# Sphaera Migrates Client's Complex Data Architecture to Azure for Improved Performance & Cost Savings

**SPHAERA**™

## Case Study

Sphaera recently helped Sempra, a public utility energy provider, develop solutions for its convoluted data architecture and migrated its apps & architecture to Microsoft Azure. The solution saved Sempra millions of dollars in tech refresh & operating costs, mitigated outage concerns and satisfied PUC requirements.
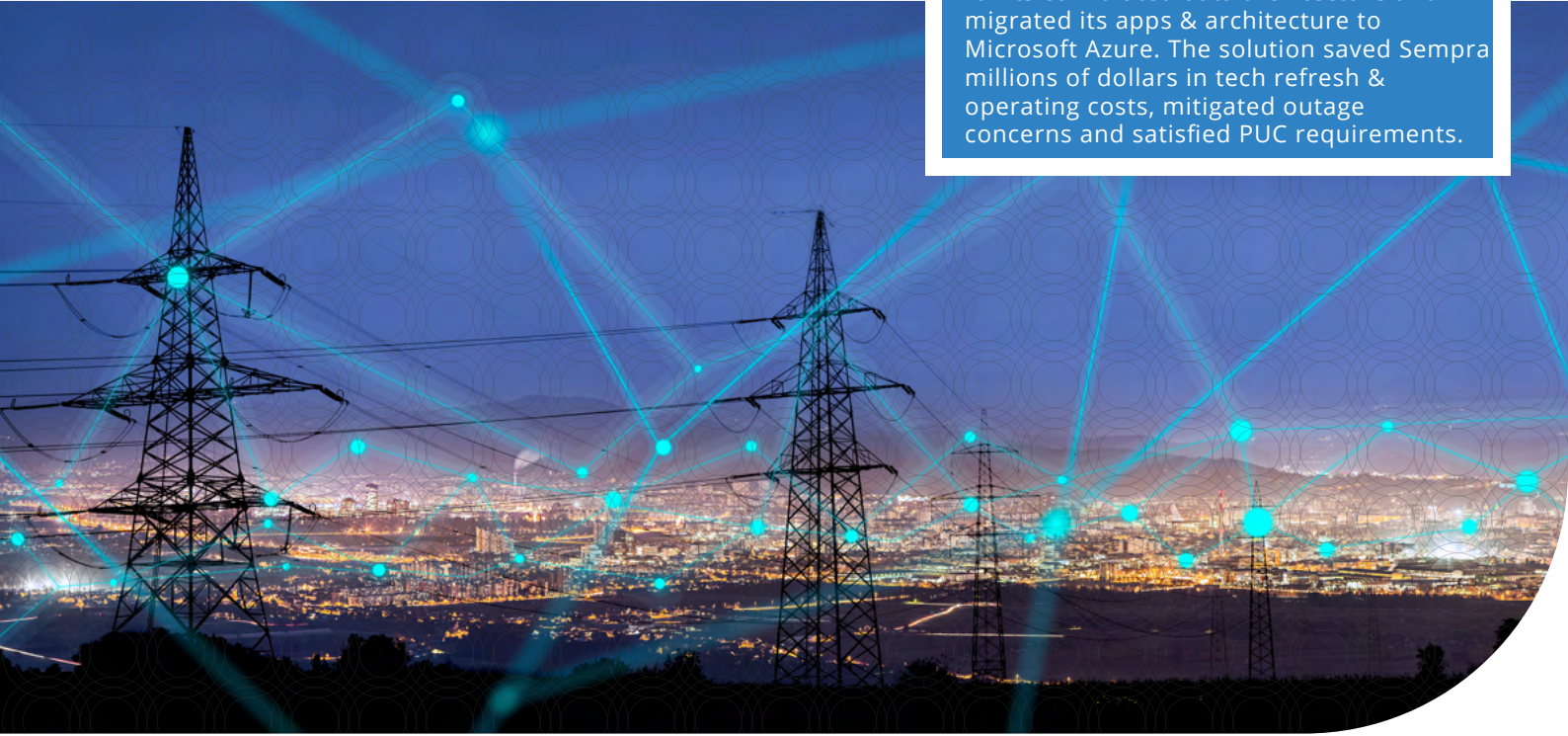
## Project Overview

Sempra Energy, a San Diego-based public utility energy provider, needed to update their data analytics applications and architecture. The first step in their initiative was to bring in Sphaera as a trusted advisor in critical infrastructure management.

We began at the beginning: we quantified the problem, the expected benefits of alternate solutions, the costs, the approaches and recommended a Microsoft Azure Cloud based solution that leveraged API & an event-driven microservices architecture to consume dynamic data streams into a consolidated data warehouse & Analytics engine.

