

# DCAC Presentation

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## AGENDA

- (1) Introduction
- (2) Our Approach
- (3) Xcel Minnesota Partnership
- (4) Oregon Highlights

Google customers and users need

**High-performance computing  
around the clock.**

It all runs in our data centers.

33

locations for owned and operated data centers

4

continents



### Americas

- Jackson County, Alabama
- Mesa, Arizona
- Lenoir, North Carolina
- Lowcountry, South Carolina
- Douglas County, Georgia
- Fort Wayne, Indiana
- Council Bluffs, Iowa

- Omaha, Nebraska
- Henderson, Nevada
- Storey County, Nevada
- Central Ohio
- Mayes County, Oklahoma

#### The Dalles, Oregon

- Montgomery County, Tennessee

- Ellis County, Texas
- Red Oak, Texas
- Northern Virginia
- Canelones, Uruguay
- Quilicura, Chile

### Europe

- St. Ghislain, Belgium
- Fredericia, Denmark
- Hamina, Finland
- Hanau, Germany
- Dublin, Ireland
- Eemshaven, Netherlands
- Groningen, Netherlands
- Winschoten, Netherlands

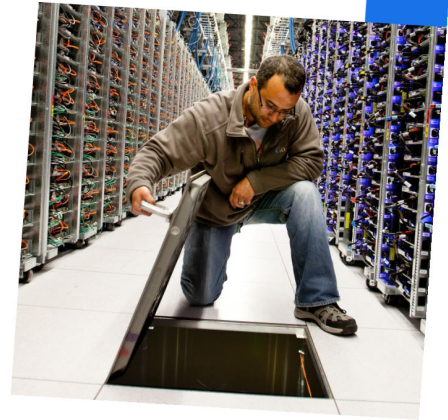
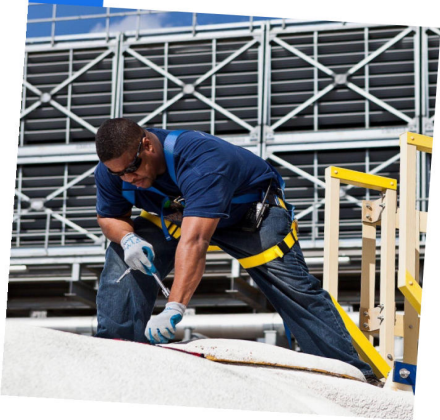
- Middenmeer, Netherlands
- Winschoten, Netherlands
- Skien, Norway
- Waltham Cross, UK

### Asia

- Changhua County, Taiwan
- Inzai, Japan
- Singapore

## The economic impact of our data centers

We believe that data centers done right can help grow the national and local economy.



# 15+ years

**in Oregon:** Google has proudly called Oregon home since 2006 when it built its first owned and operated data center in The Dalles. Oregon is also home to the Oregon cloud region and a Google office in downtown Portland.

# \$9.3B

**of economic activity:** In 2025, Google helped provide \$9.3 billion of economic activity for tens of thousands of Oregon businesses, nonprofits, publishers, creators, and developers.

# \$7B

**investment in Oregon:** Since The Dalles, Oregon data center was opened in 2006, Google has invested more than \$7 billion in the state.

# 282,000+

**Oregon businesses:** More than 282,000 Oregon businesses used Google's tools at no cost to receive phone calls, bookings, reviews, requests for directions, or other direct connections to their customers.



