

# **Westinghouse History**

**Innovation Changing the World** 

George Westinghouse's faith in the alternating-current system led to the founding of the Westinghouse Electric Company in 1886.

Westinghouse supplied the world's FIRST commercial pressurized water reactor (PWR) in 1957 in Shippingport, Pennsylvania, USA.

Westinghouse technology is the basis for approximately half of the 440 nuclear power reactors in operation, giving Westinghouse the **world's largest installed base** of operating plants.



# **About Westinghouse**

Approximately

10,000 Employees

Locations in

21
Countries

Comprised of

4

**Business Units** 

**OPERATING PLANT SERVICES** 

NUCLEAR FUEL

**ENERGY SYSTEMS** 

**ENVIRONMENTAL SERVICES** 

More Than

70

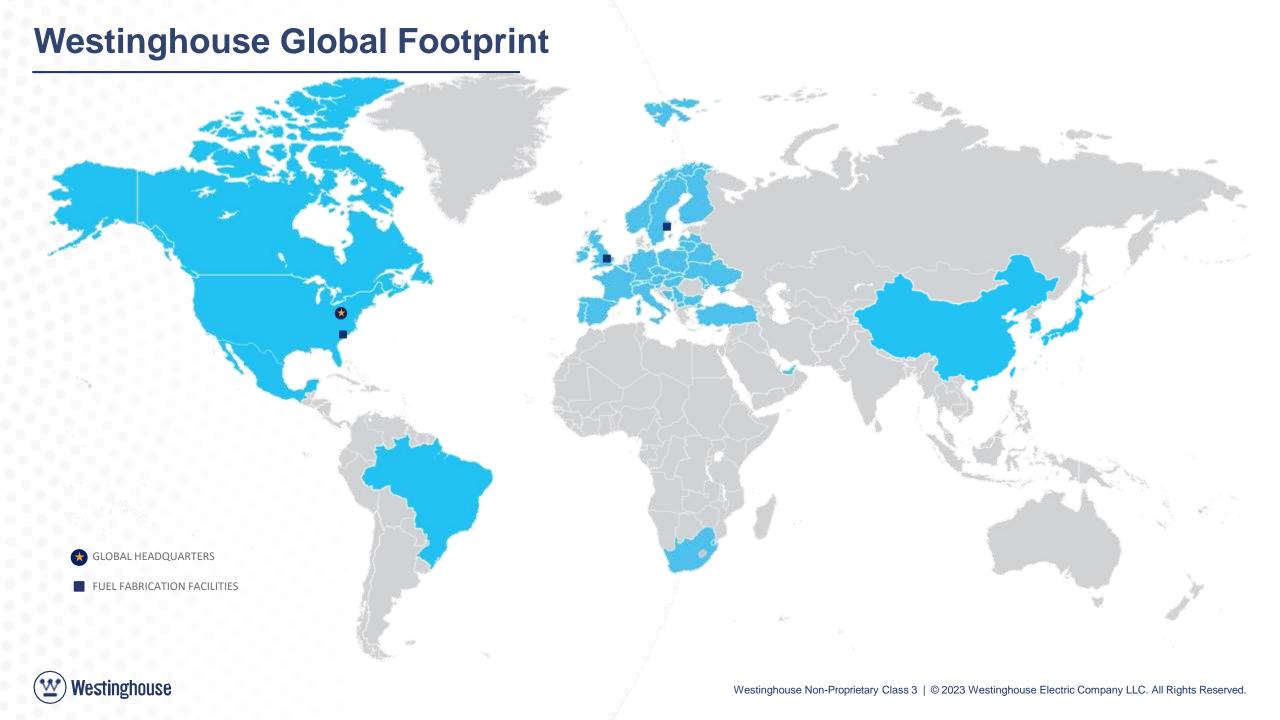
**Facilities** 

Our Technology Generates Nearly

50%

Of the World's Nuclear Power





# **Westinghouse in LATAM**

#### **Mexico**

 Operation and outage activities support for Laguna Verde NPP (CFE)

#### **Argentina**

- Operation and outage activities support for Atucha NPP and Embalse NPP (NA-SA)
- Support to LTO program for Atucha 1 NPP

