



# TVA and Advanced Nuclear Clinch River Nuclear Project & New Nuclear Program

Southern States Energy Board's (SSEB)  
63rd Annual Meeting

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Tennessee Valley Authority  
Executive Vice President and General Counsel

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FOR ILLUSTRATIVE PURPOSES ONLY



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# America's Largest Public Power Company

- Among the largest utilities in the U.S.
- 3<sup>rd</sup> largest nuclear owner in the U.S.
- 90 years in operation (1933-2023)
- 80,000 square miles service area
- 10 million service area population
- 38,111 MW diverse power system capacity
- 16,000 miles+ transmission system
- \$12.5 billion annual revenues
- \$51.2 billion total assets
- Entirely self-funded
- All board members appointed by U.S. President, confirmed by U.S. Senate



# TVA Mission

BUILT FOR THE PEOPLE OF THE UNITED STATES OF AMERICA

## ENERGY

Electricity at the lowest feasible rate and highest feasible reliability

## ENVIRONMENT

Stewardship of the natural resources for best use by the public

## ECONOMIC DEVELOPMENT

To attract and retain good jobs and capital investment in the Valley



1933

TVA ACT  
SIGNED



1940s

HYDRO



1950s

FOSSIL



1960s

NUCLEAR



1970s

PUMPED  
STORAGE &  
GAS



2020+

TVA'S ENERGY SYSTEM OF THE FUTURE

Since its inception, TVA has innovated to meet the needs of the Valley.

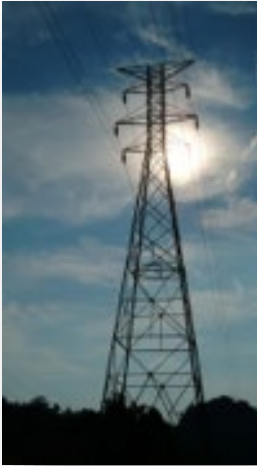
Today and in the future, the Valley needs **affordable, reliable, resilient, and carbon-free energy** to lead the nation in energy innovation.



INNOVATING FOR THE PEOPLE OF THE VALLEY

# TVA's Nuclear Power and Construction Experience

OUR EXPERIENCE & EVOLUTION POINT TO ADVANCED NUCLEAR



TVA operates the third largest nuclear reactor fleet in the U.S.



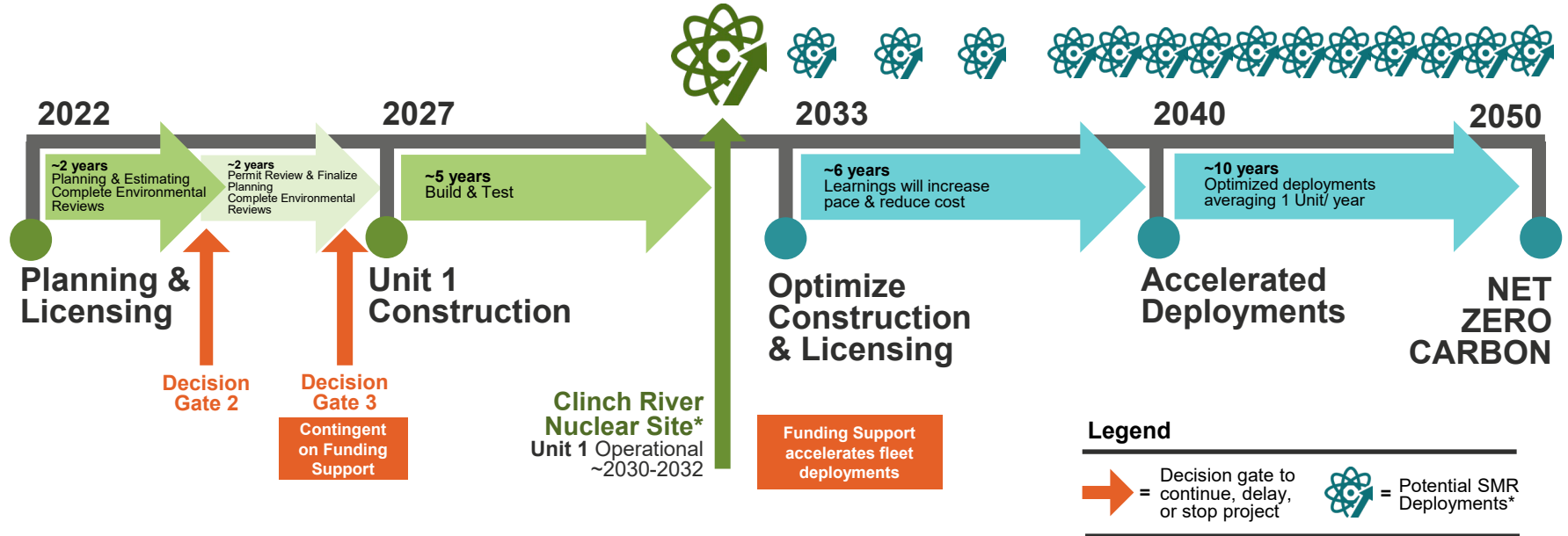
TVA's Watts Bar Unit 2, the nation's first new nuclear generation in 20 years, entered commercial operation in 2016



