CAMUS
Zero Carbon Grid Orchestration

CREA INTRO - OCT 2021

ASTRID@CAMUS.ENERGY

Managing the world's largest distributed systems

Astrid Atkinson
CEO

Google Sr Director • Pioneered & scaled Google's reliability approach

Cody Smith
CTO

Google Principal Systems Engineer • tech lead for Site Reliability

Michael Ryan
COO

BD Biosciences, NetApp, Xerox • Enterprise IoT and data integration

EXPERIENCE

Camus' founders and members leverage experience from other industries – including the founders' **pioneering work building Google's high reliability computing platform** – to provide high-performance, low-complexity management for the distribution grid.

Our team built and managed some of the world's largest distributed systems, from Google's global computing network to Uber's global network of drivers. Team expertise includes power modeling, high scale monitoring, big data analytics, distributed telemetry, software load control, systems reliability, power software systems, and utility business models.

TECHNOLOGY

Our **microservices-based cloud architecture** is based on the team's past work in massively parallel real-time monitoring, and provides a scalable foundation to leverage our world-leading experience building **reliable autonomous systems**.

Our **zero-trust cybersecurity model** secures each component individually and continuously, promoting safety without compromising flexibility.

Grid Management Platform

Software and data platform for real-time monitoring and control of a changing grid.

- Analytics
- Orchestration
- Market platform

Operator interface

Autonomous control

Data insights & forecasting

Third-party DER telemetry

Utility system and customer data

Enabling the future DSO

Our transformational approach enables customers to become a Distribution System Operator (DSO) - managing a distributed, zero carbon grid, supporting local generation, and enabling monetization of distributed resources.
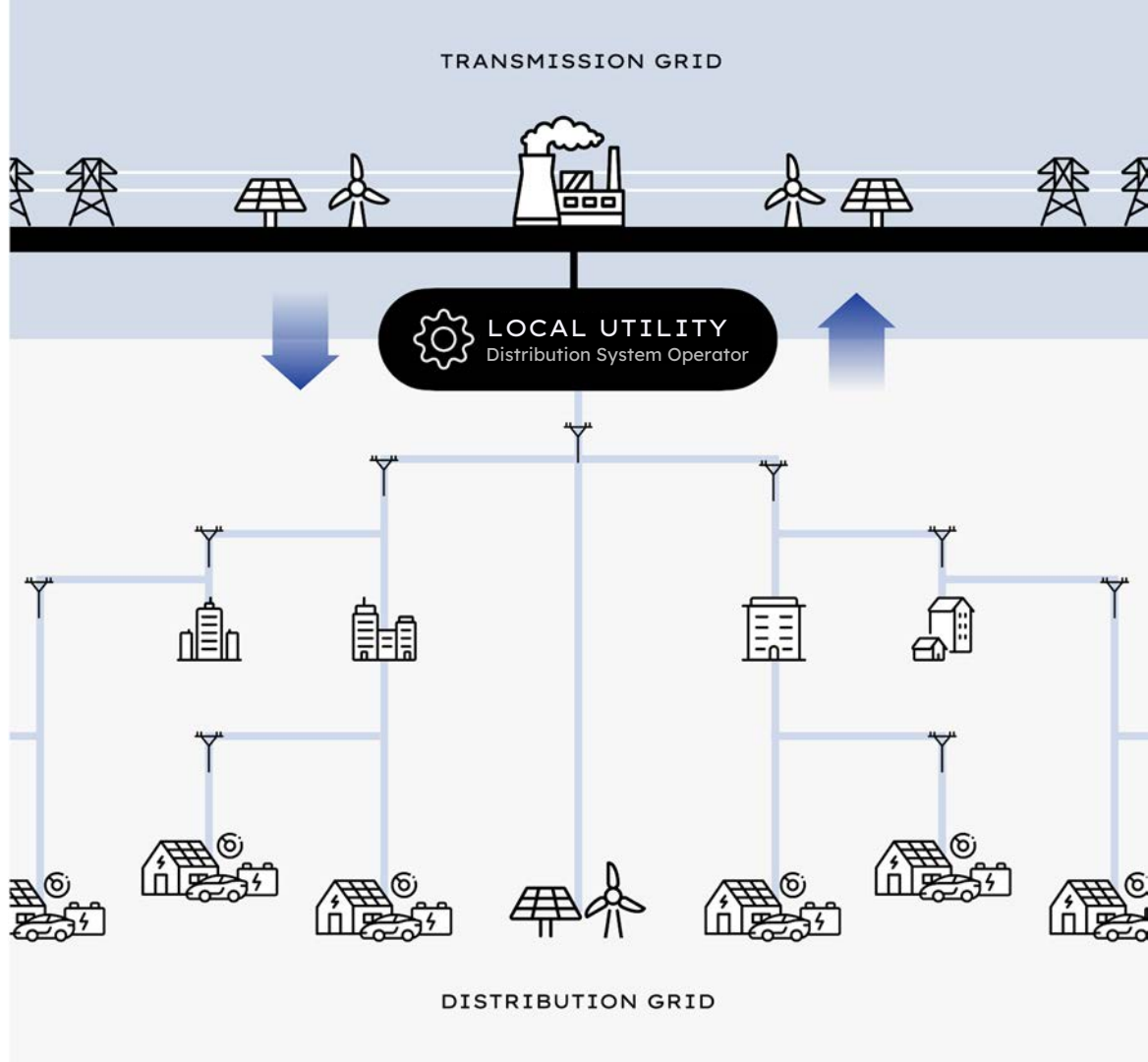
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DSO Responsibilities:

System operations and real-time network operation

Forecasting, procurement, and scheduling coordination

Managing local markets and optimizing with TSOs and Bulk Markets

TRANSMISSION GRID

LOCAL UTILITY
Distribution System Operator

DISTRIBUTION GRID

Saving money for members and supporting community goals

KIT CARSON Electric Cooperative

DISTRIBUTION UTILITY
FOR TAOS, NM

HOLY CROSS ENERGY

DISTRIBUTION UTILITY
FOR ASPEN AREA, CO

Saving $10 million/year with local solar

Providing the operational insight and visibility to manage high penetration of solar, cutting cost of energy in half (10c/kWh to 4.5c/kWh)

Zero carbon grid by 2030

Delivering integrated visibility and control of local resources to decrease peak energy costs, and supporting the goal of zero carbon emissions by 2030.