#### **Brazil**

- ELETRONUCLEAR
  - **O&M** support for Angra 1 and Angra 2 NPPs
  - Training and Simulation for Angra 1, 2 and 3
  - Support to **LTO program** for Angra 1 NPP
- INB as technological partner
- Participation in LABGENE (Amazul/Marina do Brasil)







# Innovative Solutions Portfolio

Meeting customers' flexible energy demands by shaping today's and tomorrow's energy landscape

**AP1000® PWR** ~1200 MWe

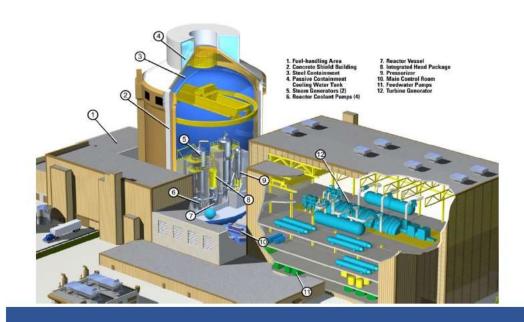
AP300™ SMR 300 MWe eVinci™ Microreactor 5 MWe



#### **AP-1000 PWR**



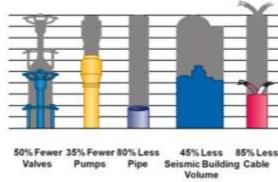
# Safe, Simple, Standard



Improved safety using passive technology and proven components

### **AP1000 Plant Key Features**

- Passive Safety Systems
- Simplified Active Systems
- Proven NSSS Components
- Canned Motor Pumps
- Compact Footprint
- Modular Construction
- Significant Reduction in Quantities
- Digital I&C and Advanced Control Room
- Load Follow Capability





#### **AP-300 Small Modular Reactor**



Leveraging AP1000 technology with demonstrated industry leading reliability



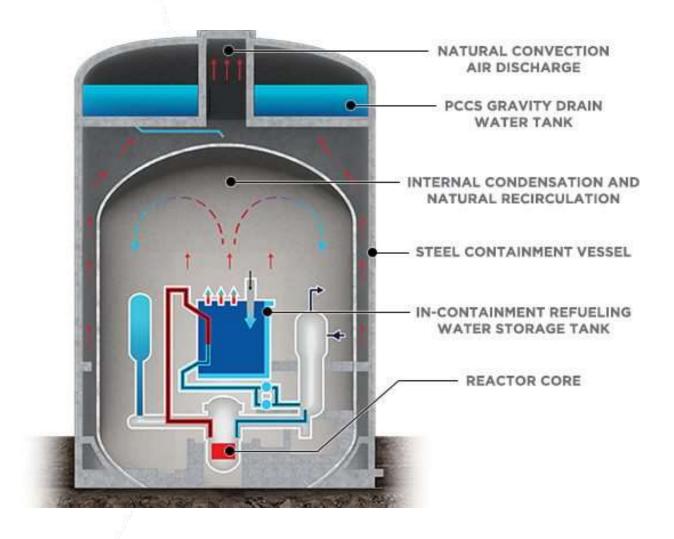
300MWe (900MWth) 1-loop PWR with demonstrated reliability



Westinghouse AP1000 reactor passive safety technology



Reduces overall components creating a simpler plant compared to other SMRs





# Readily Deployable by 2030's Westinghouse

Proven pedigree throughout the plant lifecycle ensures deployment & operations success



#### **Technology** Readiness

Tens of millions of hours dedicated to AP1000 reactor development 5 AP1000 reactors operating. 1 nearing completion, more pending



#### Licensing Certainty

Based on licensed & operating AP1000 technology, the only technology to be fully licensed by the U.S NRC



#### **Established Supply Chain**

Incumbent AP1000 suppliers can deliver major equipment Demonstrated capability to localize supply chain



#### Modular Construction

Simplified, modular, ultra compact nuclear island (costliest portion of any reactor) reduces construction costs/schedule



#### Reliable **0&M**

Record setting AP1000 operational & outage performance Targeting +80-year life cycle



