



**CHUGACH ELECTRIC ASSOCIATION, INC.  
ANCHORAGE, ALASKA**

**SPECIAL BOARD OF DIRECTORS' MEETING**

**AGENDA**

Sam Cason, Chair  
Sisi Cooper, Vice Chair  
Rachel Morse, Treasurer  
Susanne Fleek-Green, Secretary

Bettina Chastain, Director  
Mark Wiggin, Director  
Jim Nordlund, Director

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**November 7, 2023**

**12:00 p.m.**

**Alaska Native Heritage Center  
8800 Heritage Center Drive**

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- I. CALL TO ORDER (*12:00 p.m.*)
  - A. *Land Acknowledgement*
  - B. *Pledge of Allegiance*
  - C. *Roll Call*
- II. APPROVAL OF THE AGENDA\* (*12:05 p.m.*)
- III. LEGISLATIVE LUNCHEON (*12:10 p.m.*)
- IV. ADJOURNMENT\* (*1:15 p.m.*)



# Powering Through Transformative Times

November 7, 2023



# Speakers



TRISH BAKER

Manager, Government  
& Business Affairs

Emcee and event  
facilitator



ARTHUR MILLER

Chief Executive  
Officer

Business update, ML&P  
acquisition success and  
gas supply update



AL RUDECK

Chief Strategic  
Officer

Industry trends and  
energy transition best  
practices



ANDREW LAUGHLIN

Chief Operating  
Officer

Eklutna F&W, reliability,  
system fire risk  
mitigation



DUSTIN HIGHERS

Vice President  
Corporate Programs

Decarbonization  
strategies and  
technology alternatives



# Powering Through Transformative Times

## TOPICS

- **Natural gas supply for the near term and Chugach's vision for the future**
- **Transition to clean energy including the pace, challenges and impacts**
- **Safety and reliability in a changing environment**
- **Decarbonization, technology advances and funding opportunities**



