

Sizewell C Project

Radioactive Substances Regulation (RSR) Permit Application

Appendix E

Support Document E1 – Company Manual

SIZEWELL C PROJECT
RSR PERMIT APPLICATION
SUPPORT DOCUMENT E1 – COMPANY MANUAL
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NNB GENERATION COMPANY (SZC) LTD

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COMPANY MANUAL- SIZEWELL C

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1 INTRODUCTION

This company manual has been prepared by NNB Generation Company (SZC) Limited to describe the organisation and management of the company and also constitutes the management prospectus to support the application for a Nuclear Site Licence (NSL), Radioactive Substances Regulation permit, Water Discharge and Combustion Activity permits for the installation and operation of two EPR nuclear power reactors at Sizewell in Suffolk.

It is intended that the Sizewell C EPRs will be identical to the plant under construction at Hinkley Point C, with minimal changes being made to address local site issues and learning from HPC construction. This will allow NNB GenCo (SZC) to maximise the nuclear knowledge, technical expertise, safety and commercial benefits from replication and from the Generic Design Assessment (GDA) and Best Applicable Techniques (BAT) processes.

The manual shows how the organisation and appropriate governance, oversight and control arrangements in place are appropriate now (and will be developed in the future as the project progresses), to assure all aspects of safety, (Nuclear, Environmental and Industrial), and also an effective company organisation.

It is intended that NNB GenCo (SZC) will be the nuclear site licensee and environmental permit holder for the site. A Nuclear Baseline document [Ref 1] identifies nuclear and environmental safety related roles and sufficient, competent resources will be available at the right time to fulfil these roles and for the company to be and maintain its status as an intelligent customer as the organisation develops.

This manual describes the vision of the company, gives a brief description of the facility, describes the company organisation, organisational capability, safety, and environmental governance and permitting.

This company manual will be reviewed periodically and revised to fully reflect the requirements of the post-final investment decision organisation and shareholding, construction, commissioning and later for full operation.

The company manual demonstrates that NNB GenCo (SZC) is a competent nuclear site licensee and environmental permit holder, progressing through construction and commissioning to operation to be a world class owner and operator of nuclear power plants.



Image 1: Projected SZC to the North of the existing SZB

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1.1 References and Definitions

Ref	Title	Location	Document No.
1	NNB GenCo (SZC) Nuclear Baseline	EDRMS	100200200
2	Licensing of nuclear installations; Sept. 2019	ONR Website	http://www.onr.org.uk/licensing-nuclear-installations.pdf
3	ONR – The processing of Licence applications for new nuclear sites, NS-PER-IN-3 Issue 5.	ONR Website	http://www.onr.org.uk/operational/assessment/ns-per-in-003.pdf
4	Radioactive Substances Regulation: Management Arrangements at Nuclear Sites – Version 2 – Environment Agency	EA Website	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/299652/RSR_Management_arrangements_at_nuclear_sites.pdf
5	Radioactive Substances Regulation – Environmental Principles, The Environment Agency Version 2.0	EA Website	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/296388/geho0709bqsb-e-e.pdf
6	Guidance on the Production and Use of an Integrated Management Prospectus – Guidance Note – Radioactive Substances Regulation – HSE and Environment Agency.	EA Website	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/296430/geho0709bqwx-e-e.pdf
7	Licensee use of contractors and intelligent customer capability T/AST/049 – Rev 6 – ONR	ONR Website	http://www.onr.org.uk/operational/tech_asst_guides/ns-tast-gd-049.pdf
8	NNB GenCo (SZC) Nuclear Safety Policy	EDRMS	100200165
9	NNB GenCo (SZC) Health and Safety Policy	EDRMS	100200168
10	NNB GenCo (SZC) Environmental Policy	EDRMS	100200170
11	NNB GenCo (SZC) Quality Policy	EDRMS	100200187
12	NNB GenCo (SZC) Resourcing Strategy – Issue 1,	EDRMS	100196816
13	NNB GenCo (SZC) Company Procedure – Define, Manage and Release Key Hold Points.	EDRMS	NNB-209-PRO-000025
14	NNB GenCo (SZC) Management System Manual	EDRMS	100200202
15	Sizewell C- Nuclear Safety Committee Terms of Reference.	EDRMS	100197655
16	UK Strategy for Radioactive Discharges 2009	HMG Website	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/249884/uk_strategy_for_radioactive_discharges.pdf
17	Shareholders Agreement	EDRMS	Contact Company Secretary.

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1.2 Bibliography.

Ref	Title	Location	Document No.
1	ONR – NSD Safety Assessment Principles for nuclear facilities, 2006.	ONR Website	http://www.onr.org.uk/saps/saps2014.pdf
2	ONR-Function and content of a safety management prospectus. T/AST/072 rev 3	ONR Website	http://www.onr.org.uk/operational/technical_guides/ns-tast-gd-072.pdf
3	ONR-Licensee design authority capability T/AST/079 – Issue 1 – ONR	ONR Website	http://www.onr.org.uk/operational/technical_guides/ns-tast-gd-079.pdf
4	ONR - Procurement of nuclear safety related items or services T/AST/077	ONR Website	http://www.onr.org.uk/operational/technical_guides/ns-tast-gd-077.pdf

Term / Abbreviation	Definition
BAT	Best Available Technique
BEIS	Government Department of Business Enterprise and Industrial Strategy
BS	British Standard
CAP	Corrective Action Plan
CNS	Civil Nuclear Security
DA	Design Authority
DAC	Design Acceptance Confirmation
DCO	Development Consent Order
DIPNN	Division Ingénierie Projet Nouveau Nucléaire, The engineering division of EDF SA
EA	Environment Agency
EDF Energy Nuclear Generation Ltd	EDF Energy Nuclear Generation Limited, Company Number 03076445 Barnett Way, Barnwood, Gloucester, GL4 3RS,
EDF SA	Electricité de France Société Anonyme
EDRMS	Electronic Document and Record Management System
EDVANCE	An engineering support company, jointly owned by Framatome and EDF SA.
EPR	The Pressurised Water Reactor developed and trademarked by Framatome (EPR™)
EPROOG	EPR Operators Owners Group- Forum for the exchange of OPEX on EPR construction, commissioning and operation.
Export Controls	Rules and regulation regarding to transfer of knowledge over borders.
FDP	Funded Decommissioning Programme
FID	Final Investment Decision
FWP	Forward Work Plan
GDA	Generic Design Assessment
HPC	Hinkley Point C
HR	Human Resource
HSE	Health and Safety Executive
IAC	Independent Advisory Committee; a sub-committee of the NNB GenCo (SZC) Board
IACO	Independent Assessment, Challenge and Oversight
IAEA	International Atomic Energy Agency
IC	Intelligent Customer
IEC	International Electro-Technical Commission
IMS	Integrated Management System

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INPO	Institute of Nuclear Power Operators
IPC	Infrastructure Planning Commission
IPSA	Inter-Project Services Agreement; the arrangement pursuant to which people resource is shared between HPC and SZC.
IS	Information System
ISO	International Standards Organisation
ITA	Independent Technical Assessment
KM	Knowledge Management
KPI	Key Performance Indicator
LWR	Light Water Reactor
MD	Managing Director
MP	Management Prospectus
MWh	Mega-Watt Hour
NB	Nuclear Baseline
NDA	Nuclear Decommissioning Authority
NIA	Nuclear Installations Act (1965) as Amended
NNB GenCo (SZC)	NNB Generation Company (SZC) Limited, Company Number 9284825
NNB HoldCo (SZC)	NNB Holding Company (SZC) Limited, Company Number 9284571
NSC	Nuclear Safety Committee
NSIP	Nationally Significant Infrastructure Projects
NSL	Nuclear Site Licence
OCC	Operational Control Committee
OHSAS	Occupational Health and Safety Management System
ONR	Office for Nuclear Regulation
ONR CNSS	Office for Nuclear Regulation Civil Nuclear Security and Safeguards.
OPEX	Operating Experience
PCER	Pre-Construction Environmental Report
PCSR	Pre-Construction Safety Report
PDO	Project Delivery Organisation
PWR	Pressurised Water Reactor
QA	Quality Assurance
RD	Responsible Designer
RSR	Radioactive Substances Regulation
SHEC	Safety Health and Environment Committee
SHEQ	Safety, Health, Environment and Quality
SOCC	Statement of Community Consultation
SoDA	Statement of Design Acceptability
SSER	Safety, Security and Environmental Report
SZA	Sizewell A
SZB	Sizewell B
SZC	Sizewell C
TSO	Technical Services Organisation, operating out of EDF Energy (TSO) Limited
UK	United Kingdom
WANO	World Association of Nuclear Operators
WENRA	Western European Nuclear Regulators Association

2 THE COMPANY- NNB GENCO (SZC)

2.1 Company Overview

NNB Generation Company (SZC) Limited was incorporated on 28th October 2014 as a private limited company. NNB GenCo (SZC)'s company number is 09284825 and its registered office is at 90, Whitfield Street, London W1T 4EZ.

NNB GenCo (SZC)'s business is "to undertake the SZC project including the generation and sale of electricity."

NNB GenCo (SZC) will be applying for a Nuclear Site Licence [Refs. 2, 3] and relevant environmental regulatory permissions [Ref 4,5,6] for the purpose of construction and operation of a new build nuclear power plant consisting of two EPR units at Sizewell in Suffolk, the design of which has already achieved GDA approval.

NNB GenCo (SZC) will enter into agreements with EDF SA, EDF and the HPC project to serve as the Responsible Designer (RD), and provide other project services. These agreements will enable NNB GenCo (SZC) to fulfil its responsibilities as a nuclear site licensee and environmental permit holder as an intelligent customer for those services. [Ref 7]

2.2 NNB GenCo (SZC) Vision and Values

NNB GenCo SZC's vision is "Building better energy together", which is complimented by our mission of "Leading the way in building a fleet of safe, reliable nuclear power stations without costing the earth".

2.3 Our Values & Ambitions

Our values drive our operating principles and our objectives, and they are fundamental to the way we work. NNB GenCo (SZC) is committed to behaving in a safe and ethical manner and, through this, delivering excellent performance. Our Shareholders, consumers, Government, and the public place their trust in NNB GenCo (SZC) and expect us to work to build a safe, commercially successful, and financially robust business.

The generation of reliable nuclear energy is a major contribution to the reduction of emissions produced in the UK to facilitate net-zero by 2050. It reduces our contribution to rising global temperatures. In setting a net zero target, the UK will be among a small group of countries handling climate change with appropriate urgency. The new target meets fully the requirements of the Paris Agreement, including the stipulation of 'highest possible ambition', and sets the standard for other developed countries as they consider their own pledges to the global effort. It is right that the UK takes a lead on this issue, and Sizewell C will provide a significant contribution in the battle against global climate change to date. There is the prospect of real benefits to UK citizens: cleaner air, healthier diets, improved health and new economic opportunities from clean growth. The creation of a low carbon, reliable electricity generation source at Sizewell, with the capacity of around 7% of the UK's electrical energy provides a vital piece of the future infrastructure for the ambition of carbon neutral.

We are committed to managing our environmental impacts to be as low as reasonably achievable, and Safety is our primary focus and in all cases within this document Safety includes; nuclear, radiological, industrial, environmental, health and security, unless in defining specific accountability or scope of an individual or committee.

With this Safety focus in mind, we will increase the value of the business and make it a success.

SZC will ensure that it meets the requirements of the Equality Act 2010 and non-discrimination against the nine protected characteristics, as well as celebrating and promoting the understanding and celebration of any difference.

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As the Project moves into the next phase of development, we will have a specific focus on building gender diversity to create the desired impetus for improved representation in the nuclear industry as reflected in the BEIS Sector Targets and in the NSSG Strategy:

- 40% of total workforce to be female by 2030 (taken to exclude the construction workforce)
- 50% of apprentices to be female by 2021
- 25% of senior management roles to be held by women by 2030

We will achieve success through conducting ourselves in accordance with our values and acting as one team, “Team SZC”. Our values provide a shared understanding of what is important to everyone at NNB GenCo (SZC).

- **Humility:** recognising there is always opportunity to learn from others and improve.
- **Positivity:** being an ‘energizer’ and focussing on solutions when faced with challenges.
- **Respect:** valuing people, safety, the environment and the rules under which we operate.
- **Clarity:** Knowing how far we’ve come, how far we’ve got to go and how we’re going to get there.
- **Solidarity:** Being one team, working closely together and helping each other.

