# The Energy Venture Investment Summit

# **THURSDAY, FEBRUARY 17** 12:15 PM (MT) **KEYNOTE LUNCH PRESENTATION:** NABORS INDUSTRIES







GARY CLIMATE SOLUTIONS

NABORS













### **NABORS**

## Advancing Geothermal 2.0

The Energy Venture Investment Summit 2022 Guillermo Sierra Vice President, Strategic Initiatives – Energy Transition

## **Forward-Looking Statements**

We often discuss expectations regarding our future markets, demand for our products and services, and our performance in our annual, quarterly, and current reports, press releases, and other written and oral statements. Such statements, including statements in this document that relate to matters that are not historical facts, are "forward-looking statements" within the meaning of the safe harbor provisions of Section 27A of the U.S. Securities Act of 1933 and Section 21E of the U.S. Securities Act of 1934. These "forward-looking statements" are based on our analysis of currently available competitive, financial and economic data and our operating plans. They are inherently uncertain, and investors should recognize that events and actual results could turn out to be significantly different from our expectations.

#### Factors to consider when evaluating these forward-looking statements include, but are not limited to:

- the Covid-19 pandemic and its impact on oil and gas markets and prices;
- fluctuations and volatility in worldwide prices of and demand for oil and natural gas;
- · fluctuations in levels of oil and natural gas exploration and development activities;
- fluctuations in the demand for our services;
- · competitive and technological changes and other developments in the oil and gas and oilfield services industries;
- our ability to renew customer contracts in order to maintain competitiveness;
- · the existence of operating risks inherent in the oil and gas and oilfield services industries;
- the possibility of the loss of one or a number of our large customers;
- · the impact of long-term indebtedness and other financial commitments on our financial and operating flexibility;
- our access to and the cost of capital, including the impact of a further downgrade in our credit rating, covenant
  restrictions, availability under our unsecured revolving credit facility, and future issuances of debt or equity securities;

#### skilled employees;

- our ability to complete, and realize the expected benefits, of strategic transactions;
- changes in tax laws and the possibility of changes in other laws and regulation;
- the possibility of political or economic instability, civil disturbance, war or acts of terrorism in any of the countries in which we do business;
- the possibility of changes to U.S. trade policies and regulations including the imposition of trade embargoes or sanctions; and
- general economic conditions, including the capital and credit markets.

Our businesses depend, to a large degree, on the level of spending by oil and gas companies for exploration, development and production activities. Therefore, sustained lower oil or natural gas prices that have a material impact on exploration, development or production activities could also materially affect our financial position, results of operations and cash flows.

The above description of risks and uncertainties is by no means all-inclusive, but is designed to highlight what we believe are important factors to consider. For a discussion of these factors and other risks and uncertainties, please refer to our filings with the Securities and Exchange Commission ("SEC"), including those contained in our Annual Reports on Form 10-K and Quarterly Reports on Form 10-Q, which are available at the SEC's website at www.sec.gov.

• our dependence on our operating subsidiaries and investments to meet our financial obligations; our ability to retain Non-GAAP Financial Measures

This presentation refers to certain "non-GAAP" financial measures, such as adjusted EBITDA, net debt and free cash flow. The components of these non-GAAP measures are computed by using amounts that are determined in accordance with accounting principles generally accepted in the United States of America ("GAAP"). A reconciliation of adjusted EBITDA to income (loss) from continuing operations before income taxes, net debt to total debt, and free cash flow to net cash provided by operating activities, which are their nearest comparable GAAP financial measures, as provided in the Appendix at the end of this presentation.



## About Nabors Industries

(NYSE: NBR)

One of the World's Largest O&G Drillers and A Leader in Advanced Energy Technology



