period cannot be changed; the calculation is updated every night at 02:15.

7. Management

Team

- **Add a person to the team:** email and role. Strova does not send the invitation email itself; use "Copy invitation" to get the text and pass it on to the person. Access opens once the person signs in with that address; the invitation is valid for 14 days. Pending invitations are shown in the list and can be withdrawn.
- When **Location manager** is selected, you tick which locations they will manage; optionally, they are given full rights on the stations at those locations.
- Alarm emails can be switched on/off per member.

Organisation settings (top of the Team page)

- **Time zone:** times in alarm emails and the Turkey pricing rule follow this time zone.
- **Currency:** new tariffs are entered in this currency; existing tariffs and sessions are not converted.
- **Country:** if Turkey is selected, the Turkey pricing rule applies. Switching from TR to another country, or the reverse, can only be done on this screen and is logged.

Open data (AFIR)

If switched on, location names, addresses, coordinates, sockets, live availability and prices are published at a public address; national access points and map services can list them. No personal data or station IDs are included. Off by default; take care with residential sites.

Audit log

Every change, including tariffs, cards, members, stations, commands and password resets: who, what, when. When a station is removed from the organisation, owners also receive a separate email.

Device models

Organisation-specific model definitions and recommended OCPP settings (e.g. `ConnectionTimeOut` at most 90 s, meter value interval). After connection, Strova reads the settings from the device and shows deviations from the recommended values.

8. Adding devices, commissioning and connection problems

Stations › Add station. There are two ways:

1. **Predixon device:** if the label carries a serial number and a setup code (XXXX-XXXX-XXXX). The device connects with its factory password; no extra password setting is needed. For this, the device must already have been entered in the Strova registration system and its label printed.
2. **Other charger:** enter the charge point identity (Charge Point ID) configured on the device and choose the location. Strova shows the OCPP address and the password; **the password is shown only once.** If it is lost, use "New password" on the station page.

Settings on the device side:

Setting	Value
OCPP version	1.6J
Server address	`wss://ocpp.strova.energy/ocpp/<id>` (or `/ocpp/1.6/<id>`)
Charge point identity	Exactly as entered in Strova, including upper/lower case
Security	Profile 2: TLS + Basic (username = ID, password = the one Strova issued)
Network	DHCP or static IP; **gateway configured**, DNS working
Clock	Correct (NTP on)

Once connected, the station goes "Online"; brand, model, serial and firmware come from the device, and Strova reads the device settings.

Troubleshooting (lessons from the MC-11 commissioning on 22.10.2026):

What Strova shows	Likely cause	Fix
No connection attempt at all	The device cannot reach the internet (e.g. "No Gateway" ticked in the network settings), wrong address, different ID	Set the gateway, check the address and ID, restart the device
"Password not sent"	Password field empty or incomplete	"New password" in Strova, paste it in full on the device, save, restart
"Wrong password"	Old or incorrect password	Same
"Unencrypted connection"	`ws://` was used	`wss://`
No connection and no error	TLS cannot be established (certificate or clock)	Check the clock is correct; if needed, install the root certificate (ISRG Root X1 / GTS Root R4)

After a rejection, some devices put off retrying for several minutes; after changing settings, **fully restarting the device** is the quickest way. The station's "Maintenance and faults" tab shows the reason for the last connection error.

9. Charging user app

Address: **app.strova.energy/d** (opens in the phone's browser and can be added to the home screen; there is no app-store app yet).

- **Signing in:** email + 6-digit code (or a sign-in link). The user is added by the organisation, or signs up themselves with an invite code.
- **Starting a charge:** scan the QR code on the socket, or type the socket's **6-digit short code** / the 8-character code under the QR into the "Enter code" field. Charging can be stopped from the app. Starting with an RFID card works independently of the app.
- **Nearby stations:** list or map view; number of available sockets, distance, directions, "Start here".
- **Account:** their own sessions and the sessions of a vehicle they are responsible for (from the date of assignment), card request, monthly summary email on/off, "charging finished" email, operator announcements on/off, **delete my account** (not possible while a charge is in progress or while they are the sole owner of an organisation).
- **Charging finished notice:** an email 5 minutes after charging finishes, if the vehicle is still plugged in.

Turkish texts use the term "şarj kullanıcısı" (charging user) throughout.

10. Emails, frequently asked questions and support

Emails Strova sends

Email	To	When
Sign-in code	The person signing in	At every sign-in
Alarm opened	Owner, administrator (and selected location recipients)	Offline, fault, failed start, clock drift
Problem resolved / back online	Those who received the alarm email	When the alarm closes by itself
Station removed from organisation	Owners (except the one who did it)	When the station is removed
Charging finished	Charging user	5 min after charging ends, if the vehicle is still plugged in
Monthly summary	Charging user	At the start of the month (can be switched off)
Announcement	Charging users	When the organisation sends one (can be switched off)

Frequently asked questions

- Why does current/voltage say "calculated" or "nominal"? The device does not send these readings over OCPP; Strova calculates them from power and shows them with a label.
- Can I link a session to a vehicle afterwards? Not from the console; let us know and it is done as a logged correction. The lasting solution: register the vehicle's own card.
- I cannot change the price straight away. Turkey pricing rule: 00:00 the next day at the earliest, entered by 16:00 the day before.
- How is a new customer organisation opened? The organisation is opened by the Predixon platform administrator; the customer's representative is added by invitation. A customer-specific setup guide is prepared by Predixon.
- The station stays at "Awaiting first connection". See the troubleshooting table in Section 8.

Support: Predixon OÜ · +90 850 242 55 72 (WhatsApp on the same number).