# Chugach By the Numbers

01 Provides power to 1 in 3 Alaskans

02 \$354.5 million in total revenue

03 One of a few utilities in the nation with a direct ownership in a gas field

04 13th largest electric cooperative in U.S. on basis of total asset value

05 \$1.8 Billion in total asset value



**Standard & Poor  
Global Ratings**

**“A”**

**Fitch Ratings**

**“A-”**



# ACQUISITION & INTEGRATION



## **Cost savings through efficiencies**

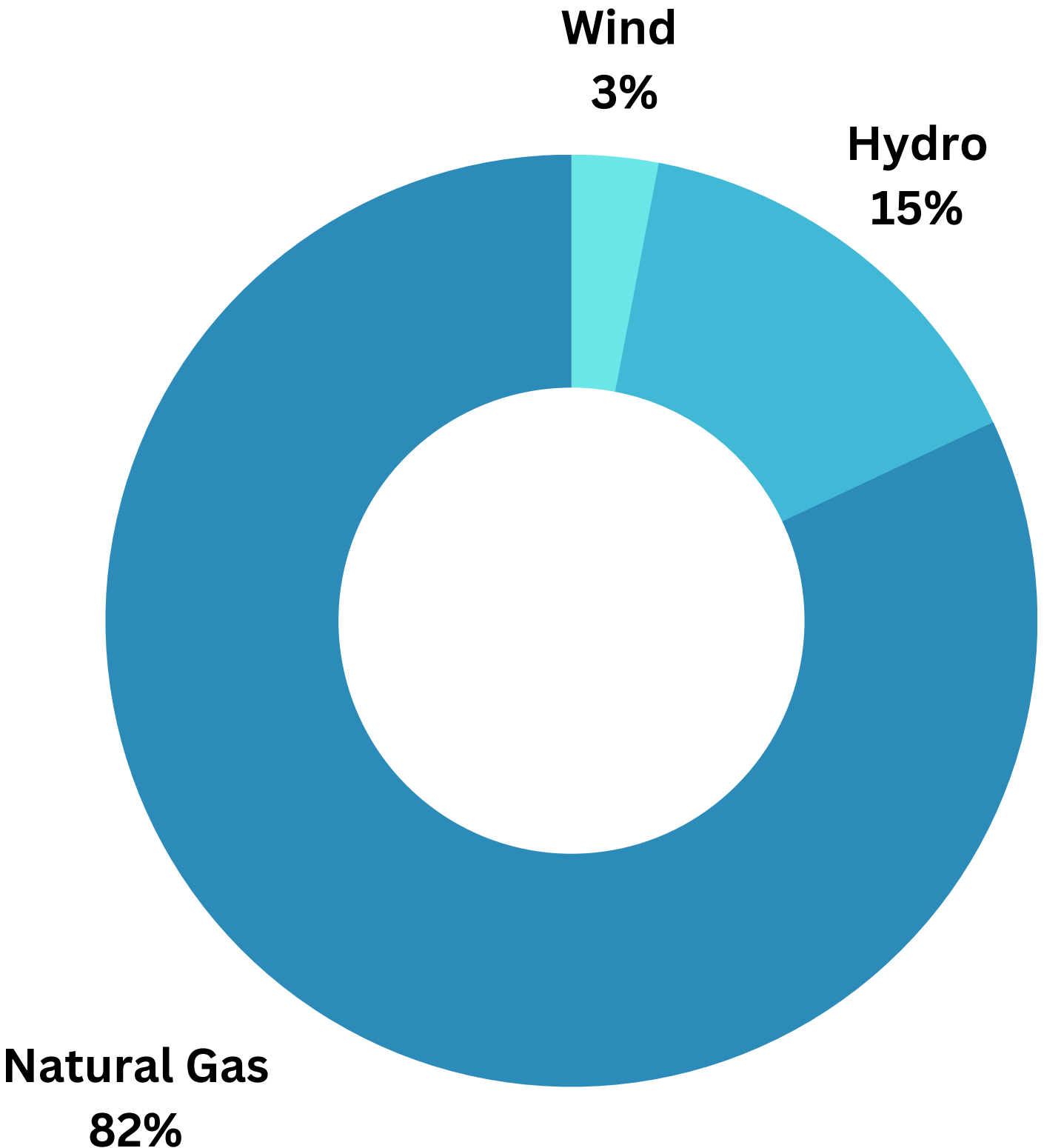
