NERS 2018

EPR & ATMEA1 proposal for nuclear new build program in Czech Republic

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Commercial Lead – Strategic Supplier Engagement

Prague– NERS 2018 – November 7th 2018

AGENDA

1. **EDF / MHI proposal for EPR and ATMEA1 proposal in Czech Republic**
2. **EDF presentation**
   - EDF group
   - EPR reactor
   - EPR on-going projects
3. **MHI presentation**
   - MHI and ATMEA company presentation
   - ATMEA1 presentation
   - Progress of Sinop project
4. **Localisation in Czech Republic**
   - EPR / ATMEA1 synergies
   - Localization approach
5. **EDF-Energy experience for Hinkley Point C**
6. **Conclusion**

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EDF / MHI PROPOSAL FOR EPR AND ATMEA1 PROPOSAL IN CZECH REPUBLIC

- **EPR & ATMEA1: flexible power solution**
  - Middle range power: ATMEA1
  - Large size reactor : EPR
  - Similarities between the 2 design allows series effect and operation synergies
- **EPR proposal**
  - EDF proposal, with MHI support
- **ATMEA1 proposal**
  - Lead EDF
  - in cooperation with MHI
  - ATMEA provides technical support to EDF and MHI

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EDF GROUP

WORLD'S NO. 1 ELECTRICITY COMPANY

- Well established in Europe, especially France, the United Kingdom, Italy and Belgium.
- Diversified low-carbon energy mix founded on nuclear power capacity.

EDF COVERS ALL ELECTRICITY-RELATED ACTIVITIES

- Generation
- Transmission, distribution
- Trading, supply
- Energy services

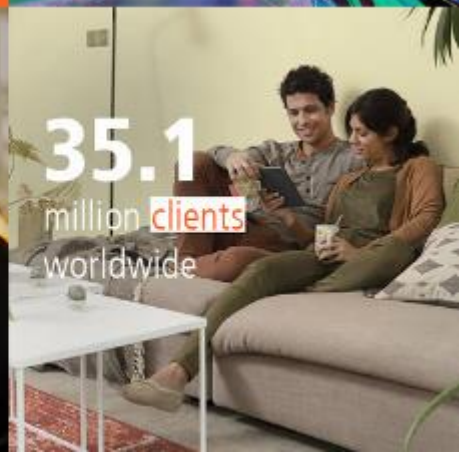
LEADER IN LOW-CARBON POWER GENERATION

- No. 1 in the world for nuclear power generation.
- No. 1 in Europe for renewable energy generation.
- No. 3 in Europe for energy services.

an efficient, responsible electricity company that champions low-carbon growth

EDF GROUP

Efficient & responsible electricity company, champion of the low-carbon growth



EDF produces around 22% of the European Union's electricity, primarily from nuclear power

ALL THE OPTIONS ARE OPEN TO SECURE A LOW CARBON FUTURE

UNCERTAIN ELECTRICITY LEVEL IN 2030-2050 DUE TO SHIFT TOWARDS ELECTRICITY USE AND NEW TECHNOLOGIES EVOLUTION

NEED FOR A LOW CARBON ELECTRICITY MIX BASED ON :

NUCLEAR

EDF Worlwide nuclear operator

Leader of the French Nuclear Industry

Committed to develop new builds projects worldwide

RENEWABLES

EDF SOLAR PLAN (2020-2035)

Develop and build solar plants in France totalling 30GW of installed capacity and a 25Bn € investment

STORAGE

EDF ELECTRICITY STORAGE PLAN

Further storage capacity of 10GW representing investment of €8 billion

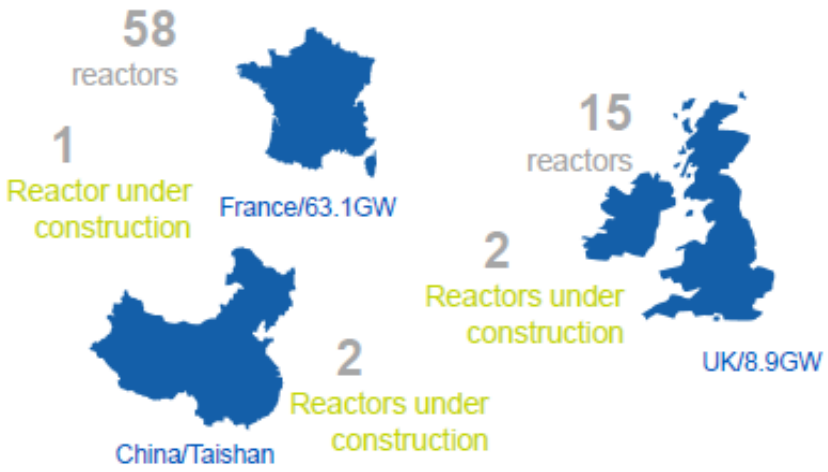
Doubling the investment in Research and Development

EDF is engaged in the energy transition and promotes the complementarity of nuclear and renewables energies in tomorrow's energy mix

EDF GROUP

A UNIQUE EXPERTISE AND KNOW-HOW IN NUCLEAR INDUSTRY

EDF, the world's leading nuclear operator



- Operate the existing nuclear fleet beyond 40 years for a competitive energy mix
- Creation of EDVANCE

EDF, a global expertise

- **EDF manages the entire lifecycle of nuclear generation facilities:**
  - design,
  - operation
  - decommissioning

EDF GROUP

A UNIQUE POSITIONING IN NUCLEAR NEW-BUILD

A WORLDWIDE EXPERIENCE IN NUCLEAR PARTNERSHIP

- Unrivalled track record:

103 nuclear reactors built and under construction across the world

- **73** NPPs operated by EDF
- **1,700+** reactor years of operating experience
- A **history of technical partnership** and technology transfers with South Africa, China, Japan, South Korea, Brazil, India & UK

BUILDING AN EPR NUCLEAR OPERATOR GROUP

NEW Nuclear Development

3 EPR reactors in operation before 2020

EPR REACTOR

MAIN DESIGN CHARACTERISTICS

- **Power:**
  - Core Thermal Power: 4590 MWth
  - Generated Electrical Power: > 1600 MWe
- **Availability:** > 91 %
- **Radiation Protection:** collective dose < 0.5 man.Sv/y
- **241 Fuel assemblies in core**
- **Fuel cycle length:** up to 24 months
- **Design service life:** 60 years
- **Ready for power maneuvering**

Designed for sustainably reducing O&M costs

EPR REACTOR

SAFE TECHNOLOGICAL IMPROVEMENTS

Double-wall containement building with a shell able to resist to an airplane crash

4 independent safeguard systems

Core catcher in case of an accident

- **Safety**
  - Accident probability reduction (factor 10)
  - External hazard protection (shell able to resist an airplane crash)
  - Evolutionary design (core catcher)
- **Performance**
  - Annual generation boosted of 36%
  - Efficiency improvement (+3pts)
  - Increased availability (91%)
- **Radioprotection**
  - At least 40% cut in collective annual exposure
- **Environment**
  - Very important reduction in radioactive waste and gaseous and liquid discharges

A PROVEN REACTOR DESIGN – A REFERENCE FOR THE SAFETY

- **Licensed in 4 countries**
- **Fully compliant with the European Utility Requirements (EUR)**
- **Strong resistance confirmed by the European Post-Fukushima stress tests**

EPR ONGOING PROJECTS

HPC 1&2
United Kingdom

Flamanville 3
France

Taishan 1&2
China

A smoother licensing phase supported by experienced team involved in numerous licensing contexts

EPR ONGOING PROJECTS

EPR FLAMANVILLE 3: THE REFERENCE PLANT

GENERAL INFORMATION

- EPR Reference Plant
- First EPR reactor in France
- Power output : 1,650 MW
- EDF as owner & operator

September 2015
New schedule

August 2017
Nuclear circuit cleaning

August 2018
Functional tests vessel open successfully completed

End 2018
Hot functional tests

CURRENT STATUS

SCHEDULE

March 2016
Welding of 1st Primary Circuit

January 2018
Cold tests carried out

4th Quarter 2019
fuel loading and start-up operations to begin

EPR ONGOING PROJECTS

TAISHAN 1 & 2

GENERAL INFORMATION

- The first two EPR reactors in China
- Power Output : 1,750 MW each
- EDF as co-owner and co-operator
- The project had to be tropicalized to adapt to the country's climate

