Company Document

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NNB GENERATION COMPANY (SZC) LTD

COMPANY DOCUMENT

COMPANY MANUAL- SIZEWELL C

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DOCUMENT CONTROL

Version	Purpose	Amendment	By	Date
1.0	For Review	First issue		22/11/2019
2.0	Update	Updated with TCO		28/02/20
3.0	Update	Latest Template used. Design Authority and INA roles clarified; Section 5.1 staffing added.		10/06/20
4.0	Update	Updated Executive Team role profiles and future delivery strategy and assurance model added. Governance arrangements clarified.		30/11/21

TABLE OF CONTENTS

1 ABOUT THIS DOCUMENT

1.1 Purpose and Applicability

The purpose of this company manual is to describe the internal management structure and governance arrangements of NNB GenCo (SZC), which enable SZC to control and manage its activities, including those which could affect Safety and Environmental Management. It is applicable to all SZC employees and personnel working on behalf of SZC.

This company manual also constitutes the management prospectus to support the application for a Nuclear Site Licence (NSL), Radioactive Substances Regulation permit, Water Discharge permit and Combustion Activity permit, for the installation and operation of two EPR nuclear power reactors at Sizewell in Suffolk. It sets out how NNB GenCo (SZC) has appropriate governance, oversight and control arrangements in place to assure all aspects of safety (nuclear, radiological and industrial) and environmental management.

This company manual will be reviewed periodically at points in time where NNB GenCo (SZC)'s arrangements evolve to meet the needs of future project phases, investment or changes in ownership.

2 COMPANY OVERVIEW

2.1 Introduction to the SZC Project

NNB GenCo (SZC) is a private limited company incorporated on 28th October 2014, company number 09284825 and registered at 90 Whitfield Street, London W1T 4EZ.

2.2 Ownership

NNB GenCo (SZC) is majority owned by EDF (80% shareholding) together with CGN (20% shareholding). EDF and CGN hold their investment in NNB GenCo (SZC) through NNB HoldCo (SZC) (see Figure 1 below).

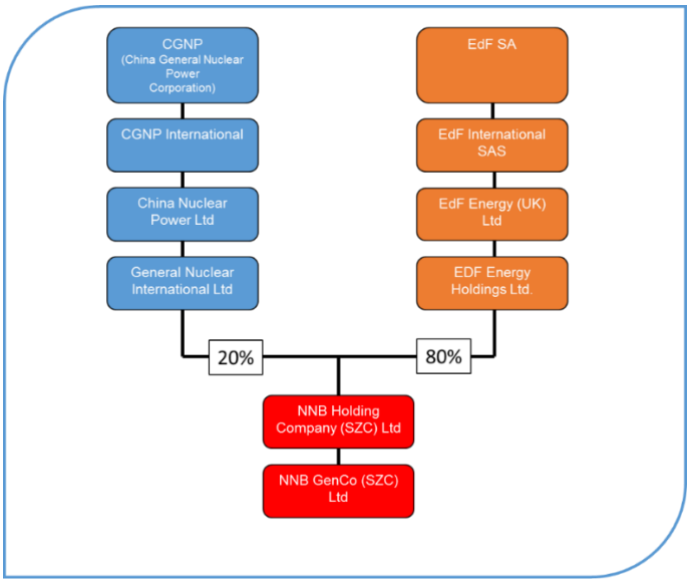

Figure 1; Ownership

EDF and CGN have defined the funding and governance arrangements for the SZC project in the Development Phase SZC Shareholders' Agreement. Once the development phase of the SZC project is complete, the Development Phase SZC Shareholders' Agreement will be revised or replaced in a manner that is appropriate to the licences, consents, financing and ownership arrangements in place.

2.3 Funding Arrangements

NNB GenCo (SZC) is funded by equity finance from its shareholders. Each shareholder provides funding to the SZC project pro rata to its percentage shareholding in accordance with the agreed budget.

2.4 SZC Project Development Phase

NNB GenCo (SZC)'s business is to own, design, develop, finance, construct, test, commission, operate, maintain and in due course decommission a new build nuclear power plant consisting of two EPR units at Sizewell in Suffolk. The principal objectives of the current development phase of the SZC project are to:

- conduct a feasibility study of the SZC project;
- obtain key regulatory consents (including the Nuclear Site Licence, Operational Environmental Permits and Development Consent Order);
- prepare and finalise the detailed integrated works schedule, budget and financial model for the next phase of the SZC project;
- negotiate and agree key project contracts for the next phase of the SZC project;
- negotiate and agree revenue arrangements and funding sources for the next phase of the SZC project.