# eVinci: Capable and Simplicity by Design



**Nuclear battery designed for safe and reliable electricity and heat generation** 

#### **Technical Capabilities**

- 5 MWe with ~7MWth @ 170° C usable heat
   // 13.5MWth @ > 700° C heat only
- Scalable
- Minimum 8 year refueling cycle
- Eliminates spent fuel storage on site
- High speed load-following capability
- Transportable
- Minimal onsite personnel
- Mature technology, manufacturing, and regulatory readiness

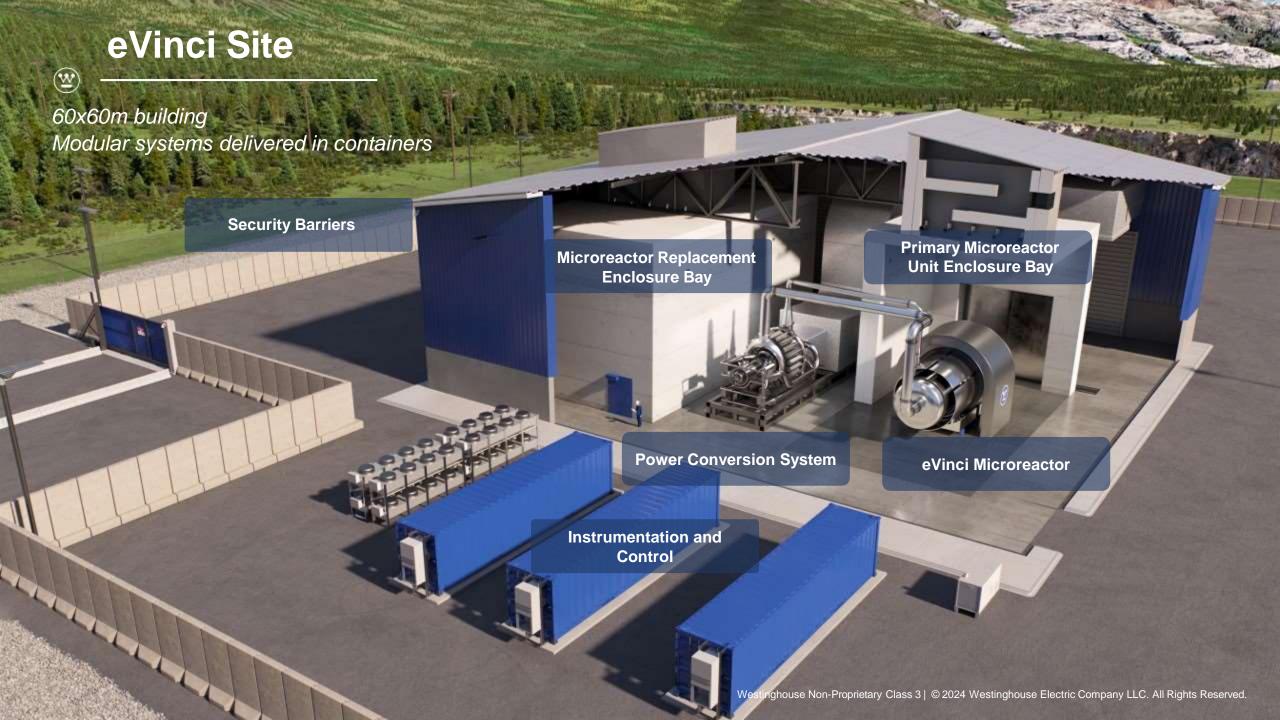




Learn more about eVinci

Minimal moving parts due to passive cooling through heat pipe technology





# eVinci distributed energy wherever it's needed









# **Challenges**



#### **Supply Chain**

- Technical and economical feasibility for the advanced reactors.
- Leverage the lessons learned & existing supply chain

#### Regulatory

Licensing new design reactors and fuel

#### **Public policies**

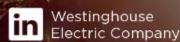
 Legal framework to enable private companies to participate in the construction and operation of new nuclear facilities



# iGracias! Obrigado!









westinghousenuclear.com

