

Manual: QA OTE

Loading and visualisation of spot electricity prices directly from the server of the market operator OTE-CR. The data basis for spot control in the SHE ecosystem.

Introduction

QA OTE downloads the current spot electricity prices from the OTE-CR portal and provides them in a unified format to other applications in the SHE system. It also offers the user a graphical display of prices in the selected resolution (15-minute and hourly), an overview for today, tomorrow and the whole week, and statistics showing how favourable the current and the minimum price are in a short, medium and long window.

The application serves primarily as a data source (Data Provider) for downstream spot control applications. It does not actively switch any appliance itself – downstream QA applications (Spot Pro) are used for automatic control of devices according to spot prices.

The application is intended exclusively for the Czech market (OTE ČR data).

The application cooperates with Mervis SCADA for visualisation and with other QA applications of the Energy Management family – for control according to spot prices, energy sharing, controlled wallboxes, DHW heating and more.

IMPORTANT WARNING: The application reads data from a third-party service – the server of the market operator OTE-CR.

The transfer of values, their scope and update frequency depend on the OTE-CR server and on which data the market operator publishes and when.

The functionality of the application and the support options of Smart Home and Energy depend on the availability, capabilities and terms of this source. If it is changed, restricted or discontinued, the application may stop working completely or partially.

Smart Home and Energy does not guarantee the availability, completeness or correctness of data provided by a third party.

Upstream and downstream applications

Upstream applications

The application is standalone and does not require any upstream QA application. A working internet connection of the unit (for communication with the OTE server) and an installed SHE system are sufficient for operation.

Downstream applications

Optional:

- **QA Spot Pro** – comprehensive control of buying and selling on the spot market, including control of downstream devices.

Installation and initial setup of the QA

Purchase the application in the Smart Home and Energy e-shop (<https://eshop.smarthomeenergy.cz>). After the purchase you receive an e-mail with a link to the activation form, in which you choose one of the two installation methods:

- **Installation via the SHE Installation Application (recommended)** — the application is installed and activated automatically, including future updates. Requires the "superuser" credentials for the unit. See the separate "Installation Application" manual for details.
- **Standalone installation file** — from the activation form you obtain a *.fqax file, which you install manually into the unit according to the unit manufacturer's instructions (logged in as "superuser"). This option does not allow automatic updates.

To try out the application before purchase, a **TRIAL version free for 7 days** is available for download from the Smart Home and Energy website. After the trial version expires, a full licence from the e-shop is required for further operation.

After the installation, the application appears on the unit desktop in the **Energy** section, **OTE** subsection. The application creates a set of six tiles there — one main tile and five informative tiles with key values to help you understand prices.

User settings

Warning: Not all cards and tiles are displayed to all users. Each user selects which cards and tiles are displayed on the Display Settings card (sheViewControl application) – levels SHORT, ADVANCED and ADMIN. If you cannot see a described card, check the settings on this card.

The application has no user settings in the form of configuration fields. All control consists of switching the display in the chart and in the statistics window on the application card.

Desktop tiles

After the installation, the following tiles appear in the **Energy / OTE** section:

- **OTE** — the main tile of the application. In the top-right corner it contains the eye icon, which opens the card with the chart and statistics. Below the application icon, the state of communication with the OTE portal is displayed (e.g. "Disconnected" when the connection fails).
- **OTE Now** — the current spot price for the ongoing hour in CZK. Below the value, the hour to which the price applies is shown (e.g. Hour: 00:00).
- **Profit.Cur.Prices Today** — percentage score indicating how favourable the current price is within today.
- **Profit.Cur.Prices Min** — percentage score indicating how favourable today's minimum price is compared with the minimum prices on other days in the monitored window (short / medium / long).
- **OTE Tomorrow Min.** — minimum spot price for tomorrow in CZK (after publication of the OTE auction data). Below the value, the hour in which the minimum occurs is shown.
- **Profit.Min.Price Tomorrow** — percentage score indicating how favourable tomorrow's minimum price is compared with the minimum prices on other days in the monitored window.

