

BWRX-300 beginnings

BWRX300

Deep decarbonization with nuclear

District Heating Seminar, Helsinki, Finland, March, 2019



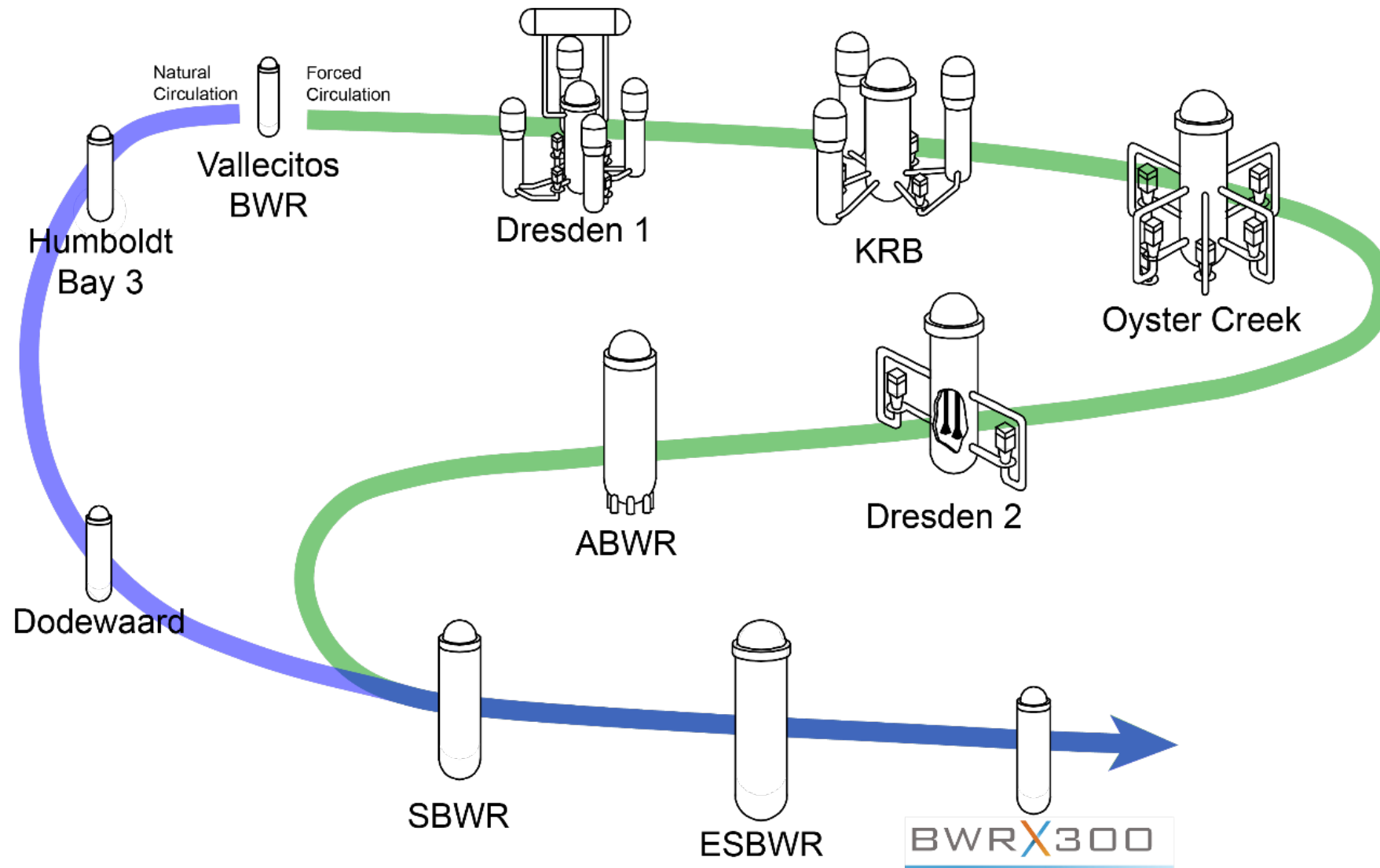
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<https://thinkatomnet.files.wordpress.com/2020/03/christer-dahlgren-ge-hitachi-bwrx-300-deep-decarbonizing-with-nuclear-1.pdf>

