Data Centers, Coming to a Neighborhood Near You

Moderator:

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Panel:

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Michael Burke, MTA

Dave Ryan, Strata

A Look Back at What Got Us Here

2000 - 2010

Avg <1.0ZB

- Internet adoption begins
- Basic mobile computing

- Central telecom hubs
- Broader access to the 3rd party data center hosting
- Copper circuits

2011 – 2019

Avg 16.85ZB

- Advanced Mobile computing (4G)
- Smartphone adoption

- Increased fiber
- Emergence of cloud computing and colocation data centers
- Smaller chip geometry (32nm)

2020 - 2021

Avg 71.6ZB
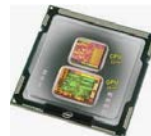
- 5G cellular

- Online gaming
- Cloud computing explodes

- Work from home
- Advanced chip technology
- Electric vehicles

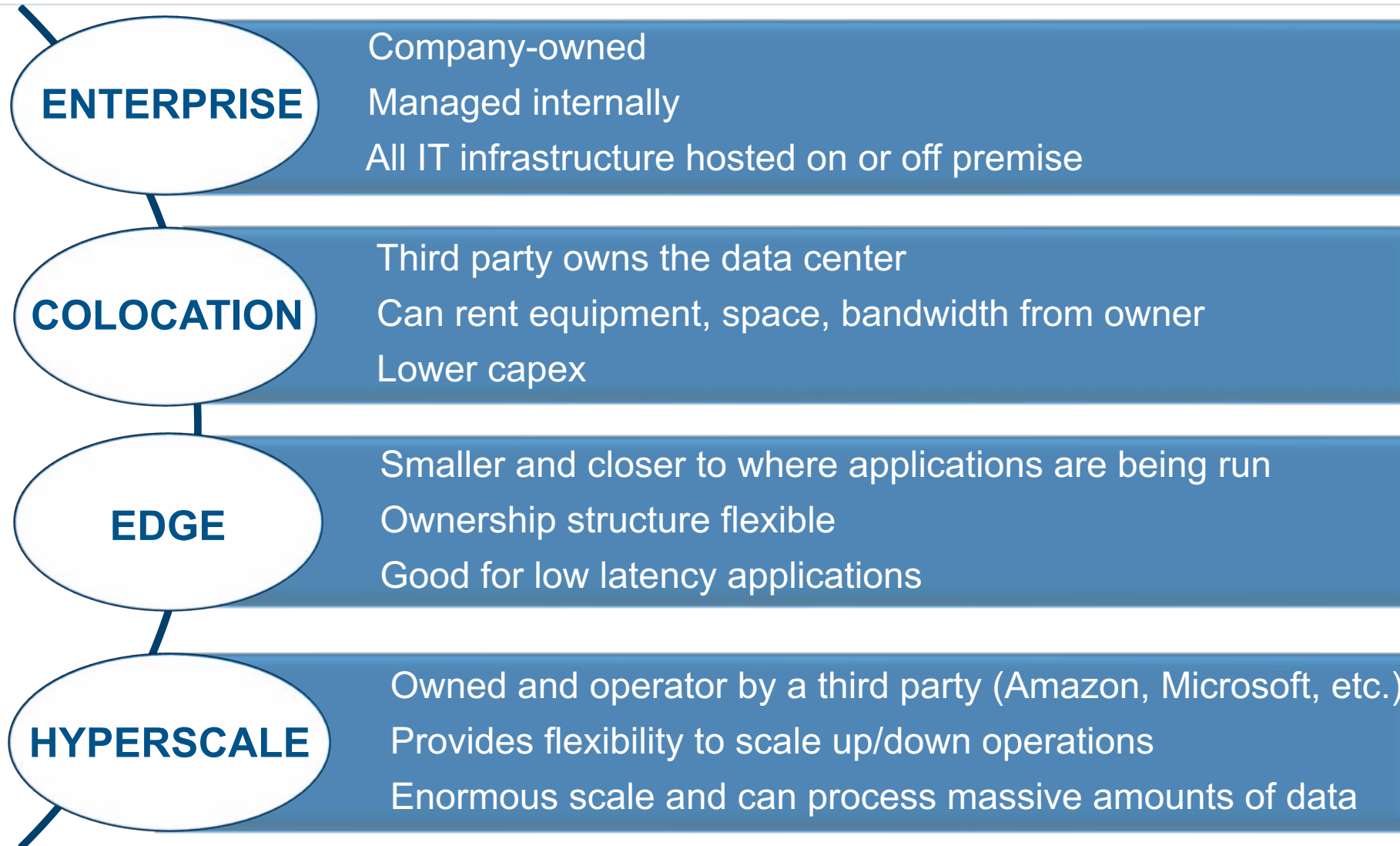## 2022 – Present

