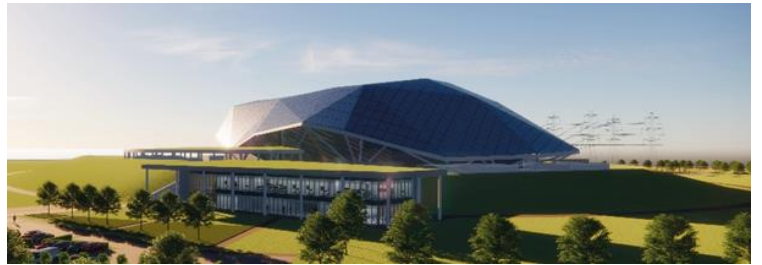


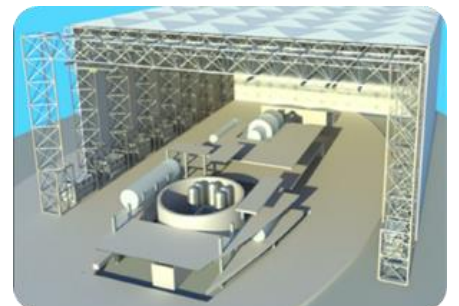
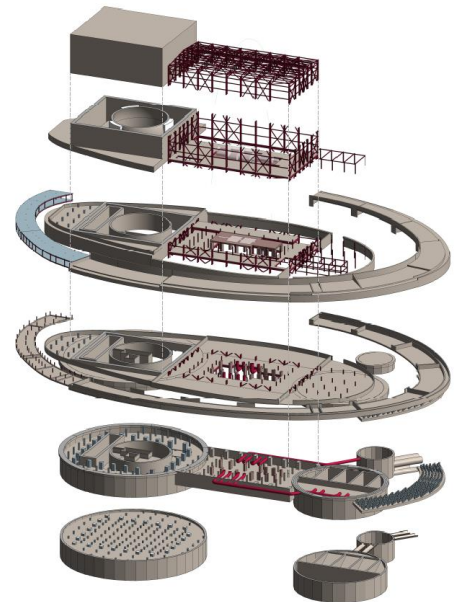
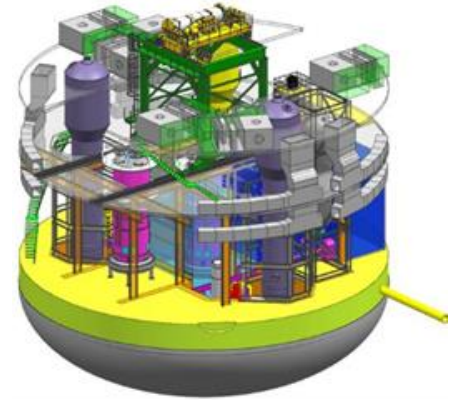


Rolls-Royce SMR Technical Overview



MAJOR TECHNICAL PARAMETERS

Parameter	Value
Technology Developer	Rolls-Royce & Partners
Country of origin	United Kingdom
Reactor Type	PWR
Electrical Capacity (MWe)	470
Thermal Capacity (MWth)	1358
Expected Capacity Factor (%)	>90
Design Life (years)	60
Coolant/Moderator	Light Water
Primary Circulation	Forced circulation
System Pressure (MPa)	15.5
Main Reactivity Control Mechanism	Control rods
RPV Height (m)	7.9
RPV Diameter (m)	4.2
Configuration of Reactor Coolant System	Compact
Coolant Temperature, Core Outlet (°C)	325
Coolant Temperature, Core Inlet (°C)	295
Power Conversion Process	Rankine cycle
Cogeneration Capability	Possible configuration
Passive Safety Features	Yes
Active Safety Features	Yes
Fuel Type / Assembly Array	Industry standard UO ₂ fuel in 17x17 array
Fuel Active Length (m)	2.8
Number of Fuel Assemblies	121
Fuel Enrichment (%)	4.95
Fuel Burnup (GWd/Te)	50 – 60
Fuel Cycle (months)	18 – 24
Number of Safety Trains	3 diverse decay heat removal methods, each with multiple trains
Emergency Safety Systems	Passive
Refuelling Outage (Days)	18
Distinguishing Features	<ul style="list-style-type: none"> • Compact site footprint • Modular approach facilitating rapid and cost-effective build • Larger power output than similar SMRs • Highly reliable passive safety systems • Attractive exterior that is robust to hazards
Estimated Construction Schedule (fleet)	4 years
Seismic Design (g)	0.3
Core Damage Frequency (per reactor year)	<1E-07
Design Status	Mature Concept



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