



ULTRA SAFE NUCLEAR

Advanced Nuclear Overview for CIBO

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RELIABLE ZERO-CARBON ENERGY ANYWHERE



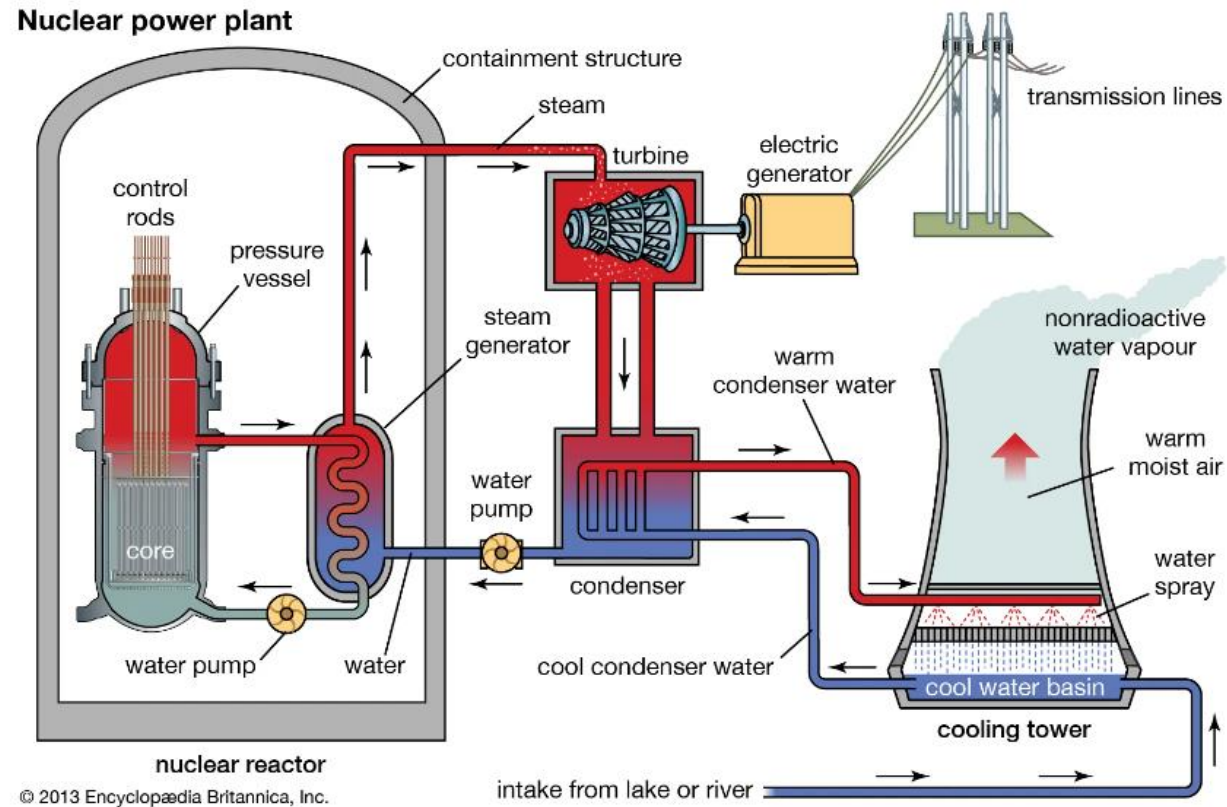
September 23

Outline

- Nuclear Power Overview
- Comparing Existing Nuclear to Advanced Nuclear
- Considerations for Deploying Nuclear Power at an Industrial Site



