



Digital Energy Management for Sustainability

www.vtcenergy.com

FORTUNE
500

Turkey's Top 500 Companies
We are proud to be among them!

As **VTC Energy**, we are one of the key players in the sector with a sustainable energy management perspective, and we provide digital energy management for companies with the software we have developed. With the work we have done, we are among the "**Turkiye's Top 500 Companies**" in the Fortune 500 - Turkiye list published by Fortune magazine in 2021 and 2022.

The digital energy management platform V-Gen product family, developed by our company's expert staff is integrated with different markets and manages the energy of power generation plants regardless of the source.

Our balance responsible party is one of the largest balancing parties in Turkiye with a capacity of **5.5 GW** and provides up to **100%** advantage to our stakeholders every year.

In 2023, 158.7 billion telemetry data were monitored with V-Sensor, our IoT-based energy monitoring platform. Over 7.5 GWh trading volume took place in our energy trading platform V-Gen throughout the year.



VTC ENERGY

COMMERCIALS OF VTC ENERGY



Customers

As a company in the Fortune 500 list for 2021 and 2022, we have 500+ industrial clients, which 90% of the total transaction volume of is from companies in the Fortune 500 list.

Locations

We provide solutions to our customers from our offices in **Kocaeli, Istanbul, Gaziantep and Berlin.**

Our Team

We have 95 employees, 55 of whom are **engineers and postgraduated engineers**, all of whom are experts in their fields.

Sectors

We serve to many different sectors such as Energy, Construction, Textile, Tourism, Food, Chemical, Petroleum, Tire, Iron and Steel.

R&D

We have 6 successfully completed R&D projects, one of them is a **TEYDEB** project supported by **TÜBİTAK.**

Balancing Group

We provide up to **100%** advantage to our participants with our Balancing Group which has **5.500 MWh** capacity.



PRODUCT AND SERVICE



Energy Management

We remotely monitor our customers energy and minimize their costs. We provide Day-Ahead Market and Intraday Market integrations, cost optimization, production planning and portfolio management services.

**Not every feature is available for every market



Carbon Trading

We enables the enterprises that produce with green energy to acquire I-REC, which is the International Renewable Energy Certificate, as soon as possible according to the amount and resource type they demand.



Energy Efficiency Management

We provide an end-to-end management audit in all energy efficiency issues, especially energy surveys, VAP (Efficiency Increasing Projects) and **ISO-50001** Energy Management System projects with our expert and certified team members.



Renewable Energy

We manage system operator processes of licensed power plants. We reduce imbalance costs with day-ahead and intraday wind and solar forecasts. We manage the **Cancellation Statement processes of Renewable Energy Certificate, Issue Certificate and Carbon Certificates.**



Artificial Intelligence Solutions

We provide day-ahead and intraday **production and consumption forecasting** services with artificial intelligence and machine learning algorithms.



Monitoring - IIoT

We provide all the components your industrial facility needs for digital transformation with a holistic perspective. We securely transform your data into added value with specially designed **IIoT devices.**

VTC V-Sensor

V-Sensor is an industrial internet of things platform that transport any kind of telemetry data to the cloud with various protocol and communication options, offers analytical tools for processing the data, and enables live monitoring of results through customized dashboards.

V-Sensor has been designed using modern software architecture approaches. With its platform-independent structure, it can run in any environment and scale automatically. Even in the case of data flow at very high frequency and from many devices to the platform, the system intelligently plans the resource requirement based on the load and keep providing the same quality service without causing any performance loss.

It is designed as definition-based, so new types of telemetry data having different units can be transferred to the system without any additional cost. It supports all protocols and data transfer methods commonly used in the industry for sending data to the system.

Key Benefits

- It can be easily integrated into the devices that organizations are already using. Thus, there is no need to make an extra investment.
- In addition to electricity production and consumption, it also monitors data such as steam consumption/production, temperature and current. Thus, there is no need to use different solutions for different systems.
- It supports many protocols which has the industry standards such as including http, mqtt, modbus, and opc-ua.
- It offers turnkey service by isolating all processes such as SIM card purchase, hosting services or server installation required for operation and maintenance from end users.
- It can be easily integrated with different software and all processes of an organization are end-to-end digitized and aligned with industry 4.0 standards.



Who is it for?

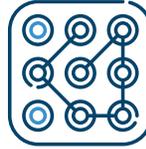
- Wind Farms
- Solar Power Plants
- Biomass Power Plants
- Steam Plants
- Hydroelectric Power Plants
- Thermal Power Plants
- Geothermal Power Plants
- Industrial Enterprises
- Factories That Produce Their Own Energy





Data Upload and Download

The data accumulated in the system can be downloaded in the desired date range in .xlsx or .csv format. In addition, data that cannot be read digitally or transferred due to systemic problems can be uploaded to the system in excel format and processed and visualized.



Reading and Scheduling

The data types to be monitored can be easily defined to the system via the admin pages. By creating meaningful groups with reading types, confusion is avoided in complex systems. Even if the readings of the same type are in different units, the unit definitions in the system can easily distinguish the values during monitoring.



Real-time Dashboards

The data sent to the system can be monitored instantly on the dashboards. Big data can be easily interpreted by taking the averages or sums of the data accumulated at high frequency in a wide range interval according to the selected periods.



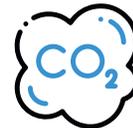
Rule Engine

All data sent to the system is saved in the database after passing through a central rule engine. In this way, each telemetry data can be processed in accordance with business requirements, analytical calculations can be made and values can be shared with 3rd party systems depending on the conditions.



Multiple Switchboard Monitoring

It observes the instantaneous production, consumption and efficiency values of your power plants located in different regions or cities through analysers. It allows you to control the instantaneous production and consumption status of all your power plants on a single screen.



Efficiency Measurement

Comparison of the production performances of the power plants is ensured. Issues such as how much radiation the solar energy receives, the dustiness of the solar panels can be observed. Carbon emission prevented and environmental benefits provided by the production in the power plant are shown on the dashboard.



Alarms

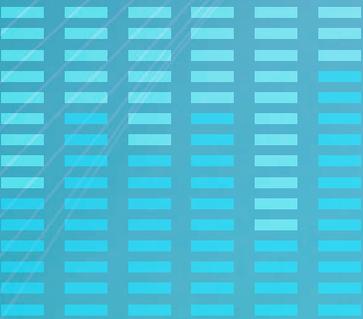
In addition to being able to monitor instant data on the report screens, alarms can be created for times when you cannot be at the screen or for complex scenarios that are difficult to control visually. When alarms defined for the desired time interval and conditions occur, they can be viewed on the report screens and the affected users are notified. Conditional alarms can be generated and alarms generated by the system can be cleared automatically depending on the defined conditions.



Solar and Wind Power

It offers two-way integration capability with solar forecast service providers. It enables instant monitoring of error rates by displaying the forecast values read periodically from multiple forecast providers and the actual values in the field at the same time. Provides two-way integration capability with the industry's leading wind forecasting service providers, enabling instant error rates to be tracked by displaying periodically read forecast values from multiple forecast providers and actual values in the field at the same time.

We are investing in energy efficiency studies and striving to make the future of our world sustainable!



 BERLİN

 KOCAELİ

 GAZİANTEP

 İSTANBUL



Digital Energy Management for Sustainability



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