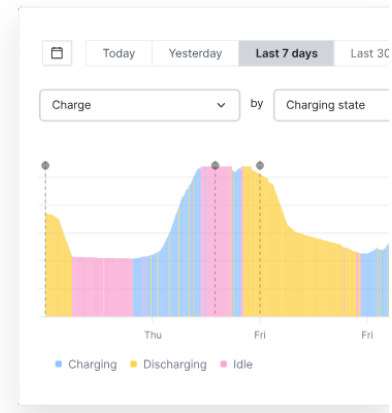# How Texture Unlocked Faster Insights and Cleaner Data with an AI-Powered Energy Intelligence Platform

Struggling to surface insights from complex energy data, Texture turned to Uturn's GenAI solution — unlocking faster decisions, higher data quality, and new business value for their energy data ecosystem.

KEY CHALLENGES

As the central nervous system for AI-driven grid intelligence, Texture aggregates data from devices, meters, markets, and other signals into a single platform, enabling companies to securely connect, analyze, and share energy data across systems and stakeholders. With projected rapid growth in connected energy assets, Texture needed to extract maximum value from the wealth of data flowing through their platform.

The company had a goldmine of energy data—but too much of it was locked behind engineering resources or stuck in disjointed systems. Their sophisticated microservices-based platform with an event-driven architecture spanning multiple domains (Devices, Identity, Sites, Locations) was accumulating valuable data, but they faced critical challenges:

- Extracting meaningful patterns and actionable insights from their complex data ecosystem

- Identifying and addressing data quality issues across their pipeline

- Efficiently leverage their data warehouse for customer-facing insights

- Making high-value insights accessible to non-technical users who needed answers to business questions

- Processing and analyzing high-frequency telemetry data from distributed energy resources

> "Uturn's GenAI solution has transformed how we interact with our data. What once took hours of manual analysis, we now do in seconds—with more confidence in the results. Their deep understanding of both AWS services and our business made them the ideal partner."
>
> **- Victor Quinn, Co-Founder and CTO, Texture**

The company's existing OLTP and OLAP infrastructure, which included Postgres, Opensearch, and Snowflake, contained a wealth of information that wasn't being fully utilized to support real-time visibility and control capabilities core to Texture's platform.

THE SOLUTION

Uturn designed and implemented a GenAI solution that transformed how Texture accessed, cleaned, and used their data. By building specialized AI agents and integrating directly with existing data pipelines, the solution made complex insights accessible through simple, conversational queries.

Core Components

- **AWS Bedrock infrastructure** with both knowledge base and agent components

- **Vector store for semantic retrieval** of energy data information

- **Semantic search interface** for relevant text retrieval from AWS OpenSearch

GenAI Agents

Customer Insight Agent:
Analyzes retrieved energy data to identify valuable patterns across devices, sites, and locations

Data Cleanup Agent:
Identifies data quality issues and provides recommendations for improvement, ensuring data integrity

Integration Approach

- **Seamless integration with Texture's existing ETL pipelines** to leverage current data flows
- **Data synchronization between operational systems** and the vector store
- **Natural language query processing** to generate structured, actionable insights with contextual information
- Support for handling high-frequency telemetry data while maintaining enterprise-grade security

Texture chose Uturn Data Solutions for their specialized expertise in AWS data services and GenAI implementation. Uturn's approach to integrating with existing workflows rather than replacing them was particularly valuable, allowing Texture to build on their existing investment while adding new capabilities. The implementation was designed to be completed within eight weeks, showing Uturn's ability to deliver value quickly.

DRIVING TANGIBLE RESULTS FOR TEXTURE

Data Visibility and Accessibility

Non-technical users can now ask complex questions in natural language, democratizing the data across the organization and significantly reducing time to insights.

Data Quality and Consistency

Previously hidden data quality issues were resolved, improving reporting accuracy and enabling automated monitoring for ongoing quality assurance.

Decision Speed and Operations

Time to actionable insights dropped from days to minutes, manual workflows were automated, and issues are now identified before they impact customers.

Want to unlock hidden value in your data? Email or call us today for a free consultation.