**200+ new employees (450 Total)**

**20,000+ new members (90,000 Total)**

**>\$72.4 million to date cumulative net savings as of 2022 (on-going)**



# Current Chugach Generation Mix



# Chugach Carbon Intensity Reduction Goals\*

**35%**  
by 2030

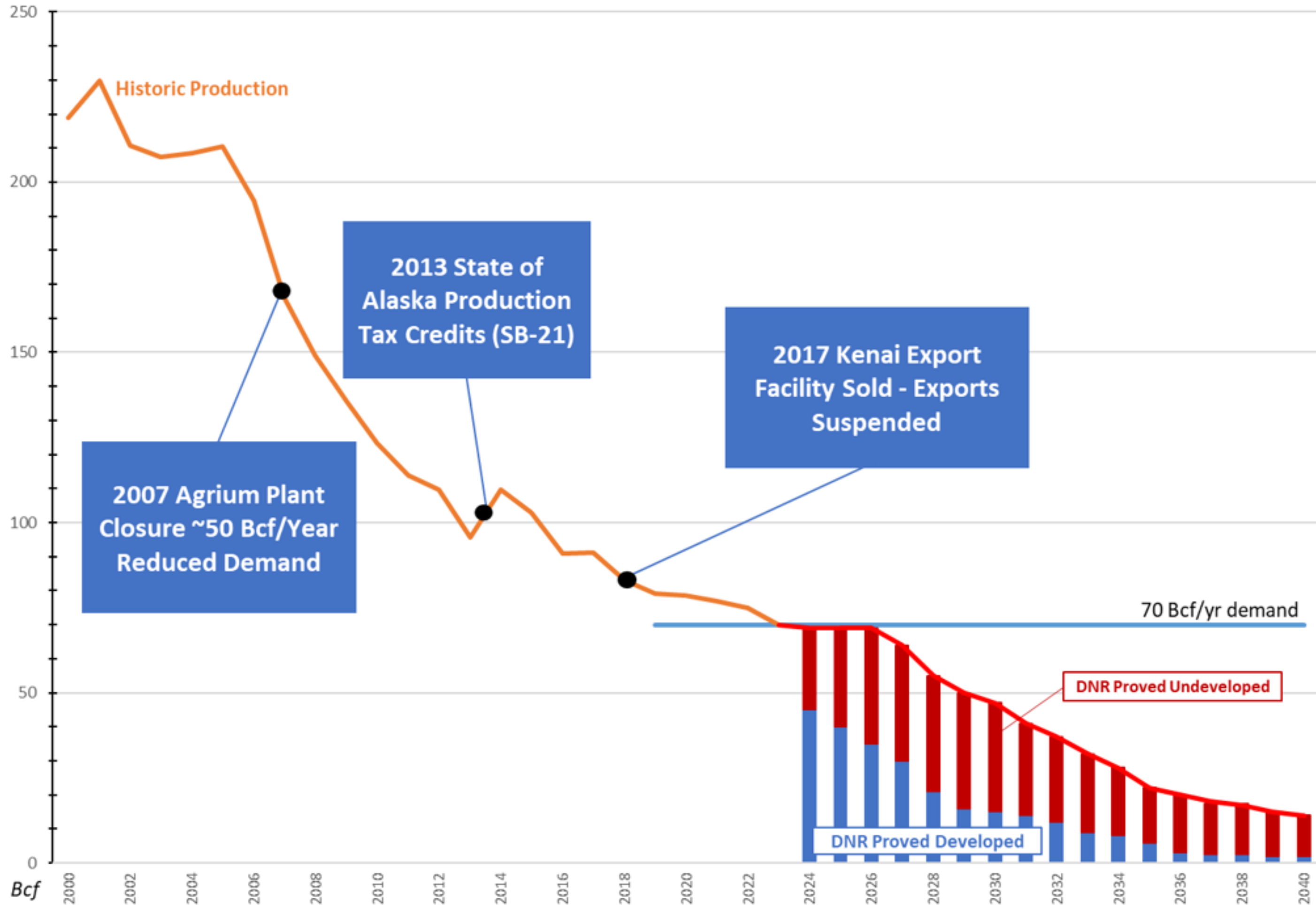
**50%**  
by 2040

Provided no negative  
material impact to rates.

