



Energy Services is the Solution Provider

Meet Alaska 2023 – The Alliance

PRESENTED BY
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ENERGY SERVICES IS THE SOLUTION PROVIDER

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ABOUT ENERGY WORKFORCE & TECHNOLOGY COUNCIL



Energy Workforce & Technology Council is the national trade association for the global energy technology and services sector, representing more than 650,000 U.S. jobs in the technology driven energy value chain. Energy Workforce works to advance member policy priorities and empower the energy workforce of the future.

Our Members are critical to providing the energy necessary to meet growing global demand while also investing in technological innovations to support a lower carbon future.



FOUNDED IN 1933

PESA was at the vanguard of the energy services and equipment sector with workforce development opportunities and certification programs.



FOUNDED IN 1956

AESC operated through a network of national committees and local chapters becoming a leading voice in safety, technology, advocacy and training.



ENERGY WORKFORCE

Unites the OFS sector to form the largest energy technology and services association. Combining into one organization broadens our reach by increasing geographic representation.

ENERGY WORKFORCE LEADERSHIP

Connecting Leaders in the Oilfield

Board and Advisory Board Companies



HALLIBURTON



SPM™ Oil & Gas
A Caterpillar Company



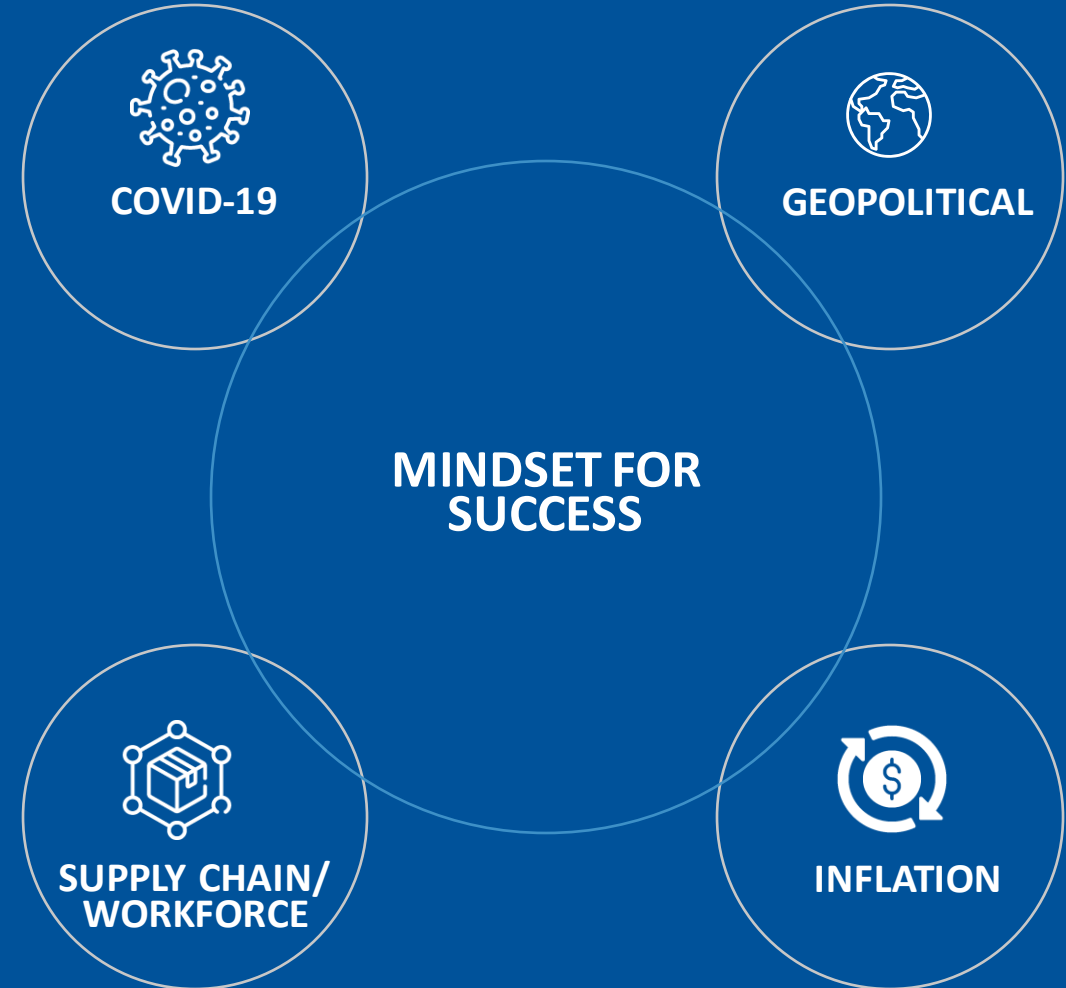
HEIDRICK & STRUGGLES



THE LANDSCAPE

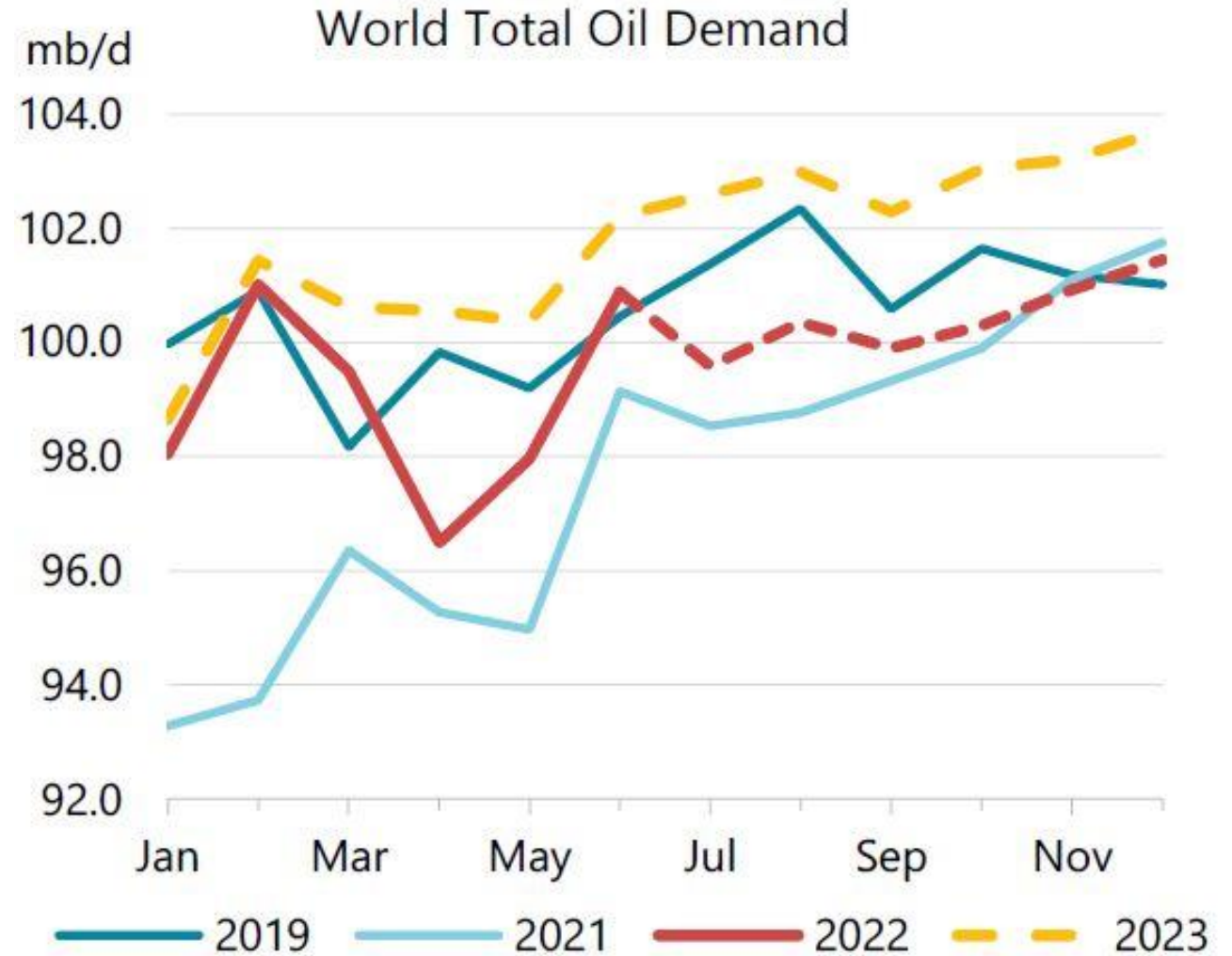
NAVIGATING THE CHALLENGE

We are coming out of some of the most challenging times our nation and our world has faced.