Deployed First Fully Automated Land Rig in 2021

Vertically Integrated Engineering and Manufacturing

## **Our DNA**

**Our success comes from** a forwardlooking mindset, customer focus and our differentiated solutions



#### 2015-2017

#### "Purpose, Mission, Vision & Values" Launch

Global operations restructuring; created NDS & dedicated R&D group



#### 2018-2019

#### **Performance Drilling**

KPI-based performance culture drove safer, more efficient operations

#### 2019-2020

#### Automation, Robotics and Digitalization

Enabled the integration & scalability of smart drilling tools & technologies

#### 2020-2021+

#### **Energy Transition**

Developed energy efficient solutions portfolio & geothermal partnerships



#### Pre 2011

**Siloed Business Units** 

Successful yet differing operating standards & performance



#### 2011-2015

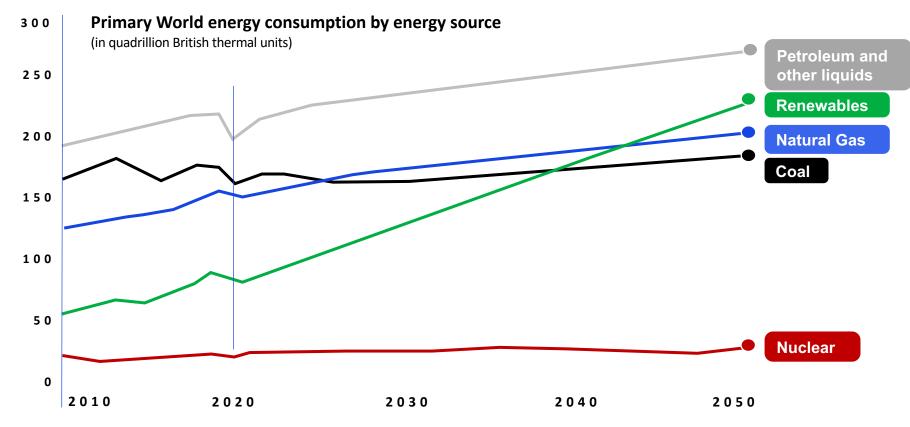
#### "One Nabors" Philosophy

Streamlined scope of services, consolidated engineering & extracted the best from Nabors global operations



#### *NABORS*

## **Global Energy Demand Outlook**



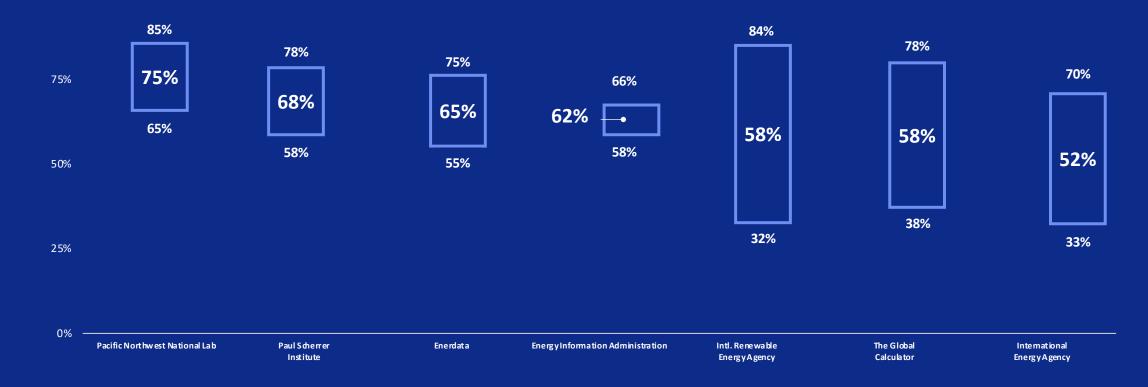
Source: EIA IEO 2021



## The World is Off Track to Net Zero

Average % Share of fossil fuels in the energy mix in 2050 between 52% – 75%





#### NABORS

100%

# Innovating the Future of Energy

#### OUR THREE PILLARS FORMULA

Our three pillars are **Talent**, **Technology** and **Transition**.

They are our formula to drive sustainable outperformance and enduring value for stakeholders.

#### TALENT

Building a skilled, diverse and competitive workforce of the future

#### TECHNOLOGY

Advancing solutions that deliver safe, efficient and responsible energy production

#### TRANSITION

Lowering carbon intensity and exploring new energy business models.

#### NABORS

## **Three-Pronged Energy Transition Strategy**



Nabors Energy Transition Solutions (NETS)

Develop technology portfolio to decarbonize the oilfield and make that portfolio of solutions available to other industries



Nabors Energy Transition Ventures (NETV)

Partner with companies with significant adjacencies to our competencies, particularly geothermal or other lower carbon businesses