3 OUR VISION, MISSION & VALUES

3.1 Our Vision

SZC's vision is "Doing the Power of Good for Britain" by generating reliable, low-carbon electricity for six million UK homes, creating thousands of jobs up and down the country and helping Britain take control of its future energy needs.

3.2 Our Ambitions & Culture

1. NUCLEAR SAFETY AND ENVIRONMENTAL MANAGEMENT IS OUR OVERRIDING PRIORITY

SZC is committed to a strong safety and environmental management culture, encompassing the following expectations:

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

2. NET ZERO EXCELLENCE

- Clean, "always-on" power for six million homes: A big step on the UK's journey to Net Zero, delivering baseload power to support the rollout of renewables and cut carbon at scale;
- While Sizewell C is in essence all about achieving net zero for the UK, the project has committed to making a substantial positive contribution across a broad front of Environmental, Social and Governance issues;
- The project is aiming to put more back into the local community, the natural environment and the UK economy than it takes out. We call this our "Net Zero Excellence" approach, which as well as helping to deliver net zero for the UK in the most cost-effective and reliable way possible, is also creating net positive outcomes against a number of the UN Sustainable Development Goals. This includes supporting new technologies to power Britain's future Helping to enable the new, exportable, clean technologies of tomorrow like hydrogen and direct air capture, and other nuclear technologies such as SMRs and nuclear fusion.

3. ENSURING THE PROJECT IS AFFORDABLE AND INVESTABLE

- Sizewell C will cost less than Hinkley Point C. By replicating Hinkley Point C and lowering the costs of financing through a RAB model, Sizewell C can be delivered at a lower cost for both consumers and taxpayers.

4. MAXIMISING UK CONTENT AND SUPPORTING THE GOVERNMENT'S LEVELLING AGENDA

- **70,000 jobs created or supported across the regions:** Jobs, skills and opportunities the length and breadth of the country, boosting British business to level up the country and support a full, fair and clean economic recovery from the pandemic;
- **70% of the value of contracts will go to UK companies:** Another boost to the UK nuclear supply chain already revitalised by Hinkley Point C. New contracts to thousands of British companies in all regions of the country;
- **Investing in 1,500 apprentices**: Investing in skills and training, particularly in Suffolk, to strengthen the construction workforce. Giving at least 1,500 apprentices the skills they need to help build the UK's future;
- **Make home grown, home-grown:** Reducing our reliance on imports by strengthening our home-grown energy supply;

5. DELIVERING SOCIAL VALUE IN THE UK AND A LEGACY BENEFIT TO THE LOCAL REGION

- **A thriving and diverse workforce with 40% women in nuclear by 2030:** Ensuring diversity and inclusion across our workforce. Helping more women into positions of leadership and developing a workforce that fully reflects society. SZC has signed the Gender Sector Target to support 40% women in nuclear by 2030 in its NNB GenCo (SZC) workforce and 50% female apprentices from 2021;

- **A long-term commitment to protect and enhance East Suffolk:** At least £125 million per year will be spent in the local economy during construction and £40 million per year during 60 years of operation.

3.3 Our Values

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.

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.

4 POLICIES AND INTEGRATED MANAGEMENT SYSTEM

SZC controls and manages its activities through the implementation of the arrangements contained within its Integrated Management System (IMS). The IMS has a policy framework which provides a set of principles and standards under which SZC must operate, which are consistent with SZC's values, and support the delivery of SZC's vision and mission. Further details are provided in the Management System Manual (Ref 14).

Employees and contractors working from SZC's premises are made aware of key policies and the purpose of the IMS during the induction process and must always comply with the arrangements.

5 GOVERNANCE

5.1 SZC Company Boards

The current responsibilities of the NNB GenCo (SZC) and NNB HoldCo (SZC) Boards are defined in the Development Phase SZC Shareholders' Agreement. Once the development phase of the SZC project is complete, the Development Phase SZC Shareholders' Agreement will be revised or replaced in a manner that is appropriate to the licences, consents, financing and ownership arrangements.

Terms of Reference for each of the NNB GenCo (SZC) and NNB HoldCo (SZC) Boards set out the detailed arrangements for the administration and operation of the Boards [Refs 38 and 39].