Traditional Nuclear Power Plant Overview

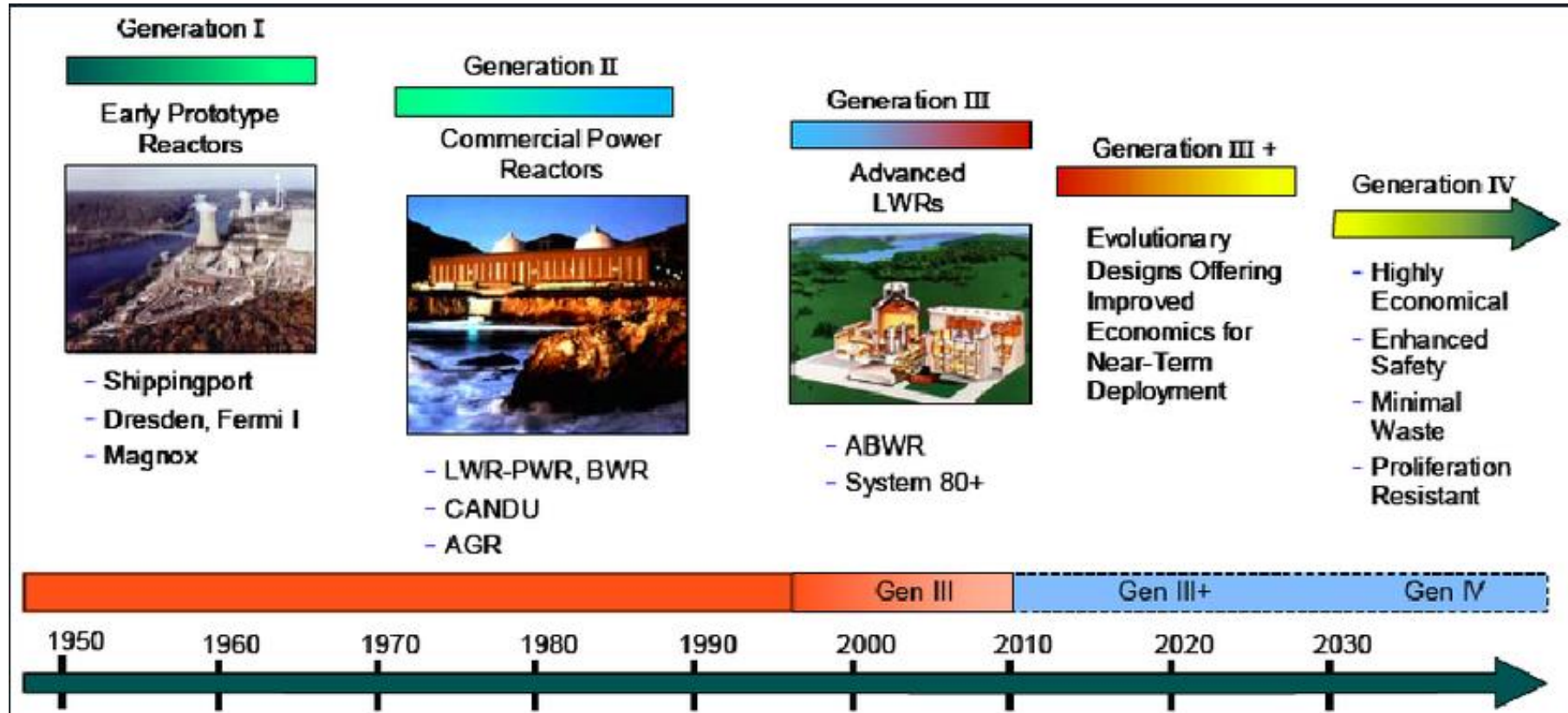


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Source: Encyclopedia Britannica



Advances in Nuclear Over the Decades



Source: An overview of future sustainable nuclear power reactors



Advanced Nuclear vs. Existing Nuclear

	Existing Nuclear	Large Gen III/III+	Small Modular Reactors	Micro Reactors
Power Level	500-1000 MWe	1000+ MWe	~300 MWe	<50 MWe
Footprint	~50 acres	~50 acres	~50 acres	~5 acres
Siting	Large standoff	Large standoff	Medium standoff	Reactor site boundary
Safety	Can meltdown	Can meltdown	Inherently safe	Completely safe
Construction	Long	Long	Medium	Short
Operation staff	Large staff	Large staff	Medium staff	Small staff
Operation	Electric	Electric	Electric	Electric, Heat, and Power
Load	Always on	Always on	Always on	Load follows



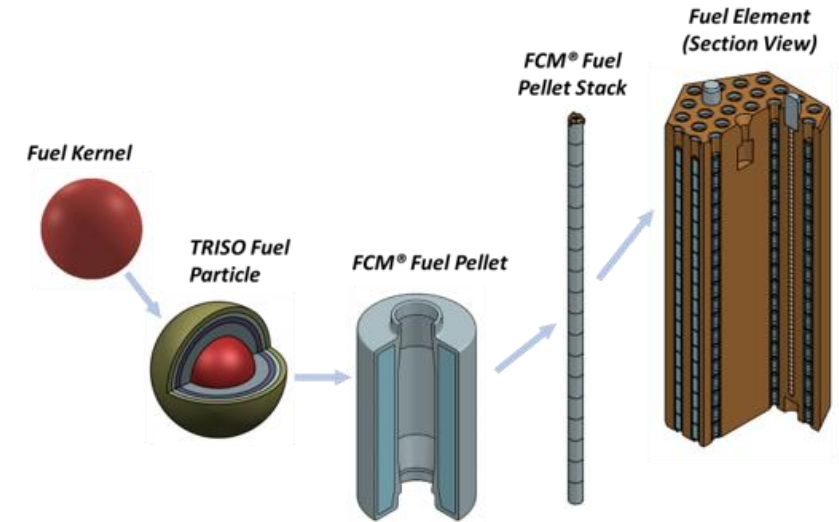
Considerations for Nuclear Deployments for Industrial Applications

- **Power resiliency**
 - Nuclear has fuel onsite, with long refueling timelines
- **Construction timeline**
 - Rapid transition from existing to nuclear
- **Facility integration**
 - Match existing process temp, pressure, uptime, load changes
 - Evaluate additional water needs
- **Footprint**
 - Available space, deployable anywhere
- **Economics**
 - Predictable long term power costs
- **Carbon free power**
 - Value of low carbon products



Ultra Safe Nuclear Micro Modular Reactor (MMR) Characteristics

Key Considerations	MMR Characteristics
Power Resiliency	5 – 10 years of fuel onsite
Construction Timeline	1 - 2 year construction after licensing is complete
Facility Integration	Deployable at any site, any location; no water needed
Footprint	<1 acre per MMR
Economics	Competes with carbon sequestered natural gas
Carbon Free Power	100% zero carbon power
Load	Any size and type energy demand
Energy Characteristics	Meet existing boiler conditions



Advanced Nuclear is Now

- **Fuel Factory**
 - Delivered product to customer in 2023
 - Washington site with existing nuclear fuel manufacturer
- **Reactor Manufacturing Facility**
 - Alabama site
- **Current Orders**
 - Chalk River Lab in Canada
 - University of Illinois Urbana – Champaign
- **Filling the Factory**
 - Multiple global negotiations underway, including industrial boilers and across various markets





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