NNB GenCo (SZC) is committed to a strong Safety culture, encompassing the following expectations:

- Everyone is personally responsible for Safety.
- Our leaders demonstrate a commitment to Safety.
- Trust permeates the organisation.
- Decision-making reflects Safety first.
- Nuclear technology is recognised as special and unique.
- A questioning attitude is cultivated.
- Organisational learning is embraced.
- Safety undergoes constant examination.

Through a strong focus on these values and living up to our expectations the project will deliver the mission and achieve our ambitions:

- To achieve zero harm to people.
- To be the best and most trusted for customers.
- To deliver safe, secure and responsible nuclear electricity.
- To achieve strong financial and ethical performance.
- To power society without costing the earth, and provide a major contribution to the net-zero economy.
- To empower our people to be a ‘force for good’.

The project will reinforce the mission and values through training programmes and performance management processes.

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The real engine of a great project is a team of skilled qualified and experienced people, motivated to work together with trust to the highest standards, not for themselves, but for the success for the project. The freedom for a team to succeed in nuclear construction:

- has its foundation in project discipline process and clarity of purpose,
- is a result of leadership at all levels; together with
- concern for every individual.

NNB GenCo (SZC) has defined its 10 core disciplines for a successful project which, with its annual priorities, give clarity on what NNB GenCo (SZC) will deliver:

- 1. Put Nuclear Safety first alongside industrial safety and the environment.**
- 2. Be part of one team, one purpose and one incentive.**

The greater SZC project team, including contractors, will be bound by a common purpose, common incentive, strong supervision as well as quick open communication.

- 3. Start only when you are sure you won't have to stop.**

The design process and the forward plan are linked to the nuclear safety case and procurement through equipment delivery and construction to first operation. If the design is late so is the project at every step. If the plan is not clear and deliverable the site will be disorganised.

- 4. Learn as much as possible from the experience of others.**

Through systematic training, innovation, and continuous improvement. Efficient construction and future operation require a design process that integrates experience from construction, operation, and innovation, particularly that of HPC.

- 5. Manage the risks created by interfaces.**

Interfaces between pieces of equipment, with buildings, between contracts and between teams require special attention.

- 6. Create realistic cost risk and time estimates.**

They are the foundation of the business case and are an essential input to procurement and project control.

- 7. Build as designed and document as built.**

The highest standards are needed to ensure there is no excuse for concessions, deviations are identified and resolved, and that equipment qualification and quality assurance are planned, managed and rigorous. The aim is that all work is right first time.

- 8. Embrace strong project control; it is the basic discipline of a project.**

No one can escape their responsibility to understand what they need to do; do what they said they would do, when they said they would do it, to the cost and quality required.

- 9. Every problem on site was caused much earlier and was avoidable.**

Early risk identification and forward planning allows pre-construction planners to plan, plan and plan again to mitigate risk and adapt to current realities, providing the construction team with a smooth

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workload. The construction team must be engaged inside the full project team and be proactive in identifying and resolving potential problems and learning from experience.

10. The client takes the risk on and off site and hence must be in control.

The client must be able to be in control of people processes, machines and equipment; all through design and construction into operation.

The NNB GenCo (SZC) Nuclear, Health and Safety, Environment and Quality Policies (Ref. 8, 9, 10,11,) explain that safety and care for the public, our workers and the environment are our overriding priorities and we are committed to achieve this through the excellence of our quality arrangements and by providing appropriate training to employees.

3 THE UK EPR FOR SIZEWELL C

3.1 Sizewell C Site

NNB GenCo (SZC) intends to design, construct, commission, operate and decommission two UK EPR reactors on the SZC site, located at Sizewell, on the east coast of the County of Suffolk. It will be within the civil parish of Leiston cum Sizewell. (Figure 1. Below)

The grid reference of the approximate centre of the SZC site. This is at grid references Lat.- 52.213200 Long.- 1.6162560SZC.

The proposed site is located to the north of two existing nuclear installations, Sizewell B (SZB) and Sizewell A (SZA). SZB is a Pressurised Water Reactor operated by EDF Energy Nuclear Generation Ltd. SZA is a two-unit Magnox nuclear power plant now being decommissioned under the authority of the Nuclear Decommissioning Authority (NDA) with all nuclear fuel removed from site.

The Sizewell C EPRs will be, wherever possible, a replica of the design approved by the GDA process and developed during detailed design of the sister plant under construction at Hinkley Point C. The use of a standard design provides significant benefits including taking advantage of overseas experience involving many years of design input and detailed regulatory review and is the optimum method of reducing construction and operational risk.

It combines the latest technologies to provide enhanced safety, environmental protection, technical and economic performance above those of existing reactors. An indicative layout plan (Figure 2) showing the boundary of the licensed site.

The land that comprises the SZC nuclear licensed site is currently owned by EDF, and the land will be transferred at (or around) the final investment decision date.

Nuclear Safety Cooperation Agreements will exist between NDA and Magnox Limited (the owners of Sizewell A), the Nuclear Decommissioning Authority and EDF Energy Nuclear Generation Ltd dealing with common issues relating to access, interactions, shared services and emergency arrangements; NNB GenCo (SZC) will become party to them.

NNB GenCo (SZC) will have overall control of activities at the site throughout the construction period (and beyond).

Ancillary support activities and buildings, such as offices for management, engineering and human resources, training simulator, maintenance facilities, warehouses, and storage facilities will also be on site. Other temporary laydown areas, offices and a public information centre may also be constructed just outside the licensed site boundary.

Prior to the granting of the NSL other agreements and arrangements will be in place with EDF Energy Nuclear Generation Ltd to allow NNB GenCo (SZC) to undertake preliminary works on the SZC site.



Figure 1. Location of Site.

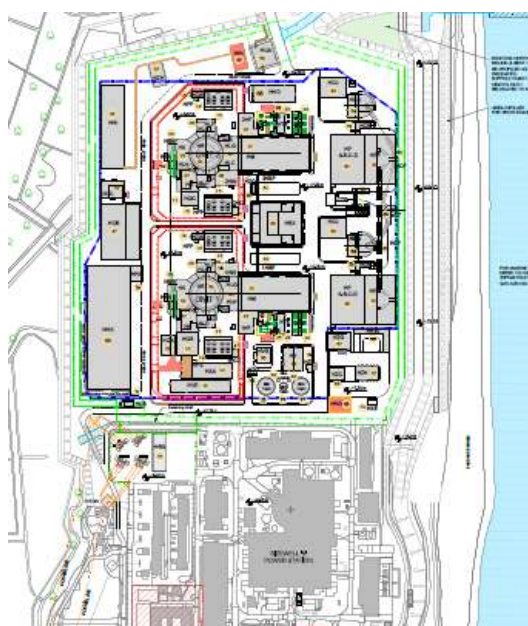


Figure 2. Site Layout (Outer Green line shows NSL Boundary).

3.2 Security of Tenure

The area of land that will be occupied by the proposed SZC station is currently owned by EDF Energy Nuclear Generation Ltd, and the land transaction will complete and ownership transferred at the time of the final investment decision (FID), so that the Nuclear Site Licence may be granted to NNB GenCo (SZC) as owner of the land.

This land transaction will also include a transfer of some land which is part of the existing SZB Nuclear Licenced area which will ultimately become part of the Nuclear Site Licenced area of SZC. NNB GenCo (SZC) will own the freehold of the land from FID. Prior to ownership, NNB GenCo (SZC) will enter into an option agreement for this land.

3.3 Basic EPR Description

The SZC Site will have two UK EPR's, each is a PWR with a rated thermal power of 4500 MW and an electrical power output of ~1630 MW depending on conventional island technology and heat sink characteristics.

The EPR operating design life of 60 years, reduced fuel consumption and waste production per unit of energy output contributes significantly to energy production from a low carbon source. The design philosophy has the following objectives over earlier generations of PWR:

- To further reduce the likelihood of core damage.
- To further reduce the likelihood of large releases of radioactivity.
- To mitigate the consequences of severe accidents.
- To protect critical systems from external events.
- To achieve an improved plant availability factor.
- To give extended flexibility of fuel cycle lengths and capability for load following.
- To give increased savings on uranium consumption per MWh produced.
- To achieve further reduction in long-lived actinides generation per MWh through improved fuel management.

The following list identifies the key structures contained within the EPR unit:

- Reactor containment to house the nuclear steam-supply system.
- Safeguard and electrical buildings are split into four divisions, (trains) each containing emergency systems with electrical support systems.
- Fuel building.
- Interim Spent Fuel Store.
- Nuclear auxiliary building.
- Diesel-generator buildings.
- Effluent-treatment building.
- Turbine hall containing the turbo-generator, condenser and ancillaries.
- Conventional island electrical building.
- Power-transmission and subsidiary feed platform.
- Pumping station and the pre-discharge and discharge ponds.
- Operational service centre, and
- Gas and chemical storage building.

The detailed safety case for the EPR and its construction will be contained in the SZC Pre-Construction Safety Report (PCSR). Environmental Safety and Best Applicable Techniques are included in the RSR application for the station and its associated references.

4 NNB GENCO (SZC) COMPANY DETAILS

4.1 General Overview

NNB GenCo (SZC)'s sole purpose is to have responsibility for all activity related to the SZC project. NNB GenCo (SZC) is currently 100% owned by NNB HoldCo (SZC).

NNB GenCo (SZC) will control all activities conducted under its Nuclear Site Licence and in compliance with environmental permits and other relevant safety, security, transport, and environmental legislation.

4.2 Funding Arrangements

NNB GenCo (SZC) is currently funded via equity finance. Pursuant to the Shareholders' Agreement [Ref. 17], EDF's ultimate shareholding in Sizewell C is currently 80% and CGN's ultimate shareholding is 20%. Shown in Figure 3 below.

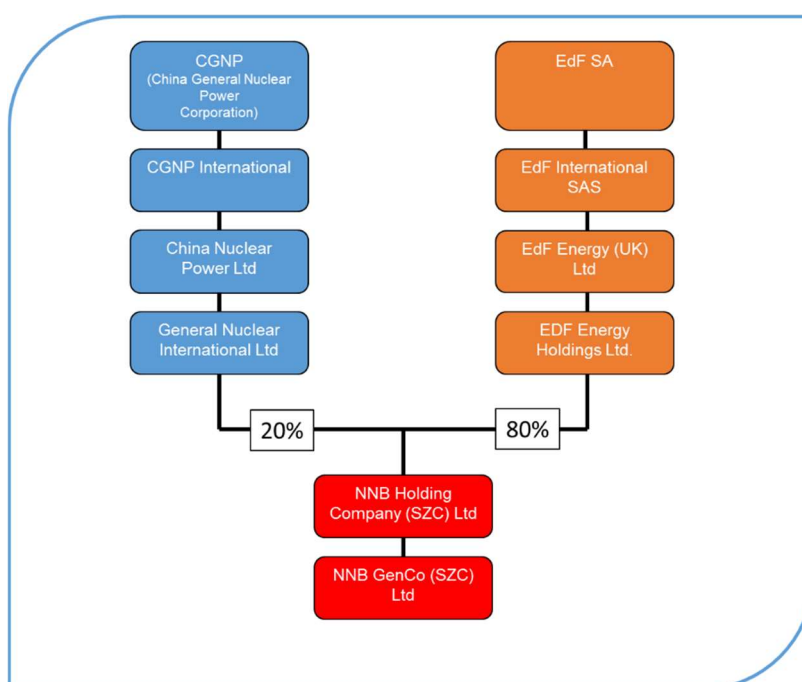


Figure 3; Current Shareholding.

Equity financing for the SZC project is provided by way of the shareholders subscribing for further shares in NNB HoldCo (SZC) or by providing shareholder loans; the funds for which then flow down to NNB GenCo (SZC).

Each shareholder provides equity financing to the SZC project pro rata to its percentage shareholding to fund the agreed SZC project budget.

EDF intends to bring other investors into the SZC project at FID, and to retain a minority shareholding in SZC. It is anticipated that post-FID, the SZC project will be funded by a combination of equity and debt finance.