Avg 108.5ZB

- Artificial Intelligence

- Cable TV demise
- Hyperscalers boom
- Breakthrough chip technology

- Energy shortages
- **Next Industrial Revolution!**

Types of Data Centers

ENTERPRISE
- Company-owned
- Managed internally
- All IT infrastructure hosted on or off premise

COLOCATION
- Third party owns the data center
- Can rent equipment, space, bandwidth from owner
- Lower capex

EDGE
- Smaller and closer to where applications are being run
- Ownership structure flexible
- Good for low latency applications

HYPERSCALE
- Owned and operator by a third party (Amazon, Microsoft, etc.)
- Provides flexibility to scale up/down operations
- Enormous scale and can process massive amounts of data

Data Centers are Central to the Telecommunications Value Chain
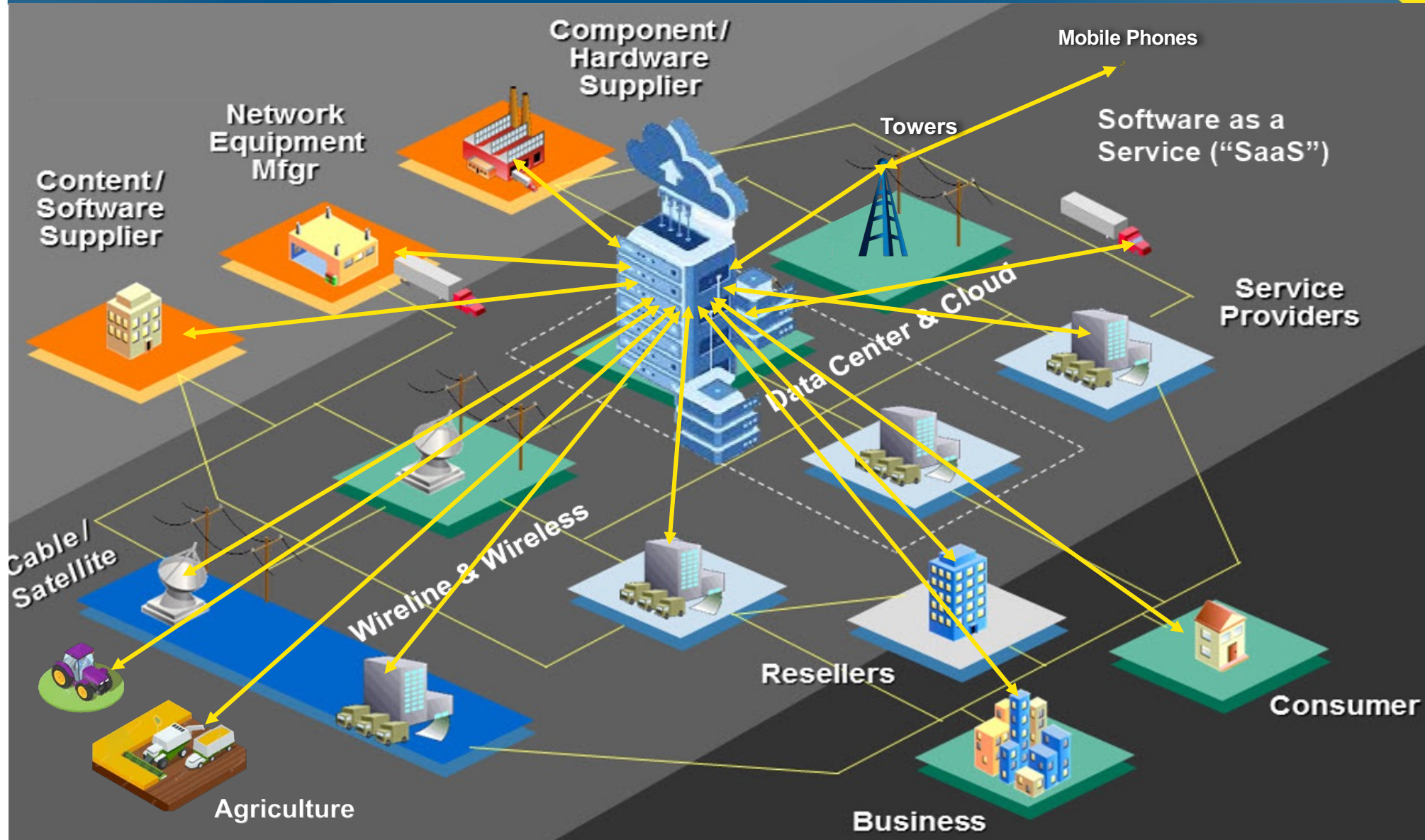
MTA | Who We Are