60 years of Boiling Water Reactor (BWR) innovation



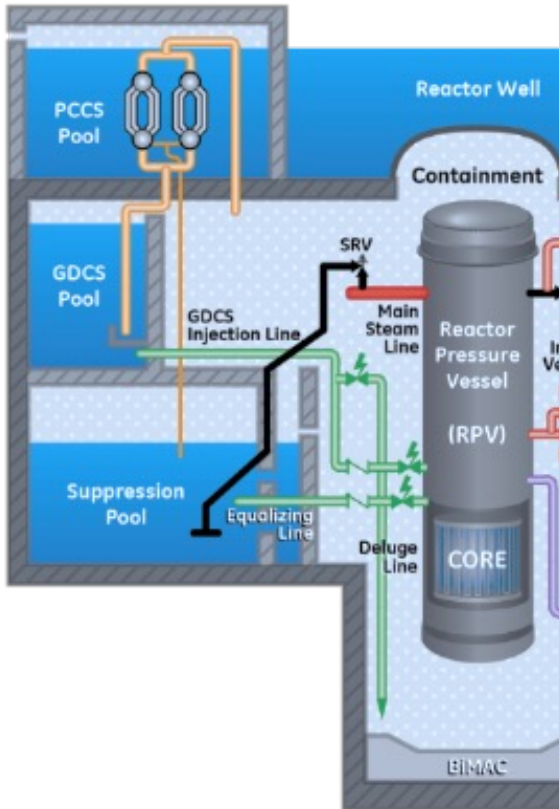
Simplicity drives cost reduction

ESBWR



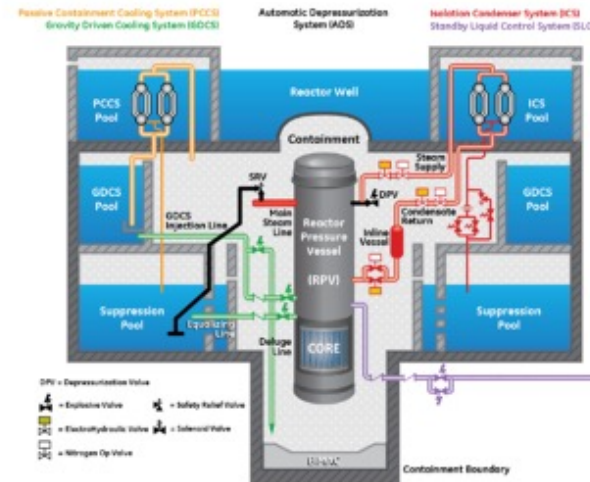
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BWRX300

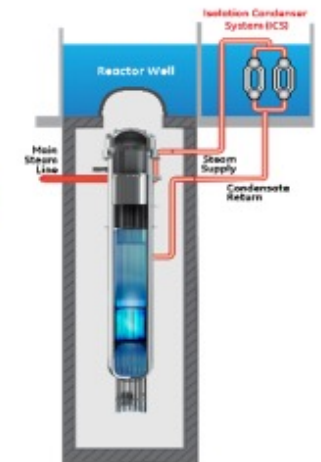


Licensed pedigree, re-sized

ESBWR



90% volume reduction

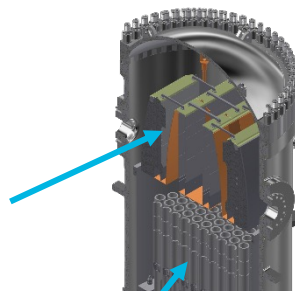


GE-Hitachi Nuclear Energy Proprietary Information – non-public information

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Using proven technology

PROVEN COMPONENTS, PRIOR TESTING, AND OPERATIONAL HISTORY GREATLY ACCELERATE DEPLOYMENT

Dryer: 