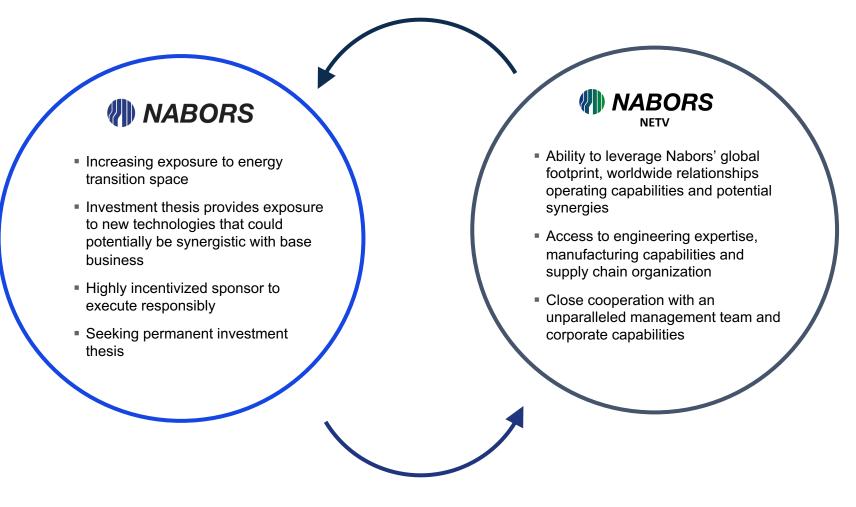


Nabors Energy Transition Corporation (NETC)

Special purpose acquisition company (SPAC) made its initial public offering and will target larger energy transition opportunities

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### **Venture Investments Create All Around Alignment**



## Where Will the Energy Come From Now?

Hydrocarbons will continue to drive energy supply, which require cleaner operations to produce it.

To achieve carbon neutral goals clean baseload energy is vital.

We seek to achieve baseload energy via innovative geothermal systems Geothermal 95% Uptime

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## Geothermal 2.0

Geothermal market is undergoing a paradigm shift as the market has begun to realize the value unlocked by technological advancements

The new age of geothermal is working to address various challenges that will allow a global expansion

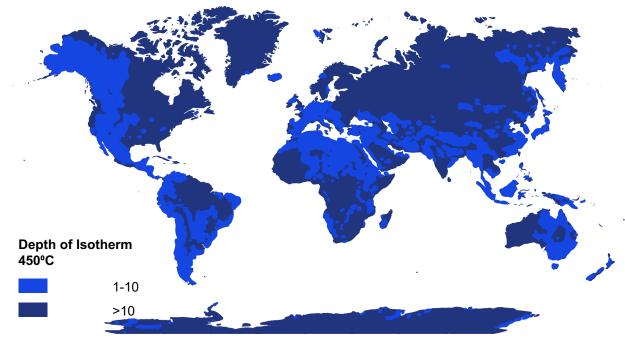
The emergence of geothermal 2.0 is underpinned by the fact that while naturally occurring economic hot springs are rare, the vast majority of the globe has access to thermal gradients that would allow for geothermal power generation Widely Deployable

#### **50%**

world population with 450°C at **<10km** 

#### **95%**

world population with 450°C at **<20km** 



#### Geothermal Electricity Production Is Becoming Economically Feasible on a Larger Scale

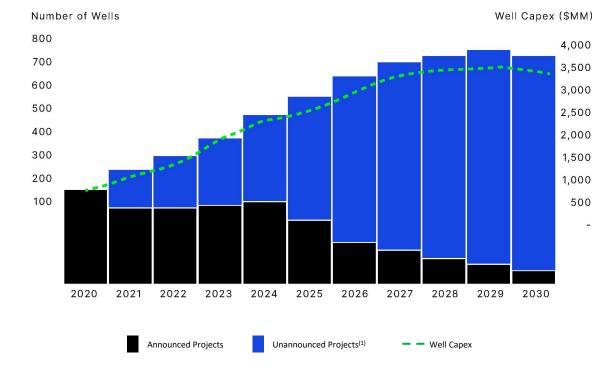
| Site Name   | Development Period | Country        | Reservoir Lithology | Type / Status  |
|-------------|--------------------|----------------|---------------------|----------------|
| Insheim     | 2008 – Present     | Germany        | Granite             | Greenfield     |
| Landau      | 2004 – Present     | Germany        | Granite             | Greenfield     |
| Soultz      | 1987 – Present     | France         | Granite             | SourGreenfield |
| Eden        | 2020 – Present     | United Kingdom | Granite             | Greenfield     |
| The Geysers | 2009 – Present     | United States  | Metasandstone       | Near field     |
| Desert Peak | 2013 – Present     | United States  | Metamorphic tuff    | In field       |