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Adequate financial resources will be made available to NNB GenCo (SZC) by its shareholders to enable the fulfilment of the Nuclear Site Licence, other Safety obligations and to maintain an organisation with appropriate skills, knowledge, and experience.

The Shareholders' Agreement and the other relevant project agreements support these requirements, and a new shareholder agreement and funding arrangements will be in place at FID for the NNB GenCo.

4.3 Links with EDF, EDF SA and CGN

NNB GenCo (SZC) will be supported by NNB GenCo (HPC), EDF and EDF SA group companies and divisions, including EDF SA Division Ingénierie Projects Nucléaire Nouveau (DIPNN) and Edvance. The detailed design knowledge of the EPR has been built up over many years within the EDF SA group of companies and particularly within the DIPNN organisation. The use of a 'single family' approach provides a safety benefit by making use of this extensive expertise, while maintaining sufficient in-house expertise at NNB GenCo (SZC) to remain in control of the design integrity.

Whilst for the sister plant of HPC, there was an "Architect Engineering" role, as the HPC plant is being replicated, the "Architect Engineering" role is incorporated in the "Responsible Designer" (See Appendix A2.2). Replication of the plant is the optimum approach to minimise risk- in design, construction and operation, and provide a project with commercial and safety risks "As Low as Reasonably Practicable". (ALARP).

NNB GenCo (SZC) will have control of activities being undertaken on its behalf and be an Intelligent Customer of the services provided.

NNB GenCo (SZC) may, for some services and to aid replication, use the NNB GenCo (HPC) organisation to provide support, and will utilise the Technical Services Organisation (TSO) (see appendix A2.3.1) and all of the experience feedback and know-how of the HPC team, via formal agreements.

Following granting of the NSL and any Environmental Permissions, changes to the organisation will be made using a Management of Change process in accordance with the NSL.

Following a final investment decision to proceed with the SZC project, EDF, CGN (if CGN exercises its option to invest), and any other investors, will sign a Shareholders' Agreement for the investment in two EPR reactors at SZC.

4.4 The NNB GenCo (SZC) and NNB HoldCo (SZC) Boards

The NNB GenCo (SZC) Board is responsible for delivering a successful development of the SZC project, in a timely and efficient way meeting high safety and quality standards (subject to the HoldCo Board Reserved Matters, all of which must be brought to the NNB HoldCo (SZC) Board for resolution). The NNB HoldCo (SZC) Board is responsible for overseeing the strategy of the SZC project and approving the project's development plan and budget. The NNB GenCo (SZC) Board is accountable for satisfying all the Company's statutory and regulatory requirements, specifically with respect to maintaining effective control over safety. The Board reports to the shareholders on its stewardship of the Company.

NNB GenCo (SZC) has in place a Board structure ready to become a Licensee and controlling mind, having a Board that is solely focused on the mission of NNB GenCo (SZC) with no other conflicts from other companies within the EDF Group. The NNB GenCo (SZC) Board retains the responsibility for Nuclear Safety decision making.

The directors on the NNB HoldCo (SZC) Board are appointed by the shareholders in the SZC project, who have rights to appoint directors to the NNB HoldCo (SZC) Board based on their percentage shareholding. A shareholder may remove a director appointed by it by notice to NNB HoldCo (SZC) and appoint another director in his or her place.

The NNB HoldCo (SZC) Board's quorum requirements are set out in the Shareholders' Agreement. Currently, as the largest shareholder in the project, EDF is responsible for the appointment of the Chairman and currently as the second largest Shareholder, CGN is responsible for the appointment of the Vice-Chairman of the NNB HoldCo (SZC) Board (although neither the Chairman or the Vice-Chairman has a casting vote on matters).

Figure 4 below shows the structure and membership of the NNB Holdco (SZC) Board.

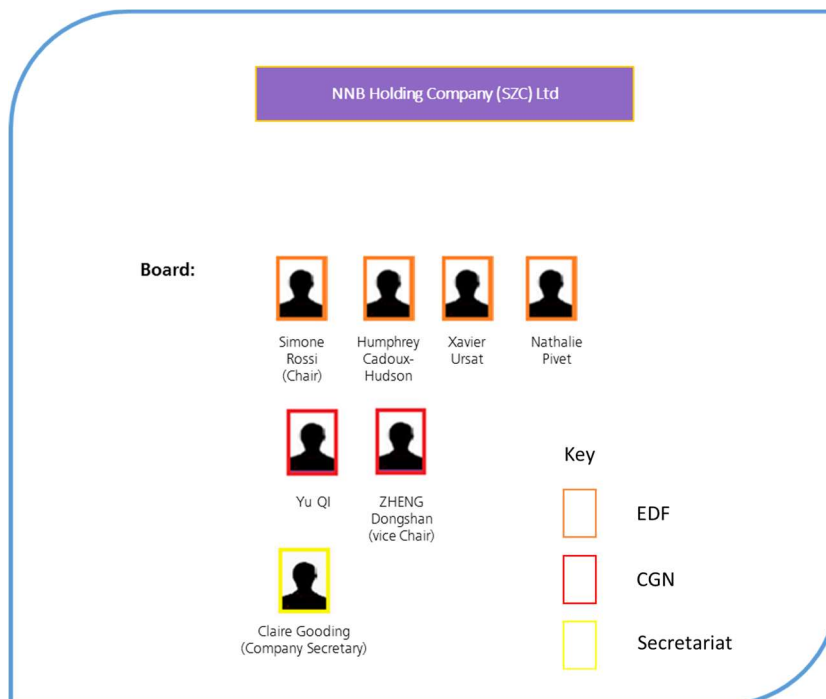


Figure 4: NNB Holdco (SZC) Board

The directors of NNB GenCo (SZC), like all other directors in the UK, must act within their powers, in good faith, to promote the success of the company. The Directors must exercise independent judgement, exercising reasonable skill, care, and diligence. They must avoid conflicts of interest, comply with the Ethics & Business Conduct policy, and must declare interests in proposed transactions or arrangements with NNB GenCo (SZC). Each member of the NNB GenCo (SZC) Board is aware of these duties and is provided with periodic training to reinforce this. The NNB GenCo (SZC) Board is shown in Figure 5 below.

All appointments of members of the NNB GenCo (SZC) Board and NNB GenCo (SZC)'s management must be consistent with the requirements of the licence documents and relevant regulatory guidance.

The Shareholders' Agreement acknowledges that all appointments of members of the NNB GenCo (SZC) Board and NNB GenCo (SZC)'s management must be consistent with the requirements of the nuclear site licence documents and relevant regulatory guidance.

The NNB HoldCo (SZC) Board is responsible for the appointment and removal of the executive directors and the independent non-executive directors of the NNB GenCo (SZC) Board, following proposals made by the Chairman (or in some cases the joint proposal of the Chairman and Vice-Chairman) of the NNB HoldCo (SZC) Board.

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NNB GenCo (SZC) executive directors must have relevant experience for the role which satisfies an assessment against a set of agreed standards and competencies consistent with the Nuclear Baseline for SZC and which, when taken together with the rest of the NNB GenCo (SZC) Board, satisfies a collective assessment against such agreed standards and competencies. On appointment, NNB GenCo (SZC) Board members are made aware of their duties and are provided with periodic training to reinforce this and to ensure they are briefed on legal and regulatory developments relevant to their directorship.

Each director receives an annual review to discuss their performance and consider their training and development needs.

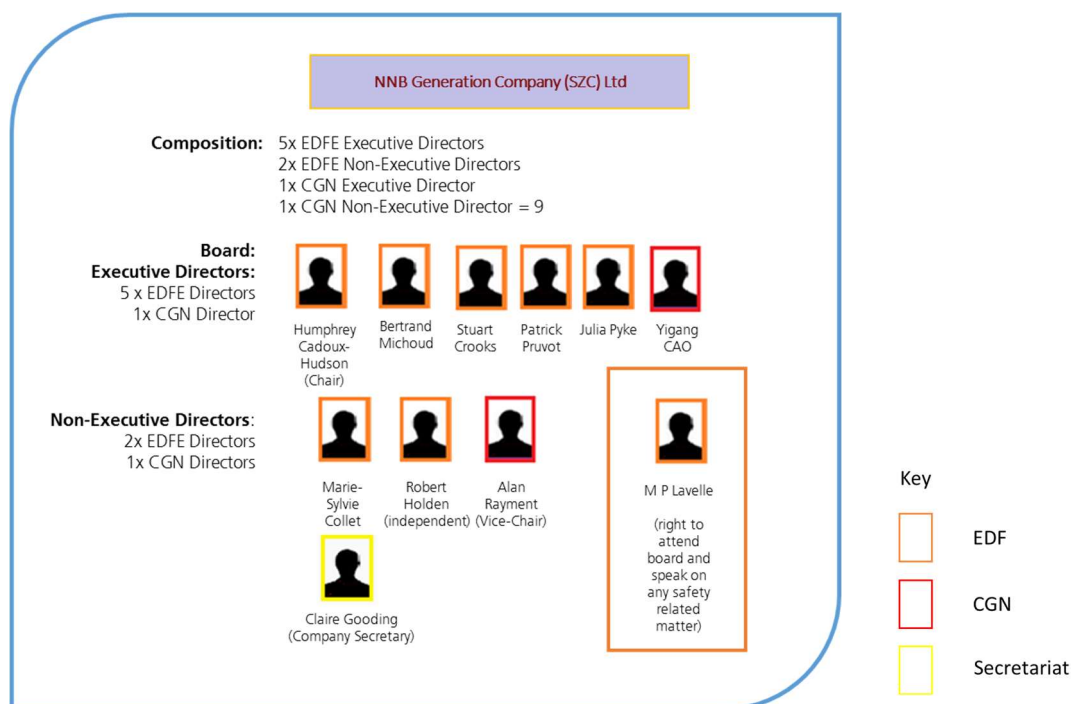


Figure 5. NNB GenCo (SZC) Board

NNB GenCo (SZC) also has a Company Secretary who attends all NNB GenCo (SZC) Board meetings and acts in an advisory role.

4.5 Board Membership & Responsibilities

The individual responsibilities of the NNB GenCo (SZC) Board members are set out in the following sections.

4.5.1 Managing Director

The Managing Director (MD) is appointed from amongst EDF's Executive Directors. The MD acts as the Chairman of the NNB GenCo (SZC) Board and is a member of the Board of NNB HoldCo (SZC) and represents NNB GenCo (SZC) externally.

The MD is accountable to the NNB GenCo (SZC) Board for NNB GenCo (SZC)'s compliance with all legislation including Safety legislation.

A key role is ensuring the following areas are being satisfactorily achieved and monitored:

- The NNB GenCo (SZC) Board has the right balance of membership to provide leadership, vision and independent challenge.
- The NNB GenCo (SZC) Board sets the aims, strategy and policies and monitors performance by a set of improvement targets and key performance indicators (KPIs).
- The NNB GenCo (SZC) Board receives the accurate, timely, high quality and clear information it needs to be effective; and
- NNB GenCo (SZC) is interfacing well with its stakeholders and their views are being properly considered.

The MD is responsible for the overall performance of the SZC project and leads the Executive Team, overseeing and monitoring the Executive Team to ensure that the following key goals are satisfactorily achieved:

- NNB GenCo (SZC) operates safely and complies with legislative and regulatory requirements.;
- Targets and performance standards are met, or effective corrective measures are put in place.
- There is appropriate oversight and direction to management at all levels within the organisation.
- Competent persons and other resources are provided throughout NNB GenCo (SZC); and
- Appropriate internal control processes, including assurance arrangements, are in place to ensure high levels of efficiency, effectiveness, and Safety within NNB GenCo (SZC).

4.5.2 Engineering and Delivery Director

The Engineering Director has responsibility for all aspects of the engineering and delivery. The Engineering Director is responsible for:

- Management of the preparations for the construction of SZC site and related developments.
- Managing any design changes and configuration control.
- Oversight of Safety at the SZC site, related developments, and associated activities.
- Ensuring environmental safety and monitoring on site.
- Enabling works and relocating facilities from the existing SZB station.
- Ensuring the RSR requirements for BAT are achieved and maintained.
- Project management to safely deliver the SZC project preliminary and enabling works on schedule, to quality and on budget, and
- Producing and continuously improving the monthly management reporting.