The statistical window for calculating the profitability score (short / medium / long) is set on the application card in the **Profitability whole system** section.

Application card

To open the application card in a web browser, move the cursor over the **OTE** tile and click the eye icon in the top-right corner of the tile. The card displays the current data, the chart and the price statistics.

Current price

The top part of the card shows the **Current price** in CZK/MWh. The value corresponds to the valid spot price for the ongoing interval according to the data from the OTE-CR portal.

OTE Chart

The main part of the card is the **OTE Chart** with a bar display of prices within the selected period and a switchable profitability overlay.

The chart legend distinguishes four data series:

- **Price Hourly** — spot price valid for the given hourly interval (market price from the OTE-CR settlement).
- **Price 15min** — spot price valid for the given 15-minute interval. In the Czech Republic, electricity is traded and settled this way.
- **Profitab.today** — how favourable the price is throughout today.
- **Profitability** — how favourable the price is throughout the selected statistical window (short / medium / long).

Period selection

Below the chart there are buttons for selecting the displayed period:

- **Today** — prices for the current day.

- **Tomorrow** — prices for the following day. The data are available after publication of the OTE auction results (typically in the afternoon of the previous day).
- **Week** — overview of prices for the last seven days.
- **Tab** — table display of the values.

Resolution and overlays

The second row of buttons determines which data and overlays are displayed in the chart:

- **15M** — electricity price in 15-minute intervals.
- **60M** — electricity price in hourly intervals.
- **PROFIT.TODAY** — overlay of how favourable the price is for today.
- **PROFITAB.** — overlay of how favourable the price is within the selected statistical window.

The buttons can be combined freely — hourly and 15-minute prices can be displayed at the same time and overlaid with one or both of these curves.

Chart statistical window

The third row of buttons determines which statistical window is used to calculate the **Profitability** curve in the chart:

- **SHORT** — statistics for the last 7 days.
- **MIDDLE** — statistics for the last 30 days.
- **LONG** — statistics for the last 90 days.

Profitability whole system

Below the chart there is a separate **Profitability whole system** section with the same trio of switches **SHORT / MID / LONG**. The selection determines which window is used to calculate the summary statistics displayed below the chart (Min/Max prices and the percentage score). The selection is independent of the statistics setting for the curve in the chart.

Summary values

Below the switches, summary values are displayed, providing an overview of current and expected prices:

- **Min. Price Today/Next/Tomorrow** — minimum spot price for today, the following day and the day after (if the data have been published).
- **Max. Price Today/Next/Tomorrow** — maximum spot price in the same periods.
- **Profitab Short/Mid/Long** — percentage score indicating how favourable the current / minimum price is compared with the selected statistical window. The value in the **Today Min** row corresponds to how favourable today's minimum price is compared with the 7/30/90-day history; the **Tomorrow Min** row to the same indicator for tomorrow (after the data are published).
- **Past Days/Number of Samples** — how many days and how many price samples the application currently uses for the calculation (e.g. 1(2),7(8),30(31),90(91)). The values vary depending on how much historical data has been collected.

Data update

The bottom part of the card shows the time of the last successful data update from OTE and the **UPDATE** button. The button is for checking only — whenever you want to verify which values are currently loaded from the OTE portal, click it and the values are reloaded from the unit. The application performs regular automatic synchronisation with OTE in the background by itself; pressing the button manually is not needed for normal operation.

Below the button there is the informative field **Communication status** (e.g. "Valid Answer") and the application **Version**.

Notes

- For active automatic switching of appliances according to spot prices, one of the downstream QA applications (Spot Pro) must be installed.
- For evaluating the long-term development of prices and archiving data, we recommend connecting to **Mervis SCADA** (value export, charts, history).
- Tomorrow's price data are available after publication of the OTE auction results (typically in the afternoon of the previous day). Until then, the values for "Tomorrow" are empty.