



# **U.S. Advanced Reactor Development: The Time for Demonstration is Now**

Marcia Burkey, Executive Vice President and Chief Financial Officer  
TerraPower, LLC

# Getting to Zero

Nuclear fission: “It’s the only carbon-free energy source that can reliably deliver power day and night, through every season, almost anywhere on earth, that has been proven to work on a large scale.”

Bill Gates in “How to Avoid a Climate Disaster: The Solutions We Have and the Breakthroughs We Need”



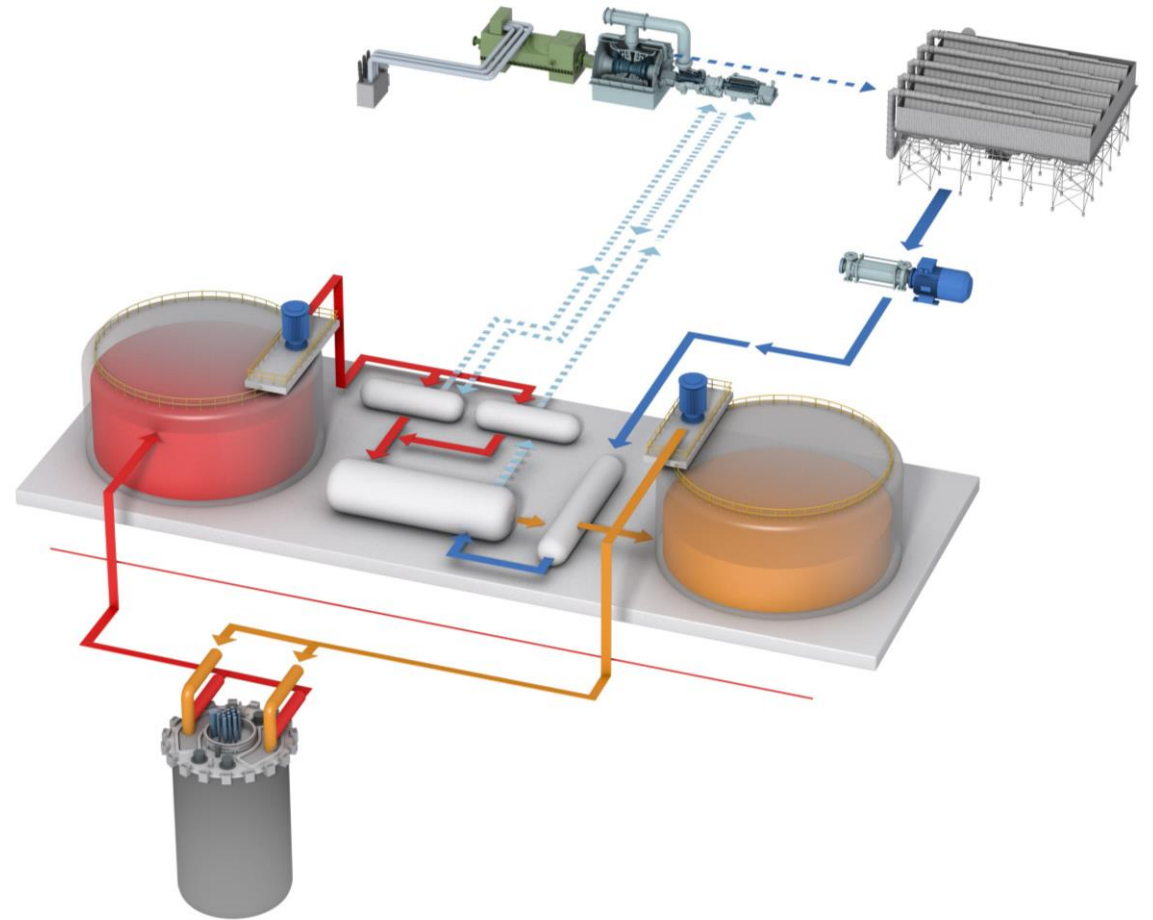
# U.S. Commitment to Advanced Reactor Demonstration



