



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

Chris Levesque, President and CEO  
TerraPower, LLC

# Bold and Ambitious Clean Energy Goals



“[T]here is promise in the solutions — opportunities to... put the United States on a path to achieve net-zero emissions, economy-wide, by no later than 2050.”

Executive Order on Tackling the Climate Crisis at Home and Abroad, January 27, 2021

# 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”

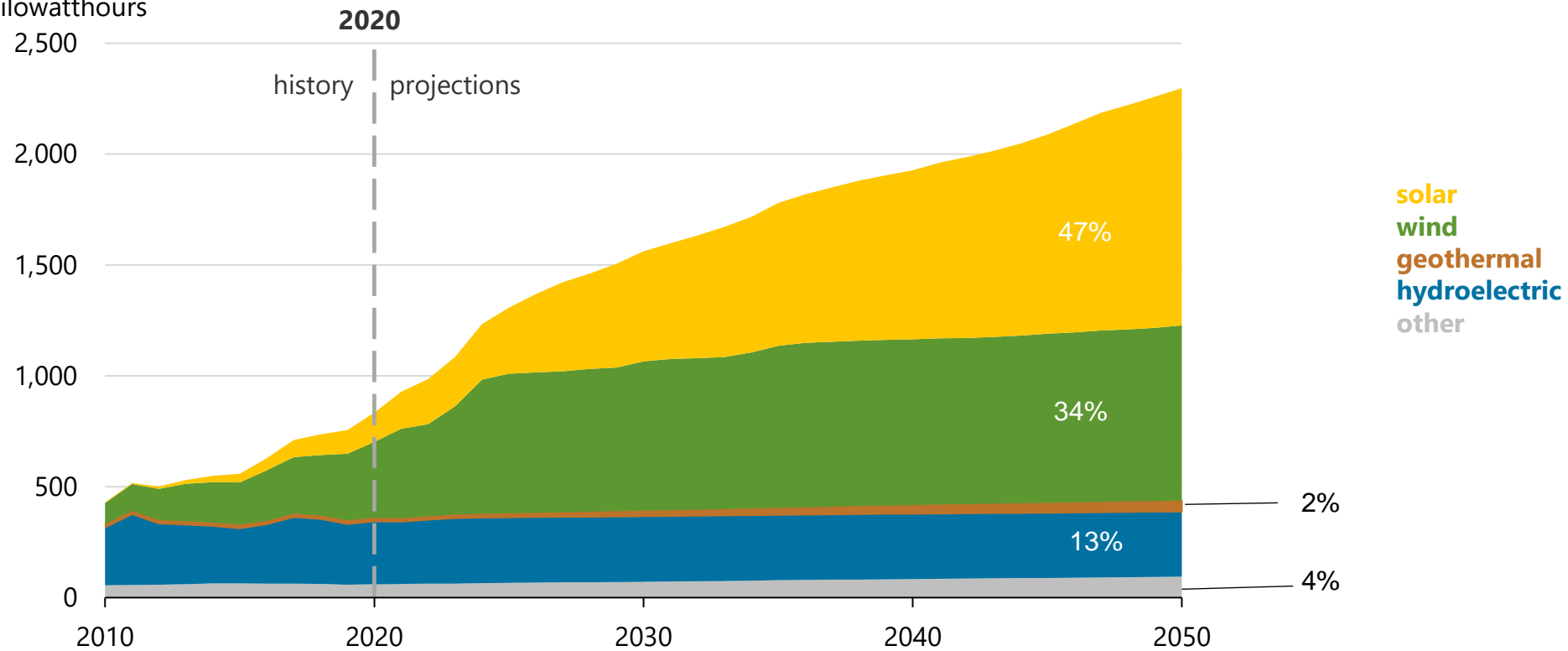


# Need for Clean, Firm Generation and Energy Storage

## U.S. renewable electricity generation, including end use

AEO2021 Reference case

billion kilowatthours



Source: U.S. Energy Information Administration, Annual Energy Outlook 2021 (AEO2021)

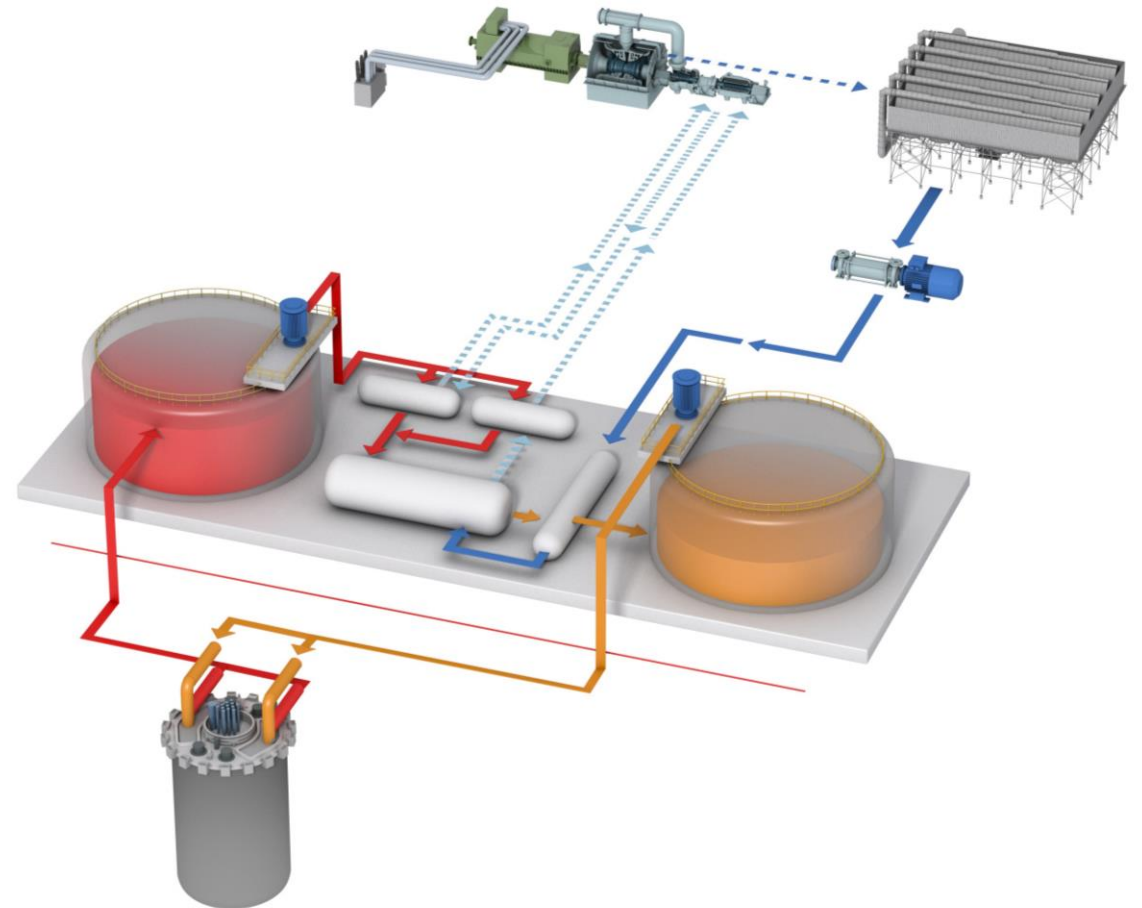
# U.S. Commitment to Advanced Reactor Demonstration



