**Engineer** Data

# Released 500 electricity and GIS data reports

Released 500 electricity and GIS data analysis reports, utilizing deep research and troubleshooting to ensure accurate geographic and time series big data insights.

2022 – 2024

**500**

electricity and GIS analysis reports released

**Situation.** The team managed vast datasets generated by smart-meters installed across multiple geographic regions. These smart-meters produced granular, time-series electrical consumption data used by energy analysts, engineers, and regional planners for operational and strategic decision-making.

**Task.** The responsibility was to produce high-quality, transparent, and reproducible analytical reports that could uncover patterns in energy consumption, detect anomalies, and identify regional usage trends, while ensuring non-technical stakeholders could easily interpret and reuse the findings.

**Action.** 500+ in-depth data analysis reports were created and delivered, using pure SQL to perform all data extraction, transformation, and analysis tasks, working directly within cloud-based environments such as PostgreSQL and BigQuery. The data included geolocation coordinates, meter IDs, timestamped energy usage, and environmental metadata. The SQL scripts featured CTEs, window functions, subqueries, and geospatial joins, allowing for scalable and efficient processing.

Each report included annotated SQL code, enabling colleagues and collaborators to fully reproduce and audit the research, which significantly reduced the time needed for follow-up analysis. Troubleshooting notes were also added and common data quality issues documented, such as missing GPS coordinates or corrupted meter values, with recommended handling procedures.

**Result.** The reports became a standard reference across departments, aiding in regional load balancing, energy efficiency planning, and anomaly detection. By ensuring full transparency and reproducibility, the work helped improve stakeholder trust in the data and contributed to more accurate forecasting models and a 10–15% improvement in operational planning efficiency.

### Bring this experience to your project

Use “Released 500 electricity and GIS data reports” as a starting point for a similar challenge in your organisation. The services behind this work are available for your project. Dashboards and reports showing the handful of figures a decision actually turns on, refreshed without being asked.

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### Look behind the result

Read the situation, decisions and result in this example. We can discuss which parts transfer to your constraints and which need another approach. Released 500 electricity and GIS data reports — 500 electricity and GIS analysis reports released

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## Need reliable insight from complex data?

Talk through your project with the engineer responsible for delivery. We agree the scope, price basis and handover in writing before work begins.

Role context: Data Analyst. It draws on Databases, PostgreSQL, SQL, Data Warehousing, Data Analytics, Data Governance, GIS / Geospatial, Stakeholder & Reporting and Documentation. And while you are here, we are rather good at GIS & Geospatial Solutions, Data Analytics & BI Dashboards and Data Governance & Quality.

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## One piece of **a longer record** — and it is all on this site.

Every entry is written the same way: the situation, the task, what we did and what changed.

**See the whole record**

Define the improvement you need

Bring a representative dataset, the questions it must answer and the current bottleneck. We can agree how to measure quality, throughput and recovery.

**See what it costs** Get in touch →

# Need reliable insight from complex data?

Ask about the decisions behind “Released 500 electricity and GIS data reports”. You will speak with the people who can explain the work and assess your own project.

**Explore our services**

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