5.1.1 NNB GenCo (SZC) Board of Directors

As a prospective Nuclear Site Licensee and Environmental Permit Holder, the NNB GenCo (SZC) Board holds ultimate responsibility for all Nuclear Safety and Environmental Management decision making.

The Development Phase SZC Shareholders' Agreement sets out the primary responsibilities of the NNB GenCo (SZC) Board during the development phase of the SZC project, which are as follows:

- Day to day operational responsibility for the SZC project;
- Control of the development phase of the SZC project;
- Ensuring compliance with applicable law and regulation;
- Reporting to the NNB HoldCo (SZC) Board and shareholders;
- Preparing the SZC project's schedule and budget; and
- Delivering a successful development of the SZC project up to a final investment decision, in a timely and efficient way meeting high safety and quality standards.

The NNB GenCo (SZC) Board must refer certain matters for the decision of the NNB HoldCo (SZC) Board (the 'Reserved Matters', which are detailed in the Terms of Reference for the Boards [Refs 38 and 39]).

Directors on the NNB GenCo (SZC) Board are appointed by the shareholders in accordance with the Development Phase SZC Shareholders' Agreement. EDF has the right to appoint 7 directors to the Board and CGN has the right to appoint 2 directors. In addition to the directors of the NNB GenCo (SZC) Board, the SZC Safety & Assurance Director and the Managing Director of the TSO attend the NNB GenCo (SZC) Board meetings as observers and the SZC Company Secretary acts in an advisory capacity.

Once the development phase is complete, the composition of the NNB GenCo (SZC) Board will evolve in a manner that is appropriate to the licences, consents, financing and ownership arrangements in place; including, for example, to secure in-depth experience in key areas such as Nuclear Safety.

The directors of NNB GenCo (SZC), like all other directors in the UK, owe duties by law, including to act in the best interests of the company and to declare conflicts of interest. Each member of the NNB GenCo (SZC) Board is aware of their legal duties and is provided with periodic training to reinforce this.

During the course of Q1 2022 the skills and capabilities of the executive directors of NNB GenCo (SZC) will be assessed and mapped against an agreed set of standards and competencies to demonstrate that the executive directors have relevant experience for their roles consistent with the Nuclear and Environmental Baselines for SZC. 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 also receives an annual review to discuss their performance and consider their training and development needs.

5.1.2 NNB HoldCo (SZC) Board of Directors

The NNB HoldCo (SZC) Board is responsible for overseeing the overall management and strategy of the SZC companies (being NNB GenCo (SZC) and NNB HoldCo (SZC)) and taking decisions on the Reserved Matters (which are detailed in the Terms of Reference for the Boards [Refs 38 and 39]).

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. EDF has the right to appoint 4 directors to the Board and CGN has the right to appoint 2 directors.

5.1.3 Board Committees

The NNB GenCo (SZC) Board is advised by Board Committees (see Figure 4).

1. The **Nuclear Safety Committee** has been established in anticipation of NNB GenCo (SZC) becoming a Nuclear Site Licensee. A Nuclear Safety Committee is required pursuant to Nuclear Site Licence Conditions and will provide nuclear safety advice to the NNB GenCo (SZC) Board [Ref 20].

2. It is also intended that the NNB GenCo (SZC) Board will establish a **Risk and Audit Committee** in Q1 2022 to assist the NNB GenCo (SZC) Board in fulfilling its responsibilities by reviewing the general policies and practices of NNB GenCo (SZC) in respect of accounting and financial control matters, the internal control environment, risk assessment, risk management and corporate governance.

5.1.4 Organisational Model

SZC is developing an organisational governance and assurance model that is based on good industry practice to monitor, identify, assess and manage risks and opportunities, ensuring safe delivery to quality, cost and time. See figure 5 below.