- 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

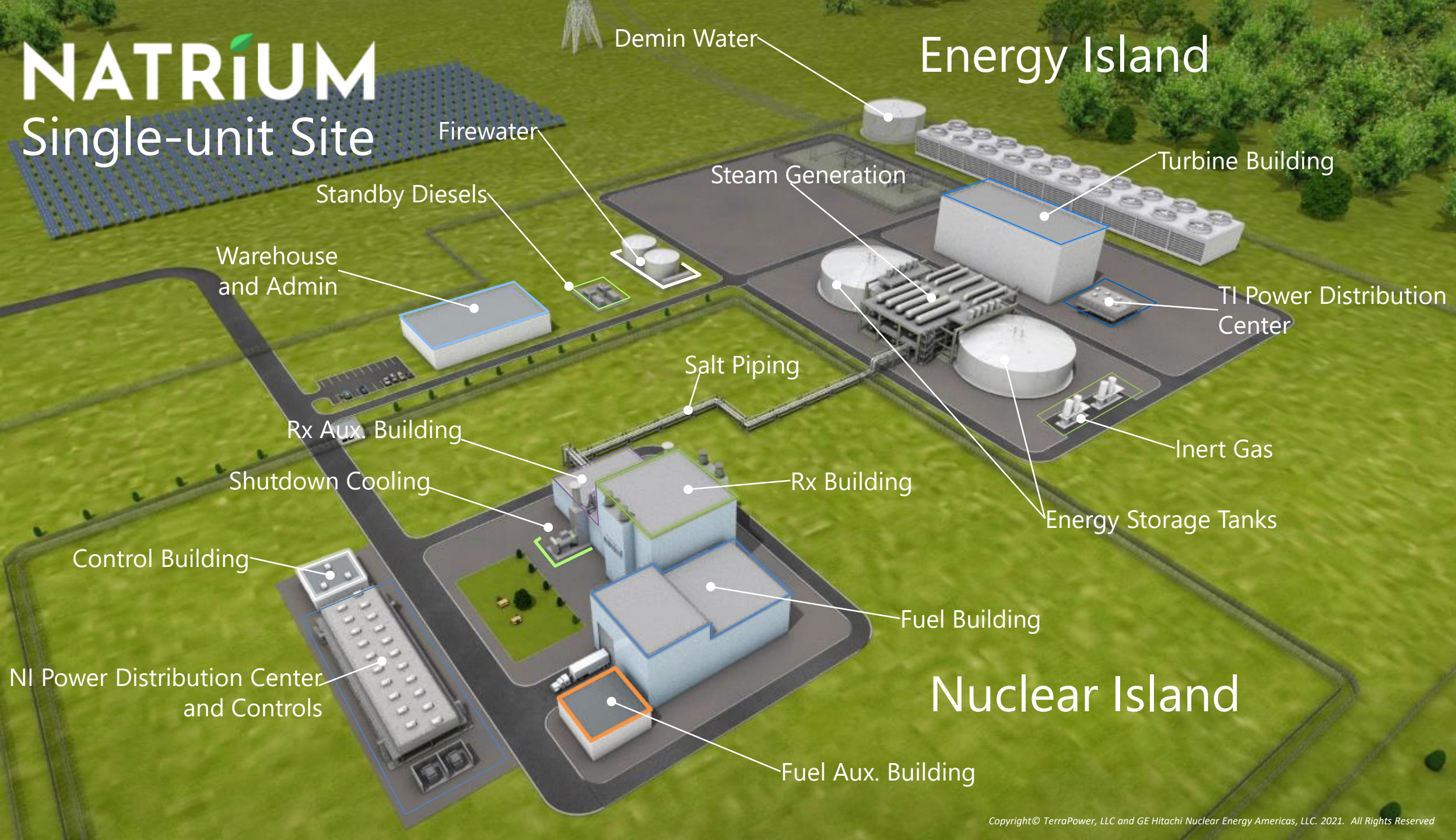
# Natrium™ Technology: Flexible, Clean Energy

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



# 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



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