July 2017
End of hot functional tests

6 June 2018
1st criticality

Second half of 2018
COD Unit #1

CURRENT STATUS | SCHEDULE

September 2015
Vessel Flushing Operations

April 2018
First fuel loading

29 June 2018
Connection to the grid

Second half of 2019
COD Unit #2

EPR ONGOING PROJECTS

EPR HINKLEY POINT C

GENERAL INFORMATION

- First nuclear construction project in the UK in 30 years
- A certification process: GDA requirements for reference plant EPR Flamanville 3 adaptations
- Contract For Difference guarantying a fixed price of electricity for 35 years
- Chinese partnership - EDF as co-owner and operator
- A First Of A Kind in many ways
- Power output : 1,638 MW each

September 2016
Final contracts signed

2026 :
COD Unit #2

CURRENT STATUS

SCHEDULE

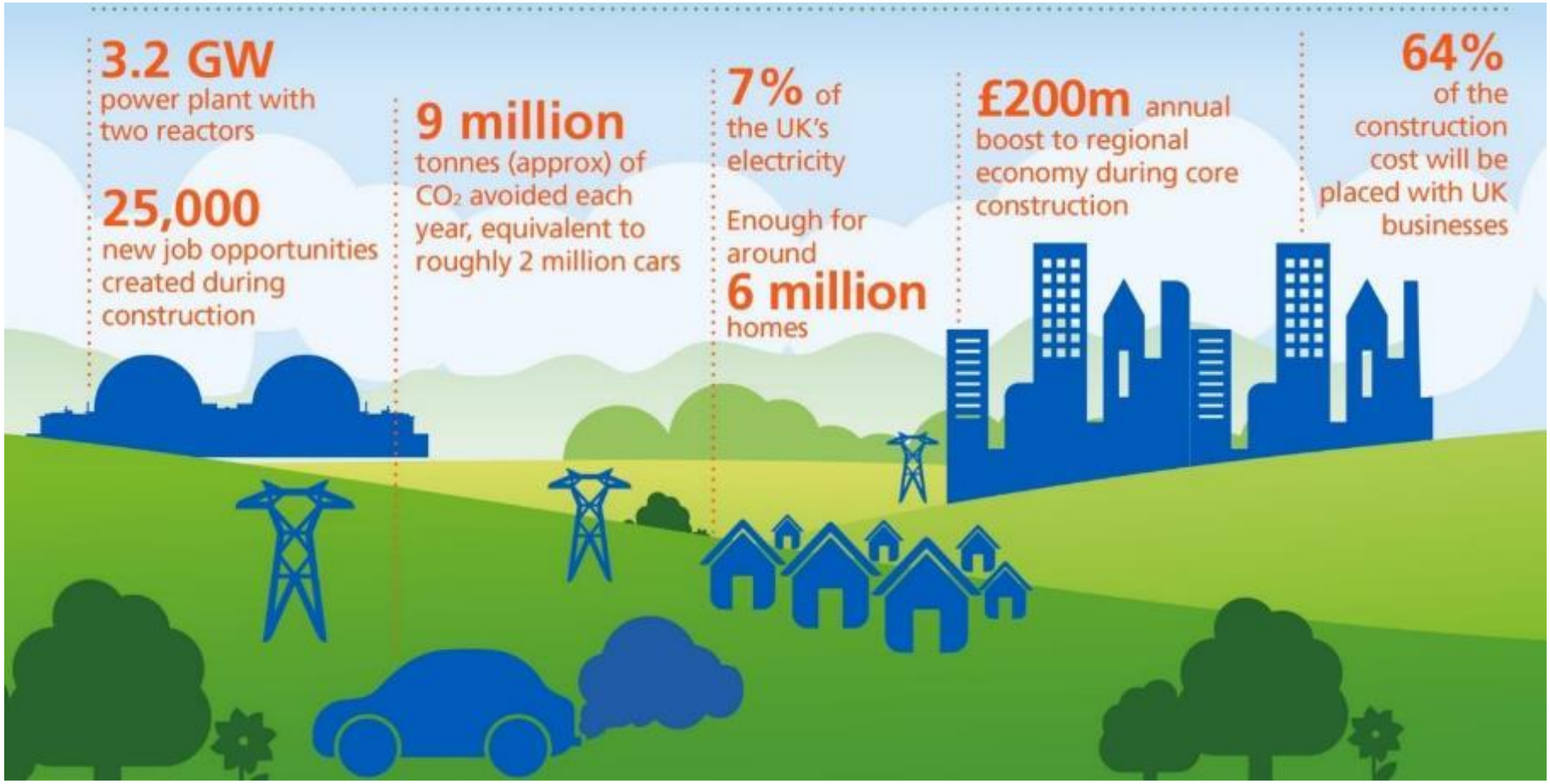
October 2013
UK Governments agrees Contracts For Difference for HPC

March 2017
First concrete successfully poured for power station galleries

2025 :
COD Unit #1

EPR ONGOING PROJECTS

HINKLEY POINT C: STRONG DOMESTIC SOCIO ECONOMICAL BENEFITS



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Mitsubishi Heavy Industries, Ltd. (MHI)

MHI Company Overview

MHI Products and Operation Results in Fiscal Year 2017 (consolidated)

Net Sales	4,110.8 billion Yen (€ 31.6 B)
Orders Received	3,875.7 billion Yen (€ 29.8 B)
Number of Employees	80,652

POWER SYSTEMS

Nuclear Energy Systems
Thermal Power Systems
Offshore Wind Power Systems
Pumps, Marine Machinery, Compressors,


Gen III+ PWR


ST rotor


Wind Turbine

INDUSTRY & INFRASTRUCTURE

Chemical Plants
Shipbuilding & Ocean Development
Land Transportation Systems
Engine, Turbocharger, Material Handling Equipment


LNG Carrier


LRT

AIRCRAFT, DEFENSE & SPACE

Commercial Aircraft (including MRJ)
Defense Aircraft, Missile Systems, Naval Ships
Space Systems