At any given time, TVA has around 900 active projects totaling \$12 Billion in approved funding for construction and refurbishment projects.

# TVA's Path Forward for Potential SMR Deployments

CLINCH RIVER NUCLEAR PROJECT | NEW NUCLEAR PROGRAM

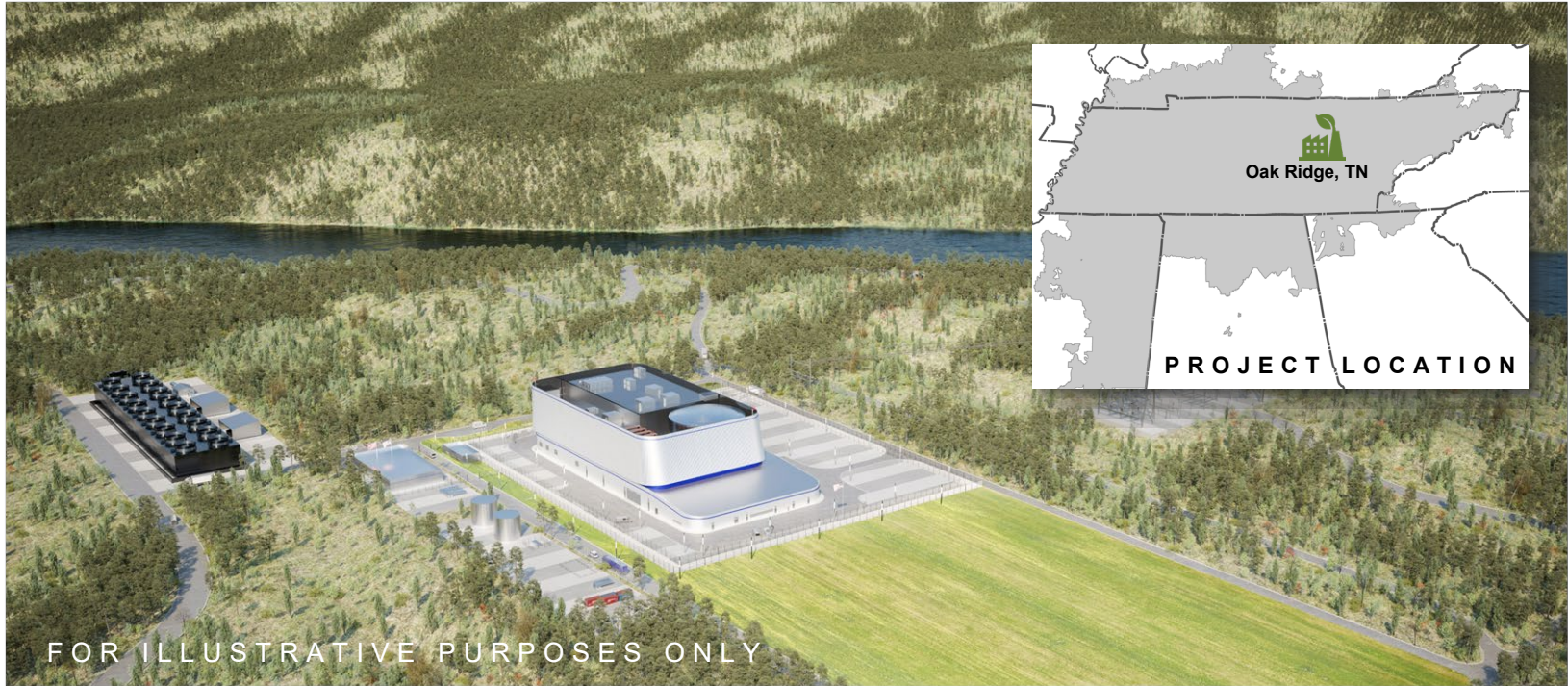


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\*TVA has not yet decided to deploy an SMR. Any decisions will be subject to support, risk sharing, required internal and external approvals, and completion of all necessary environmental and permitting reviews.