4.5.3 Financing and Economic Regulation Director

The Financing and Economic Regulation Director's key accountabilities are:

- **Commercial Structure;** ensure NNB GenCo (SZC)'s commercial arrangements and financing activities are aligned with the shareholders' investment strategy in SZC, and contribute to the development and implement of SZC financial strategies and policies, including agree with Government and investors and maintain the contractual and regulatory arrangements.

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- **Investors;** oversee the establishment of NNB GenCo (SZC)'s Investor Relations function, including putting in place systems and processes for the management of investor relations and maintaining a central depository for all shareholder related performance reporting (financial and non-financial), liaise with shareholder's Investors Relationship teams and provide support in their external communication, including but not limited to communication to the financial market and rating agencies
- **Government interactions (national);** liaise and work with the relevant Government departments, develop and present compelling Investment Cases, arrange appropriate governance and identify areas for optimisation, including funded decommissioning planning and waste management,
- **Liaison/interface** of NNB GenCo (SZC) with legal, State Aid & other Consents
- **Lenders:** deliver efficient processes and systems to ensure compliance with lending arrangements and enhance collaborative team working between NNB GenCo (SZC) and lenders;
- **Assure** supply chain compliance with finance requirements,
- **External comms;** be the focus for external communications

4.5.4 Finance Director

The Finance Director is a shared director currently working on both HPC and SZC. responsible for;

- **Building a financial model** and implementing financial policies and strategies for NNB GenCo (SZC).
- **Primary interface with EDF Group Finance,** including Interface/liaison with EDF Finance, e.g. Tax, treasury.
- **Financial governance and reporting;** ensuring NNB GenCo (SZC) has a defined management information strategy and establishing robust financial and non-financial KPI reporting to monitor the delivery of business activities and initiate strategic business improvements.
- **Budget management:** business plan and annual budget is prepared for the NNB GenCo (SZC) Board to review and approve as appropriate.
- **Providing construction cost estimates;** developing an investment case to support decision making for the SZC programme.
- **Conducting independent financial and risk analysis** to provide challenge to business development activities and undertake post-investment analysis of investment decisions to assess progress against strategies and plans.
- **Preparing annual accounts and reports** as required by statutory and regulatory requirements, as well as the financial reports required by the Shareholders' Agreement and any applicable IPA financing arrangements.
- **Deconsolidation/ Separation;** prepare the company for deconsolidation and separation from the parent company,
- **Ensuring** that Information Technology, Information Management Systems and Project Services for the organisation is effectively provided.

4.5.5 General Counsel and Company Secretary

The General Counsel and Company Secretary is responsible for,

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- Serving as legal counsel to NNB GenCo (SZC), providing legal advice and support to NNB GenCo (SZC) across all aspects of the project; including legal arrangements for the supply chain, property matters, licensing and consents, financing and Government arrangements, and intellectual property.
- Responsible for the development and continuous training of the lawyers within NNB GenCo (SZC)'s Legal department.
- Ensuring NNB GenCo (SZC) complies with all relevant company law and regulation and operates to a high ethical standard,
- Ensuring the Board and Board Committees within NNB GenCo (SZC) comply with legislative requirements and apply good corporate governance practice including meeting Companies Act requirements.
- In consultation with the Chairman, preparing agendas for NNB GenCo (SZC) Board meetings and preparation of NNB GenCo (SZC) Board minutes, and
- Receiving statutory instructions from the regulators on behalf of NNB GenCo (SZC), such as licence instruments made under the Nuclear Site Licence, or specifications made under the environmental permits.

4.5.6 Safety, Security and Assurance Director

The Safety, Security and Assurance Director leads the Safety Directorate of NNB GenCo (SZC). This director is not a statutory director of the NNB GenCo (SZC) Board but has a right to attend the Board and speak on safety-related matters. This director has responsibility for:

- **Safety Reporting and Actions;** Is a standing invitee to board meetings to discuss matters of Safety (Nuclear, Environment and Industrial).
- **Nuclear Safety;** preparation, oversight and implementation of robust Nuclear Safety policies, provision of a strong assurance function within NNB GenCo (SZC) including independent assessment, challenge and oversight (IACO), ensuring that a Nuclear Safety Committee is established and operates effectively,
- **Industrial Safety;** oversight of the implementation of processes and systems, management of the Safety, Health and Environment Committee, reporting to the board of safety matters.
- **Environmental impact;** ensuring oversight of the RSR and other environmental permits to provide assurance that these permits are being respected, in terms of BAT and site monitoring, and the sustainability monitoring programme,
- **EA and ONR regulation;** liaise and work with the regulators to ensure effective working between the parties,
- **Licensing,** obtaining the permissions and relevant licences from the ONR, EA and any other related bodies, including those required on site for waste management and processing,
- **Quality;** ensuring the project has appropriate levels of assurance (ISO 9001, ISO 14001, and performs audits to advise the board on any improvements.
- **Organisational Learning,** the establishment of an effective and sustained learning process (OPEX) within NNB GenCo (SZC).
- **Security;** liaison with the ONR (CNSS) and associated bodies to provide appropriate security vetting and physical arrangements, including cyber security and nuclear proliferation.

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- **Pre-Ops** – Manage the Pre-Operations aspects of the project as below, until appointment of the Pre-Operations Director.

4.5.7 Human Resources Director (post FID)

The Human Resources Director is a shared director currently working on both HPC and SZC. This director is not a statutory director on the NNB GenCo (SZC) Board but is invited to the Board to speak on HR-related matters. This director has a Head of Function responsible for day to day management of:

- **HR Business Partnering**; ensuring there is appropriate HR support to all line managers in NNB GenCo (SZC), providing advice, support, and coaching.
- **Resource planning & reporting**; developing the NNB GenCo (SZC) human resource policies, Co-ordinating employee relations and pay issues.
- **Organisational design & Capability**; developing and managing of the NNB GenCo (SZC)'s succession and resource planning and leadership development activities, ensuring that the NNB GenCo's (SZC) responsibilities under the management of organisational change processes are properly carried out, making and ensuring implementation of adequate arrangements to control any change to the NNB GenCo (SZC) organisational structure or resources which may affect Nuclear Safety.
- **Interface between HPC/SZC**: on people & organisation & internal communications.
- **Skills, Education and Social Values**, identify and develop a talent pipeline and ensure this meets organisational succession needs, chair the NNB GenCo (SZC) Skills Committee, and
- **Construction Workforce Development**, looking ahead for training and recruitment of the workforce

4.5.8 Pre-Operations Director (Post FID)

The Pre-Operations Director will be appointed post FID. Until that time the role will be carried out by the Safety, Security and Assurance Director. The Pre-Operations Director will have responsibility for:

- Pre-operations involvement in review of all modifications.
- Development of the SZC station operating model in terms of required organisation, standards, procedures, processes, etc.
- Support the Nuclear Site Licence and environmental permitting forward work plan activities.
- Both Nuclear Baseline and construction competency assessments, develop training programs, and deliver training to create a competent project staff.
- The development of the organisational strategy, hiring plans and processes, and required training program descriptions for future station staff (operators, engineers, etc.).
- Analysis and determination of the IT systems necessary to support configuration management and training learning management.
- Perform and/or support integrated work schedule activities to achieve all SZC project milestones.
- Development of an EPR operator family interface to receive learning from all future EPR commissioning and operations.

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- Development of the strategic nuclear fuel cycle design and implementation plans including acquisition, interim storage, and eventual disposal.
- Development of the commissioning strategy, schedule, and processes to include use of operation's personnel and turnover methodology.

4.5.9 Non-Executive Directors

An important feature of the NNB GenCo (SZC) Board are its non-executive directors. It is intended to evolve the composition of the board from the current membership to expand to having more members with in-depth experience in key areas such as Construction and Nuclear Safety and provide advice and independent challenge to the NNB GenCo (SZC) Board.

The NNB GenCo (SZC) Board currently comprises both independent and non-independent non-executive directors.

4.6 Board Meetings

NNB GenCo (SZC) Board meetings take place every month unless the Board agrees otherwise. Meetings are usually held in the UK at NNB GenCo (SZC)'s registered office although the notice of the meeting may specify another venue. Directors can participate via telephone or video conference, if they can hear all of the other meeting participants and address other participants simultaneously. The working language of the Board is English.

Notice of Board meetings, together with any supporting papers, will be given to Board members at least ten business days before the meeting is held. Quorum for a Board meeting is two directors (executive or non-executive), provided that one of the directors is a director that was nominated for appointment by EDF and one by GNI. If a quorum is not present, the meeting will be adjourned and re-convened three business days later at the same time and place. The directors present at a Board meeting each hold one vote and resolutions are approved by a simple majority. A director can be represented by an appointed alternate director if they cannot attend the meeting themselves, provided that the director has notified the Board in writing that an alternate director has been appointed to take their place.

Any director can call a Board meeting or propose a resolution for the agenda, but the dates and agendas are usually set by the Chairman. The Company Secretary is responsible for the programming and administration of meetings and for preparing draft Board minutes as soon as practicable following the meeting, which are then finalised by the Chairman and submitted to the Board for approval.

The NNB GenCo (SZC) Vice Chairman provides support to the NNB GenCo (SZC) Chairman, reviewing the agenda for each meeting and the draft minutes prior to finalisation by the Chairman, and acting as chair of NNB GenCo (SZC) Board meetings in the absence of the Chairman.

4.7 Delegated Authority

The NNB GenCo (SZC) Board has delegated authority for the operational management of the business to the MD and the Executive team. The delegation is based upon the following key principles:

- Delegation of authority will be consistent with Nuclear Site Licence conditions, Environmental Regulation, the Shareholders' Agreement and any other applicable agreements, regulations, and legislation.
- Authority is delegated to individual roles within NNB GenCo (SZC) not to committees. The delegation framework is focused on empowering individuals by clearly defining who can approve key business

decisions. Authority thresholds are based on identified business need and are not a reflection of seniority within the organisation.

- Authority levels cascade through the business to enable the Executive Team and their reports to make effective 'business as usual' decisions.
- NNB GenCo (SZC) Board Committees are consultative bodies with no voting rights and have, in themselves, no decision-making authority.
- Certain matters may need to be approved above the NNB GenCo (SZC) Board (the "Reserved Matters" under the Shareholders' Agreement), and these will be referred to the NNB HoldCo (SZC) Board for decision.

4.8 Sub-Committees

The culture of NNB GenCo (SZC) embodies robust and effective challenge to its safety policies, standards and performance.

To discharge its responsibilities, it has established and interacts with several executive advisory and challenge committees. The NNB GenCo (SZC) Board ensures it is properly briefed by these committees to ensure decisions are made with full knowledge of the facts and issues.

The NNB GenCo (SZC) Board and supporting committees are outlined in Figure 6, and details of individual committees are listed in Appendix 1.

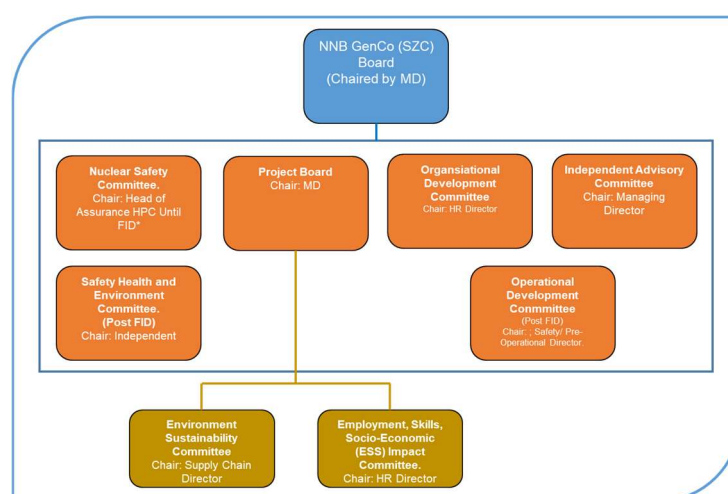


Figure 6. Sub-Committees

5 ORGANISATIONAL CAPABILITY

5.1 Staffing

SZC is taking forward lessons learned from how the HPC Project has set up its client/delivery activities. A key driver for SZC is to replicate HPC as much as possible, to leverage skills, experience, and capability, alongside learning. Taking the HPC learning on board has identified opportunities to enhance and improve the delivery model for SZC to

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improve control of the schedule, costs, quality, and nuclear safety, and is aided by the Organisational Development Committee. (See Fig 6 above)

The client resourcing approach for SZC is like HPC, i.e. a mix of employees, embedded contractors, and expats. The SZC project has its own headcount and staffing budget allocated as part of the annual planning process. However, recognising that HPC has skills and expertise to support SZC, an inter project service agreement (IPSA) has been put in place for HPC to carry out work on behalf of SZC.

