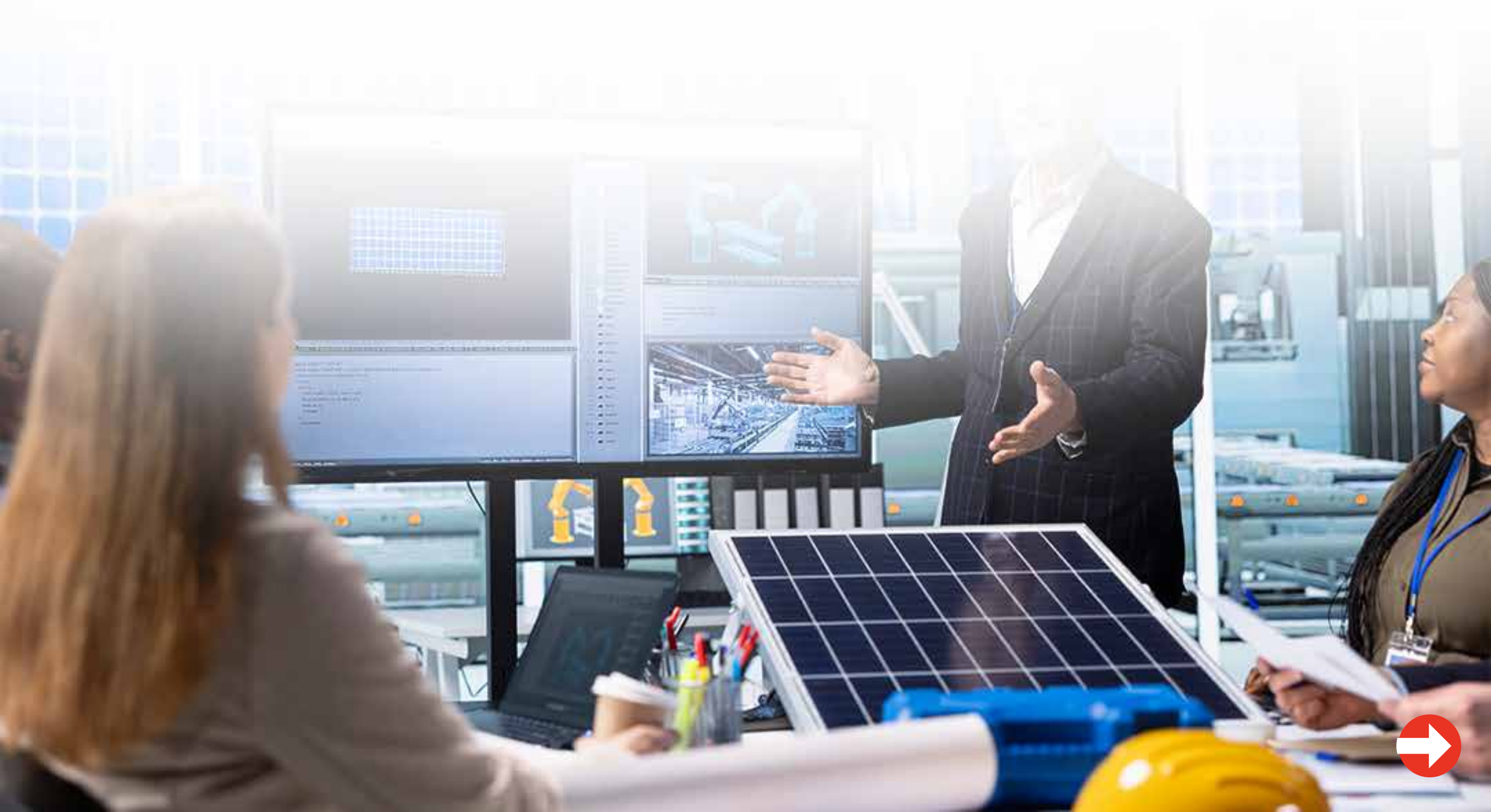
For a global energy intelligence platform

We enhanced user experience and engagement with a highly configurable, AI-powered energy insights web app.

A Ccube Case Study



Problem Statement

Smart meter data lacked appliance-level insights, limiting decision-making

Generic billing failed to influence consumer energy behavior

Manual segmentation & outreach slowed demand-side program delivery

EVs and other behind-the-meter devices introduced load volatility

Utilities struggled to derive actionable intelligence from raw data

Solution

- Developed a customizable React-based web app for energy intelligence delivery
- Enabled real-time appliance-level insights using smart meter disaggregation
- Integrated Highcharts for intuitive energy data visualization and recommendations
- Delivered secure, SSO-enabled access with global theming and localization support

Our Tech Stack

- **React**
- **TypeScript**
- **Java**
- **Node.js**
- **AWS** (S3, Lambda, ECS)
- **Cloudflare**
- **mTLS**
- **CloudWatch**
- **Encryption at Rest**
- **Audit Trails**

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Process

Designed a responsive, modular React-based web application tailored to utility needs

Integrated RESTful APIs to fetch and visualize disaggregated smart meter data

Implemented theming, RTL localization, & accessibility (ADA/WCAG) standards

Built secure SSO authentication with mTLS and audit logging

Deployed on AWS using scalable Lambda and ECS services with Cloudflare protection

Impact

- Reduction in on-peak EV charging
- Increased customer satisfaction (CSAT)
- Thousands of agents enabled with real-time tools
- Full accessibility and localization compliance

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