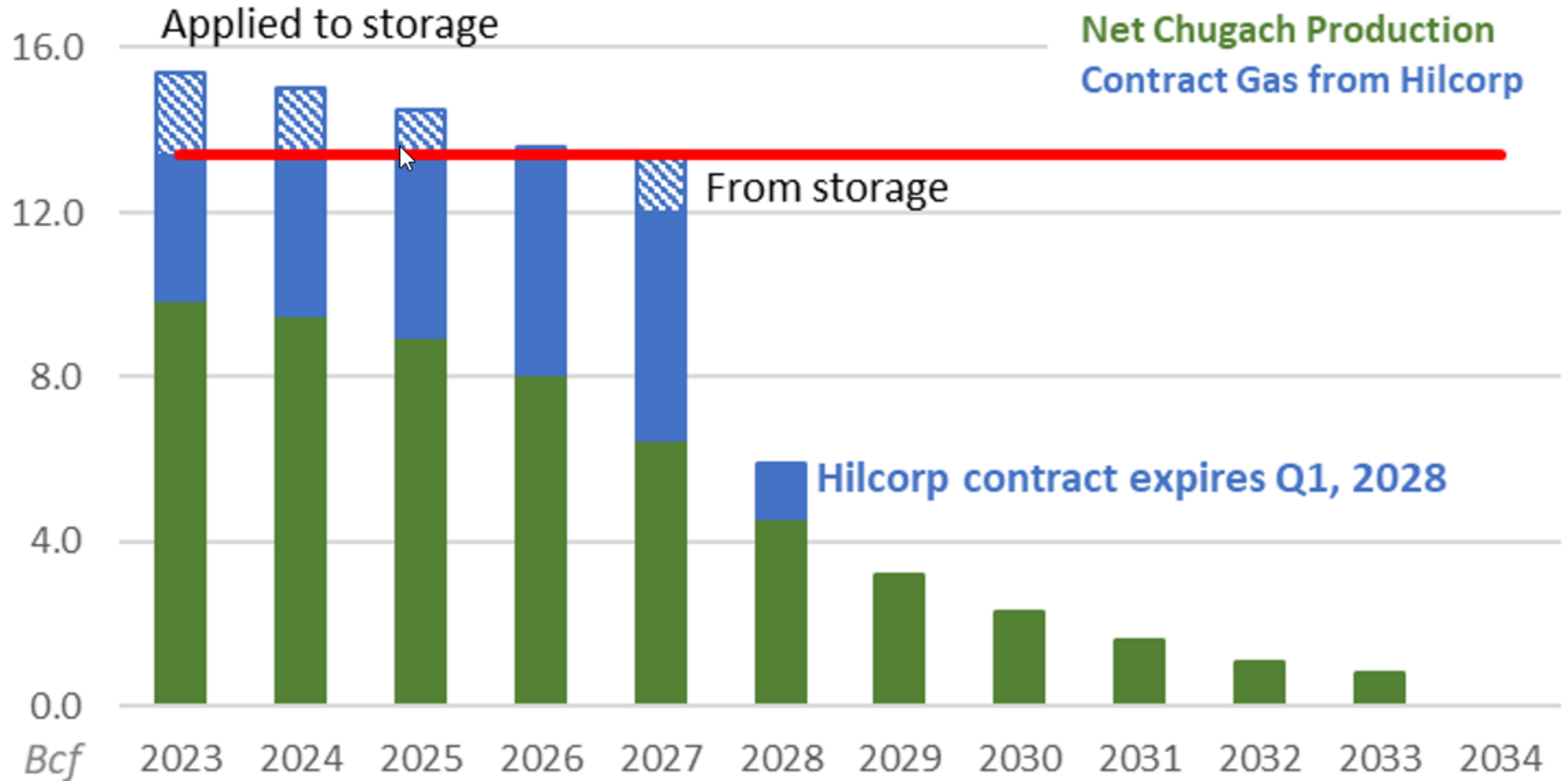
\* Using 2012 as baseline year



# Cook Inlet Gas Production



# Chugach Gas Forecast



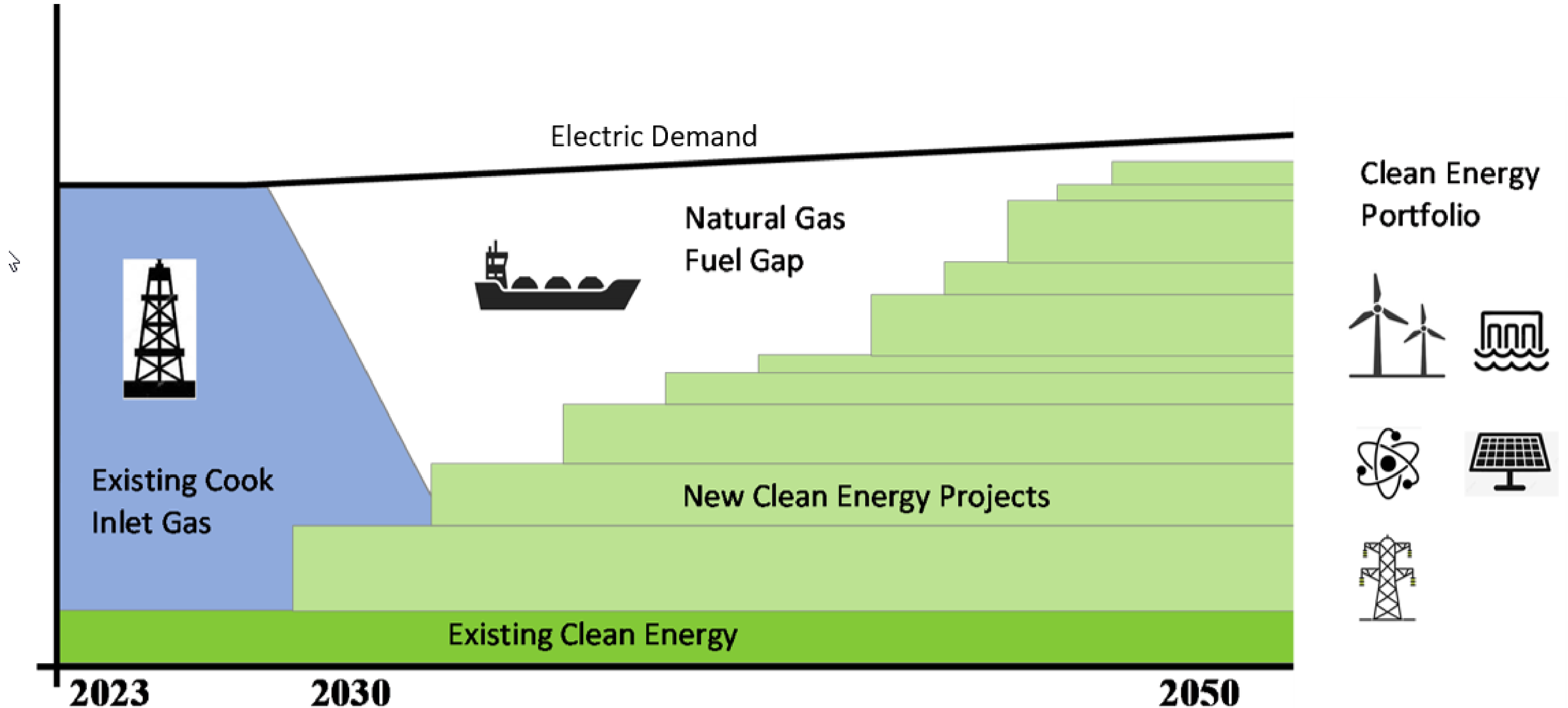


# Options to Fill the Gap

- Pursue clean energy that is economic
- Maximize life of Beluga River Unit gas field
- Use Alaska North Slope gas if available
- Pursue LNG import opportunities
- Expand gas and electric storage



# Chugach Energy Transition





# Industry Transition

## Railbelt Opportunities

- Diversification of generation
- Advances in clean energy and beneficial electrification
- Energy storage
- Transmission investment

## Lessons learned from industry

- Challenges can become opportunities
- Capital investment today will yield long term benefit







# Moving Forward

Secure natural gas supply

Develop electric and gas storage

Develop alliances and partnerships

Advance transmission and distribution infrastructure



# Speakers



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**Vice President  
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# **Electric Industry is Changing**

**Decarbonization**

**Decentralization**

**Technology Advancement**

**Industry Consolidation**





# Decarbonization

- 1** Clean Energy
- 2** Beneficial Electrification
- 3** Energy Efficiency





# Decentralization

- 1** Industry is moving from an all centralized to a partially decentralized business model
- 2** Distributed generation, microgrids, batteries