## Problems & Challenges

The company had grown by acquisition, had both regulated and The company had grown by acquisition, had both regulated and non-regulated entities that were separately managed, had tens of thousands of data feeds coming in from external vendors, internal systems. The convoluted technical architecture that evolved over the years was expensive, complex, brittle, and delay/outages triggered huge penalties & fines by the PUC.

The clients weren't even sure what the answer would be for their challenge, much less what the implications would be on their environment, support, customers, etc.

### 01 Technical Consultancy
We modeled out various scenarios & provided an analysis of each solution. The final approach & architecture was proposed & accepted by the leadership team- an Azure Cloud-based Solution.

### 02 Prototype Design in Azure
We deployed experts to design a prototype of the 'to-be' architecture, and scaled the prototype up in Azure to prove scale, performance, and cost requirements.

### 03 Strategic & Phased Migration
Data feeds were duplicated from the source system to the 'legacy' target and to the Azure Data Warehouse. Data integrity was compared, validated, and then deprecated in the legacy application.
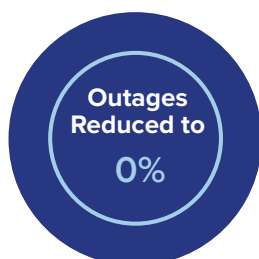
### 04 Decommission of On-prem Data Center
The final phase of the project was the decommissioning of the legacy equipment, data center space, data feeds, network architecture, and monitoring applications.
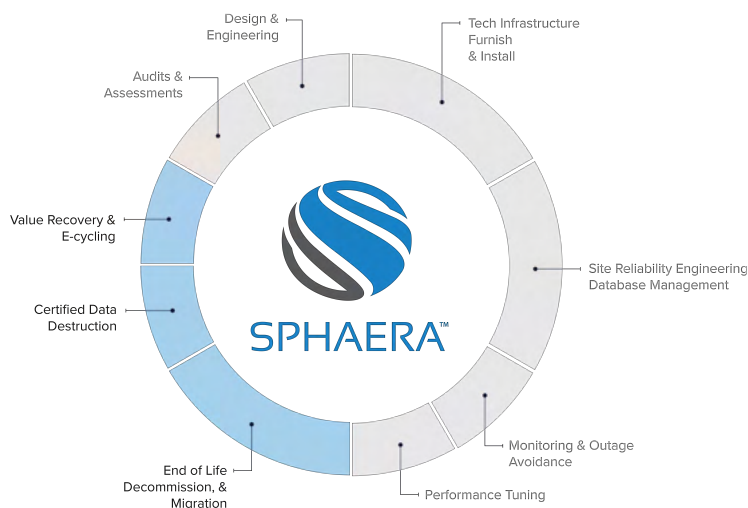
# Sphaera's Work & Results

- Reduction in deployment time of external data source to the Azure Data warehouse from months to days.
- Elimination of manual toil involved with managing data streams with 100% successful data feeds.
- Improved data quality and consistency leading to higher customer satisfaction & NPS scores
- Offset OpEx costs 100% and resulted in an estimated $1 million refresh cycle savings /3 years.
- Mitigated outage concerns by eliminating critical business applications from a data center located in a seismic hazard zone to a safe cloud environment.

**Productivity Increase**
50%

**CapEx & OpEx Savings**
$MM

**Outages Reduced to**
0%

**Eliminated**
PUC
fines

**Toil Reduction**
100%

# Project Capabilities

- Business Consultancy Services: Problem quantification, impact analysis of benefits & costs of alternate solutions.

- Project Strategy & Management: Timeline, operating complexity, risk, flexibility & 'future proofing' solutions.

- Technical Migration Services - Database & Streaming Data Expertise, Network Architecture, Azure Stream Analytics, Azure Data Lake, Event Hub and Data Warehouse expertise.

- Decommissioning Services - Legacy equipment, Data Center space, Data Feeds, Network Architecture, and monitoring applications.

Design & Engineering
Tech Infrastructure Furnish & Install
Audits & Assessments
Value Recovery & E-cycling
Certified Data Destruction
Site Reliability Engineering Database Management
Monitoring & Outage Avoidance
End of Life Decommission, & Migration
Performance Tuning

SPHAERA™

With proven experience and expertise in Engineer, Furnish, & Install (EF&I), Site Reliability Engineering, Database & Systems Management, Migration, Decommission, and Certified Data Destruction, Sphaera takes a strategic approach to ensure technology is an enabler of business performance.

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WHAT PROJECT CAN WE HELP YOU COMPLETE?

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