There are some key differences for SZC,

- The project is a replica in design, then numbers of staff in some areas are much reduced, in particular those in engineering design, in Design Authority, and in other areas that have had a key role in development of the base design, such as independent nuclear assurance, and the management of the responsible designer contracts.
- The organisation will have a core capability, but there will be no procurement occurring prior to FID, so a large Project Delivery Organisation organisation is not required prior to FID.

A key focus of resource planning is on the socio-economic opportunities presented by the new nuclear projects. Early construction workforce mobilisation activities for SZC have considered these opportunities, for example a conveyor belt model to transition skills from HPC across to SZC, also opportunities to link colleges of further education from the regions. Long term planning is carried out using a methodology to identify skills required against major milestones. This is mapped to the EDF Energy job family architecture (JFA), which supports integrated resource planning across HPC, SZC and NG. This is a best practice approach adopted in many organisations. The JFA can be rolled up to provide a view of skills within key buckets, e.g. Engineering, Commercial, Quality/Assurance. This allows analysis to be completed to understand the trend of the future workforce, which supports long term resource pipeline activities, such as determining graduate discipline and volume requirements.

The requirement for SZC delivery organisation will be largely like the demand for HPC, This will form the basis for discussions with project teams to identify short and mid-term resource requirements. It also enables long term strategic planning of skills development pipelines, such as science and engineering graduates. Therefore, this forward view, alongside HPC actuals, can be used to support early planning activities, such as development of the nuclear baseline.

5.2 Nuclear Baseline

The Nuclear Baseline (NB) is an integral part of the arrangements that demonstrate that NNB GenCo (SZC) is an 'intelligent operator', a capable licensee and holder of environmental permits and consents. It shows that it has the organisation, resource and competences needed for this Pre-Construction phase and is preparing for the capability challenges of the future. The NB is owned by the HR Director and is managed through the company's resource strategy [Ref 12].

NNB GenCo (SZC) recognises the importance of the NB throughout the lifecycle of the project and has developed an approach that draws on best practice and reflects regulatory and industry guidance.

The NB has several purposes:

- To demonstrate that NNB GenCo (SZC), as the holder of the NSL and Environmental Permits and Consents, has suitable and sufficient organisational structures, resources and competence to be able to reliably and effectively carry out all activities that may impact on nuclear safety.

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- To describe responsibilities to adequately manage the design supply chain and ensure adequate technical competences to oversee the nuclear, environmental, and other safety related activities are available at the right time in the lifecycle.
- To support the development of the IC capability for the oversight of nuclear and environmental safety related activities undertaken on its behalf by others.
- As an ongoing management tool to provide a reference point for the assessment of change.
- Provide evidence that NNB GenCo (SZC) is in control of activities through the right allocation of responsibilities for all work that has the potential to impact on nuclear, environmental, and industrial safety.
- Demonstrate how nuclear responsibilities for safety, environment and security are allocated across the organisation to achieve legal compliance; and
- Provide an overview of the staffing levels for this Pre-Construction phase and a look ahead to the future.

The NB will be updated at appropriate intervals to take account of changes to the organisation.

The NB provides the detailed roles, capability, and posts to support NNB GenCo (SZC) as an NSL and Environmental permit holder in addition it also identifies vulnerabilities and the associated mitigation.

To achieve the NB as described above, the overall resource requirements and manpower needs within NNB GenCo (SZC) are managed through the Resourcing Strategy [Ref 12] and the supporting budgets and Medium Term (2 year) Plan. Maintaining a capable licensee organisation will be achieved through:

- Recruitment of staff commensurate with the Resourcing Strategy [Ref 12].
- Competency Assessment and Training.
- Succession Planning, and
- Managing Change.

NNB GenCo (SZC) have developed processes and an organisation to support the safe procurement of materials and services relating to the build of SZC. They demonstrate how NNB GenCo (SZC):

- Assures that materials and services delivered by the supply chain meet required standards.
- Correctly identify and specify work requirements and standards.
- Identify suitably qualified and experienced potential tenderers.
- Evaluate and select the right Contractor(s).
- Identify and control interfaces with Responsible Designer procurement processes via Interface Specifications.
- Identify appropriate interfaces with supporting organisations and departments such as Design Authority and Construction via the Inter-Project Services Agreement (IPSA), and
- Control procurement.

5.3 Control of Organisational Change

NNB GenCo (SZC) recognises the importance of identifying and managing organisational change and has produced and is currently implementing robust arrangements which apply throughout the organisation and will have an appropriate organisation in place to support it under the HR Director. These arrangements include:

- Identification of what constitutes an organisational change.
- Description and categorisation of organisational change based on the potential impact on the NNB GenCo (SZC) NB (impact on roles/posts/IC status).
- Assessment, planning and success criteria of the organisational change.
- Consideration and Approval of the change through the Nuclear Site Licence arrangements (Licence Condition 36).
- Post implementation assessment of the change and close out.

The arrangements once implemented will consider the cumulative effect of changes on the organisation and identify any mitigation necessary. Applying organisational change in this way will ensure changes are fully assessed to ensure NNB GenCo (SZC) remains a competent licensee, justified and the NB is appropriately maintained by keeping a record of organisational changes.

5.4 UK EPR intellectual property

The intellectual property for UK EPR is owned by EDF SA. HPC has a perpetual right to use, royalty free, the intellectual property for UK EPR for all HPC purposes, but not to build a further EPR. HPC is a single purpose company, as required by the HPC contract for difference.

The intellectual property provided by HPC's contractors is either licensed to or owned by HPC, depending on whether the intellectual property is background or foreground intellectual property and depending on the contractor. HPC's rights of use in such intellectual property range from a full right of use for all purposes for any project to a right of use limited to HPC's purposes.

SZC will have, at a minimum, similar intellectual property rights as HPC for all SZC purposes, specifically to enable it to construct and operate a copy of HPC as built and modified. The terms on which SZC acquires those rights are not yet settled with EDF SA, HPC and relevant suppliers (or with HMG).

SZC is taking a two-staged approach to securing the intellectual property rights which it requires for development of the SZC project:

- Rights already in existence: SZC Co already has certain arrangements in place with HPC and HPC's suppliers for the sharing and licensing of intellectual property to SZC Co. SZC Co has been undertaking progressive work to fully map the scope of rights already granted to it.
- Procurement of additional rights: Where SZC does not have in place pre-existing rights, SZC intends to enter standalone contracts with relevant EDF entities and relevant suppliers of HPC.

These agreements will be in place prior to or at FID and will apply retrospectively.

5.5 Transfer of know-how and lessons learned

In addition to securing appropriate and adequate intellectual property rights, NNB GenCo (SZC) has established arrangements to ensure that the knowledge originating from and being developed through HPC and SZC's shared capability is captured. In addition, NNB GenCo (SZC) will be a member of the EPR Owners and Operators Group (EPROOG) at FID and will, in advance of commercial operation, join and establish links with the World Association of Nuclear Operators, (WANO).

In line with feedback from the ONR that it found the HPC project execution plan useful, SZC and HPC are currently developing a project execution plan for the SZC project (the Project Execution Plan). The intention is that the Project Execution Plan will be an all-encompassing internal resource, setting out both key information about the SZC project (for on-boarding purposes) and SZC's proposal for delivery of the SZC project, using lessons learned from HPC. HPC is actively contributing to and working with SZC to develop this Project Execution Plan, which will set out the consensus reached between SZC and HPC on optimal project delivery.

5.6 Supply Chain Strategy

SZC Co's replication strategy is predicated on the reduction in risk that can be delivered through SZC being developed as the 7th and 8th EPRs worldwide (and the 3rd and 4th versions of such units in the United Kingdom). This replication strategy and reduction in risk in turn allows SZC Co to deliver a project which presents values for money for both the consumer and HMG.

By adopting a replication approach, using suppliers that have provided qualified equipment for HPC, NNB GenCo SZC will be able to contract with a known entity that has already worked on HPC, leading to a reduced risk of delivery due to experience gained on the lead project, HPC.

In practice this means that NNB GenCo (SZC) will contract with the same contractors (or affiliates of those contractors) for key supply chain contracts which are essential to secure the EPR design. It will also contract with contractors who are required to support the wider implementation of the replication strategy (for example where it would take too long to re-qualify equipment from a different supplier, where the use of different equipment could have a ripple effect on design or where the contractor has key and valuable know-how from its work on HPC. In assessing whether to replicate a contract from HPC, NNB GenCo (SZC) is taking into account the contractor's performance on HPC, and will need to adapt if, for example, a contractor withdraws from the market or withdraws its product from the market.

NNB GenCo (SZC) is also aiming to obtain a sequential transfer of key personnel from working at HPC to working on SZC. Use of the same construction and erection contractors ensures replication of the build and sequence methodology, reducing construction risk and optimising productivity.

6 SAFETY GOVERNANCE

NNB GenCo (SZC) has developed an overarching Nuclear, Health and Safety, Environment and Quality Policies (Ref. 8,9,10,11). The underpinning management arrangements reflect best practices, processes and procedures as reflected in IAEA requirements, WANO advice, ISO standards (e.g. ISO 9001, 14001, 45001) and guidance from the EA and the ONR in addition to its current parent company EDF SA, the world's largest owner and operator of nuclear

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power plants. SZC will also be members of the EPROOG which will allow the sharing of operational experience of the worldwide EPR fleet.

The NNB GenCo (SZC) Board has responsibility for Safety and is ultimately accountable for all Safety related decisions and will ensure that excellence in safety is at the forefront of what we do throughout the organisation. This will be achieved through:

- Establishing and implementing effective safety, health and environmental protection policies based on national and international best practice and guidance, as well as legislative compliance.
- Establishing and maintaining a risk assessment and work authorisation process to manage industrial hazards.
- Establishing reasonably achievable.
- Overseeing that sufficient competent persons and other resources are provided to execute all nuclear licensed, permitted, and consented activity.
- Overseeing the NNB GenCo (SZC)'s Safety performance, including receiving and reviewing reports and implementing recommendations from the Safety, Health and Environmental Committee.
- Challenging ourselves to seek opportunities to improve and ensuring systematic robust challenge from the Independent Assessment Challenge and Oversight (IACO) and review of designs and safety documentation.
- Overseeing the implementation of adequate arrangements to control any change to NNB GenCo (SZC)'s organisational structure or resources which may affect Safety.
- Ensuring Safety takes priority over commercial performance objectives; and
- Reviewing the effectiveness of NNB GenCo (SZC)'s security and emergency arrangements.
- Overseeing an effective safety, health, and environmental protection culture, specifically implementing a strong nuclear safety culture within the project enabling a proactive identification and mitigation of Safety hazards and ensuring that environmental impacts are as low as The NNB GenCo (SZC) Board is assisted by the Safety, Health and Environmental Committee (SHEC) and the Nuclear Safety Committee (NSC) as per their definitions in Appendix 1.

The Safety, Licencing and Assurance director will have specific responsibilities within the organisation for safety related issues, as below.

Industrial Safety

The Industrial Safety function, within the safety directorate, provides leadership for the development and effective implementation of policy and standards, and ensuring that arrangements and performance of the project organisation and the supply chain are compliant with the requirements of the Health and Safety at Work Act and associated legal requirements. The team will ensure that the requirements of the Construction Design and Management (CDM) Regulations throughout the design, construction, and commissioning phases of SZC Project are fully addressed. The Industrial Safety Team will support the development of industrial safety strategy and policy as 'Client' under the CDM regulations.

Independent Nuclear Assurance

The Safety Licencing and Assurance Director will have in place an Independent Nuclear Assurance (INA) function to maintain oversight of NNB GenCo (SZC)'s activities and will report on Safety and overall organisational performance to the Board and its supporting committees as appropriate.