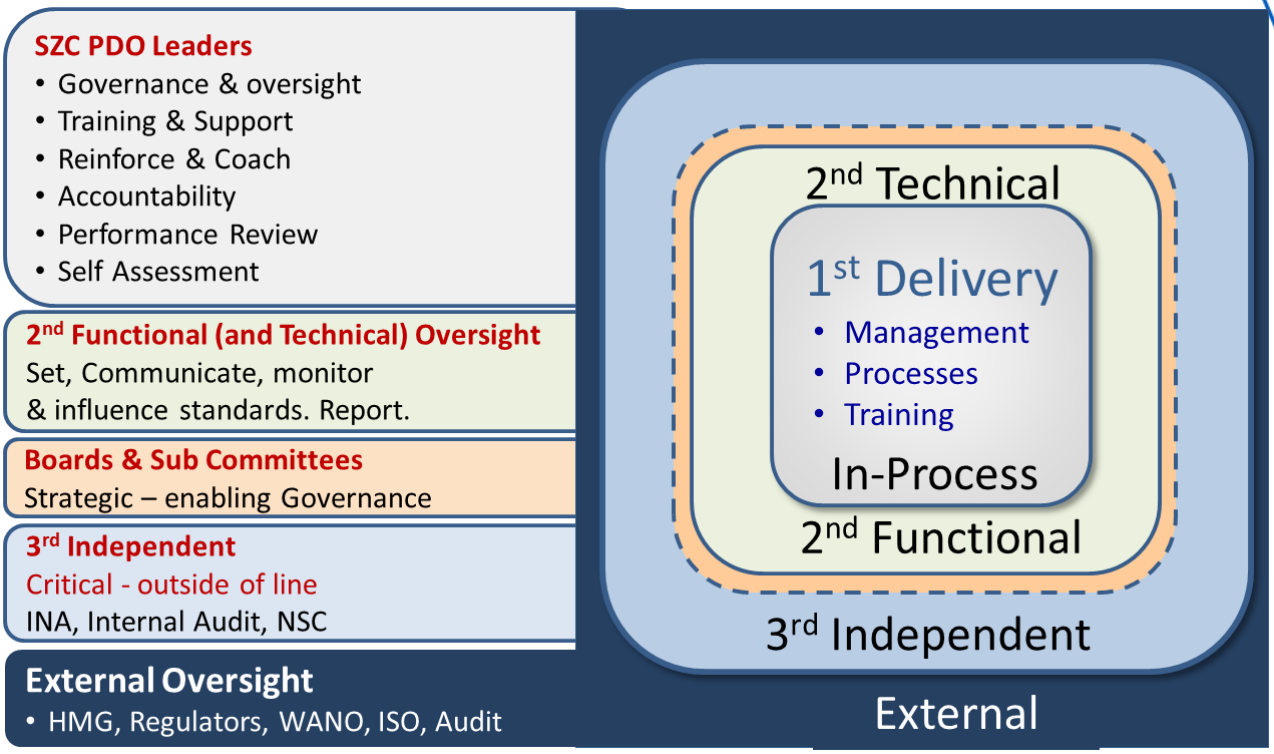

Figure 5- Lines of Defence Overview

In this model the **first line of defence** is self-assurance within the delivery arm of SZC, the PDO, which will be responsible for designing, implementing and maintaining effective day-to-day control measures; supervising the execution of work and implementing corrective actions to address any issues it identifies. The subject matter experts within the PDO's Quality and technical department, the PDO integrator and project management partners will also provide assurance of timely delivery to safety, security, technical and quality requirements.

The **second line of defence** is delivered through the enabling Directorates/Functions of the SZC organisation shown in Figure 11. They set the policies, standards, procedures and guidance to enable SZC to develop compliant and effective procedures and management controls to implement them. They also assure the PDO's compliance with the organisational standards and the effectiveness of its control measures through a systematic programme of audit, inspection and surveillance, including conducting such activities within all tiers of the supply chain on a sampling basis.

Effective, routine reporting of performance, events and learning will enable appropriate management control and provide visibility of risks and emerging issues to be identified and brought to the attention of the MD and the GenCo Board where required.

The **third line of defence** is formed by Independent Nuclear Assurance, Internal Audit and other partners as deemed appropriate by the NNB GenCo (SZC) Board. These functions will, through a risk-based approach, provide assurance to the Board of Directors and Senior Management. This level of assurance will also encompass how effectively the organisation monitors, assesses and manages risk and will include assurance of the performance of the first and second lines of defence. These functions will also work with the second line of defence to ensure that the programme of audit, inspection and surveillance covers all risks and that mitigating measures to address these, or

to minimise their impact, are effective. SZC may commission independent reviews relating to specific risks and/or issues to be undertaken through the enabling functions or by external independent bodies.

SZC will adopt a proportionate approach to assurance based on risk and other factors including compliance and performance history to ensure it has adequate oversight and control of the supply chain and of the performance of its delivery arm. This approach enables SZC to develop an effective and efficient assurance framework, and risk informed and integrated plan, tailored to meet its demands at various stages of the project.

