



**HITACHI**

# The BWRX-300

**GE Hitachi**

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Dave Sledzik  
Senior Vice President



# BWRX300

- 10<sup>th</sup> generation BWR
- 300 MWe SMR
- World class safety
- LCOE competitive with gas
- Up to 60% capital cost reduction per MW
- Scaled from licensed ESBWR
- Designed to mitigate LOCA
- Reduced on-site staff and security
- Design-to-cost approach: <\$1B total and <\$2,250/kW
- Capable of load following
- Ideal for industrial applications ... district heating and desal
- Constructability integrated into design

Deployable by 2027



**300 MW  
Water Cooled  
SMR**



Designed to  
Mitigate LOCA



Reduced  
Staff



Cost Competitive  
with Gas

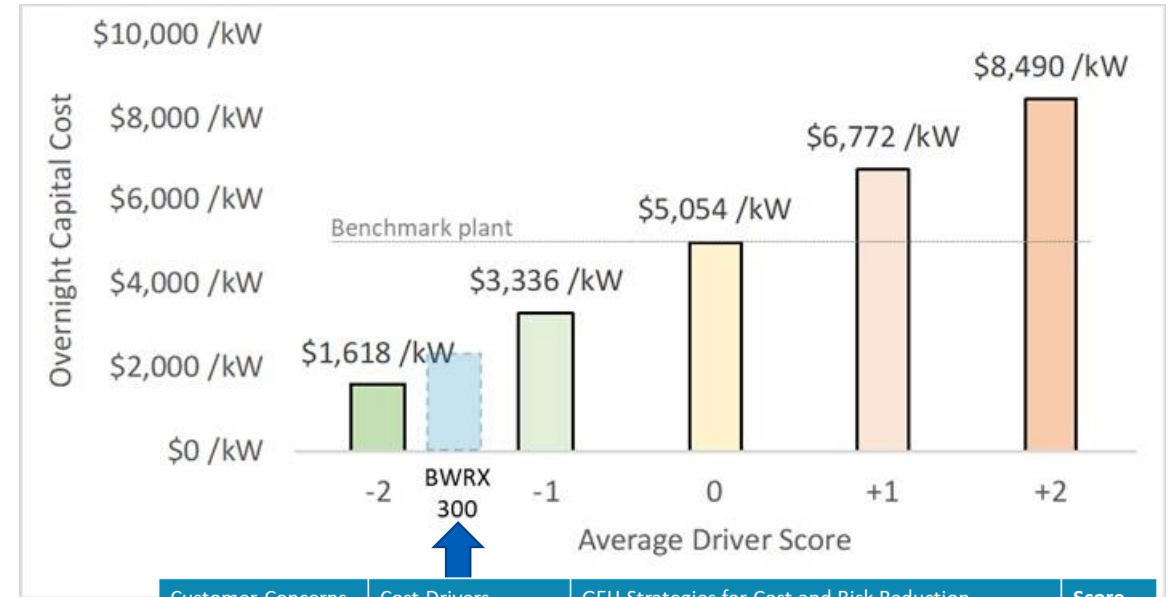


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# LucidCatalyst independent BWRX-300 cost analysis

- Builds on UK Energy Technologies Institute's (ETI) study on **nuclear cost drivers** ... data from 33 nuclear projects & 50+ interviews\*
- **Database** compiled of nuclear **project costs** and **score assignments** in **eight** cost driver **categories**\*\* ... determined **statistical relationships** through **multiple regression**
- **Scoring system from -2 to +2** ... **0** is **benchmark** plant, **+2** reflects factors that tend to **raise** plant **costs**, and **-2** reflects factors that tend to **lower costs**
- Model **calculates expected capital costs** for future **nuclear plants** ... from score assignments across nearly **100 specific indicators** within the driver categories
- ETI Nuclear Cost Drivers Study found that a relatively small number of understandable factors drives the cost of nuclear plants