Mitsubishi Regional Jet


Submarine JINRYU


H-II B

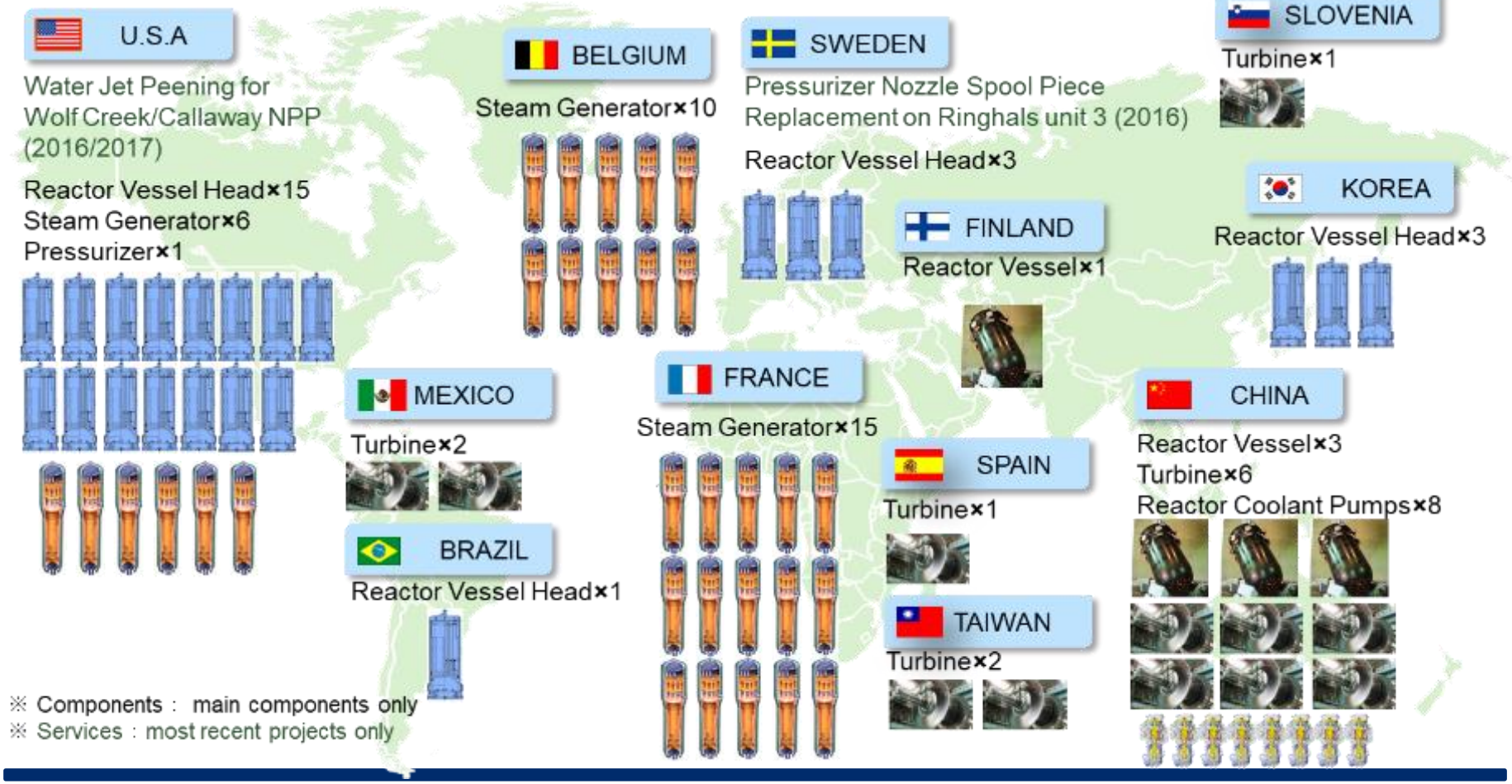
MHI COMPANY OVERVIEW

MHI constructed All 24 PWRs (20,280MW) in Japan, and has been contributing to the restart of the PWRs.

Note:
Number in ◯ indicates the number of loops in the plant.

MHI COMPANY OVERVIEW

- Abundant experiences in nuclear component exports (4 Reactor Vessels, 22 Reactor Vessel Heads, 31 Steam Generators, 1 Pressurizers, 12 Turbines and 8 Reactor Coolant Pumps)
- Steady efforts in providing maintenance services for PWRs (completed 3 projects related to countermeasure for corrosion cracking of alloy 600 in last 2 years)

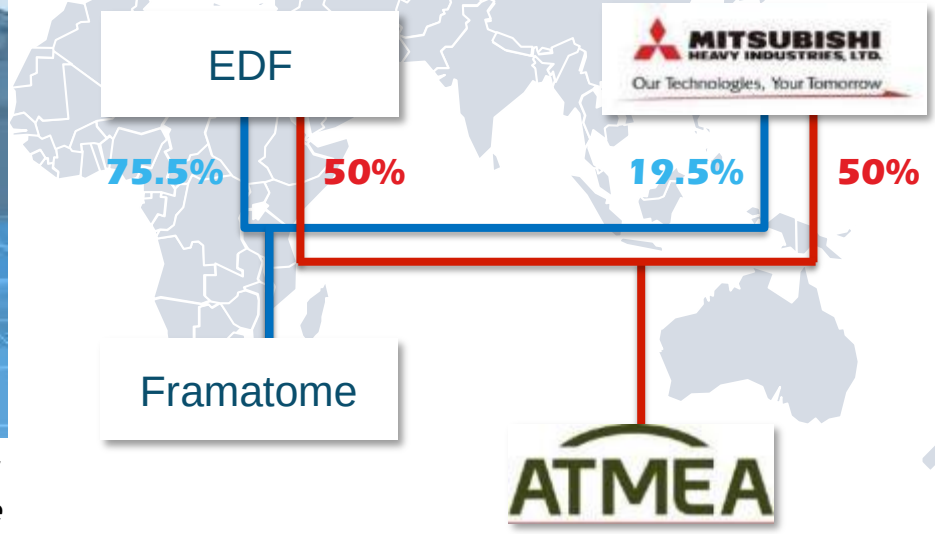


※ Components : main components only
※ Services : most recent projects only

ATMEA COMPANY

- In November 2007, MHI and AREVA (now Framatome) established ATMEA company for the development of ATMEA1.
- In January 2018, in the course of restructuring of the French nuclear industry, Framatome became an affiliate of EDF. MHI also invested in Framatome and now holds 19.5% shares. ATMEA company is newly formed as a joint venture of MHI and EDF.
- Through the strategic collaboration among MHI, EDF and Framatome, MHI enhances marketing of ATMEA 1 and delivers safe and reliable nuclear technologies worldwide.

Mid-sized Generation Ⅲ+ reactor with highest level of safety features jointly developed by Japan and France

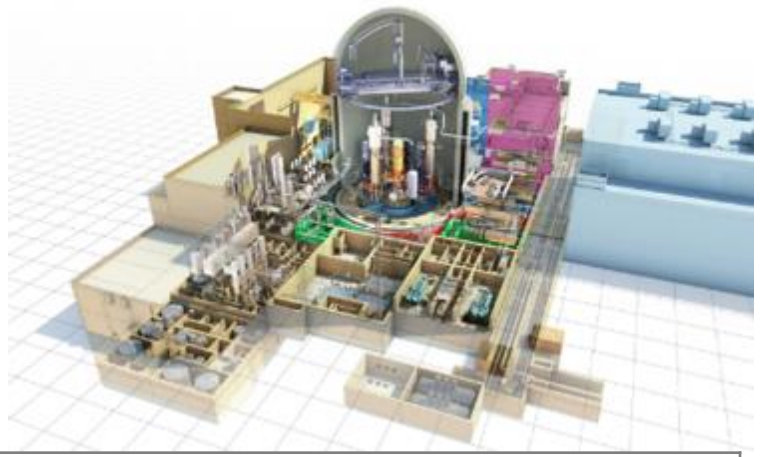


FEATURES OF ATMEA1 REACTOR MODEL

Advanced Safety Design

Highest level of safety as a Gen III+ reactor

Latest design based on the proven technologies and experiences of MHI and Framatome