6 EXECUTIVE LEADERSHIP TEAM

The NNB GenCo (SZC) Board has delegated authority for the operational management of the business to the Managing Director and the Executive team.

SZC will be an integrated organisation responsible for specifying requirements, governing, enabling, assuring and managing the integration of its suppliers and Alliances, and as such has an executive leadership team [Fig 6].

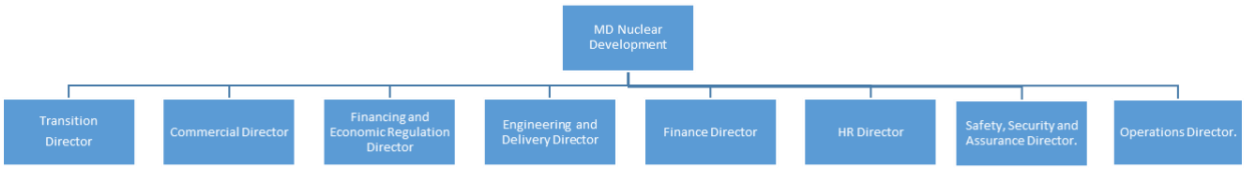

Figure 6. NNB GenCo (SZC) Executive team.

6.1.1 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;
- 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, protecting the environment 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);
- Appropriate internal control processes, including assurance arrangements, are in place to ensure high levels of efficiency, effectiveness, safety and environmental management within NNB GenCo (SZC).

6.1.2 Engineering and Delivery Director

The Engineering and Delivery Director:

- **Develops** the operating model and organisation capability to deliver the design, procurement, construction and commissioning of the power plant to safety, quality cost and schedule through the programme lifecycle;
- **Establishes** a multi-disciplinary team culture that enables productive collaborative working that enables and de-risks programme delivery through intelligent customer capability;
- **Builds** a resilient and capable programme management functionality with strong integration, control of data, risk-reporting;
- **Establishes** robust change control that enables dynamic decision making and full control of all scope/cost and schedule changes;
- **Responsible** for the design and safe construction of a safe nuclear facility;
- **Leads** and embeds a culture of quality, safety and environmental management that enables and contributes to positive technical and commercial assurance outcomes;
- **Responsible** for creating and delivery of a data strategy for SZC, including connectivity with HPC;
- **Engenders** a culture of respect for partners, unions and neighbouring communities, that creates support and positive momentum for the SZC programme.

6.1.3 Commercial Director

The Commercial Director:

- **Establishes** the commercial strategy principles, pricing and incentivisation aligned to HPC replication and value for money parameters;
- **Strengthens** and ensures the robustness of the commercial supply chain to manage risk and avoid single points of failure;
- **Ensures** that all commercial contract negotiations, decisions and outcomes meet standards, principles and pricing;
- **Principal** point of contact with investors, government and regulators for the performance of the Commercial strategy;

- **Enables** empowered decision making by embedding commercial expertise at the level of the work;
- **Leads** on contentious or complex issues, problems and/or disputes to reduce and manage risks of contract performance and impacts to wider SZC programme delivery.

6.1.4 Financing and Economic Regulation Director

The Financing and Economic Regulation Director:

- **Develops** the strategic model for the investment case that leads to successful funding by Government and Investors;
- **Provides oversight** to the legal terms and investability of commercial contracts to ensure that these are constructed to deliver and align with the investment case;
- **Leads investor relations** activities connected to the investment business case throughout the programme lifecycle;
- **Leads Government interaction**, influences policy in support of SZC objectives, and ensures that the voice of Government is heard within organisational decision making;
- **Develops** and shapes business opportunities presented by emerging markets, technologies or seeks opportunities to further strengthen the UK energy footprint;
- **Provides** oversight of Sizewell C's Environmental, Social and Governance (ESG) commitments;
- **Establish** a strong working relationship with EDF that is focused on creating opportunities and delivering mutual benefits;
- **Leads** external communication and stakeholder communication and management.