## Our Approach

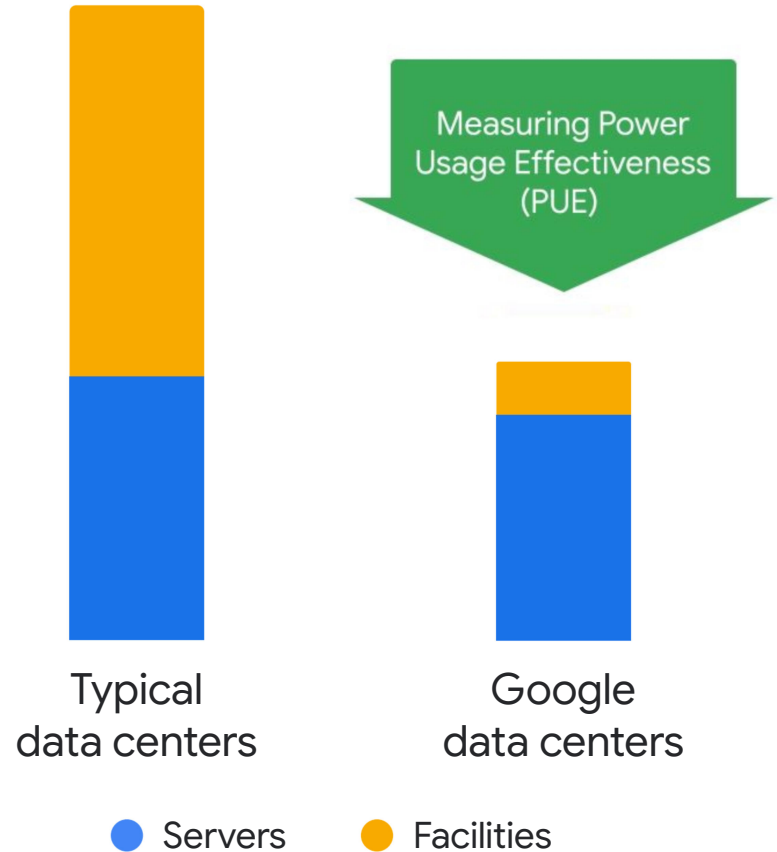
**We're  
committed to  
responsible  
energy growth**



Our data centers are some of the most efficient in the world

84%

less overhead energy than the industry average



# Capacity Commitment Framework (CCF)

The CCF is a proven contract model that offers a common-sense solution for large energy customers to responsibly buy electricity without burdening others with the costs of building infrastructure for new projects. It has already been adopted by several utilities across the country.

## The Five Pillars

1. Amount-Based Approach
2. Long-Term Financial Promise
3. Guaranteed Minimum Payment
4. Upfront Collateral
5. Transparent Change & Cancellation Fees

## Clean Transition Tariff (CTT)

We've created a new utility rate structure called the CTT that allows utilities to meet customer demand with 24/7 clean energy with no increase in costs for non-participating customers. NV Energy was the first utility to operationalize this new approach through an agreement that will add 115 MW of geothermal power to the grid.

### Where is it being developed?

Arizona

Colorado

Indiana

Kansas

Michigan

Minnesota

Missouri

**Nevada (approved)**

North Carolina

# New Regulatory Models are Needed

- **The electric grid is the backbone of our modern economy**  
Access to reliable, clean energy is foundational to maintaining competitiveness in new era of demand growth
- **Resource diversity is essential to grid decarbonization**  
Our modeling shows a 40% reduction in cost and MW deployed with new technologies
- **Capital alignment creates broadest benefits**  
Customer demand needs to align to drive acceleration of new technological/ innovations
- **Existing regulatory models and customer programs are poorly suited to support rapid deployment of new tech**  
Least cost deployment, commercial readiness, and cost recovery in utility planning processes slow or impede development



# Clean Transition Tariff (CTT)

## Overview

Over the past two years, Google has worked with partners across the U.S. to create a new, scalable pathway for utilities and large energy users to invest in clean firm capacity and accelerate the commercial deployment of advanced, clean technologies.

A Clean Transition Tariff (CTT) allows the utility to meet customer demand with around-the-clock clean energy by focusing on resources that can deliver clean capacity.

## Key Pillars

- **Focus on Clean Capacity**

Customer and utility select CTT resources that can provide clean capacity to support reliability and enable customer to achieve its energy goals.

- **Incorporation into Utility Integrated Resource Planning**

Consideration of existing and planned utility investments ensure efficient investment customer-specific resources under the CTT.