### Geothermal Expected to Play a Larger Role in Global Power Generation

- Lower drilling costs and system enhancements improve the economic viability of new age geothermal driving expected increased activity
- Combination of advancements across the entire value chain have unlocked the ability to reach the vast geothermal potential at a very competitive LCOE
- As various technologies have shown success in the pilot stage the expected activity in the geothermal space is expected to grow materially over the next decade
- Increased activity will target both (i) existing drilling capabilities utilizing higher efficiency systems and (ii) to-be-developed drilling techniques allowing for access to superhot rock

#### **Projected Geothermal Investment**

Unannounced projects contain an estimated number of wells to be drilled to meet government targets on capacity additions toward 2030



Source: NREL, Rystad

## Geothermal Market Technology Advancements

Multiple technological advancements are helping to overcome historical hurdles for wide-scale commercial geothermal development:

#### **Lowering Costs**

Lowering drilling costs by combining with advanced stimulation techniques derived from the technology advancement made in the unconventional fields

#### **Improved Reliability**

Improving the reliability of high-temperature drilling equipment

#### **Alternative Fluids**

By using alternative working fluids that remain supercritical at lower temperatures

#### Innovative Drilling Technologies

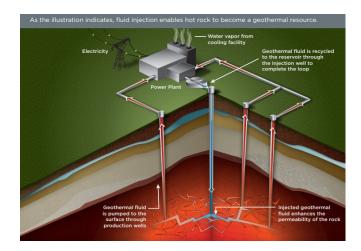
By developing innovative deep hard rock drilling technologies

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## **Geothermal Ventures**

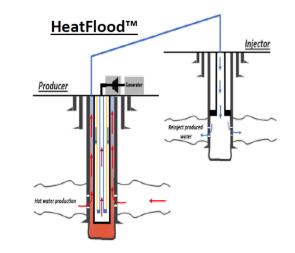
## GeoX

- Deeper wells with supercritical temperature
- Impermeable basement rock
- Stimulated loop direct steam Rankin Cycle
- Inject water as working fluid at high rates
- Higher enthalpy (20-30 MWe/well) vs hydrothermal
- Mud cooling, automation and materials/ chemistry





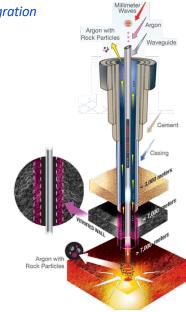
- Permeable geopressured water wells
- Single well closed loop system, sCO2 working fluid
- First mid-temperature supercritical CO<sub>2</sub> turbine
- Compact plant, existing D&C tech, lower opex
- Digital Twin drilling program
- Rig automation and turbine manufacturing







- Deep, super hot hard rock
- Surface gyrotron via waveguide
- Enable ROP vs bits
- Inert gas cools, removes particulates
- Supercritical water production 500 °C
- Top Drive and solids Integration



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## **Geothermal Partners Selections**

|                 | Investment<br>Date/Value | Partner<br>Goals                                                                                                                                                           | Benefits from<br>Partnership                                                                                                                                                                                                 |
|-----------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sage Geosystems | June 2021<br>(~\$10mm)   | Developing an integrated system approach covering<br>both surface and subsurface environments to deliver<br>a higher-heat harvesting efficiency at a lower capital<br>cost | Sage to benefit from Nabors' broad global reach,<br>technology development, deployment expertise,<br>automaton and digitalization experience, as well<br>as its leadership in the well construction and<br>drilling industry |
| GeoX Energy     | June 2021<br>(~\$11mm)   | Commercializing technologies to install supercritical geothermal power stations at scale globally                                                                          | GeoX to benefit from Nabors' industry and regulatory expertise, global operational footprint and excellent track record in Health, Safety & Environment protocols                                                            |
| Quaise Inc.     | August 2021<br>(+\$12mm) | Developing and commercializing novel millimeter-<br>wave drilling systems to harness geothermal energy<br>around the globe                                                 | Quaise to benefit from Nabors' existing supply chain, as well as its development and deployment capabilities                                                                                                                 |

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07

Be part of the long-term power business

Provide drilling and engineering services and

02

03

Create Geothermal 2.0

Geothermal Development Goals

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NABORS CORPORATE SERVICES

515 W. Greens Road Suite 1200 Houston, TX 77067-4525

@naborsglobal