- 3** Increases complexity in providing electric service





# Technology Advancement

- 1 Automation - advanced metering infrastructure (AMI)
- 2 Demand-side management and load control
- 3 Enhanced outage response
- 4 Sophisticated rate design



# Best Practices in Energy Transformation

**Get the pace of the transition right**

**Recognize the challenges and impacts of change**

**Deploy new technology economically while managing risk**

**Solicit broad stakeholder engagement**





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**Reminder:  
before you dig.**







# Eklutna Hydroelectric Project

- **Draft Fish and Wildlife Program released October 27, 2023, after 4+ years of consultations, planning, and scientific / engineering studies**
- **Currently out for public comment ([www.eklutnahydro.com](http://www.eklutnahydro.com))**
- **Final proposed program to be submitted to the Governor in April, 2024**
- **Governor to issue Final Fish and Wildlife Program in October, 2024**



# 2022 Reliability Statistics

STATISTIC	CHUGACH	NATIONAL AVERAGE	% BETTER THAN NATIONAL AVERAGE
System Average Interruption Duration Index (SAIDI)	151 Minutes	333 Minutes	55%
System Average Interruption Frequency Index (SAIFI)	1.24 Interruptions	1.43 Interruptions	13%
Customer Average Interruption Duration Index (CAIDI)	121 Minutes	233.5 Minutes	48%

National Averages: [https://www.eia.gov/electricity/annual/html/epa\\_11\\_01.html](https://www.eia.gov/electricity/annual/html/epa_11_01.html)