# Clinch River Nuclear Project

TVA'S POTENTIAL FIRST ADVANCED NUCLEAR SMALL MODULAR REACTOR\*



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# GE-Hitachi BWRX-300


BUILDING ON PROVEN TECHNOLOGY

TVA identified GEH's innovative BWRX-300\* reactor design as the most promising for near-term deployment.

**BENEFITS OF THIS DESIGN INCLUDE**

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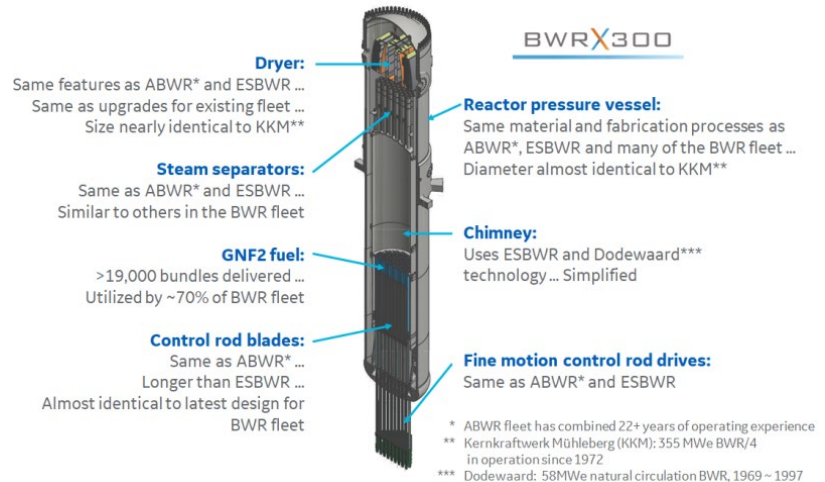
**10** GENERATIONS OF DESIGN HISTORY 

