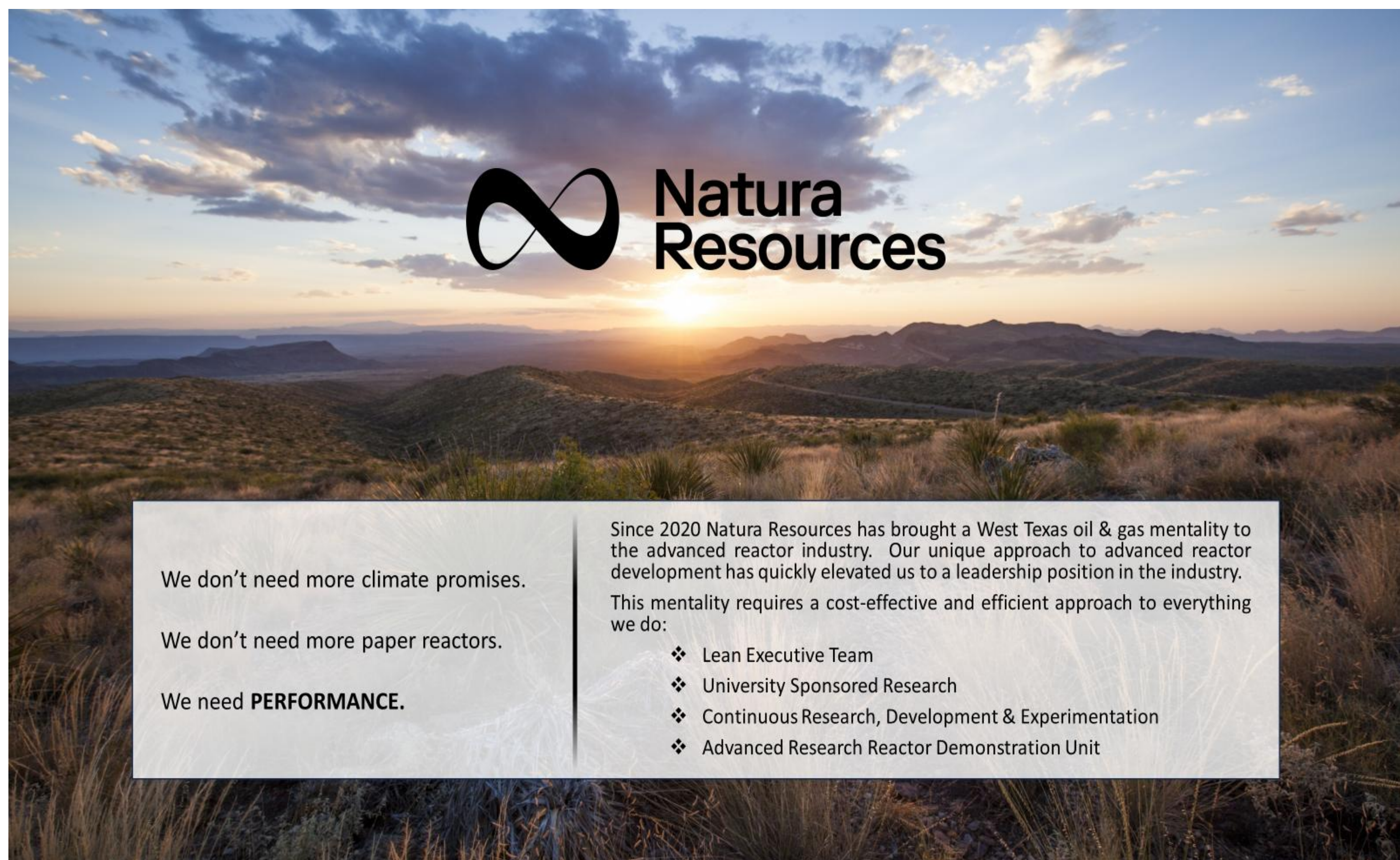




Natura Resources Team

NATURA EXECUTIVE TEAM

Douglass Robison
Founder, President
Douglass Robison is the founder and President of Natura Resources. Throughout his career in the energy sector, Douglass has been at the forefront of leading-edge technologies in his role as Partner, Co-founder, President and Executive Chair of Ex. Petroleum, a Permian-based oil and gas exploration and production company, and now as the founder and President of Natura Resources. In 2004 he was appointed by former Texas Gov. Rick Perry to serve on the Texas Energy Planning Council and co-chaired the Energy Supply Committee during which time his committee identified the importance of nuclear energy in our energy future. Natura Resources is a natural fit for his deep-seated interest in advanced energy technologies.