Global Demand

There is an ever-growing global demand for energy, and oil and gas must continue to be a part of the equation.



SOURCES: IEA, REUTERS

Energy Security

U.S. domestic energy production provides affordable, accessible and reliable energy to our nation and to populations around the world.



NATIONAL SECURITY

- Decreasing U.S. oil and gas production strengthens foreign producers
- Enables China and Russia dominance, increases dependency on Middle East and rouge nations
- U.S. has extraordinary oil and gas resources, produced in a cleaner, safer manner than foreign counterparts
- China controls majority of critical minerals processing essential for batteries and solar panels



NECESSITY OF OIL & GAS

- Oil and gas **enables** wealthy nations and companies to **invest in alternative energy sources**



INFRASTRUCTURE

- Existing infrastructure can be **adapted for future energy sources**
- **Domestic infrastructure investment essential to meet global demand**

THE LANDSCAPE

Solutions Provider



**ENERGY
PRODUCTION**



**NEW
TECHNOLOGIES**



**REGULATORY
ENVIRONMENT**



**WORKFORCE
DEVELOPMENT**



ENERGY EXPANSION

Energy Transition is Not an Either/Or Proposition. It is an Expansion of Energy Resources.

- Energy transition is not a transition away from oil and gas, it is an **expansion** of the entire energy ecosystem, including oil and gas
- Working together to reduce emissions while meeting increased global demand
- Multiple iterations based on unique aspects of countries and regions



TRENDS

- Digitalization
- Remote Technology
- Automation

KEY DRIVER: MARKETS

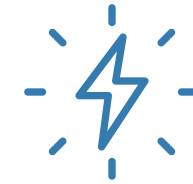
- Reduce Climate Impact
- Improve Environmental Performance
- Economic & National Security

Energy Services **Will Lead** the Expansion

Renewables - Hydrocarbons - Hydrogen - Nuclear - Biofuels



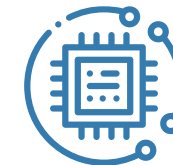
Entire ecosystem working together to produce the cleanest, most reliable and affordable energy.



Expansion must be smart and realistic, with a focus on improving lives. Solutions also must be practical and scale to meet the needs.



Hydrocarbons will be part of the fuel mix for the foreseeable future.