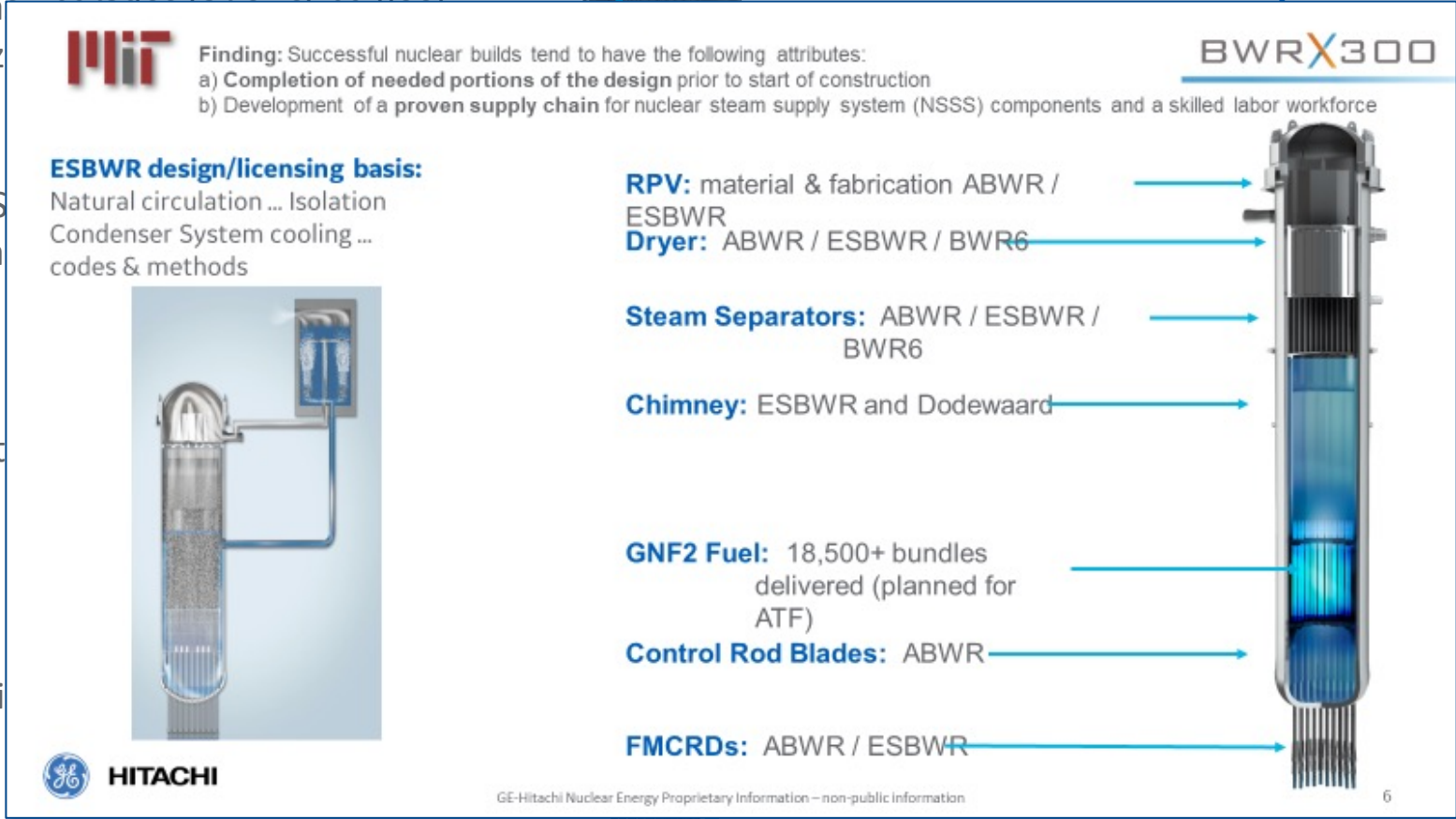
Same as ABWR* and ESBWR

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Similar to ABWR* and ESBWR

Utilizes ABWR* and ESBWR

Almost identical to ABWR* and ESBWR



MIT Finding: Successful nuclear builds tend to have the following attributes:
 a) Completion of needed portions of the design prior to start of construction
 b) Development of a proven supply chain for nuclear steam supply system (NSSS) components and a skilled labor workforce

ESBWR design/licensing basis:
 Natural circulation ... Isolation
 Condenser System cooling ...
 codes & methods

RPV: material & fabrication ABWR / ESBWR

Dryer: ABWR / ESBWR / BWR6

Steam Separators: ABWR / ESBWR / BWR6

Chimney: ESBWR and Dodewaard

GNF2 Fuel: 18,500+ bundles delivered (planned for ATF)