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Within the INA organisation there will be the following functions:

- **Independent Technical Assessment, (ITA)** - Providing independent review and assessment of the SZC safety case, Category 1 and 2 modifications, and a sample of design deliverables. ITA will manage the Nuclear Safety Committee (NSC) process and provide independent advice at NSC meetings. ITA also leads or supports the Concurrence process for Primary and Secondary Hold Points.
- **Independent Assurance and Challenge Organisation (IACO).** Providing independent assurance of the SZC project team and its suppliers, using audits and reviews, and reporting findings directly to the concerned functions, Suppliers and to the SZC Senior Management Team as appropriate.
- **Independent Site Inspection-** This team will provide independent review, oversight, and challenge of the sites Nuclear, Environmental and Industrial Safety, during the construction phase, and will provide feedback findings directly to the relevant functions and to management. This to ensure the robustness of the organisation, control of risks and its compliance with Regulations, International Standards, and internal policies.
- **Regulatory and Licencing-** This team manages the process interface with our regulators, identifying key issues and ensuring their effective and timely management and resolution within a framework of proportionate regulation. They also optimise regulatory engagement and working arrangements to realise the benefits of proportionality and manage the Hold Point Process to ensure smooth and timely governance of key project milestones.

Security

The Security team, within the Safety directorate, assesses all threats to the Project and specify security controls to be implemented by operational teams and Industry Partners to reduce the overall exposure of Project activities to the effects of malicious acts. The project key security objectives are to:

- Identify key assets requiring protection and the risk of harm to those assets through objective threat assessment and risk management activities.
- Specify and communicate physical, personnel and information security controls which adequately mitigate threats to business operations.
- Assure delivery of agreed security standards, provide specialist advice and measure success or non-compliance.
- Continually seek to improve through organisational learning, self and independent assessment, analysis and reporting of useful metrics and the pursuit of innovation.

Design Authority

The Engineering and Delivery organisation will include a robust Design Authority (DA), The Design Authority is responsible for design acceptance and assurance, ensuring that the SZC design meets UK requirements, this includes production and maintenance of the safety case, providing focussed expertise for the resolution of design issues; providing the overall design authority technical capability for SZC. As part of this, the high-level responsibilities of

the DA Function are:

- The ownership and production of the safety case.
- The process for the acceptance of safety significant design and safety case changes.
- The oversight and acceptance of the safety analysis that underpins the design and its safety case.
- The oversight and acceptance of the safety justification that underpins the plant integrity.

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As SZC is a follow on “second of a kind” project, the DA Function is smaller than that of its precursor plant, HPC, – in size and scope of work. This is because of much of the design being completed by the HPC project, and the main role in the design area is to ensure replication is achieved safely. The DA retains responsibility for the SZC safety case. The DA Function acts as the Intelligent Customer (IC) / DA capability for the safety case and safety analysis.

In the current phase of the project, the Design Authority (under the HPC Project Director) has responsibility for the Independent Technical Assessment (ITA) of safety related documentation, under an Inter-Project Services Agreement (IPSA). SZC will have its own DA established within the TSO (See Appendix A.2.4) prior to FID and award of the Nuclear Site Licence and Environmental permits.

7 ENVIRONMENTAL PERMITS

7.1 Overview

Activities in the project phases of construction, commissioning, and operation of SZC will require environmental permits to be granted by the EA under the Environmental Permitting (England and Wales) Regulations 2016. Some permits will be relatively limited in scope and will only affect activities undertaken in the construction phase.

Three permits supporting the commissioning and operation of the power station, referred to as ‘operational permits’, are being applied for early in the project lifecycle so that they can be considered in parallel with the application to the IPC for a Development Consent Order. The environmental permits do not just contain numerical limits that must not be exceeded - the fundamental permit conditions relate to the requirement for a permit holder to have suitable management arrangements, including an organisational structure and governance and sufficient competent persons and resources to operate the activities covered by the permit. The permits also require the use of ‘best available techniques’ (BAT) to minimise impacts on the environment.

An environmental permit is required for the operation of large combustion plant - a ‘combustion activity’ - such as the essential diesel generators and any associated plant which is required to provide power in the event of a loss of grid supply. The permit requires the operator to use energy efficiently, to avoid, recover and dispose of waste produced by the activities, to establish and maintain controls to minimise the risk of pollution and any emissions from the installation, to monitor emissions and to maintain and implement an Accident Management Plan. NNB GenCo (SZC) is planning to make an application for a combustion activity permit.

The discharge of cooling water, trade effluent and treated sewage effluent to coastal waters requires a permit for a ‘water discharge activity’. The permit conditions and limits are designed to ensure the operator uses BAT to minimise impacts on the marine environment from temperature, impingement of fish and marine organisms and chemicals in cooling water discharges. NNB GenCo (SZC) is planning to make an application for a water discharge activity permit.

Schedule 23 of the regulations is referred to as the Radioactive Substances Regulations (RSR). Under the RSR, the EA is responsible for regulating all disposals of radioactive waste from nuclear sites in England; “disposal” of radioactive waste includes discharges into the atmosphere, discharges into the sea, rivers, drains or groundwater, disposals to land, and disposals by transfer to another site. The RSR application and supporting documentation prepared by NNB GenCo (SZC) is consistent with that required by the EA for determining an application for an environmental permit. It is in line with the UK strategy for radioactive discharges 2009 [Ref.16] and proposes limits on radioactive discharges from the site that will deliver good environmental protection.

The EA will invite comments on environmental permit applications made by an operator after determining that the application is duly made. The applications will be placed on the public register and comments sought. The EA has a policy of increased consultation on applications at sites where they consider there is, or is likely to be a high degree

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of public interest. In these situations, they may engage in additional consultation activities including consultation on the draft permit and their decision document. The approach is tailored to specific local circumstances.

For all the environmental permits, arrangements for compliance are already or will be integrated within the NNB GenCo (SZC) management system. Forward action plans and appropriate hold points in the project programme will be used to deliver effective implementation of the permit conditions over the phases of the project.

Environmental Safety

The Environment team, within the Safety Directorate, are responsible for setting Policy and Standards in the areas of: Environment, Sustainability, Decommissioning, Emergency Preparedness and Business Continuity, the Environment team are also responsible for Environmental design, review, and acceptance. The team is also responsible for securing the required environmental permits to support the project execution and operational arrangements. The key areas of responsibility are.

- Strategic interface with the Environment Agency
- Environmental Permits and Consents
- Site Support and Assurance
- Managing Environmental Arrangements
- Supply Chain and Delivery Management Support
- Design and Modification Process Support
- Decommissioning Support
- Sustainability Support
- Business Continuity and Emergency Preparedness- post FID

8 PROJECT PHASING

NNB GenCo (SZC)'s approach to the SZC project is to utilise best practice and to take advantage of operational experience from the sister plant at HPC and the guidance of organisations such as the IAEA, WANO, and INPO in developing NNB GenCo (SZC) standards. As discussed below, NNB GenCo (SZC) is also taking advantage of the best practices of EDF Energy Nuclear Generation and its parent Company EDF SA, who are experienced designers, constructors, and operators of nuclear power plants.

Appropriate arrangements will be produced, implemented, and demonstrated in advance of each phase of the project. This phased approach will allow sufficient time for NNB GenCo (SZC) to identify lessons learned and make improvements, and for the Office for Nuclear Regulation (ONR) and the Environment Agency (EA) inspection of the arrangements to assure effective implementation.

The basic phases of the project are outlined below:

- FID and DCO. Final Investment Decision hold point provides the financial support and confidence for the project. The Development Consent Order provides infrastructure planning agreement to proceed. For SZC the DCO provides security and confidence for investors to achieve FID.
- Pre-Construction - NNB GenCo (SZC) is currently in this phase of the project. During this phase, NNB GenCo (SZC) are controlling detailed design, procurement and manufacturing of long-lead time items, and

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preparation of the site, including early and preliminary works for construction. NNB GenCo (SZC) has or is in the process of developing the requisite organisation and procedures to control such activities.

- **Construction** - This phase entails the construction and installation of nuclear safety related structures, systems, and components. This phase will not commence until the NSL has been granted and other prerequisite permits, permissions and authorisations have been granted. NNB GenCo (SZC) expects that the construction phase will last several years, beginning with pouring of the first safety-related concrete, and ending with the completion of pre-operational testing.
- **Non-Active Commissioning** - This phase includes inactive commissioning of safety-related systems and components and hot functional testing. Fuel delivery (i.e. the commencement of radioactive commissioning) will not take place until the appropriate non-active commissioning is complete for the structures and systems associated with fuel storage.
- **Radioactive Commissioning** - This phase begins with first fuel delivery and consists of active commissioning (e.g. testing of fuel storage systems following nuclear fuel receipt; loading of fuel in the reactor vessel, initial criticality, and power ascension testing).
- **Operation** - This phase follows the completion of radioactive commissioning and NNB GenCo (SZC)'s lifting of its Hold Point for Operation (described below). It includes maintenance, examination, testing, operation of the plant, and the treatment, processing, keeping, storing, accumulation or carriage of any radioactive waste, and
- **Decommissioning** - This phase consists of dismantling, decommissioning, and removal of the plant following completion of operation.

The phases are not necessarily distinct and are likely to overlap. For example, systems and areas will be handed over from the constructor to the testing organisation at different times, such that some systems will be undergoing non-active commissioning while the construction of other systems will be ongoing. In addition, construction of the two reactor and turbine units will be staggered, such that the first unit is expected to become operational while the second unit is still undergoing construction and commissioning.

The overall programme for the construction at SZC, incorporates:

Enabling Works:

- The site preparation works.
- Construction of a cut off wall to control groundwater.
- Earthworks.
- Construction of the local to site accommodation campus.
- Construction of the beach landing facility.
- Works in the local area to facilitate vehicular movements etc.

Nuclear Safety Related Works

- Construction of SZC, including the nuclear island, the balance of plant, ancillary buildings and structures.
- Construction of the Interim Fuel Store.
- Construction of the cooling water infrastructure.
- Commissioning.

Restoration works

- Dismantling and removal of the beach landing facility superstructure,
- Removal of the on-site accommodation campus; and
- Landscaping.

8.1 Sizewell C Hold Points

The project will have set hold points to ensure ordered and sequential progress between defined steps in the programme and that they are managed in a safe, cost effective and controlled manner. NNB GenCo (SZC) recognise that HSE or EA may select any of the identified hold points for formal regulatory hold points or impose additional ones within their powers.

The NNB GenCo (SZC) process for defining, managing, and releasing these hold points is described in Ref 13, including the management of ONR & EA permissions.

NNB GenCo (SZC) have defined a set of primary hold points outlined below:

- Replication.
- Final Investment Decision
- First Safety Concrete; (~ 2 years post FID)
- Nuclear Island Concrete.
- Non-Active Commissioning.
- Active Commissioning.
- First Criticality; and
- Rating Certificate.

It should be noted that the Hold Point List will develop and change as the project progresses.

Each of the specific hold points will have a set of specified assessment criteria to determine whether permission should be granted by NNB GenCo (SZC) to release the hold point and proceed with the work. These criteria are determined by the nature of the operation to be performed and the risks associated with it. They may be related to the organisation, procedures, competency & training, safety case documentation, availability of systems, or to the maturity of key elements of the design.

In addition to these proposed primary NNB GenCo (SZC) hold points, NNB GenCo (SZC) will have set secondary and tertiary hold points to ensure that work does not proceed until specified pre-requisites and approvals have been satisfied.

9 SZC SITE ORGANISATION (AROUND FID)

The Engineering and Delivery Director will have full responsibility for the SZC Site and activities during construction and up until handover to the Pre-Operations Director. The key responsibilities of the Engineering and Delivery Director during the Pre-Construction phase are:

- Pre-construction planning for the construction phase.
- Creating and maintaining a culture of construction excellence including all aspects of safety, environmental management, and security on the SZC site, and
- Establishing and maintaining a site organisation to deliver the project and satisfy nuclear site licensing and environmental permitting requirements.

The detailed construction organisation is currently being developed based on operational experience from the HPC project and reviews of industry best practice. This will be covered in a revised NB prior to first nuclear safety concrete.

The functions that will report through to the Engineering and Delivery Director will include:

- Off-site Construction.
- Nuclear, Environmental and Site Controls.
- Construction Support.
- Site Engineering.
- Commissioning.
- Construction Safety; (Industrial safety inspection and advice.)
- HR, Business and Site Support.
- Security.
- Construction Training; and
- Organisational Learning.