- **Unlocking the Full Power Value for the Customer**

Avoided cost models incent lowest cost procurement with diminishing value for both customer and utility. To enable investment in higher cost clean capacity, the CTT requires a full energy and capacity credit against the standard rate or “Otherwise Applicable Rate” (OAR)

# Xcel Minnesota Partnership

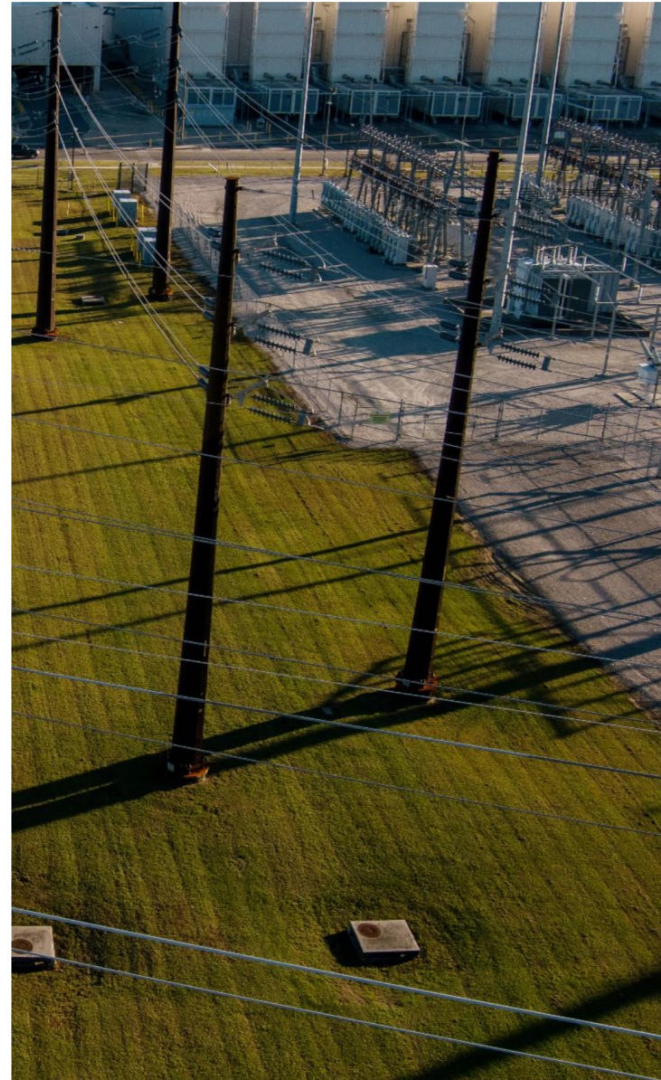
To power a new data center in Minnesota, Google and Xcel Energy executed an Energy Supply Agreement with a Clean Energy Accelerator Charge (CEAC), modeled after the Nevada CTT.

## CEAC components:

- **Renewable Capacity:** 1,400MW of wind and 200MW of solar, supporting Minnesota's 2040 carbon-free electricity goals
- **Long-Duration Energy Storage:** A 300 MW/30GWh Form Energy iron-air battery system (100-hour duration) – the world's largest – to offset 120MW of combustion turbines
- **Distributed Solutions:** \$50M for Xcel's Capacity\*Connect program to deploy customer-level batteries, enhancing local resilience

This framework ensures Google covers the full costs, protecting affordability for all other Xcel customers while adding essential grid capacity.

**It is estimated to result in \$1.1B in net benefits to other customers over the initial 15-year term of the contract.**



# From Local Pilot to Global Impact: Scaling Demand Response

## Pioneering Partnership

Google partnered with Northern Wasco County PUD to conduct a demand response pilot program. Key test events successfully demonstrated Google's ability to reduce data center power consumption during peak periods of grid stress.

## Scaled Impact

The pilot successfully showcased a software-based approach to demand response. The insights derived from this pilot were key to expanding Google's demand response capabilities. This expansion scaled the program globally to include applications in various regions.





## Partnering to Unlock New Carbon-Free Energy

- **Seeking New CFE Resources:** In 2023, Google and NWCPUD collaborated to issue a Request for Information (RFI) to identify new CFE resources
- **A Collaborative Effort:** NWCPUD was a key partner, helping to craft and distribute the RFI to hundreds of potential developers
- **Project Outcome:** This collaborative process led to a recently announced \$200M Power Purchase Agreement with Avangrid for more than 100MW from the repowered Leaning Juniper IIB wind project
- **Driving Local Impact:** The PPA will provide clean energy to Google's data centers and support the local community by extending the life of an existing wind farm and creating up to 150 jobs during the upgrade



**Thank you**