**Trees are major source of power outages**

**Trees and vegetation cleared year-round**

**Critical component in delivery of safe  
and reliable electric service**

**Right-of-Way Clearing**

# Fire Risk Mitigation

- **Coordination with fire departments / agencies in our service area**
- **Modify operations in response to changes in environmental conditions**
- **Present in emergency operation centers or coordinate on site**





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# Decarbonization Program





# One Step At A Time

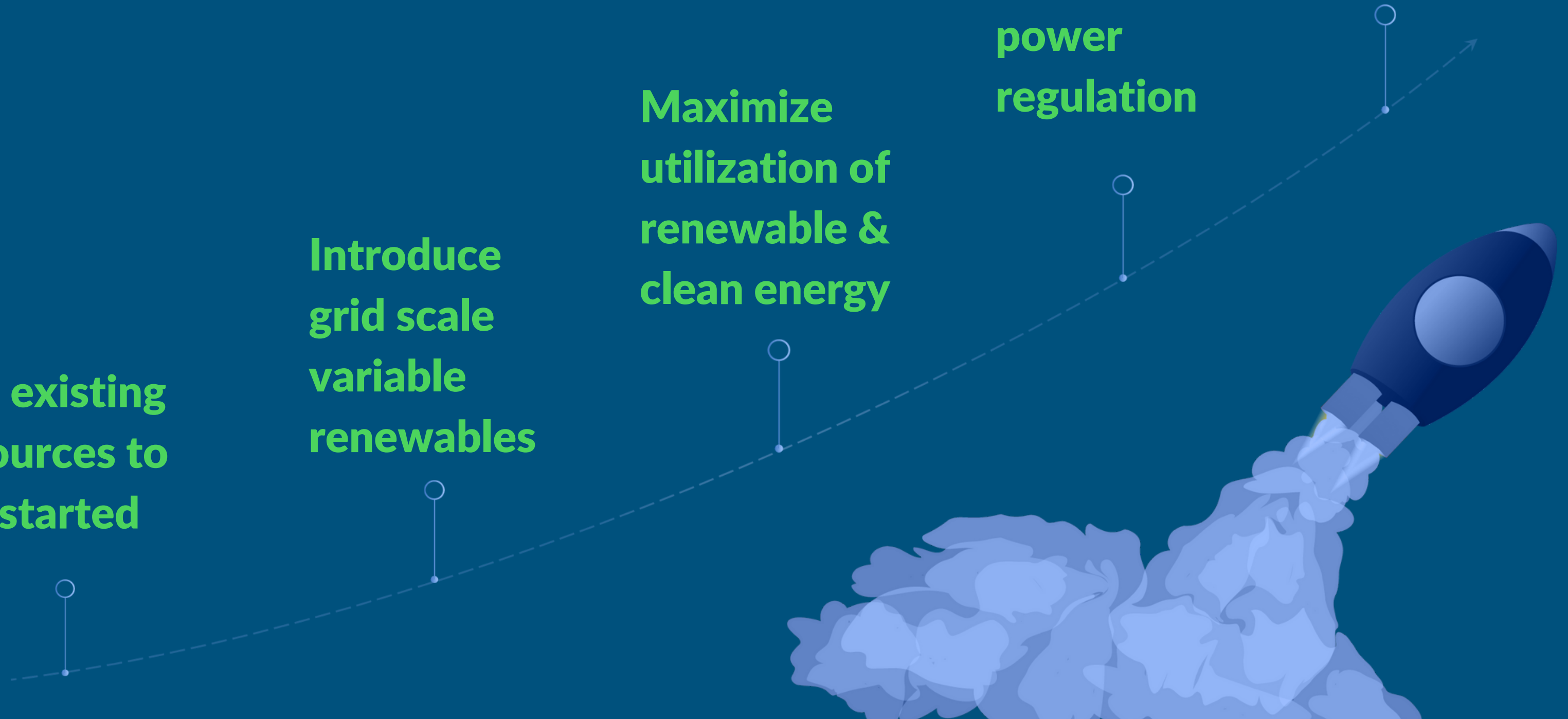
Use existing  
resources to  
get started