Key interfaces between the SZC site and central NNB GenCo (SZC) functions are with:

- Safety Directorate for oversight.
- Design Authority (supplying “accepted” designs to the site teams and the modifications process).
- Project Management.
- Project Controls; and
- Procurement.

During the construction phase, the intent is that the design will be received by the Construction Support Team as accepted by the NNB GenCo (SZC) DA. The design packages will be supplied to the SZC Construction Team for the build.

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It should be noted that prior to SZC first nuclear safety concrete commencing, the impact on the SZC Organisation (and its support from EDF, and EDF SA as the RD) will be assessed to ensure appropriate resources are available.

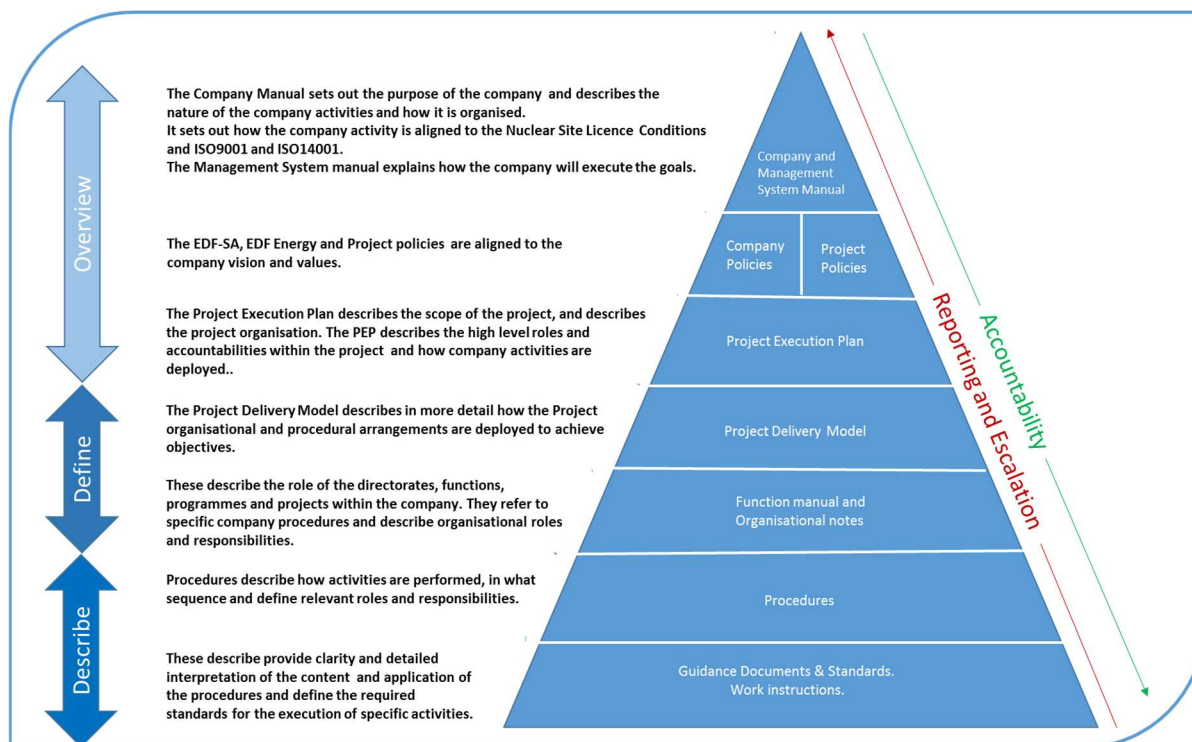


Figure 7; Integrated Management System Schematic

A.1 Sub-Committees

A.1.1 Sizewell C (SZC) Project Board

The SZC Project Board oversees the engineering, consents & licensing, procurement, construction and commissioning of the new nuclear plants at Sizewell C to enable them to be delivered safely, to quality, on time, to budget and to enable the plants to operate at their design intent. The SZC Project Board acts as the accountability forum for project performance against targets including those set by the NNB GenCo (SZC) Board and for sharing of key information to enable effective coordination of project activities. The SZC Project Board has the role of performance oversight of the SZC project including:

- Review and discuss performance against safety (including nuclear safety), security and environmental standards, or planning commitments, and recommend actions to address any issues identified.
- Review and discuss progress against Environment, Social and Governance (ESG) or sustainability principles, priority areas and requirements, and recommend actions to address any issues identified, as reported into the Board by:
 - The SZC Environmental Sustainability Committee (ESC).
 - The SZC Employment, Skills, Socio-Economic (ESS) Impact Committee.
- Consider any identified quality issues / non-conformances and provide recommendations to address the same.
- Monitor progress against the approved baseline schedule and consider methods to address any issues.
- Monitor the actual cost of work performed against the approved budgets and propose actions to address any issues.
- Consider design proposals and propose actions required to progress appropriately.
- Review the commercial performance of supply chain contracts.
- Consider any significant project level risks and recommend appropriate risk mitigation strategies and actions.
- Review of team working / resourcing arrangements and consider actions to address any issues.
- Monitor effectiveness of the stakeholder management arrangements and identify actions to address key issues.
- Consider Engineering and Delivery challenges and propose actions to address any issues.
- Develop functional strategies and management plans to ensure alignment with SZC values, systems and processes.
- Consider whether Company policies are appropriately assessed and implemented.

A.1.2 Organisation & Development Committee

The Organisation & Development Committee is a joint board with HPC and provides governance over the Organisational Development and People Strategy under the Human Resources Director. The Board provides governance by overseeing and monitoring performance of the Strategy so that HPC and SZC are both capable of

meeting key Project milestones and on into operations. All people related committees report to this board e.g. NSC / Training committees.

- Providing governance for organisational development change control, both nuclear baseline and non-nuclear baseline.
- Oversight of compliance with LC 36, Organisation Capability.
- Approval of the long-term resourcing strategy for the HPC & SZC projects.
- Oversight of client workforce skills capability, with interface to nuclear baseline competence management, acting as the senior leadership team for nuclear baseline related training; approving training programmes, overseeing development and reviewing effectiveness of training delivery.
- Oversight of construction workforce intelligent client role implementation and measurement and interface with construction workforce mobilisation.
- Oversight of employment & skills legacy and socio-economic measurement terms.
- Monitoring of the development of the leadership capability across HPC & ND ensuring there are adequate processes in place to secure the overall strength of the organisation.
- Oversight of the development and execution of the pipeline programmes, e.g. graduate/apprentice programmes.
- Ensure resilient succession plans are in place and take account of gender ambitions.
- Oversight of workforce welfare resilience including feedback mechanisms such as the Project Survey.
- Oversight of people related risks,
- Oversight of HR performance against KPIs

A.1.3 Nuclear Safety Committee (NSC)

NNB GenCo (SZC) has a Nuclear Safety Committee (NSC), [Ref 15] which acts as an independent advisory body providing Nuclear Safety advice to the NSC Chairman, NNB GenCo (SZC) Board and Executive Team to ensure they are able to make informed decisions. This is achieved by a brief from every meeting being produced by the NSC Chairman and presented to the NNB GenCo (SZC) Board and the Executive Team. The Chairman of the NSC also has direct access to the NNB GenCo (SZC) Chairman on all Nuclear Safety issues.

The NSC is a requirement of the Nuclear Site Licence and is required to be formed of at least seven members, including one or more members who are independent of the nuclear site licensee's operations. The qualifications, current posts held and previous relevant experience of the members of the NSC taken as a whole shall be such as to enable it as a committee to consider any Nuclear Safety matter likely to be referred to it and to advise NNB GenCo (SZC) authoritatively and, so far as is practicable, independently.

Matters typically considered by the NSC are:

- Nuclear Site Licence condition arrangement.
- Safety cases.
- Major environmental permit applications affecting radiological arrangements.
- Major design changes, other than those arising from the Generic Design Assessment process.

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- Organisational development including significant management of change proposals.
- Management system development, and
- WANO/IAEA peer reviews and learning from other industries.

A.1.4 Independent Advisory Committee

The purpose of the Independent Advisory Committee (IAC) is to assist the NNB GenCo (SZC) Board by providing an independent review of major pre-FID procurement decisions in order to ensure that concluded contracts represent value for money for consumers and are ultimately on acceptable terms for HM Government, regulators and potential financial investors.

The IAC is a formal sub-committee of the NNB GenCo (SZC) Board and comprises of at least four (4) members, being at least two (2) independent members ("Independent Committee Members") and at least two (2) members of the SZC project team ("Executive Committee Members").

The IAC may invite observers from EDF SA, Ofgem and HM Government to attend meetings of the IAC on a regular basis. Other non-members may be invited by the IAC to attend all or part of any meeting as and when appropriate and necessary.

The IAC meets quarterly or at such other times as a simple majority of the members of the IAC determine to be necessary or appropriate to carry out its duties.

A.1.5 Environmental Sustainability Committee (ESC)

The purpose of the Environmental Sustainability Committee is to:

- Monitor the implementation of environmental sustainability principles, strategies, policies, and plans, identify areas in need of improvement and determine necessary solutions and actions.
- Continuously challenge the SZC project against relevant sustainability best practice, acting as an advisory group to the Project Board.
- Report to the SZC Project Board on progress and on any issues preventing implementation and progress.
- Collaborate and align with others, particularly with the SZC Employment, Skills, Socio-Economic (ESS) Impact Committee, to understand and present the full ESG picture.
- Decide on environmental sustainability elements that can be communicated internally and externally.
- Support the Project on the planning and financing cases and therefore meet HMG and investor needs.
- Demonstrate application of lessons learnt from HPC and other large infrastructure projects to support value for money case, for transition to low carbon, to support development of supply chain contracts.
- Align activities with MTP and IPSA arrangements.

A.1.6 Operational Development Committee (ODC) (Post-FID)

The Operational Development Committee oversees the development of the future SZC Station Operations operating model (strategies, processes and procedures) as well as the implementation of staff recruitment and training programmes to ensure that a best practice capability is in place to support the commissioning and operation of SZC

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in line with the project schedule. This will be constituted post-FID. The ODC's key role is the oversight of development of the future operations capability including:

- Overseeing the development of the future operating model for the stations; approving strategies, high-level processes and monitoring the development of procedures in line with the required operational development schedule.
- Overseeing the implementation of the resourcing strategy for operations, approving recruitment strategies, and monitoring the progress of recruitment.
- Act as the senior leadership team for operations related training, approving training programmes, overseeing development, and reviewing effectiveness of training delivery.
- Overseeing the development of information systems and management information capabilities for the operational environment.
- Monitoring progress against the operations schedule, initiating actions to address any issues, and agreeing any significant schedule changes within delegated authority of Pre-Operations Director.
- Overseeing the delivery of the SZC simulator and management of operational facilities on the SZC site.
- Overseeing design issues and licence or permit compliance affecting future operations.
- Monitoring the operational development risk log as well as risks in the project risk logs that are relevant to future operations.

A.1.7 Safety, Health and Environment Committee (SHEC) (Post-FID)

The SHEC will be chaired by a NNB GenCo (SZC) Director and the Safety and Assurance Director (post FID) and meet at least quarterly. The members of SHEC will bring experience and expertise in Safety and environmental issues relevant to nuclear construction and operation. The SHEC is an internal implementation and monitoring committee and has the following principal responsibilities:

- Advising the NNB GenCo (SZC) Board, making recommendations on policy development, arrangements performance and risks in relation to Safety.
- Monitoring Safety performance, having regard to underlying trends and reviewing progress on improving Safety performance and Safety culture.
- Monitoring occupational health performance, having regard to underlying trends and reviewing progress on improving the occupational health of staff, contractors, visitors, and the public.
- Monitoring environmental performance, having regard to underlying trends and reviewing progress on improving the environmental impact of NNB GenCo (SZC) on society and its employees.
- Providing advice on any significant changes to non-radiological environmental permits or processes.
- Reviewing Safety risk exposures in NNB GenCo (SZC)'s risk registers and ensuring the priority risks are accurately recorded.
- Monitoring the Safety risks associated with NNB GenCo (SZC)'s operations and recommending risk mitigation actions as appropriate, and
- Reviewing the impact of change to NNB GenCo (SZC)'s organisational structure of resources with respect to its impact on Safety.

A.2 Design and Licensee Roles.