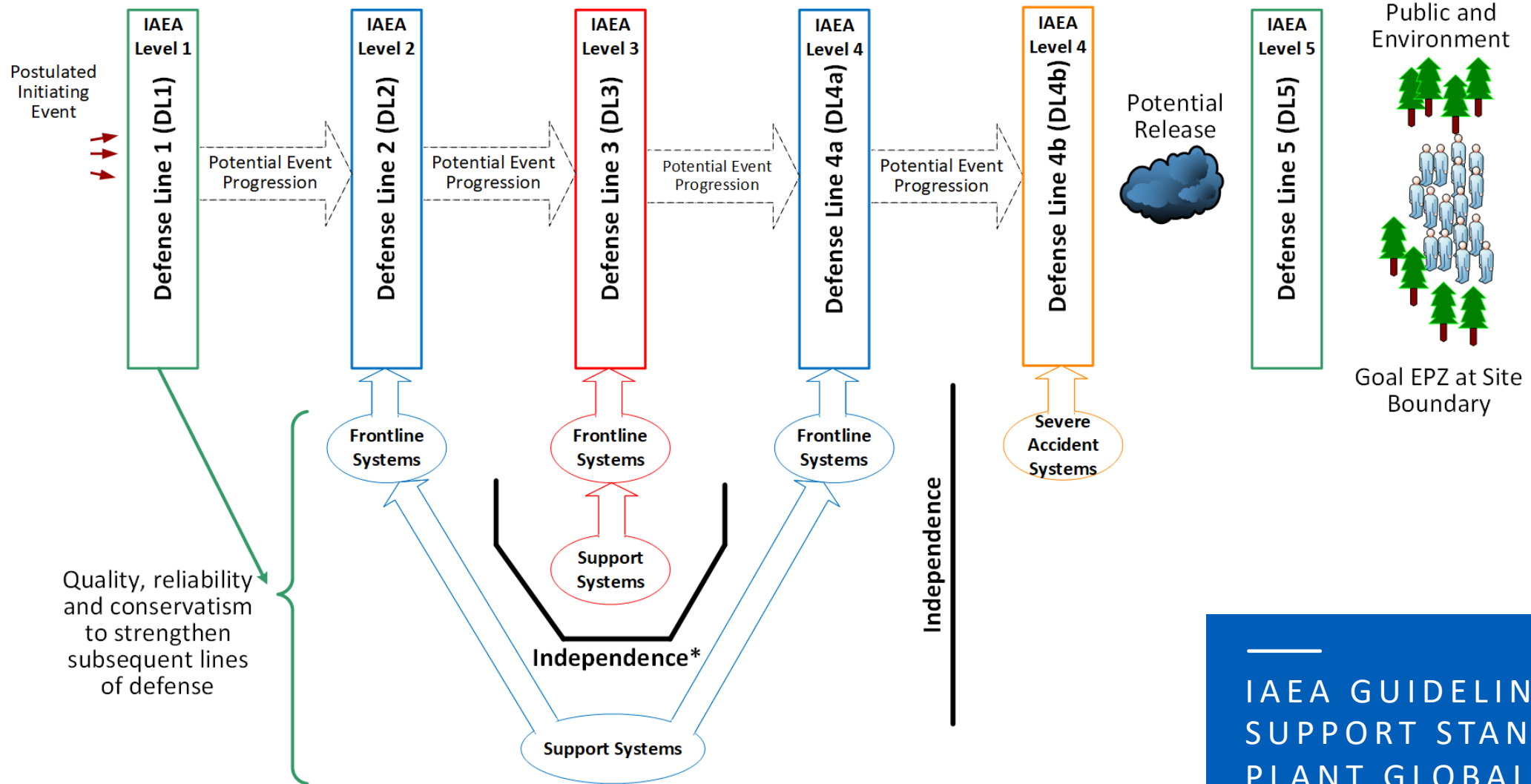
Control Rod Blades: ABWR

FMCRDs: ABWR / ESBWR

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Defense in depth ... built into the design from the start



IAEA GUIDELINES
SUPPORT STANDARD
PLANT GLOBALLY



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Suur tänu!