- Established in 1953, MTA has been serving member-owners for over 70 years!

- 100% locally owned and operated telecommunications cooperative.

- MTA's service area is over 10,000 square miles (larger than the state of Vermont).

- Serving over 33,600 Members.

- Over 290 employees, 156 contract personnel

- A key player in the economy of southcentral Alaska, MTA is one of the largest technology co-ops in the U.S.

Geographic Markets
MTA LEC Area
L48 Mountain West
Kenai Peninsula Area
Anchorage Area
SE Alaska
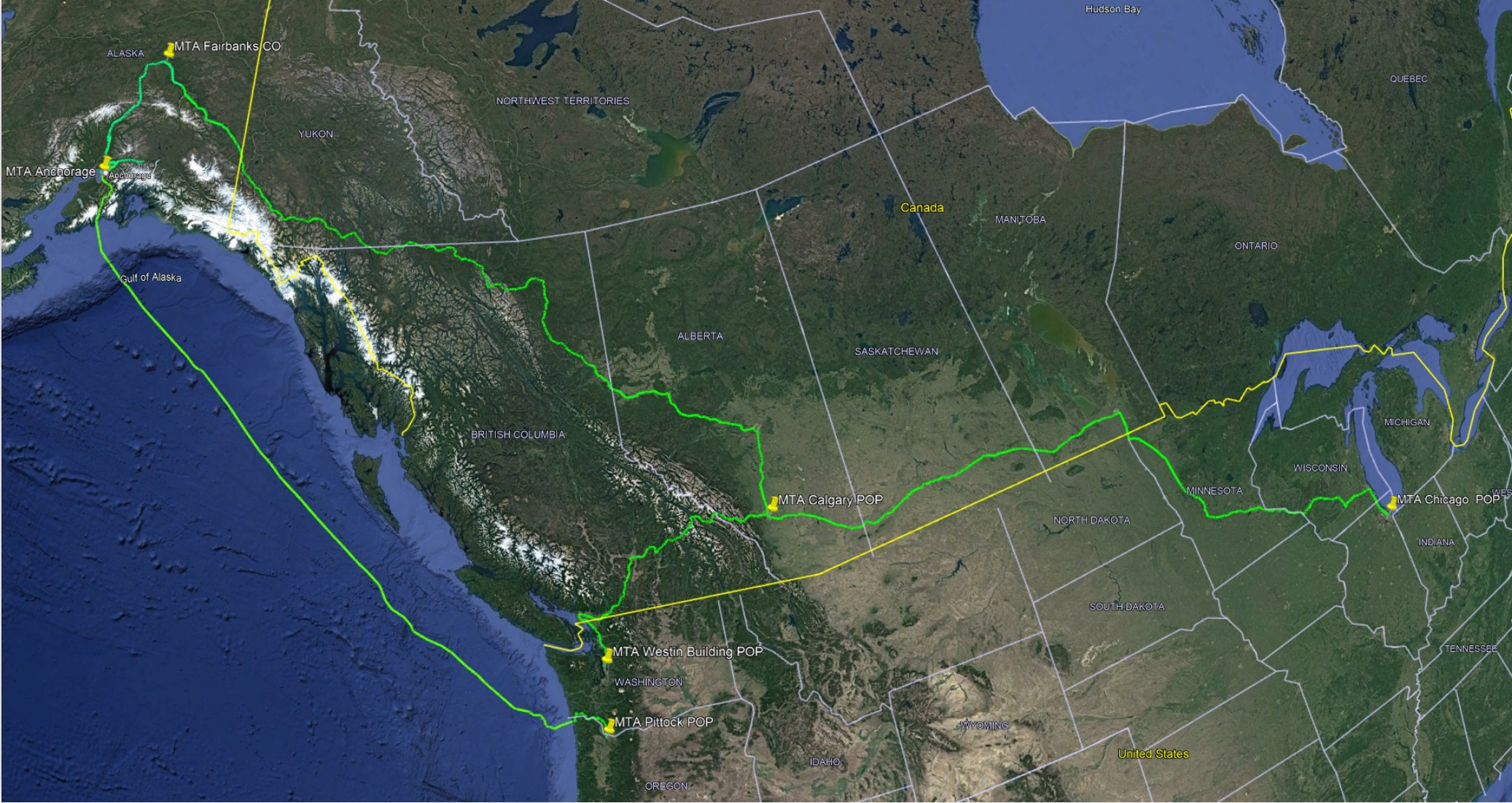Fairbanks Area
Canada to Seattle & Chicago