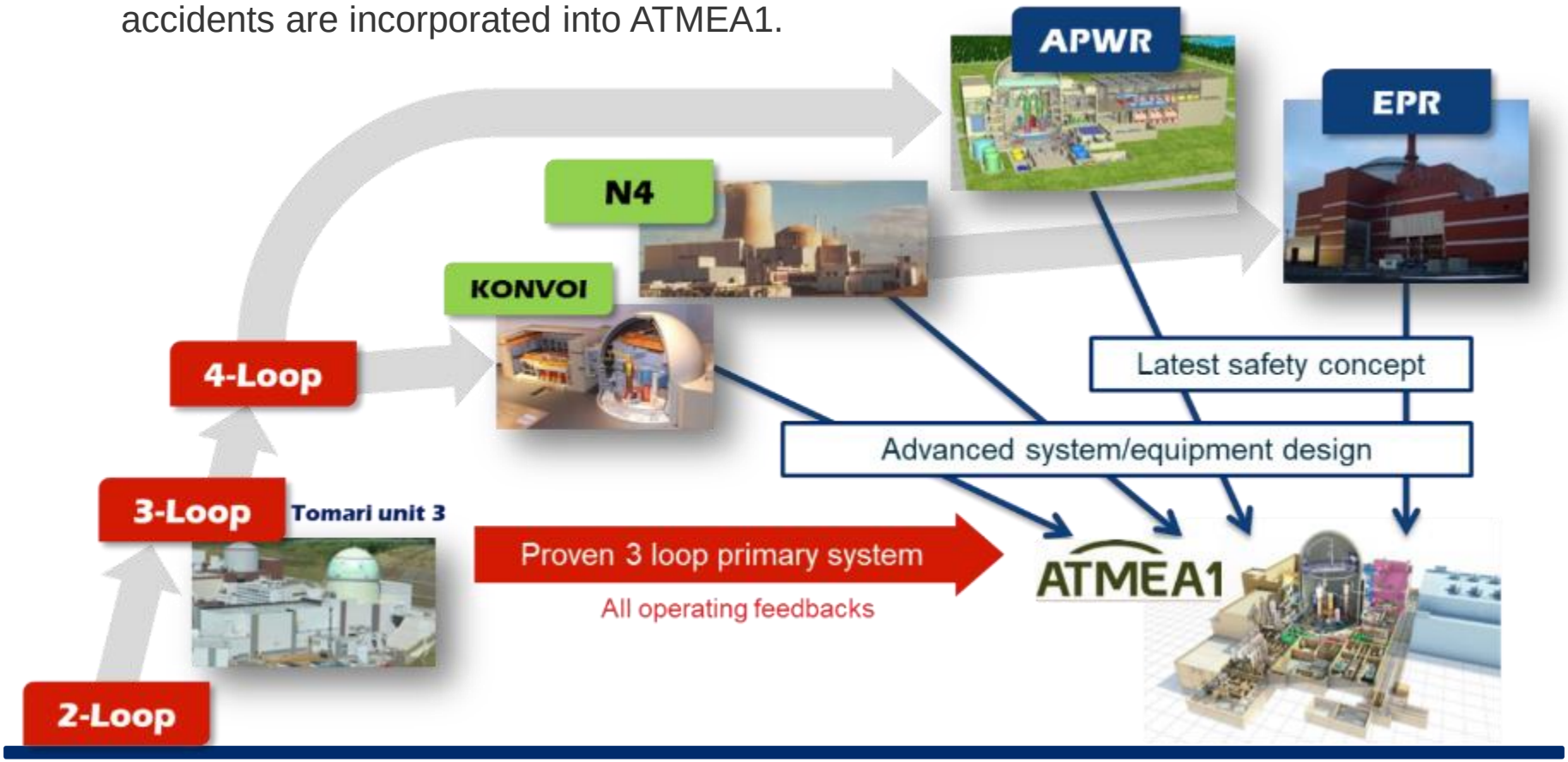


Primary system	3-loop configuration
Electrical output	1,200MWe Class
No. of fuel assemblies	157 (14ft)
Main steam pressure	more than 7MPa

Safety system	3-train, reliable active system with passive systems
Diversity/Redundancy	Diversity and redundancy of cooling systems, power supply systems, I&C systems, etc.
Severe accident mitigation	Core catcher, hydrogen recombiners
Provisions for airplane crash	Prestressed Concrete Containment Vessel
I&C	Full digital I&C

ATMEA1: PLANT CONCEPT

- ATMEA1 is the mid-sized Generation Ⅲ⁺ reactor with the advanced design based on experiences of PWRs in Japan and France.
- The abundant worldwide operational experiences of PWRs are reflected to the enhanced operability and maintainability of ATMEA1.
- The latest technologies and protection against external hazards including severe accidents are incorporated into ATMEA1.



ATMEA1: PLANT CONCEPT & SAFETY DESIGN BASIS

- **Standard ATMEA1 reactor is designed using:**
  - US regulation and codes & standards
  - ICRP recommendations for radioprotection
  - IAEA safety standards
- **Complemented by:**
  - **Lessons learnt** from the EDF Group / MHI experiences with >130 reactors
  - French, Japanese, and other regulations
  - Latest regulatory trends on **severe accidents**, **airplane crash protection**, …
  - Fukushima accident lessons learnt (**Extreme external hazards protection**)
  - URD / EUR (US and European **utility requirements**)
- **Taking robust defence-in-depth approach**

ATMEA1: REACTOR DESIGN & LICENSING ACHIEVEMENTS

2007/12-2008/6 : CONCEPTUAL SAFETY FEATURES address:
- IAEA's Fundamental Safety Principles
- IAEA's key Design and Safety Assessment Requirements

2010/6-2012/1 : SAFETY OPTIONS
- Compliant with French regulations for new reactors

2012-2013 : SAFETY DESIGN
- In-line with the latest Canadian requirements

2016 : SEISMIC DESIGN METHODOLOGIES
- Aligned with IAEA Safety Standards

Conceptual / Basic Design	Generic Detail-Design	Project construction licensing

ATMEA1 – TURKEY SINOP PROJECT

IGA* signed in May 2013.
Preferential negotiation rights given to Japan.

*1) IGA (Intergovernmental Agreement): Agreement between government of Japan and Turkey

Negotiation of HGA*2 completed in October 2013.

*2) HGA (Host Government Agreement): Agreement between government of Turkey and Project Sponsors

IGA and HGA submitted to Turkish parliament in October 2014.

In April 2015, completed necessary procedure in Turkey, including cabinet approval.
In July 2015, through the diplomatic procedure, ratification completed.

Feasibility Study report submitted to Government of Turkey in July 2018

4 units of ATMEA1 to be constructed at Sinop site

SUMMARY

- The abundant worldwide operational experiences of PWRs are reflected to the enhanced operability and maintainability of ATMEA1
- Safety design of ATMEA1 is reviewed by IAEA, ASN, and CNSC.
- ATMEA1 has redundant / diversified cooling system and power supply system that can manage Fukushima-like event.
- ATMEA1 also has dedicated systems for severe accident management in its design, such as core catcher and alternative cooling system.
- In conclusion, ATMEA1 has the latest and highest safety features in terms of Defense in Depth.

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EPR / ATMEA1 SYNERGIES

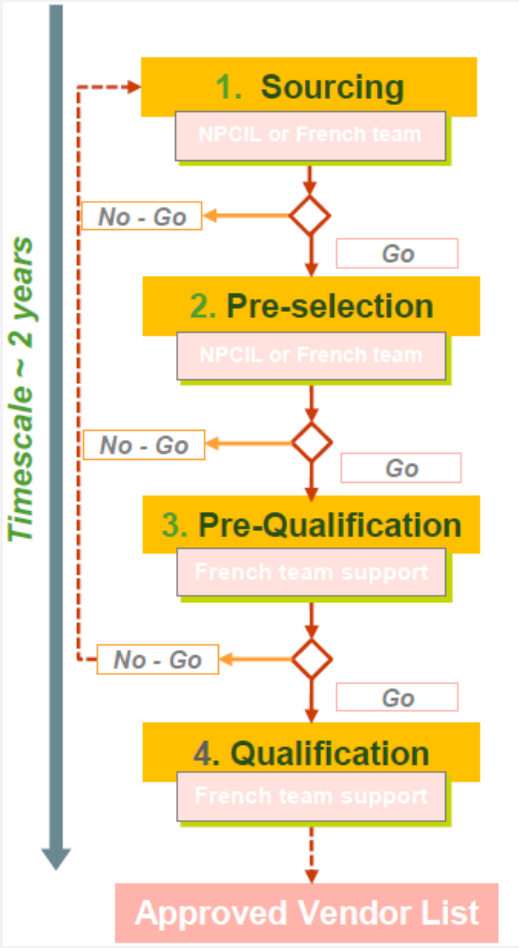
- **ATMEA1 and EPR present some common design equipment**
  - Either identical equipment
  - Either same design with adapted sizing
  - Including around 30 major NI equipment
    - For example Reactor Pressure Vessel, Steam Generators, main coolant lines, pressurizer, Fuel pool and fuel handling, polar crane…

- **Synergies of localization are possible**
  - Suppliers qualification
  - Equipment manufacturing qualification
  - Common allotment with appropriate delivery milestones
  - Optimisation of manufacturing files preparation (either common, or re-use of the first file)
  - Possible installation and commissioning synergies and mutualisation of procedures

LOCALIZATION APPROACH

- **Localization approach shared by EDF and MHI**
- **Possible localization in Czech Republic for all parts in the nuclear power plant:**
  - Nuclear Island
  - Conventional Island
  - Civil works
  - Balance Of Plant
- **Implementation of EDF suppliers qualification method for:**
  - EPR and ATMEA1 equipment
  - New build project in Czech Republic and for other EDF and MHI projects
- **Identification and screening of 175 Czech companies for:**
  - Engineering
  - Erection services
  - Civil works
  - Valves
  - Vessels
  - Heat Exchangers
  - Filters
  - Electrical
  - Pumps

EDF suppliers qualification method



LOCALIZATION APPROACH

SITUATION OF HINKLEY POINT C

- ✓ Opportunity to leverage National and South West's engineering, manufacturing, and construction skill base.
- ✓ NNB will place over 150 major contracts in order to build HPC and a further 30 contracts covering site services.
- ✓ Building industrial joint ventures with the South West supply chain through supplier steering groups.