A.2.1 Intelligent Customer (IC) Capability

NNB GenCo (SZC) will be the nuclear site licensee and environmental permit holder for SZC. It will be supported as appropriate by EDF SA including EDF SA's nuclear engineering division (Division Ingénierie Projet Nouveau Nucléaire or 'DIPNN') and Edvance.

NNB GenCo (SZC) recognises the importance of being an IC for any services it procures or receives. This is particularly so given the key RD relationship with EDF SA, HPC and EDF. NNB GenCo (SZC) will have control of activities being undertaken on its behalf and be an IC for the services provided.

Responsibility for IC rests with the Engineering and Delivery Director for NNB GenCo (SZC)

The company approach to IC applied through the procurement procedures follows six basic steps:

- "Make or Buy" decision.
- Defining the nuclear or environmental safety significance of the work.
- Specifying the work.
- Assessing and selecting the contractor.
- Oversight of work in progress; and
- Accepting completed work.

This will be applied throughout the business in areas such as:

- Procurement and Contract Management.
- Design review and acceptance.
- Design Change.

The Engineering and Delivery Director acts as the interface with the RD organisation on all aspects of the design and construction including procurement, detailed design and modifications.

The NNB GenCo (SZC) will embody its own Design Authority (DA), embedded in the TSO organisation (Appendix A.2.4) reporting to the SZC Engineering and Delivery director and as an IC will:

- Control, review and accept designs.
- Control design changes process.
- Own or have access to design and supporting documents; and
- Ensure knowledge is transferred from the RD to NNB GenCo (SZC).

Safety and Environmental IC roles within the NNB GenCo (SZC) organisation are specifically identified within the NB. Role and training profiles will be implemented to an appropriate compliant level (prior to NSL granting) for those IC roles to ensure capability across the organisation and ensure it is appropriately applied.

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For environmental requirements, resource will be maintained within the SZC project as the Intelligent Customer role, and suitable arrangements will be made with supplier organisations for relevant technical support should it be needed. This could be via the Inter-Project Services Agreement (IPSA) or contracts with technically competent suppliers. Radioactive Waste Advisors (RWA) and radiation protection experts (RPE) will be appointed and identified on the Nuclear Baseline when appropriate to support the project and operational station.

A.2.2 Responsible Designer

The role of the RD is to manage the production of the design, to assist in the early stages of the procurement process, development of the construction schedule and management of the interfaces. EDF SA will be appointed by NNB GenCo (SZC) as Responsible Designer (RD) for SZC with appropriate arrangements in place to ensure NNB GenCo (SZC) has overall control and is an intelligent customer for those areas.

The design is a direct replication, wherever possible, of the HPC design, the detailed review and acceptance of this design has been substantially completed. The RD will support NNB GenCo (SZC) in the detailed design of any features that are SZC specific due to its geology and location, in application of any modifications that occur as a result of organisational learning on the HPC project, in the project management, contract management, manufacturing and construction surveillance and in commissioning. The RD consists of specialist resource within the UK and EDF SA. The RD role will change following initial operation and become one of support to the SZC DA in operational needs for the plant.

EDF SA will be appointed as the RD through an agreement which will be put in place prior to granting of the NSL and Environmental permits. The agreement will identify the scope of services offered by the RD, which will include:

Engineering:

- Safety Case support.
- Environmental Permitting Support, including BAT.
- Delivery of basic and detailed design and manufacturing specifications and engineering.
- Checking the overall consistency of the design between the various contractors and suppliers.
- Manufacturing surveillance and conformity assessment services.
- Providing feedback and experience from other nuclear projects, particularly HPC.
- Support to NNB GenCo (SZC) in the management of relevant contracts, including design contracts, up to formal transfer of such contracts to NNB GenCo (SZC), and
- Delivery of engineering documentation.

Procurement:

- Where required by NNB GenCo (SZC), undertaking and managing the technical specifications for NNB GenCo (SZC) approval of the contract, follow-up of manufacturing / inspections.
- Manufacturing/Inspection Quality Assurance (QA) support.
- Construction.
- Construction/commissioning support and backup.

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RD activities will be integrated in the overall schedule of the project. The RD will perform the project control of its own scope in an integrated manner with NNB GenCo (SZC).

NNB GenCo (SZC) will define the services and control the delivery and schedule of those services from the RD. Interface specifications will be in place prior to the agreement that describes the requirements from both EDF SA and NNB GenCo (SZC) for particular aspects of the plant.

The role of the RD is to hold the detailed knowledge of the design. The RD will maintain the codes and standards, contribute to the design process at the upper levels and to ensure the validity of the detailed design at the lower levels. During operation, the RD will provide an operations and engineering support function to the Licensee. The RD is that organisation within EDF SA that holds knowledge of the EPR. The RD role will continue throughout the SZC lifecycle.

EDF SA will be appointed as the RD prior to NSL Granting, by a formal agreement. The scope of the RD will be for the plant and equipment within the NSL boundary, apart from those aspects which will be covered by NNB GenCo (SZC) Engineering (includes roads, networks and the operational services centre.)

A.2.3 HPC and EDF Support

SZC is intended to be an exact replica of HPC wherever this can be achieved, exceptions being those that are related to geography, geology or environment. Where practicable, HPC staff will support the SZC project via the Inter-Project Services Agreement to formally provide knowledgeable and experienced assistance to the SZC team. This will be carefully considered and by appropriate resourcing will not be allowed to impact on either HPC or SZC IC, or on the operational NG fleet and project priorities or maintenance of licensee capability.

A.2.4 Technical Client Organisation (TCO)

The TCO represents an alliance of each Licensee's DA who own the safety case, and the Technical Services Organisation (TSO) that provides the underpinning technical expertise. The Licensees (currently being HPC and EDF Energy Nuclear Generation Limited) all undertake to agree to a common approach to the following in conjunction with the TSO that sits as a wholly owned subsidiary of EDF:

- Working arrangements.
- Long term resource planning.
- Resourcing the development of capability to meet the plan.
- Development of technical strategy.

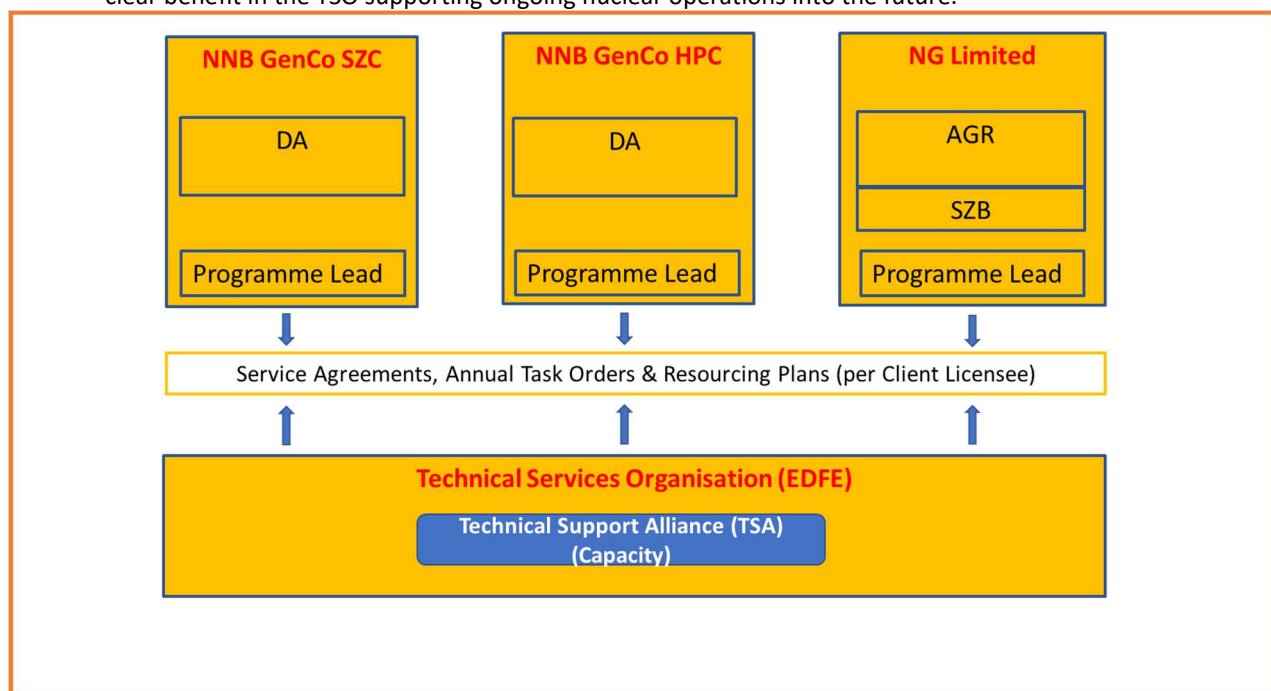
It is this agreement to a common collaborative approach that defines the TCO. The TSO Managing Director will chair a TCO Steering Board with each Licensee represented and will be empowered to drive a common approach across entities.

This collaborative platform will allow Licensees to own their resource whilst getting the benefits of a larger more resilient entity by co-location and long term resource planning in order to effectively support the future nuclear business structure of multiple Licensees and shareholders, and to meet the challenges outlined above.

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NNB GenCo (SZC) is not currently involved in the TCO or using the TSO. It is anticipated that the TCO arrangements may need to evolve to best support SZC post-FID. However, the TCO concept would deliver a solution for technical support for SZC that:

- Delivers technical competency (nuclear, engineering and environmental) as part of the Nuclear Baseline to each of the Licensees through the TSO which aligns resources from HPC and NGL into combined teams.
- With time, will orientate common working practices across the TSO and the DAs of each Licensee.
- Continues to support the UK EPR fleet as the organisation that accepts the design on behalf of the Licensee and in doing so ensures that it is constructible, licensable and operable in particular for SZC, leveraging from the HPC experience under the replication strategy.
- Provides confidence for appropriate potential long-term investors that there is adequate provision and clear benefit in the TSO supporting ongoing nuclear operations into the future.



- The TCO will support each Licensee's organisational requirements and will be designed and operated to ensure the Licensee retains control of its DA and the Nuclear Baseline.
- On site plant construction, commissioning and operations remain the responsibility of the asset owner and Licensee.
- Ensure necessary capabilities available across all plant life cycle phases,
- In the interests of minimizing capability duplication and cost, and for consistency of approach, seek to maximise support off-site (of the Licensee premises) and centralise where appropriate.
- The asset owner/Licensee retains direct control of the off-site Intelligent Customer capability for their plant.
- Through joint medium term and annual planning between the TSO and the Licensees (through the DAs), ensure the TSO has both the capability and capacity to deliver planned work. Where the plan changes and capacity is tight the TSO will utilise the supply chain through Technical Support Alliance. A prioritisation protocol will be utilised in extremis.

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- The asset owner/Licensee will have a direct line of sight to the costs of technical support for their plant.
- The TSO support capability will ultimately include in-house all the critical capabilities (other than DA) required to support the plants. Supply chain arrangements will be focussed on flexibility for capacity levels.
- Common support functions required to enable the TSO capability to support the plant are included in the agreed plans and budgets (e.g. Enterprise Asset Management system).
- The TSO will be co-located with the Licensee DAs in order to best support the DAs (and wider Licensee resources) in regulatory interface duties; leading to consistencies in standards and approach.
- Neither the TSO or the wider TCO will have the identity of a nuclear site Licensee (as prescribed under Nuclear Installations Act 1965), and therefore will not have its own Nuclear Baseline. Posts in the TSO however will be attributed with roles which are included within one or more of the Nuclear Baselines of its client Licensees and so the TSO will maintain the technical capability of staff to perform an intelligent customer role. The DAs are directly on the Licensees baseline as in the current organisational structure.
- To develop long term capability and to derive maximum benefit from the TSO, client Licensees will have common working arrangements and to joint resource planning. A joint TCO Steering Group will be established for governance in this regard, comprised of representatives from the TSO and the client Licensees and under the chairmanship of the Managing Director of the TSO.
- A joint approach will be taken to the development of technical strategy. This underpins the principle of replication in the broadest sense bringing both safety and efficiency benefits. The Chair of TCO Steering Group will have the role to drive commonality and best practice, ensuring learning across Licensees, to develop an approach to technical issues that both meets commercial needs and manages risk to be ALARP. This technical strategy will be agreed by client Licensees and will provide the point of reference for the TSO delivery of technical services.