6.1.5 Finance Director

The Finance Director:

- **Develops** the financial strategy and translates this into the operating parameters for decision making and the robust commercial management of the SZC Programme;
- **Provides** assurance of integrity of financial governance and reporting, establishes management information strategy with KPI and risk reporting to monitor and manage business performance;
- **Provides** expertise, challenge and insight to shape business development strategies and assesses quality and impact of decisions against existing strategies and plans;
- **Responsible** for cash management and control, initiates strategic business change to improve performance, or mitigate risks;
- **Delivers** Board responsibilities and all statutory and regulatory requirements, and financial reporting as required by the Shareholder Agreement;
- **Provides** robust budget and auditable cost and schedule estimates, management and control through a strong capable finance and Client Control expertise integrated within the SZC Programme;
- **Manages** the relationship of the SZC Gen Co with accounting auditors and rating agencies;
- **Ensures** related party transactions provide for deconsolidation of SZC Gen Co;

- **Responsible** for creating and delivering an IT strategy for SZC Manages the implementation of the systems and data infrastructure supporting the systems landscape of the SZC Programme.

6.1.6 Transition Director

The Transition Director leads the transition workstream. This director is not a statutory director of the NNB GenCo Board but is invited to the Board to speak on transition related matters. The Transition Director is:

- **Responsible** for the planning and coordination of the SZC transition from EDF majority shareholding to a viable standalone entity. The Transition Plan is to set out the future strategy and operating arrangements necessary up to FID and beyond FID, including details of any necessary shadow running periods and interim arrangements up to full steady state (post transition);
- **Responsible** for the delivery of appropriate arms-length commercial agreements between SZC and EDF (including services via HPC, such as the IPSA) and related parties for the provision of shared service for the benefit of SZC including corporate shared services and TCO/TSO, Nuclear Services Agreement (including UK EPR Centre), Nuclear Skills Alliance;
- **Responsible** for embedding a culture of continuous improvement within SZC, strongly linked to having a systematic approach to lessons learned and risk management;
- **Leads and embeds** a culture of quality, safety and environmental management that enables and contributes to positive technical and commercial assurance outcomes;
- **Engenders** a culture of respect for partners, unions and neighbouring communities, that creates support and positive momentum for the SZC programme.

6.1.7 Safety, Licensing and Assurance Director

The Safety, Licensing 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, environmental and security-related matters. This director has responsibility to:

- **Establish** and enable a culture of quality, safety and environmental management through implementation of policies and practices that set out standards. Establish process for organisational learning with/from HPC and external sources;
- **Develop** a strong Assurance functionality, including functional oversight and put in place the formal assurance bodies; Nuclear Safety Committee, Security Committee, Health, Safety & Environment Committee and the Safety Health and Environment Committee;
- **Build** a resilient and capable quality assurance underpinned by robust audit and oversight activities and meeting standards of ISO9001, ISO14001 and ISO 45001;
- **Review** and assure the working practices associated with Radioactive Substances Regulations and other environmental permits (including construction) to ensure congruence between permitting and ways of working;
- **Ensure** that Emergency Preparedness arrangements are prepared to support construction and future operation, in accordance with REPPIR and the site licence, ensuring liaison with HMG, Sizewell B and Suffolk County Council;
- **Establish** and maintain the Corporate Radioactive Waste Adviser Body for Sizewell C to support compliance with Sizewell C's Radioactive Substances Regulations Permit;

- **Ensure** that Sizewell C fulfils its responsibilities in respect of all relevant legislation including CDM;
- **Obtain** all permits and permissions from the ONR and EA and to establish productive working relationships with Regulators;
- **Create** the strategy, policy and working practices necessary to enable effective cyber security, security vetting, nuclear proliferation, industrial safety and radiation protection.

6.1.8 Human Resources Director

The Human Resources Director is not a statutory director on the NNB GenCo (SZC) Board but is invited to the Board to speak on HR-related matters. The Human Resources Director:

- **Creates** the people, skills and capability strategy that attracts, retains, and develops the diversity of talent necessary to deliver capability throughout the lifecycle;
- **Develops** and implements succession and resource plans that deliver the capability required for the Programme and nuclear and environmental baselines complying with regulatory requirements;
- **Evolves** a compelling employment proposition. Ensures there is a clear route to retain EDF expertise within the Programme;
- **Establishes** a high-quality calibre of leaders who demonstrate leadership values, create climate for high performance and role model behaviours that represent the Sizewell C project culture;
- **Develops** the Programme-wide approach and framework for industrial relations engagement focusing on positive collaboration and effective dispute resolution;
- **Actively** mitigates capability risks through proactive succession and development activities for all key positions recognising flow of talent between projects;
- **Accountable** for intelligent replication of people processes from HPC to the SZC Programme.

