



# CAMUS

Distributed Energy Summit:  
Modernizing New Mexico Energy

July 29, 2021

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## LEADERSHIP

# An experienced team of distributed systems pioneers



**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

GE Power, BD Biosciences, NetApp • 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.

We're skilled in thinking about systems as a whole, as well as all the parts, to develop world-class tools for operators. Expertise in distributed systems development, 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 architecture leverages proven best practices for managing critical systems in secure cloud environments. Our flexible data ingestion and hierarchical control approach enable grid operators to ride through interruptions in data availability.

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



## DSO MODEL

# Local Grid Management

We believe the grid of the future will be led by community-centric Distribution System Operators (DSOs).

This model extends responsibilities of today's utilities to leverage greater use of local energy resources.



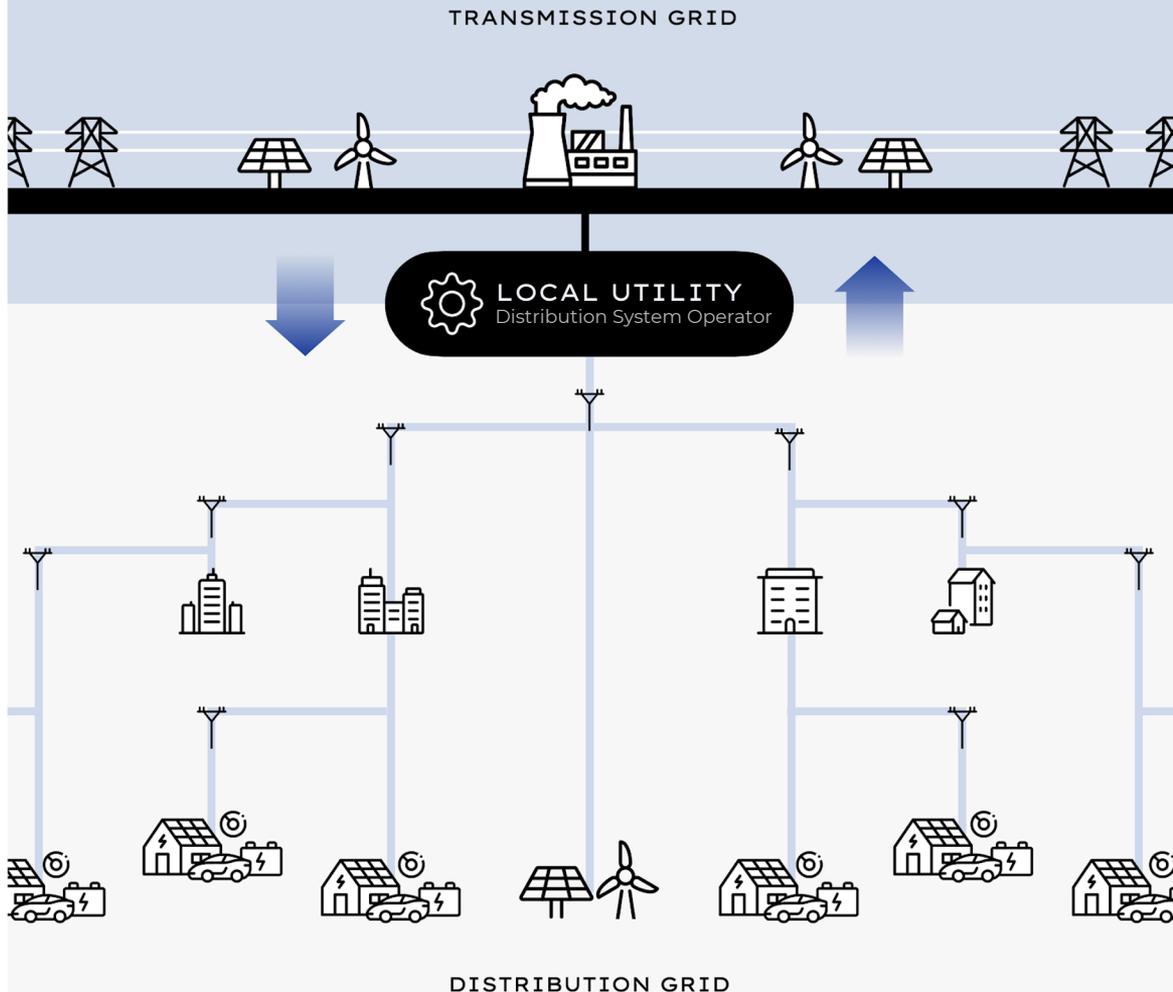
System operations and real-time network operation