Responsible Designer: EDF

Technology Systems: GE, Framatome, ALSTOM

Mechanical , Electrical & HVAC Erection: cavendish boccard Nuclear, Balfour Beatty Bailey (WORKING TOGETHER FOR NUCLEAR NEW BUILD), Tunzini, ENGIE Axima, ACTAN, DOOSAN

Civil Engineering: bylor, COSTAIN, KIER | BAM

Up to **64%** of the value of HPC contracts to go to UK companies

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EDF-ENERGY EXPERIENCE FOR HINKLEY POINT C

EDF Energy's focus for Nuclear New Build

EDF-ENERGY EXPERIENCE FOR HINKLEY POINT C

EDF-ENERGY EXPERIENCE FOR HINKLEY POINT C

HPC Project Goals 2018

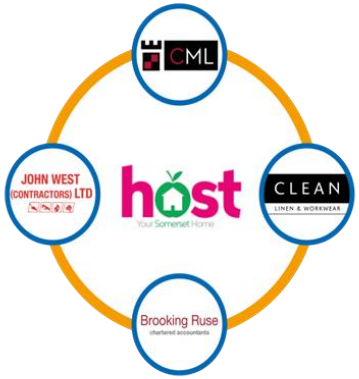
1. Pre-stressing gallery start of construction for Unit 1
2. Construction work starts on the pumping station for Unit 1
3. Design handover Nuclear Island for Unit 1
4. Common raft first J0 concrete pour for Nuclear Island for Unit 1

EDF-ENERGY EXPERIENCE FOR HINKLEY POINT C

£4 BILLION TO BE INVESTED IN SOUTH WEST ECONOMY OVER LIFETIME OF HPC

SOUTH WEST ECONOMIC BENEFIT:
£1.5 BN DURING CONSTRUCTION
£2.4 BN DURING OPERATION

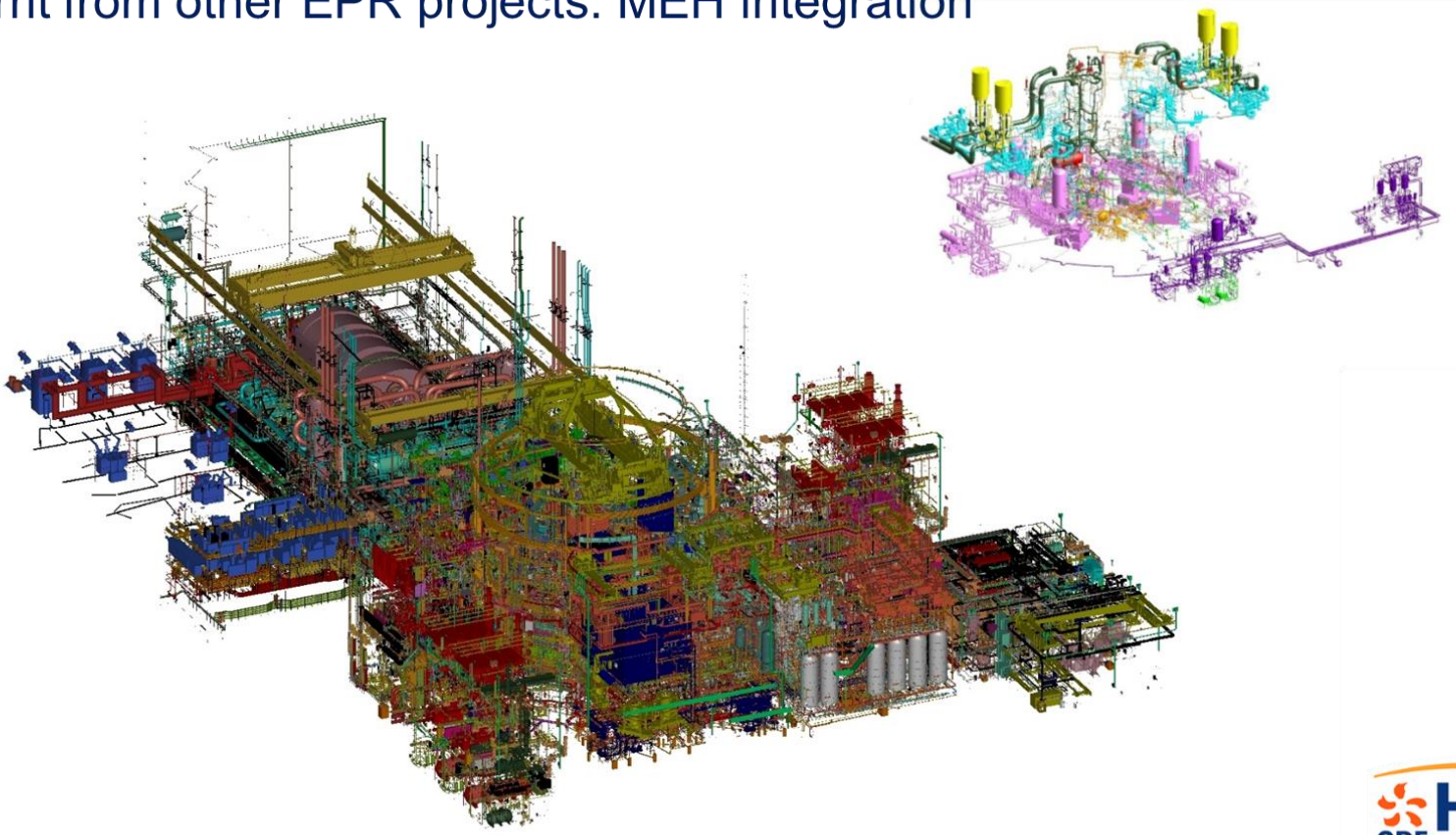
£200 MILLION PER YEAR BOOST FOR SOUTH WEST ECONOMY DURING CORE CONSTRUCTION



HPC EDF ENERGY CGN

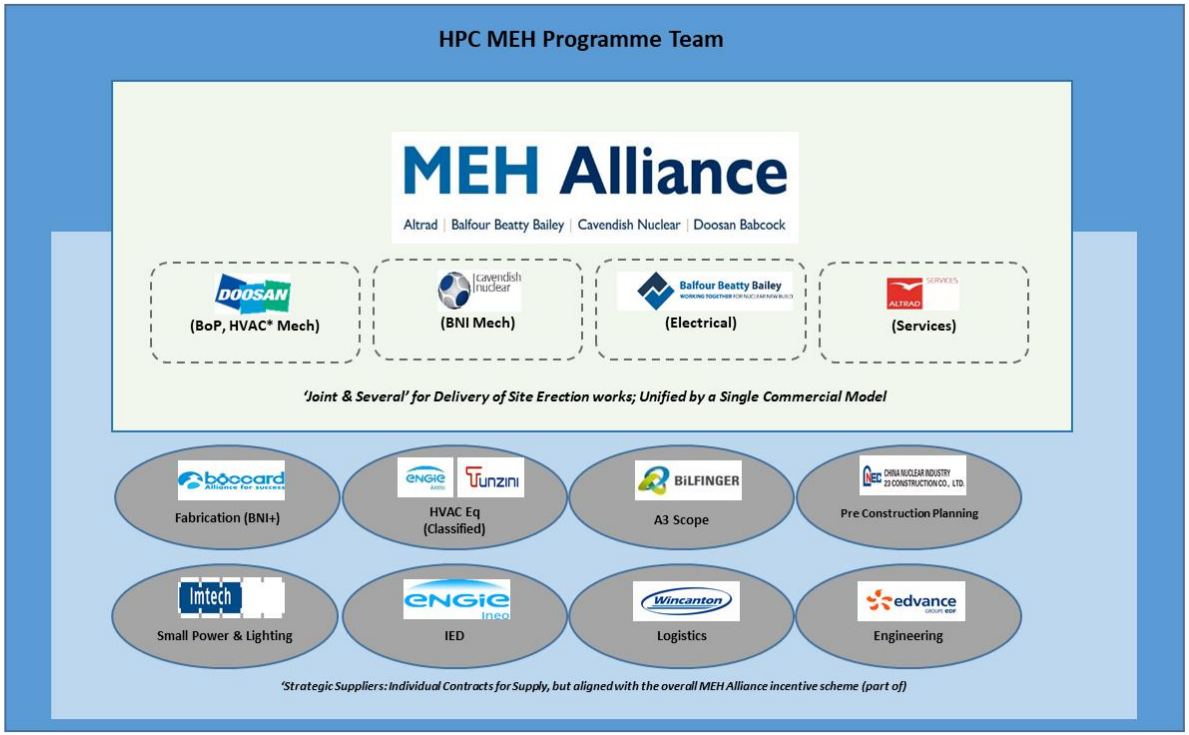
EDF-ENERGY EXPERIENCE FOR HINKLEY POINT C