Introduce  
grid scale  
variable  
renewables

Maximize  
utilization of  
renewable &  
clean energy

Go green  
with new  
power  
regulation

Integrate  
the Railbelt  
with clean  
energy



# Expanding Grid Scale Renewable Energy

01

“Gas Battery”  
being evaluated  
to regulate  
variable  
renewables

02

Large wind &  
solar PPAs  
due diligence  
underway

03

Engineering  
underway for  
four solar  
projects

04

Advancing  
long duration  
energy  
storage with  
Sandia



# Maximize Variable Renewable Energy



## Go Green With New Power Regulation

# Integrating Clean Energy on the Railbelt

High renewable energy penetration in  
each region

Coordinated transmission management  
and planning

Energy flow restrictions between regions  
eliminated

Interregional grid stability support

Adoption of new clean energy and energy  
storage technologies



# STRATEGIES



**Seek strategic alignment with non-utility stakeholders**



**Maximize funding opportunities**



**Advance clean energy projects**



**Collaborate with Railbelt utilities**

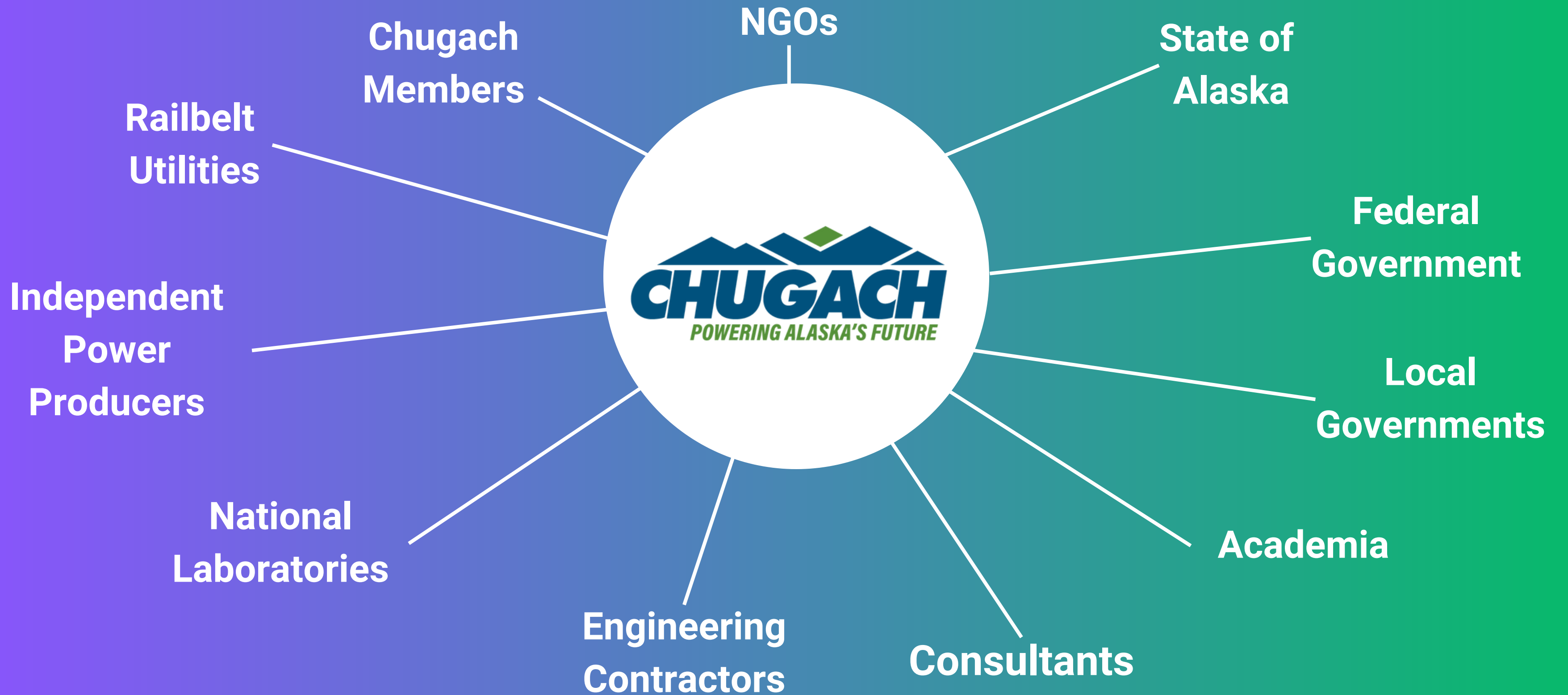


**Partner to advance technologies**



**Maintain an analytical approach**

# Relationships





# Maximizing Funding Opportunities



- USDA “New ERA” grant letter of interest submitted
- DOE grant for hydro upgrade at Cooper Lake
- DOE Grid Resilience & Innovative Partnerships
- DOD grant to support Port of Alaska microgrid development