Forecasting, procurement, and scheduling coordination



Managing local markets and optimizing with wholesale markets





Taos, NM

Pop ~60,000

Served by Kit Carson Electric  
Cooperative (est. 1947)

100% daytime solar by 2022

## Achieving 100% daytime solar by 2022 and \$10M+ annual savings

38MW

New local solar developed to reduce energy costs and decarbonize

5 years

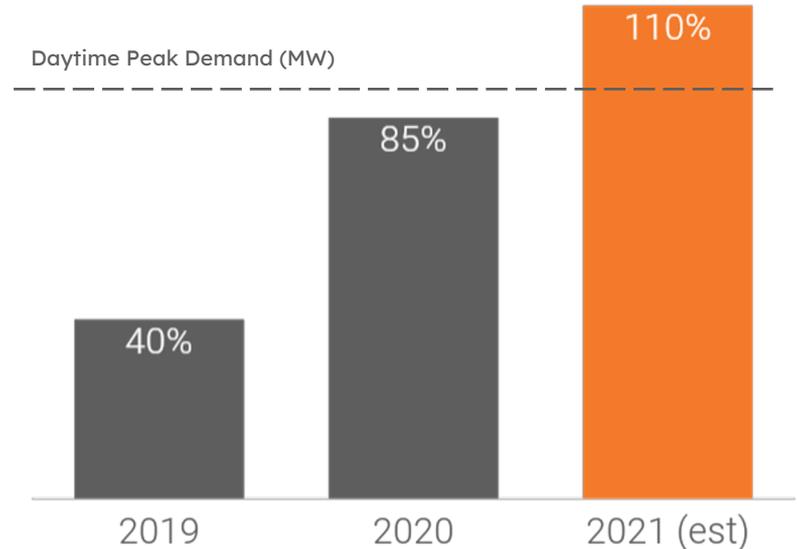
Goal announced in 2017, reaching target date of 2022

\$10M+

Annual savings with local solar and grid management controls  
10c/kWh → 4.5c/kWh