Lessons learnt from other EPR projects: MEH integration



EDF-ENERGY EXPERIENCE FOR HINKLEY POINT C

Lessons learnt from other EPR projects: MEH Programme



'NEC' encourages Collaborative working

EDF-ENERGY EXPERIENCE FOR HINKLEY POINT C

Lessons learnt from other EPR projects: HPC Project Setup

Delivery Command Centre

Bristol

- Project Management
- Schedule
- Planning pre-construction
- Work packages
- Procurement

Site Command Centre

HPC

- Construction
- Assembly
- Commissioning

Engineering Command Centre

Paris

- Design Engineering
- Procurement
- 3D model

HPC is managed across **three Command Centres** allowing the efficient segregation and management of work from design to construction.

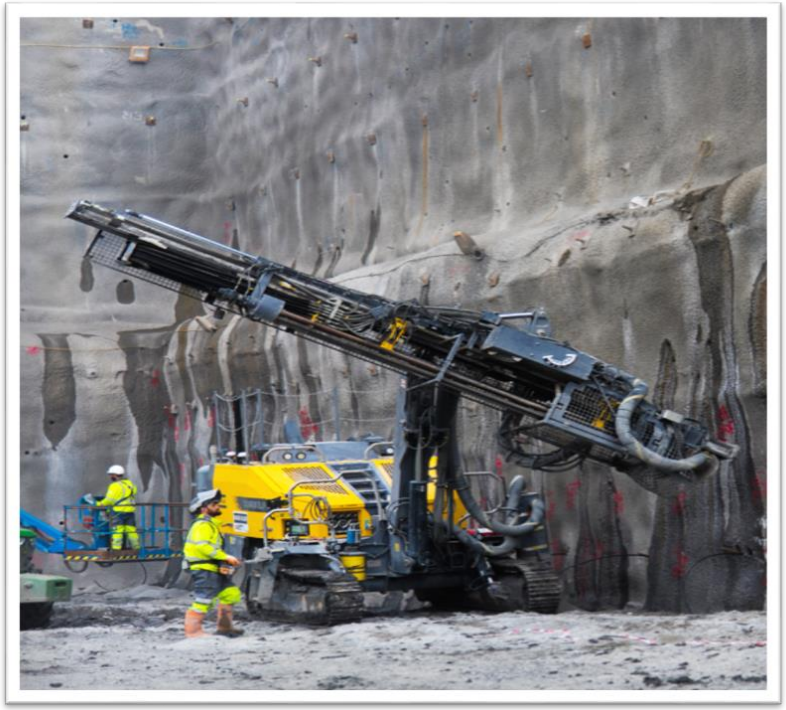
EDF-ENERGY EXPERIENCE FOR HINKLEY POINT C

Case study – series effect

Experience from nuclear power station construction around the world shows the efficiency benefits of building a series of reactors. At Hinkley Point C work on Unit 2 is already providing evidence of this "series effect".

Excavation of Unit 2 has been 15% quicker than Unit 1 with "right first-time" figures rising to an industry-leading 95%. Spray concrete work has been 30% quicker. Drilling techniques and sequencing of work were perfected during the first dig and were applied from the beginning of the second. Some work from Unit 1 was considered to be unnecessary and was eliminated for Unit 2. A new tool was designed to install and handle the 7,500 ground nails used on each unit has led to a 5% increase in productivity.

Geologists with two years' work on the excavations for Hinkley Point C are moving directly to **Sizewell C** at the end of 2018 to apply their experience and supervise work.



DIT Civil Nuclear Event - UK Protect Commercial - Paris 181018

EDF-ENERGY EXPERIENCE FOR HINKLEY POINT C

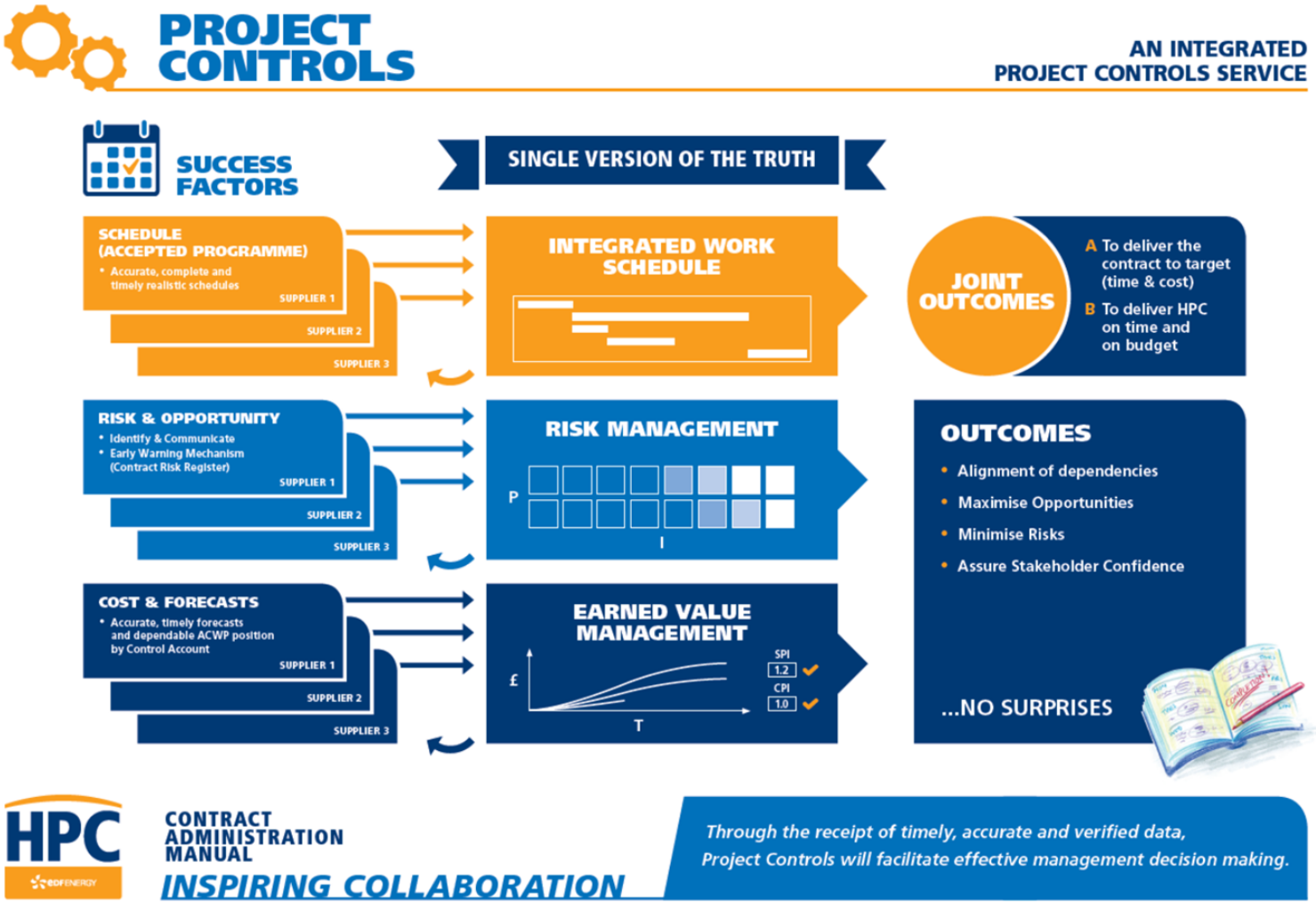
Series effect

- **SZC will be an almost exact copy of HPC nuclear and conventional islands**
- **Increasing EPR track record**
  - Four international EPRs will enter operation across the next two years before SZC FID
  - In operation SZC will be units 7 and 8 of an operating international fleet
- **SZC construction costs forecast to decrease by 20%+ from HPC**
  - Replication of HPC saves UK context design work
  - One off supply chain costs not repeated at SZC
  - Further reductions possible from productivity improvements