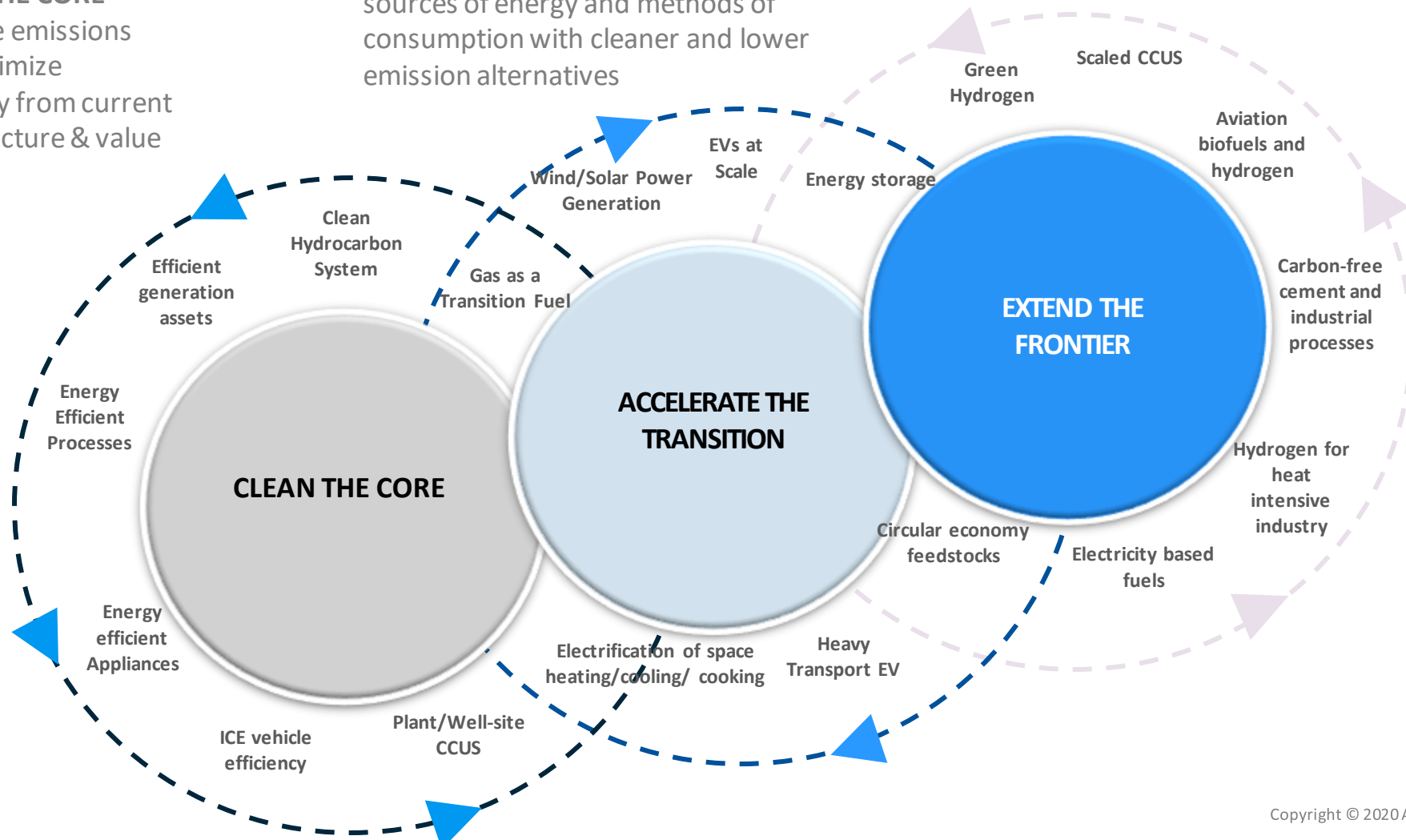
Energy services will lead the transition to **lowering emissions** because the sector knows how to **scale projects** and **deliver technology** to meet growing demand.

Three Types of Action Will Set the Pace and Success

CLEAN THE CORE
minimize emissions
and maximize
efficiency from current
infrastructure & value
chains

ACCELERATE THE TRANSITION to expand
sources of energy and methods of
consumption with cleaner and lower
emission alternatives

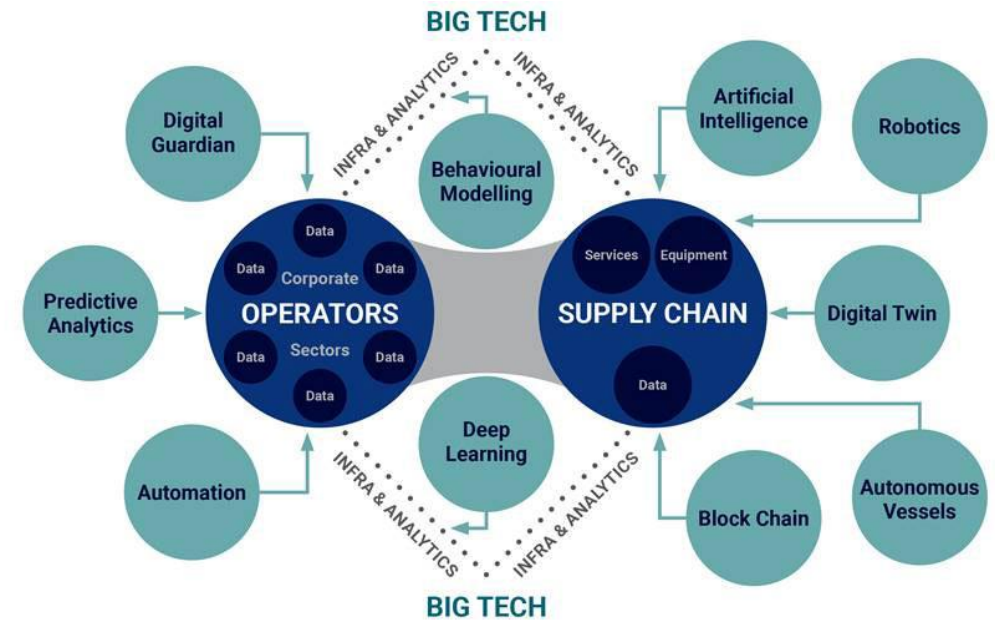
EXTENDING THE FRONTIER scales
solutions
commercializes
beyond what is
feasible today