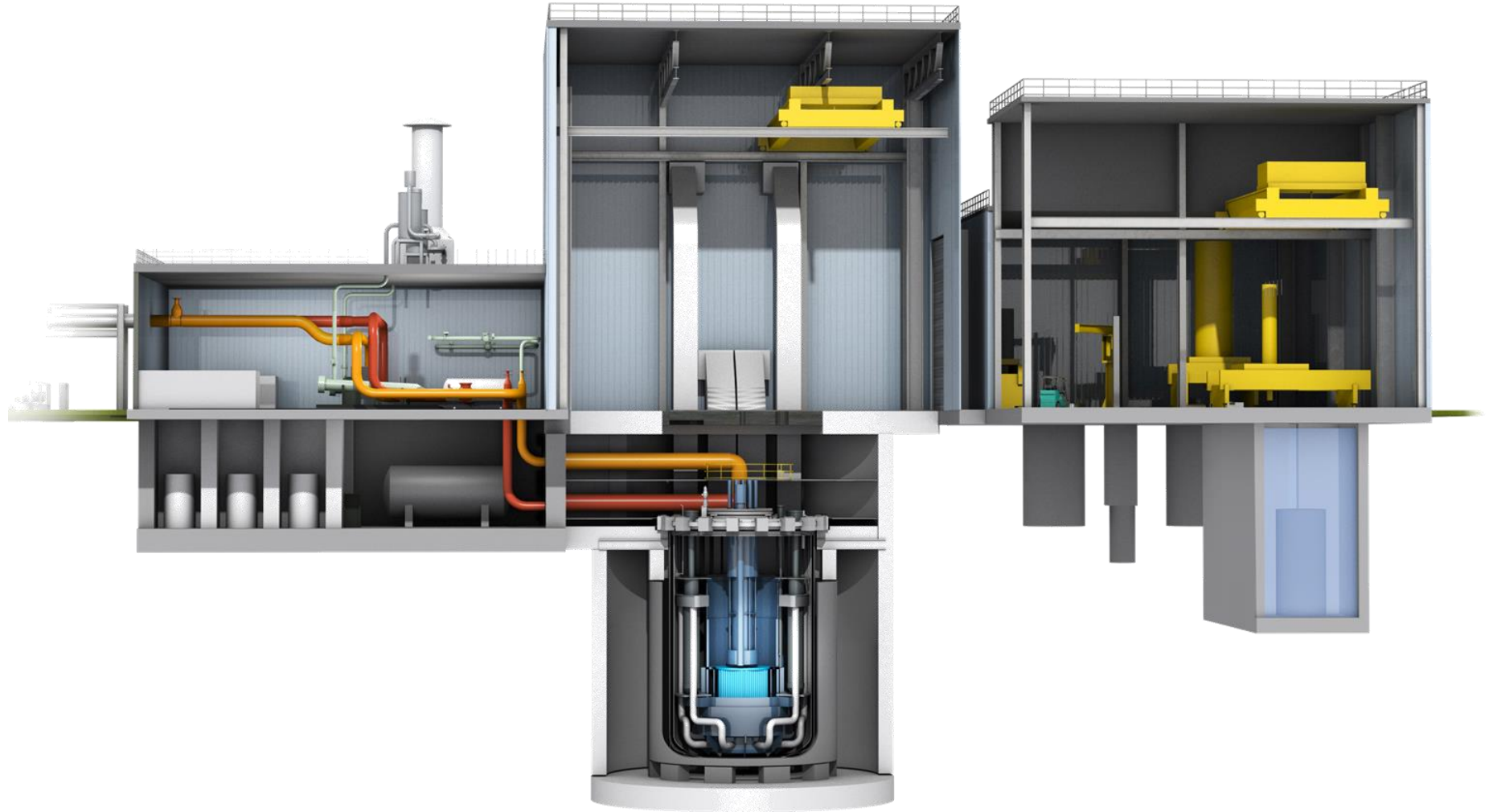
- Renewing U.S. leadership in nuclear energy and climate
- Unlocking U.S. national labs' and nuclear technology companies' innovations
- Building on U.S. history of demonstration success

# Natrium™ Technology: Flexible, Clean Energy

- Developed through close collaboration between TerraPower and GE Hitachi
- Builds on technology development at TerraPower and GE Hitachi and concentrated solar power technologies with a focus on cost competitiveness
- Integrates on and fortifies grids with high renewables penetrations
- 345 MWe reactor that can flex to 500 MWe for 5.5 hours when needed