Andrew Harmon
VP of Operations & Business Development

Jordan Robison, PE
VP of Engineering & Program Management

Ray Ferguson, CPA
VP of Finance

UNIVERSITY PARTNERS

• PhDs: 25+ • Staff: 45+ • Grad Students: 45+ • Undergrad Students: 170+

ABILENE CHRISTIAN UNIVERSITY

TEXAS A&M UNIVERSITY

Georgia Tech

NATURA SENIOR TECHNOLOGY DEVELOPMENT TEAM

Jack Shoemate, PE
Chief Engineer

Dr. Jonathan Scherr
Sr. Nuclear Engineer

Dr. Steve Biegalski
Reactor Design

Ben Beasley
Licensing

Dr. Rusty Towell
Reactor Design

Dr. Derek Haas
Reactor Design

Dr. Pavel Tsvetkov
Reactor Physics

Dr. Kevin Clarno
Reactor Physics

Dr. Mark Kimber
Thermohydraulics

Brazos Fitch
Nuclear Engineer

Project Milestones & Development

PRE-PROJECT & EARLY ENGAGEMENT

OAK RIDGE National Laboratory

1954-1969 MSR HISTORY

- (Nov 1954) Aircraft Reactor Experiment (ARE) at Oak Ridge National Laboratory (ORNL) is the first reactor to demonstrate the feasibility of molten-salt fuel.
- (1964) Molten Salt Reactor Experiment (MSRE) is constructed at ORNL.
- (June 1965) MSRE goes critical utilizing uranium-235.
- (Oct. 1968) MSRE goes critical utilizing uranium-233.

2016-2019 EARLY ENGAGEMENT

- (2016) Nuclear Energy Experimental Testing (NEXT) Lab established at Abilene Christian University (ACU).
- (2017) Douglass Robison commits \$3.2M gift to the NEXT Lab to support molten salt research.
- (Dec. 2018) Secretary of Energy, Rick Perry, sends representatives from the Department of Energy (DOE) Office of Nuclear Energy (NE) to visit NEXT Lab at ACU.
- (Jan. 2019) Robison and ACU representatives visit the DOE in Washington D.C.
- (Nov. 2019) DOE encourages the development of a Molten Salt Research Reactor (MSRR) at ACU and provides Programmatic Letter of Support.

2020-2021 PROJECT INITIATION

- (2020) Natura Resources is established to develop the MSRR at ACU and commercialize MSR technology.
- (Feb. 2020) Natura enters into \$30.5M of Sponsored Research Agreements (SRAs) with four universities: Abilene Christian University, The University of Texas at Austin, Texas A&M University, Georgia Institute of Technology.
- (Sep. 2021) Natura Resources and Research Alliance receive Resolutions of Support from the Texas Senate and Texas House of Representatives.

2022-2024 RAPID PROJECT DEVELOPMENT

- (March 2022) Groundbreaking takes place for the Advanced Research Reactor Demonstration Site for the Natura Resources 1MW_{th} system, the Science and Engineering Research Center (SERC) at ACU.
- (Aug. 2022) Construction Permit (CP) application is submitted to and docketed for formal review by the Nuclear Regulatory Commission with anticipated May 2024 approval.
- (Oct. 2022) Teledyne Brown Engineering completes Front End Engineering & Design (FEED) of MSRR.
- (July 2023) Zachry Nuclear Engineering (ZNE) is contracted to complete Detailed Design Engineering (DDE) of the first Natura MSR system.
- (Sep. 2023) Advanced Research Reactor Demonstration Site at ACU opens (SERC).