Digital Technologies

Energy Workforce Members are making clean energy independence possible by investing in research and development in an array of energy sources and technologies. Leveraging their long history of finding and deploying technological solutions on a global scale, these companies are making energy cleaner, safer and more cost-effective than ever before.

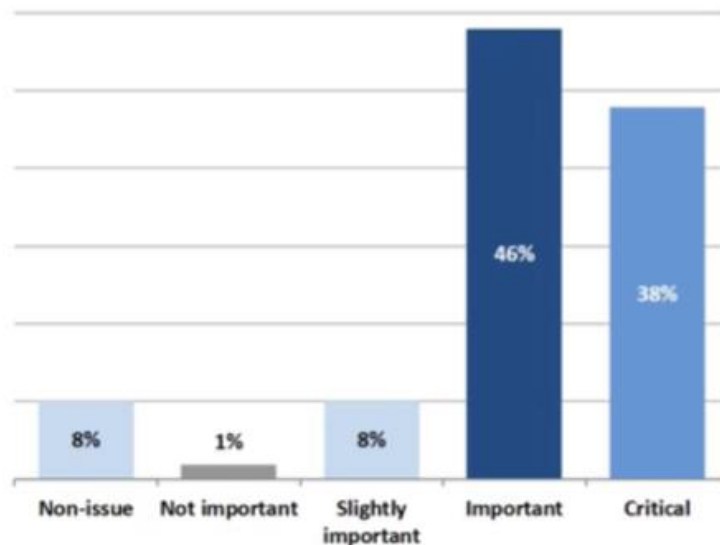
- Artificial Intelligence
- Automation
- Cloud Computing
- Digital Twin
- Digitalized Drilling Equipment
- Fugitive Emission Reduction
- IoT
- Machine Learning
- Predictive Analytics
- Remote Monitoring & Analytics
- Robotics



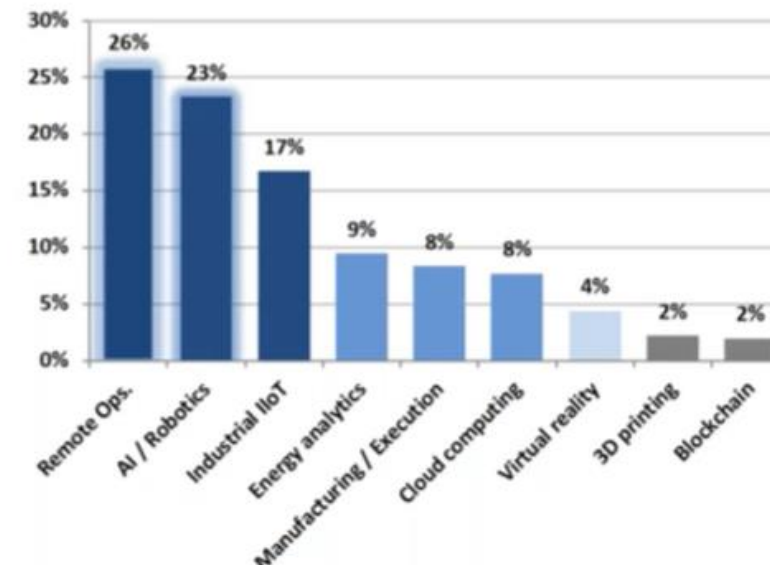
The Digital Road Ahead

- Energy service providers have long played **a critical role** in the technical advancement of the upstream oil and gas industry.
- Digitalization, remote technology, automation — all working to **lowering emissions and expand energy resources**.
- Closer partnerships between operators, service companies, and technology provider **reduces operating costs and environmental impact, while increasing well production**.