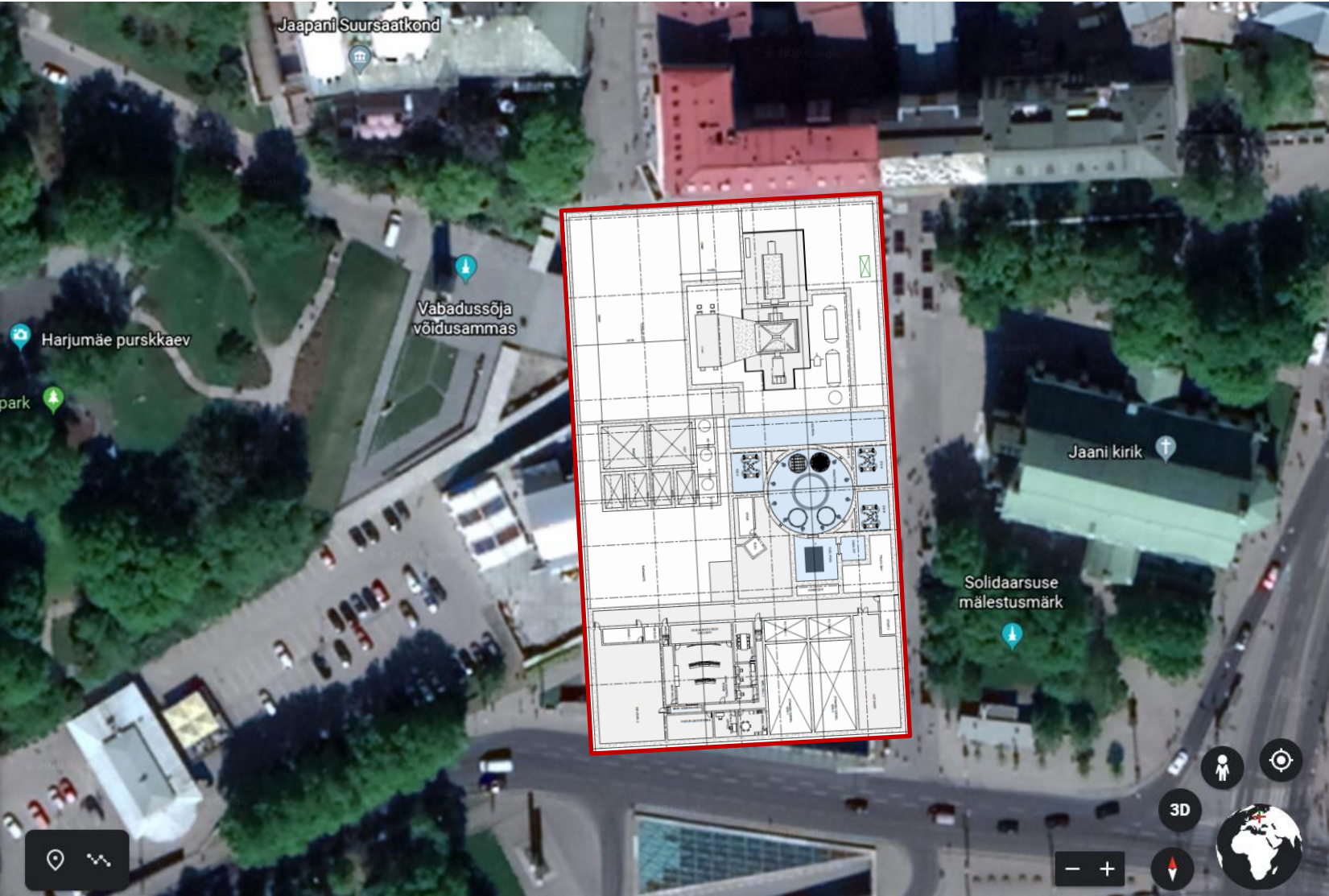
Customer Concerns	Cost Drivers	GEH Strategies for Cost and Risk Reduction	Score
Design completion and constructability review	Vendor Plant Design	Design to cost, optioneering, constructability integrated into design, standardization, design reuse	Below -1
Schedule certainty and risk of delays	Construction Execution	Planning for streamlined construction. Short schedule target (3yrs) Design for manufacturing and assembly (DfMA) greatly de-risks construction	Below -1
Extent of qualified labor required	Labor	Off-site manufacturing to minimize onsite labor	-1
Supply chain risk	Supply Chain	Well-established high quality supply chain. Off-the-shelf commercial components	Below -1
FOAK risks	Project Governance	Integrating highly experienced and successful project delivery team with the design team to optimize design for constructability	Below -1
Regulatory uncertainty	Political and Regulatory context	Reduced regulatory risk through design completion and use of previously licensed components and systems.	Below -1
High OpEx	Operation	Operational strategies, such as fewer on-site staff per MW	Below 0

\* LucidCatalyst for the Energy Technologies Institute, *The ETI Nuclear Cost Drivers Project*, April 2018  
<https://www.eti.co.uk/library/the-eti-nuclear-cost-drivers-project-summary-report>  
<http://www.world-nuclear-news.org/Articles/Identifying-the-cost-drivers-of-nuclear-projects>

\*\* The eight driver categories are vendor plant design, equipment and materials, construction execution, labor, project governance and development, political and regulatory interactions, supply chain, and post-construction operation



# BWRX-300 ... small footprint



Freedom Square



Image provided by Google Earth