Replication From HPC

Deviation From HPC

EDF-ENERGY EXPERIENCE FOR HINKLEY POINT C



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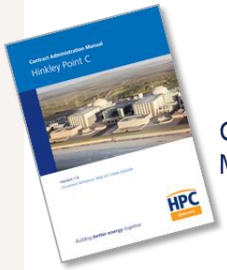


Contract Administration Manual (‘Blue Book’)

Equipment Contract Administration Manual (‘Red Book’)

Manufacturing and Delivery Management Manual (‘Green Book’)

EDF-ENERGY EXPERIENCE FOR HINKLEY POINT C

CEMAR

CEMAR IS THE CENTRE OF CONTRACT ADMINISTRATION

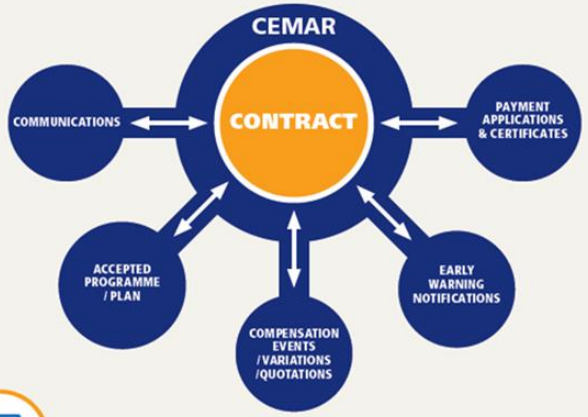
CEMAR IS A SECURE AND MANDATORY WEB-BASED COLLABORATIVE TOOL

CEMAR ACHIEVES COLLABORATION BY PROVIDING A SERVICE THAT:

- Both Employer and Supply Chain Partner teams can access 24hrs per day, 365 days per year, providing party privacy for communication drafting
- Generates real-time common reports and registers of communications with single/shared numbering systems
- Allows teams to build associations between communications
- Covers the NEC3 & FIDIC

EMAIL ✗ CEMAR ✓

HOW CONTRACT ADMINISTRATION WORKS:



COMPLIANCE
CEMAR achieves compliance with the contract and internal process through tailored workflow that is sensitive to specific individual user delegations, authorities and user accounts, validating at various key stages to drive consistency and compliance.

REPORTING
CEMAR provides business intelligence and programme controls across multiple contracts, with aggregated benchmarking, analysis and trending generated via action lists, reports, charts and real-time dashboard gauges.

RECORDS
CEMAR maintains a 'one version of the truth' set of administrative records, tracking key changes and assigning each communication with a process number and providing printable versions of all communications, plus a DVD archive.

TIMELINESS
CEMAR keeps the parties informed of outstanding actions and progress through a varied and significant selection of reports and alerts.

HPC CONTRACT ADMINISTRATION MANUAL

INSPIRING COLLABORATION

CEMAR enables the Client and Supply Chain Partner to administer the contract in a collaborative way, ensuring both parties have direct access to relevant information and reporting at all times.

EDF-ENERGY EXPERIENCE FOR HINKLEY POINT C

MANAGEMENT OF EARLY WARNINGS

MAINTAINING CONTROL THROUGH EARLY NOTIFICATION OF PROJECT ISSUES

The Early Warning mechanism is to be conducted in the spirit of mutual trust and co-operation and is a positive act.

The aim of Risk Reduction meetings is not to determine liability or entitlement but to seek solutions that will bring advantages to all those affected.

Correct use of the Early Warning mechanism provides for opportunity to recognise that the optimum result can be achieved for all. To this end, the parties will collaborate through all stages.

Correct use of the Early Warning mechanism enables corrective action to be taken to remove or mitigate the effect of potential risk events and so support the efficient management of any contractual changes that may result.

FOR THE BENEFIT OF BOTH PARTIES

ACTIVITIES IN THE EARLY WARNING PROCESS

1. RAISE EARLY WARNING NOTICE
2. REVIEW EARLY WARNING NOTICE
3. ASSESS RISKS AT RISK REDUCTION MEETING
4. INITIATE ACTIONS & UPDATE RISK REGISTER

HPC CONTRACT ADMINISTRATION MANUAL

INSPIRING COLLABORATION

To ensure the smooth delivery of the HPC Project through the Early Warning of potential issues, enabling corrective action to be taken to remove or mitigate the effect of the potential event and to efficiently manage any contractual changes that result.

EDF-ENERGY EXPERIENCE FOR HINKLEY POINT C

ACCEPTED PROGRAMME / PLAN

MAINTAINING DISCIPLINE IS FUNDAMENTAL IN MANAGING THE PROGRAMME OF WORKS

DESCRIBES WHAT WILL HAPPEN DURING THE COURSE OF THE WORKS UNDER THE CONTRACT, HOW IT WILL BE PERFORMED AND WHEN THE WORK WILL BE DONE BY.

PEOPLE + **PROGRAMME** + **BEHAVIOUR** = **RESULTS**

PROJECT MANAGERS/ EMPLOYER'S REPRESENTATIVES / SERVICE MANAGER
Accountable for all programme (schedule) issues in respect of the contract (may also be referred to as Contract Manager).

COMMERCIAL MANAGERS
Responsible for negotiating all entitlement and quantification of compensation events relating to potential price revisions.

PROJECT CONTROLS MANAGERS
Responsible for managing the baseline change mechanisms.

SCHEDULE MANAGERS
Responsible for reviewing the Supply Chain Partner's programme submissions for acceptability or otherwise.

PROGRAMME
- Are the Supply Chain Partner's plans practical?
- Do the plans show the required information?
- Are the plans realistic?
- Do they comply with works information & contractual requirements?

BEHAVIOUR
- Good technical quality
- Good aligned narrative
- Proactive mitigation plans
- Integration / empathy with other Supply Chain Partners

RESULTS
- Works delivered to plan
- Alignment to HPC objectives
- Dispute avoidance

The Supply Chain Partner is required to submit a programme / plan when the contract is initiated and provide updates as the contract requires. Revised programmes will normally be submitted monthly as well as when significant changes occur (e.g. Variations and compensation events), incorporating changes made since the previous version.