What role do you believe technology and digitalization (AI, Automation) will play within the oil patch?



Where should OFS companies invest R&D in the post-COVID world?



Oil & Gas Is Not the Enemy

Energy Poverty



2 billion
people worldwide
experience energy poverty

- "Energy doesn't end poverty, but you can't end poverty without energy."
– Dr. Scott Tinker

Empowering Women

Reduces exposure to non-clean cooking fuels and allows girls to attend school more freely

Better Health Outcomes

Reliable access to energy increases life expectancy

Smart Decarbonization

80% of the energy consumed in the world is still generated from fossil fuels

OIL & GAS IS NOT THE ENEMY

OIL & GAS HAS A CRITICAL ROLE IN ENERGY EXPANSION

A wide-angle photograph of an oil and gas drilling rig in a field of tall grass. The sun is setting behind the rig, creating a dramatic orange and yellow glow in the sky. The rig is a tall, dark structure with a flag on top. The foreground is filled with dry, golden-brown grass. The sky is filled with soft, white clouds, and the overall scene is peaceful and industrial.

ALL OF THE ABOVE APPROACH.

OIL, GAS, RENEWABLES, NUCLEAR AND COAL.

INVEST IN CCUS AND GEOTHERMAL.

EXPAND LITHIUM SUPPLY CHAIN.

WE ARE POWERING THE FUTURE.

REDUCING REGULATORY BARRIERS

Policy and Regulations Impact Energy Expansion



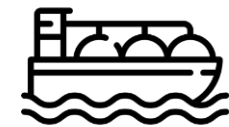
STOP REGULATORY HURDLES



INFRASTRUCTURE INVESTMENT



FULLY OPEN LEASING ON FEDERAL LANDS & WATERS



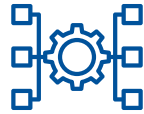
INCREASED LNG EXPORTS

Educate Policy Makers and the Public



NECESSITY OF OIL & GAS

- Energy demand **to increase 25%** over next 20 years
- Renewables supply chain **relies on oil and gas** for transportation, shipping, electricity, materials and manufacturing
- Oil and gas enables wealthy nations and companies to **invest in alternative energy sources**



PRACTICALITY

- Existing infrastructure can be adapted
- Since 2005, the switch from coal to natural gas for electricity generation has been the number one driver of decreasing carbon in the U.S., **saving CO2 emissions** by more than 2.8 billion metric tons



NATIONAL SECURITY

- Shutting down U.S. oil and gas production strengthens China and Russia
- U.S. would be dependent on other nations for energy needs
- China controls majority of earth's minerals essential for batteries, turbines and solar panels



BUILDING THE FUTURE

Workforce & Talent

- Talent is a critical issue
- 650,000+ jobs and growing in the sector, but still below pre-pandemic numbers
- Tight labor market
- Challenges in recruitment and retaining talent



INVESTMENT



UPSKILLING



RESKILLING

Attract, Retain and Prepare



Inclusion, Diversity and Racial Equality

- Gender Diversity Study
- Energy Workforce Diversity Toolkit
- Racial Equality Task Force
- Working Groups/Action Plan



Workforce Development

- Certified Executive Program
- Executive Leadership
- Inclusive Leader
- ESG Certification Program
- Field Operations Leadership
- Finance for Non-Financial Professionals
- Operations Leadership



Industry Reputation

- IPAA/Energy Workforce Energy Education Center
- NSBE Summer SEEK Program
- Rice University Fellowship
- State Department Houston Energy Course

We're Looking Forward

The future for oil and gas is optimistic with commercial opportunities in the energy expansion



Form alliances with key stakeholders



The industry must earn respect through communications, advocacy and collaboration

Innovating, training and advocating on behalf of the sector

- **Protect U.S. national and economic security**
- **Reduce emissions at home and abroad**
- **Energy access and availability to lift the world from energy and economic poverty**
- **Regulatory landscape should encourage domestic energy**
- **Workforce development**

