



Cuerva*

The Challenge

As electrification shifts distribution grids from unidirectional to bidirectional flows, Cuerva needed to operate its network proactively rather than reactively.

Its secondary substations combined supervisors, concentrators, and remote units from different manufacturers, **each using its own protocol**, while congestion and overvoltage could only be **detected after they had already occurred**.

SUCCESS STORY

AI-Driven Flexibility in Virtualized Substations

Using Barbara's Platform, Cuerva deployed edge nodes across the transformation centres of its distribution network, consolidating every device family onto **a single node with a standardized data model**. Gridfy's AI Energy Forecasting Model runs as a containerized workload on the node, generating a **six-hour flexibility prediction locally**.

Barbara's Platform manages the distributed fleet remotely, from deploying and updating workloads and AI models to monitoring node status and reconfiguring devices without site visits.

Key Results



Lower Data Integration Costs. Every device connects through one node, removing the need for a separate platform for each equipment family.



Six-Hour Forward View of the Grid. A local digital twin turns congestion and overvoltage into events that operators can anticipate.



Better Supply Quality. Real-time substation alarms and AI forecasting contribute to improvements in SAIDI and SAIFI.