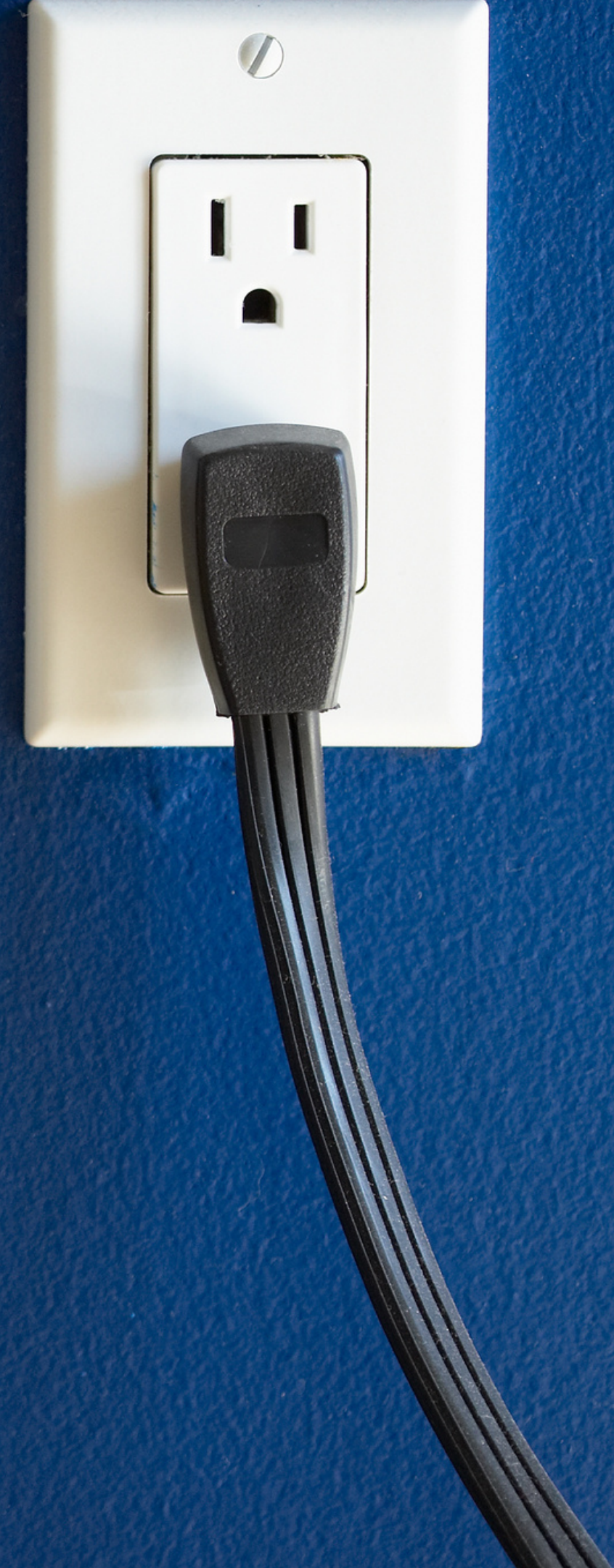


Chugach's vision for the future is  
driven by its mission to  
provide electricity that is

**SAFE**

**RELIABLE**

**AFFORDABLE**









A photograph of the Aurora Borealis (Northern Lights) in shades of green and blue, dancing across a dark night sky. Below the lights, a rugged mountain range is silhouetted against the glowing backdrop. The scene is serene and majestic, capturing the natural beauty of Alaska.

# OUR VISION

**Responsibly develop energy to build a clean,  
sustainable future for Alaska**