



# Burgenland Energie

## Object-Oriented Measurement at Burgenland Energie<sup>1</sup>

November 2023



Source: Adobe Stock



Burgenland Energie's optimistic outlook is to improve regenerative energy by using photovoltaics and wind to reach this declared goal. Burgenland Energie is aiming to be the number one for photovoltaics in Austria - as it is already for wind energy - and to become a green energy pioneer throughout the country.

<sup>1</sup> Source: Roland Ramesmayer, Harald Rathmanner and Michael Schulz

# Challenge

Secure energy supply needs stable, reliable energy transport networks. This requires a continuous expansion and improvement of the networks and services. The potential for expansion and creating new channels are provided by businesses in areas of digitalization and broadband expansion.



Source: Unsplash

# Solution

To document both the existing and future networks, the team of Burgenland Energie relied on the newest technology in GNSS measurement techniques by ALLSAT GmbH deploying the JAVAD GNSS TRIUMPH-3 receiver. This deployment takes advantage of TRIUMPH-3's light weight, 12-hour battery life, 864 channels for all satellite constellations, and an integrated IMU for tilt compensation.

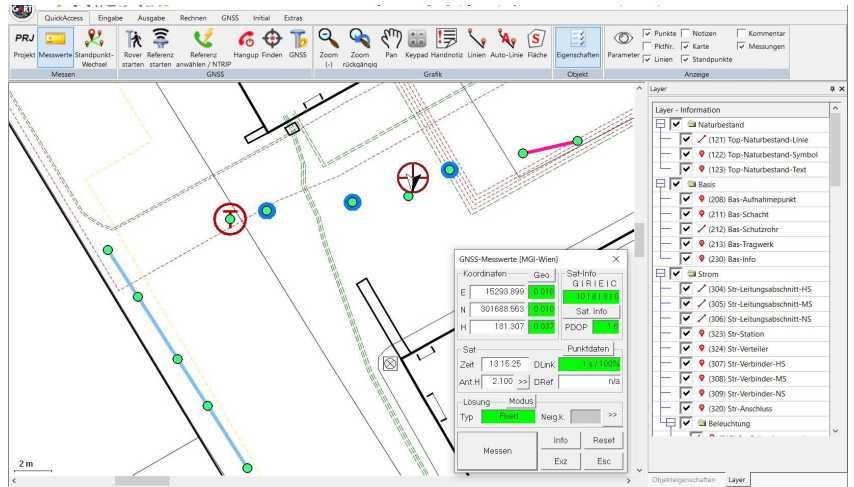
The requirements for future object-oriented measurements were defined in a workshop with the Burgenland Energie and ALLSAT teams. The team's multi-year software development project generated a perfectly customized solution capable of measuring the existing supply network and setting out objects in the field.



JAVAD GNSS TRIUMPH-3 compact Smart Antenna | Source: JAVAD GNSS

In addition, traditional Total Stations were entirely supported by GART software from ALLSAT, which can be applied to successfully measure connections in challenging environments such as inside buildings.

The documentation of measured data was carried out directly in Burgenland Energy GIS/NIS G/Technology by Hexagon - Intergraph (BE-GIS). Thereby, all attributes are defined and recorded according to the valid model for meta data.



Source: ALLSAT & Burgenland Energie

# Outcome

**Improved speed and accuracy:** automated synchronization of meta data and the delivery of the measurement results through an internet connection replaced the need for a manual exchange of data.

**Controlled measurement:** the ALLSAT GART GIS module, which was individually adjusted for Burgenland Energie, delivered reliable and direct object-oriented measurement of infrastructure directly in the field.

**Simplified dynamic mapping:** obtained through a web service with all basic project data being preset so that only minimal input is necessary when measuring new objects. Visualization through GART GIS delivered a background map of transmission lines with object attributes and line segments that can be connected with the 'auto-line' function and corresponding attributes.

**Simplified dynamic mapping:** the remote project management with GART GIS removed the need to post-edit the data manually in the office.



Source: Burgenland Energie

## About ALLSAT GmbH

Since 1991 ALLSAT GmbH has been a leader in the sector of GNSS applications providing broad and deep engineering geodetic and electronic expertise to diverse customers. Since 1995 for sophisticated and innovative solutions its long-term distribution partnership with JAVAD GNSS has delivered the right solution for every customer challenge.

[www.allsat.de/en/](http://www.allsat.de/en/)



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### About JAVAD GNSS

JAVAD GNSS, headquartered in San Jose, CA designs, engineers, and manufactures products using multi-constellation, multi-frequency GNSS technology solutions for positioning, navigation, timing, survey, and aerospace industries. Its receivers utilize the latest GNSS technology delivering centimeter-level positioning and are recognized for their unparalleled performance, high-level security, and resilience in challenging environments. JAVAD GNSS has built many generations of GNSS receivers and full-featured office post-processing real-time software for high-precision Geodesy and GIS applications.

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