Natura Resources R&D Labs and Capabilities at Abilene Christian University

Bennet Labs

Advanced Research Center

Chemistry

Analysis Systems

Isotope extraction and purification

Nitrate

FLiNaK

Loops

Purification

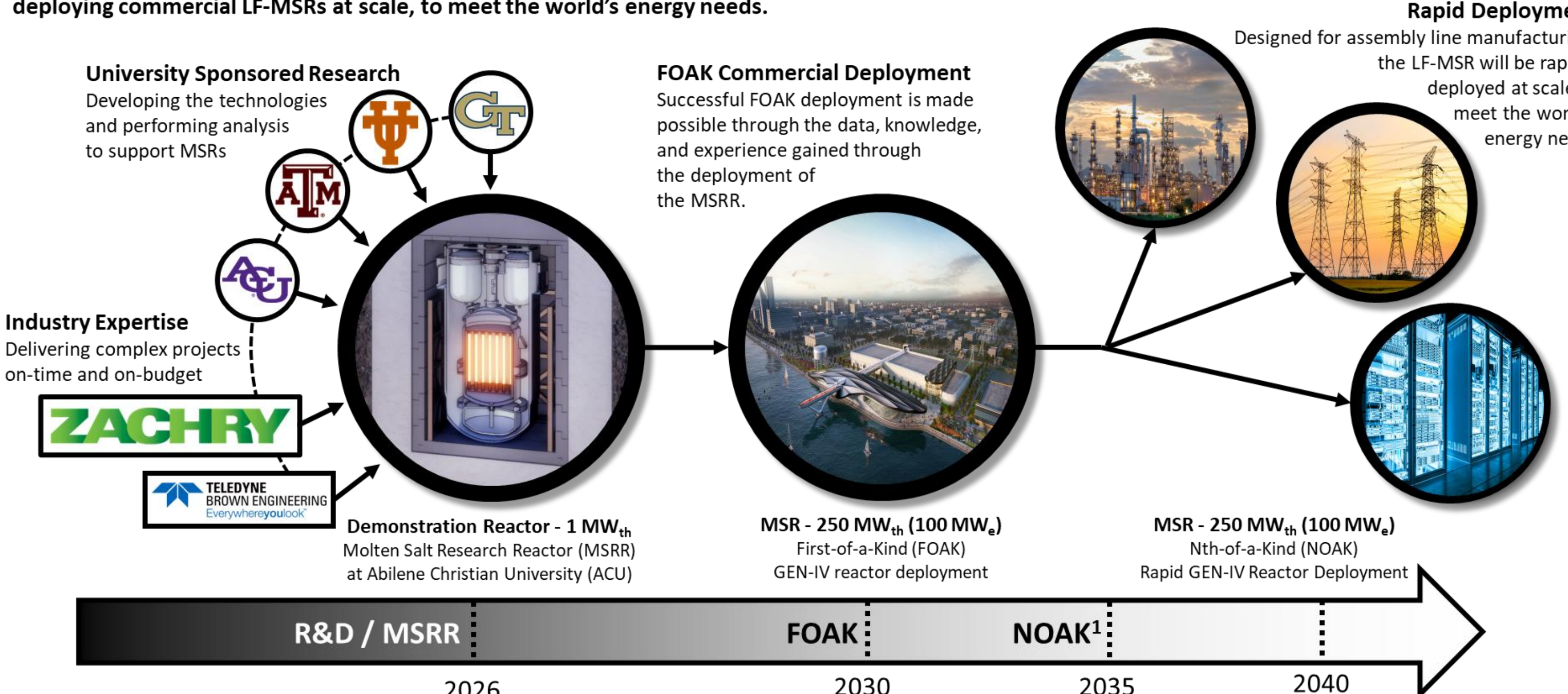
Fluoride salt

Salt filters

Science and Engineering Research Center

Natura Resources Technology Development

Natura Resources has taken a unique path to developing and deploying MSR technology that reduces costs, schedule and regulatory risk. We are on track via the MSRR demonstration reactor to deploy the first GEN-IV advanced reactor in the U.S., and then begin rapidly deploying commercial LF-MSRs at scale, to meet the world's energy needs.



PUMP

PURIFICATION SYSTEM

EXPERIMENTAL TANK

DRAIN TANK

Molten Salt Test System (MSTS)

- 50 Gallons
- FLiNaK Salt
- 700°C
- Salt Purification System
- Drain tank, configuration, and gas system similar to MSRR to further validate operations
- Experimental Tank
- Operational demonstration of patented technologies

Texas A&M University

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1MW TRIGA Reactor

- Operations
- Instrumentation

Fuel Cycles and Materials Laboratory

- The Fuel Cycle and Materials Laboratory (FCML) was established to study current issues in the nuclear fuel cycle, including materials and chemical processing, advanced fuels and materials, and waste immobilization.
- Utilized for salt synthesis, measurement and fuel qualification.

Lead Investigators

Dr. Pavel Tsvetkov
Reactor Physics & Instrumentation & Control

Dr. Mark Kimber
Thermal Hydraulics

Dr. Lin Shao
Fuel Qualification, Chemistry, Corrosion

Dr. Sean McDevitt
Fuel Qualification, Chemistry, Corrosion

- Faculty = 3
- Staff = 7
- Grad Students = 14
- Undergrad Students = 15
- Total = 39

Georgia Institute of Technology

Lead Investigators

Dr. Steve Biegalski, P.E.
Reactor Operations & Experimental Systems

Dr. Brian Petrovic
Reactor Design & Radiation Shielding

Dr. Pratik Singh
Material Science & Corrosion Engineering

Dr. Anna Eriksson
Instrumentation & Scientific Surveillance

- Faculty = 4
- Grad Students = 7
- Undergrad Students = 2
- Total = 13

Expertise

- Material Science & Corrosion
- Experimental Systems
- Radiation Shielding
- Reactor Operations
- Instrumentation / Scientific Surveillance

Experimental System Prototyping

Radiation Shielding Analysis

Molten Salt Corrosion Testing Gloveboxes

The University of Texas

Lead Investigators

Dr. Derek Haas
CFD/Gen Systems & Research Bay Integration

Dr. Kevin Clarno
Reactor Physics & Computational Modeling

Dr. Bill Charlton
Safeguards & Security

- Faculty = 3
- Staff = 7
- Grad Students = 7
- Undergrad Students = 6
- Total = 23

1MW TRIGA Reactor

- Operations
- Experimental Irradiations

Texas Advanced Computing Center

- TACC designs and deploys the world's most powerful advanced computing technologies and innovative software solutions to enable researchers to answer complex questions.
- Utilized for advanced reactor modeling and simulation



- Construction permit – September 2024
- Planned operation - 2026

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