 EXISTING SUPPLY CHAINS  AMERICAN FUEL

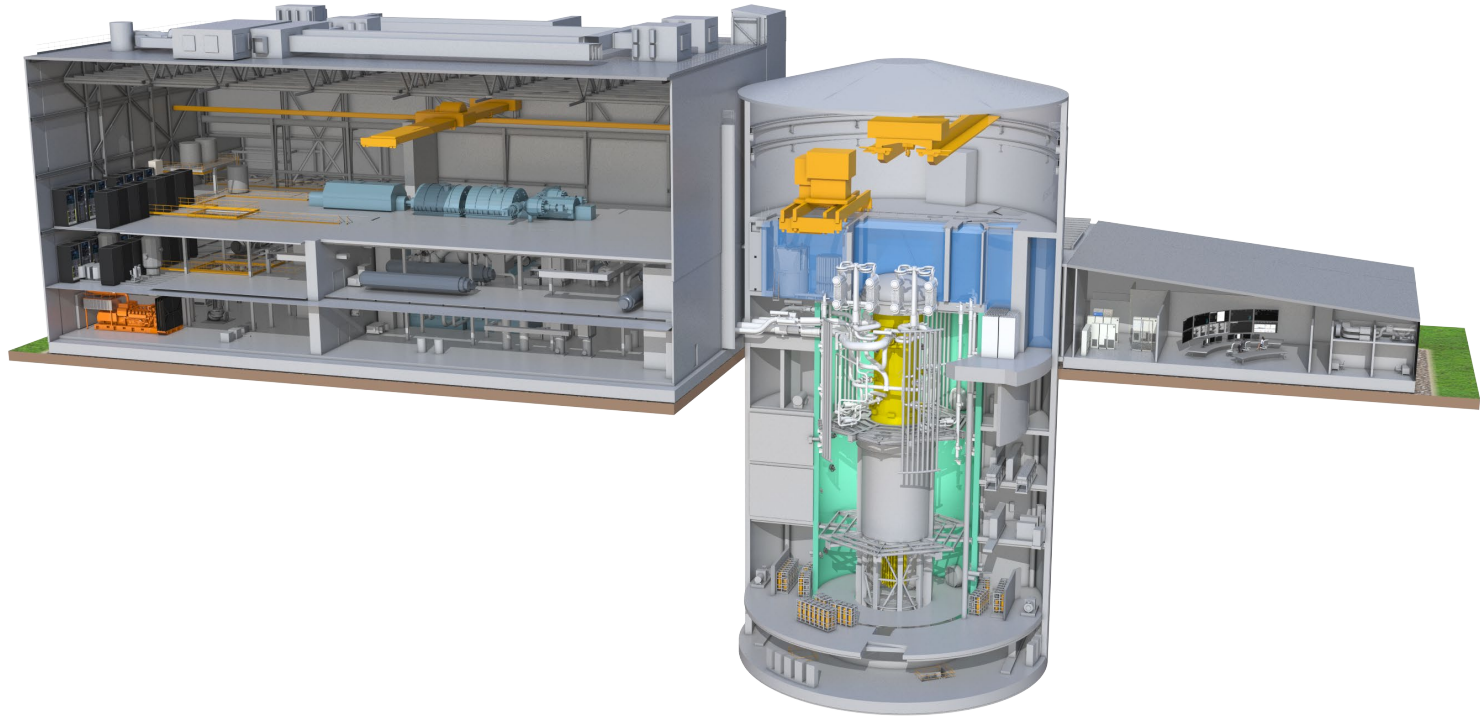
 NRC LICENSING PATHWAY

This provides confidence the technology can be **rapidly deployed** on a **predictable schedule** with **acceptable risk**.

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# Technology Collaboration Agreement

COLLABORATION | COST SHARING | STANDARDIZATION | O&M SUPPORT

**ONTARIOPOWER**  
GENERATION

Participating in the BWRX-300 SMR design for deployment in Canada. Two years ahead of TVA proposed deployment timeframe.

**TVA**

Participating in the BWRX-300 SMR design being evaluated for deployment in the Valley.

**synthos**

Participating in the BWRX-300 SMR design being evaluated for deployment in Poland.



**HITACHI**

Developer of the BWRX-300 design being evaluated for deployment.

# TVA Vision for Advanced Nuclear

STRATEGICALLY MOVING FORWARD FOR THE PEOPLE OF THE VALLEY

Leadership



TVA's leadership in technology innovation provides a pathway to net-zero carbon emissions.

Experience



TVA has the nuclear and construction experience and talent to support small modular reactor (SMR) development and deployment.

Approved Site



The NRC approved an Early Site Permit for TVA's Clinch River Site, establishing the site's suitability for SMRs.

Strategic  
Approach



TVA's Decision Gates will ensure the timing of deployment is right.

Future-Looking



TVA's Advanced Nuclear Program will inform future SMR decisions and potential deployment locations across the Tennessee Valley.

**TVA**

**TENNESSEE  
VALLEY  
AUTHORITY**