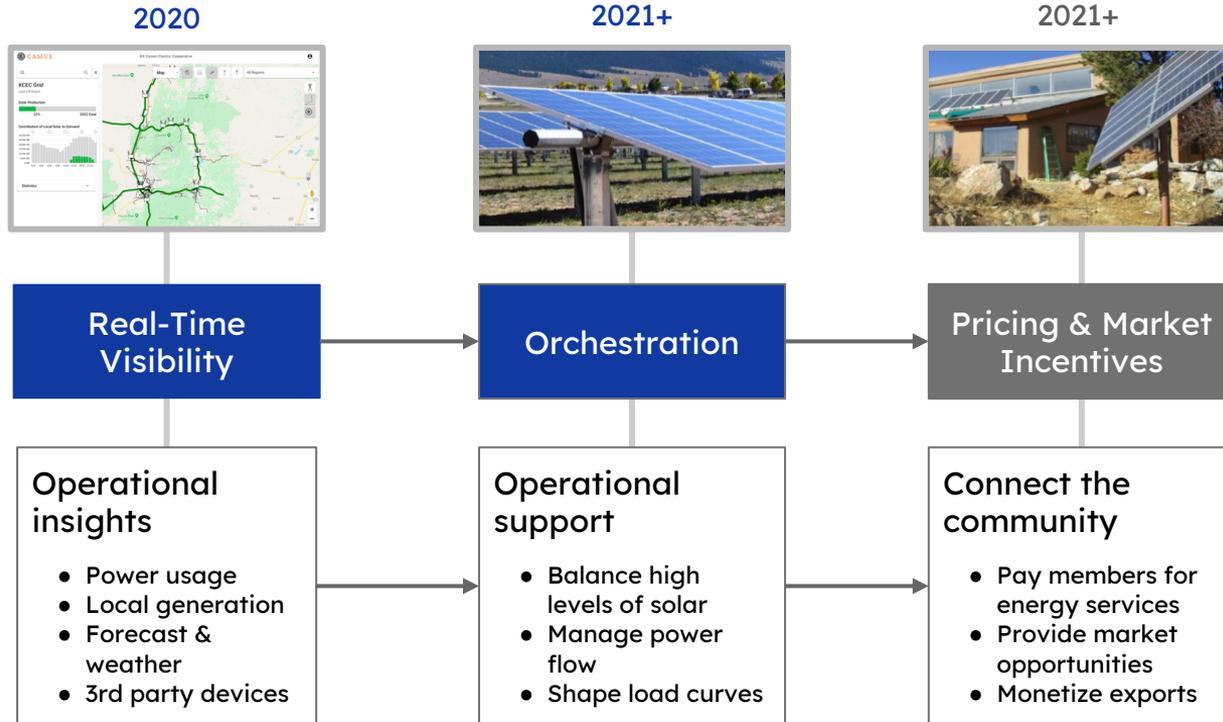


### KCEC Distributed Solar Generation as Percentage of Daytime Peak Demand





# A community-centric grid led by a DSO



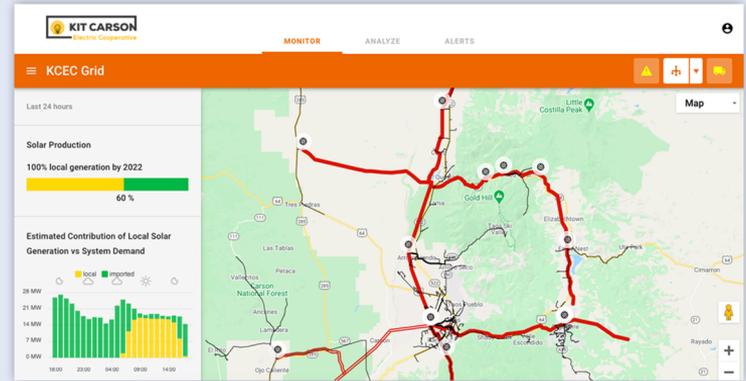
# What innovation looks like

“Camus’ platform gives us the ability to change when our members want change.”

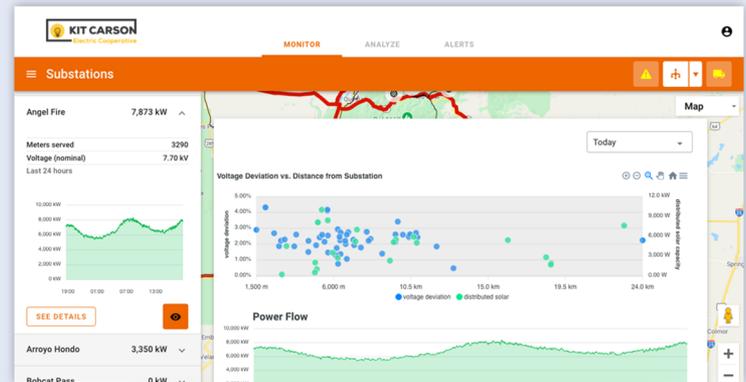


Luis A. Reyes, Jr.  
CEO, Kit Carson Electric Cooperative

View real-time data from multiple sources



Understand the impact of system changes



## RISKS

# Two common challenges may delay progress in New Mexico

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## Managing local solar development

High demand for local solar installation coupled with low visibility and low flexibility leads to interconnection tensions - and spurs interest in off-grid microgrids

## Gaps in instrumentation

Lack of data and measurements (e.g. no smart meters) can inhibit ability of utilities and their customers to adapt.

## Grid-integrated microgrid strategy

Potential opportunity to support New Mexico's grid operators and citizens -- if designed with sufficient instrumentation and grid management capabilities.





# CAMUS

Zero Carbon Grid Orchestration

LEARN MORE AT

[www.camus.energy](http://www.camus.energy)