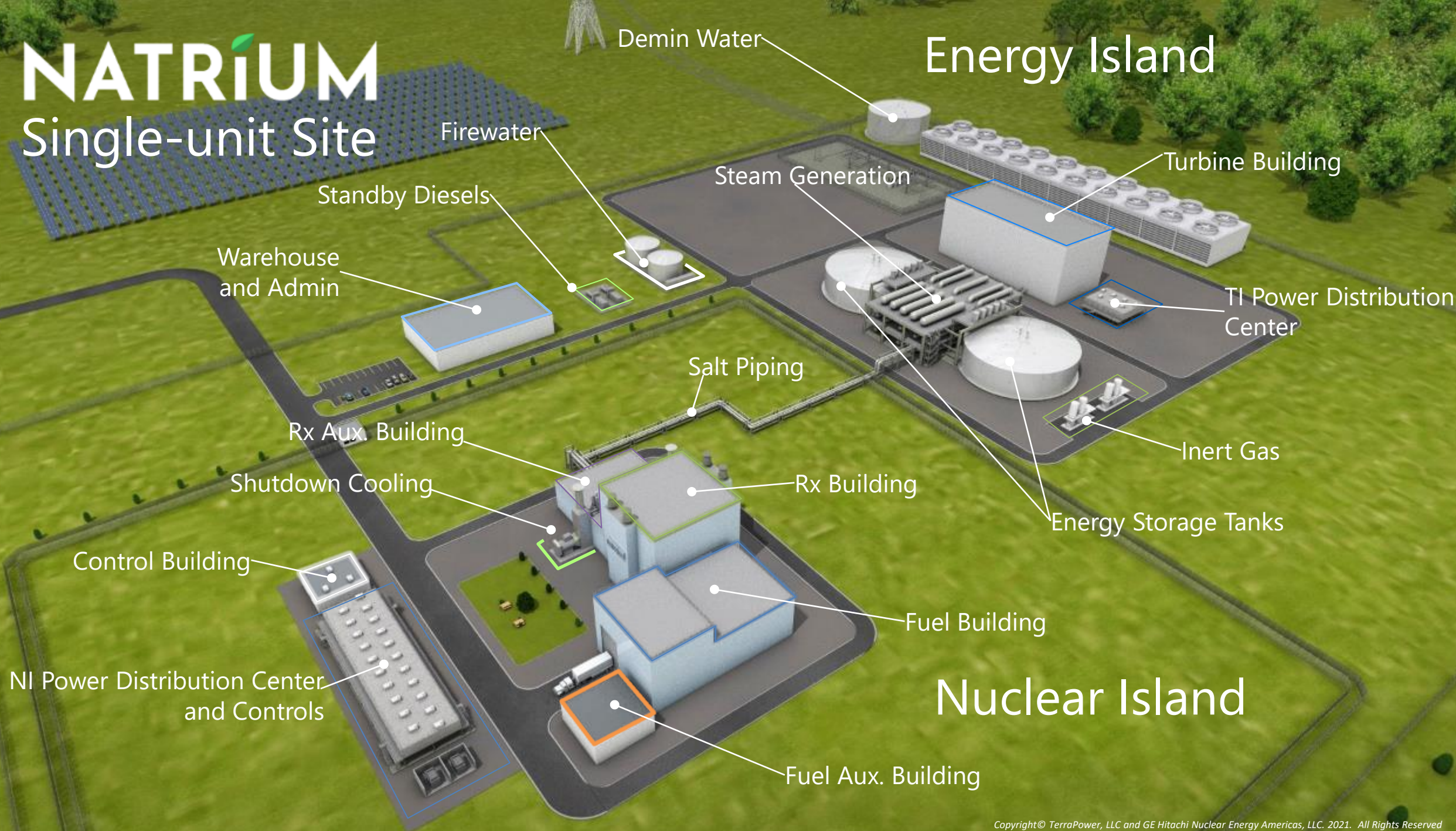


# Natrium™ Technology: Reactor Building



# NATRIUM

## Single-unit Site



Demin Water

Energy Island

Firewater

Standby Diesels

Steam Generation

Turbine Building

Warehouse and Admin

TI Power Distribution Center

Salt Piping

Rx Aux. Building

Inert Gas

Shutdown Cooling

Rx Building

Energy Storage Tanks

Control Building

Fuel Building

NI Power Distribution Center and Controls

Nuclear Island

Fuel Aux. Building

# An Expert Team with Unparalleled Expertise

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## **TerraPower, LLC**

Overall plant design, testing, licensing, design integration, procurement and project leadership and administration

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## **GE Hitachi Nuclear Energy Americas, LLC**

Plant design, testing, licensing and procurement

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## **Bechtel Power Corporation**

Plant design, licensing, procurement and construction

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## **Energy Northwest**

Operations programs, commissioning and start-up

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## **Duke Energy Carolinas, LLC**

Licensing, operations and engineering support

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## **PacifiCorp, a subsidiary of Berkshire Hathaway Energy**

Eventual plant owner and energy sales and integrated resource planning support

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# An Expert Team with Unparalleled Expertise continued

Global Nuclear Fuels Americas, LLC	Fuel fabrication
American Centrifuge Operating, LLC (Centrus Energy Corporation)	HALEU supply
Orano Federal Services, LLC	System design and decommissioning support
Battelle Energy Alliance, LLC (Idaho National Laboratory)	Fuel qualification testing
Argonne National Laboratory	Methods development and digital twin support
Los Alamos National Laboratory	Fuel characterization
Oak Ridge National Laboratory	Neutron irradiation testing
Pacific Northwest National Laboratory	Mechanical testing of materials
Oregon State University	Thermal hydraulic V&V testing support
University of Wisconsin	Heat exchanger testing support
North Carolina State University	Support on digital engineering for building/facility construction management





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