HPC EDFENERGY

CONTRACT ADMINISTRATION MANUAL

INSPIRING COLLABORATION

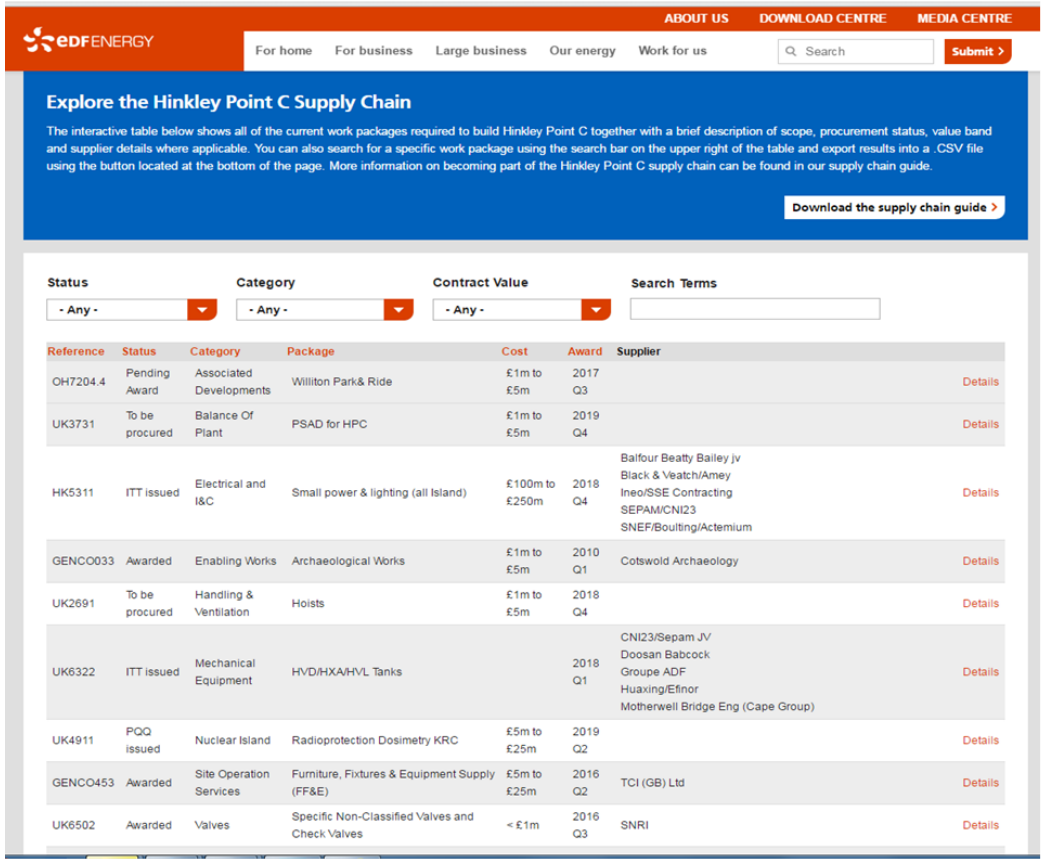
To ensure there is always a shared, timely, up-to-date view of the intended work and timescales for delivery.

EDF-ENERGY EXPERIENCE FOR HINKLEY POINT C

CONTRACTS YET TO BE PROCURED

Scope Description	Scope Description	Scope Description
HB lab equipment (HK4401)	Neutron Shield/Melt Plug/Transport System	Leak Detection System
HKB building (UK2313)	HYDRAULIC SNUBBERS	Power Supply Relays for RPVL/RPVDT Cabinents
Lorries (MSDG,…) (UK2641)	INSULATION OF SECONDARY SYSTEM PIPING AND VVP/ARE &RCS labels	GMPP speed (main coolant pump)
HQC and HHI cranes (UK2644)	PROTECTION LAYER	Manometer
Chillers Lot 5 (UK2731-5)	MELT DISCHARGE CHANNEL AND CENTRAL SUPPLY DUCT	Buoyancy Level meas.
Inspection of condenser tubes (UK3151)	Rope Opening Device of Core Melt Stabilization System	Conductivity measurement
XCA Boiler - Building + Systems (UK3721)	NEUTRONIC PROTECTION PN1	GMPP displacement & vibration
PSAD (electrical linkage + computer tools) (UK3731)	Containment H2 Reduction	Diversified Pressure transmitter
Systems waterproofing (UK4113)	NEUTRONIC PROTECTION PN2	CONSUMABLES FOR COMMISSIONNING (packages transfered to NNB)
Emergency ventilation system eff tests (UK4114)	MAST SIPPING TEST DEVICE	CABLES ACCESSORIES (not NSSS)
HR & HK dynamic containment (UK4115)	FUEL HANDLING TOOLS (NEW FUEL, SPENT FUEL, AND FUEL ASSEMBLY INSERT)	TXP platform
Looking for dead zones (H2 and N2) (UK4116)	NEW FUEL STORAGE RACK	CABLES ACCESSORIES
Inspection while operating device (UK4931)	UNDERWATER FUEL STORAGE RACK	CABLE TRAYS
Heating of RBS piping (UK5303)	Cartridge Filters	CABLE CLIPS (not NSSS)
I&C-related MCO (UK5512)	BULK TUBING INSTRUMENTATION & SUPPORTS-FITTING	JUNCTION BOXES
Class 3 PLC (UK5524)	AC/DC, DC/DC CONVERTER (I&C POWER SUPPLY)	DESKTILES (FULL SCOPE SIMULATOR EQUIPMENT)
Full-scale simulator (SIM3) (UK5611)	MV - LV Power Cables (not NSSS)	
RIS & EVU filters (UK6302)	I&C Cables < 60 V (not NSSS)	
Scaffolding, Insulation, Painting and Associated Services (GEN564)	I&C Cables - non FO (not NSSS)	**Site Erection Contracts**
Ancillary Buildings Phase 2 (HK2203) Construction (GEN348)	INTERMEDIATE TRIANGLE TERMINAL BOXES	**Site Service Contracts**
Construction Fire Safety Management (GEN417)	I&C Cables FO	**Equipment Contracts**
Site Ops Small Tool Hire Franchise (GEN462)	Permanent Roads and Networks Ph3 & 4 (OH2101)	**Framatome scope moved to NNB**
Surveying services and equipment (GEN488)	Combwich Laydown (OH7104)	

EDF-ENERGY EXPERIENCE FOR HINKLEY POINT C



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Explore the Hinkley Point C Supply Chain

The interactive table below shows all of the current work packages required to build Hinkley Point C together with a brief description of scope, procurement status, value band and supplier details where applicable. You can also search for a specific work package using the search bar on the upper right of the table and export results into a .CSV file using the button located at the bottom of the page. More information on becoming part of the Hinkley Point C supply chain can be found in our supply chain guide.

Download the supply chain guide >

Status: - Any - | Category: - Any - | Contract Value: - Any - | Search Terms

Reference	Status	Category	Package	Cost	Award	Supplier	
OH7204.4	Pending Award	Associated Developments	Williton Park& Ride	£1m to £5m	2017 Q3		Details
UK3731	To be procured	Balance Of Plant	PSAD for HPC	£1m to £5m	2019 Q4		Details
HK5311	ITT issued	Electrical and I&C	Small power & lighting (all Island)	£100m to £250m	2018 Q4	Balfour Beatty Bailey jv Black & Veatch/Amey Ineo/SSE Contracting SEPAM/CNI23 SNEF/Boulting/Actemium	Details
GENCO033	Awarded	Enabling Works	Archaeological Works	£1m to £5m	2010 Q1	Cotswold Archaeology	Details
UK2691	To be procured	Handling & Ventilation	Hoists	£1m to £5m	2018 Q4		Details
UK6322	ITT issued	Mechanical Equipment	HVD/HXA/HVL Tanks		2018 Q1	CNI23/Sepam JV Doosan Babcock Groupe ADF Huaxing/Efinor Motherwell Bridge Eng (Cape Group)	Details
UK4911	PQQ issued	Nuclear Island	Radioprotection Dosimetry KRC	£5m to £25m	2019 Q2		Details
GENCO453	Awarded	Site Operation Services	Furniture, Fixtures & Equipment Supply (FF&E)	£5m to £25m	2016 Q2	TCI (GB) Ltd	Details
UK6502	Awarded	Valves	Specific Non-Classified Valves and Check Valves	< £1m	2016 Q3	SNRI	Details

Follow our progress and get in touch:

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www.sizewellcsupplychain.co.uk

All of our contracts are online:
https://www.edfenergy.com/content/supply-chain-infomation

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1. **EDF / MHI proposal for EPR and ATMEA1 proposal in Czech Republic**
2. **EDF presentation**
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3. **MHI presentation**
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   - Progress of Sinop project
4. **Localisation in Czech Republic**
   - EPR / ATMEA1 synergies
   - Localization approach
5. **EDF-Energy experience for Hinkley Point C**
6. **Conclusion**

CONCLUSION

- **Our proposal is based on two competitive, safe and reliable reactor models:**
  - EPR to offer a large range power model
  - ATMEA1 where middle range power is preferred
- **Localization is on-going, both for EPR and ATMEA1 models and for all EDF and MHI projects**
- **Project and contractual arrangements are implemented to ensure a smooth project progress by strengthen project control, interface and design management, and alignment of interests**

DĚKUJI