What We Offer
Voice
Broadband
Transport
Professional Services
Data Center

Defined Customer Groups
Residential
Small & Medium Businesses
Enterprise
Carrier

MTA AlCan ONE Network

North America
POPs
(point of presence)

Portland
Seattle
Calgary
Chicago

Benefits for Alaska

Survivability

- Terrestrial route redundancy through Canada
- Subsea route to Oregon
- Linear, protected and MPLS-mesh services to Portland, Seattle, Calgary and Chicago
- Disaster Recovery - AlCan ONE Network can provide backup restoration for traffic in the State.
- Requires preplanning and funding.

Faster

- Lower network latency at 75ms rt Fairbanks to Chicago – 25%-30% faster than subsea through PacNW

Diverse Cloud Instances

- Terrestrial Express Route to Azure Govt Cloud in Chicago
- AWS Cloud instance in Calgary (2023)

Multi-Region Tier 1 Internet Peering

- Multiple Tier 1 Internet peering partners in the PacNW and Midwest

Data Centers,
Coming to a Neighborhood Near You

2024 WTA Spring Educational Forum
San Antonio, TX

Founded in 1951

Located in the Uintah Basin in Northeastern Utah

What We Do

The largest independent telecommunications cooperative in the State of Utah that specializes in:

- Voice
- Broadband
- Nationwide Wireless
- Carrier Aggregation/Switching
- Managed IT & Telemetry Services
- Marketing/Media Production & Distribution
- State of the Art Data Center
- Sophisticated 24/7/365 Network Operation Center (NOC)

SOC2 Compliant Facility

1MW Power Capacity
(Rocky Mountain Power)

1MW Generator
(500KW + 500KW)

500KW Load Bank
(Generator Load Testing)

300KVA A/B UPS

A/B 208V/120V to Each Rack

Hot Aisle Containment
Pod-based Rack System)
Below-floor Glycol-based Cooling System
with Dry Chiller

Dual-Entrance Geo Diverse, Redundant Fiber Transport
(into SLC and Denver)

Key Card + Biometric Security
(via man trap)

VESDA HSSD
(Air Sampling Fire Detection)

Clean Agent Inert Gas Fire Suppression System