6.1.9 Operations Director

The Operations Director:

- **Develops** the operations strategy and operating model and sets out the organisation and capability necessary to deliver safe, reliable nuclear energy whilst protecting the environment;
- **Develops** the operating procedures that will govern how work is undertaken covering all aspects of plant operation to create a fully integrated programme;
- **Develops** training strategy and processes for the Operational workforce in accordance with best practice;
- **Provides** expertise, challenge and insight as part of SZC Programme leadership team to optimise learning through construction as critical insight for Operational development;
- **Initiates** strategic business improvements that strengthen performance, create change and/or mitigate risks;
- **Delivers** all statutory and regulatory requirements, working closely with Regulators to develop positive and productive relationships;
- **In conjunction** with HR Director puts in place resource plans with clear development and acquisition strategies to mitigate capability risks and maximise continuity and performance.

6.1.10 Executive Management Committees

A range of executive management committees are in place to support the Executive Team in the discharge of their functions and responsibilities. Figure 4 below shows the executive management committees and the Committees of the NNB GenCo (SZC) Board as they stand at the date of publication of this Company Manual, together with the anticipated addition of the Risk and Audit Committee (see section 5.1.3).

Terms of Reference set out the detailed arrangements for the administration and operation of all committees (see section 11.1).

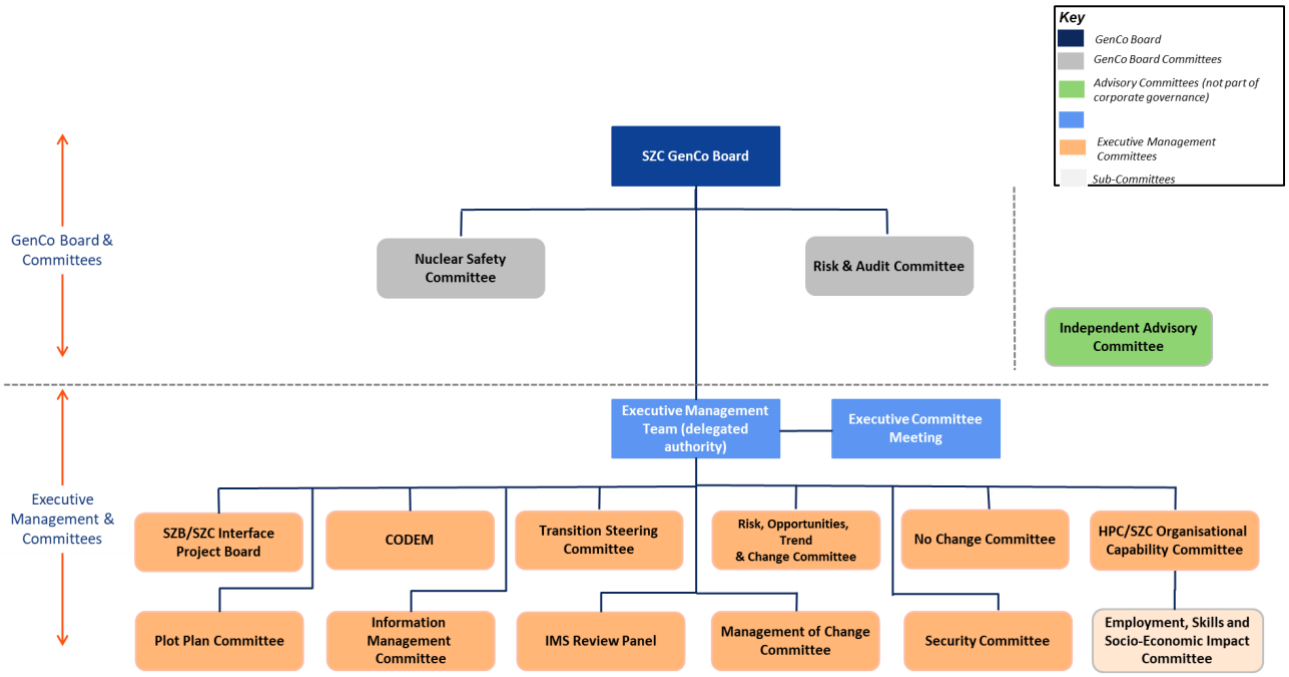

Figure 4. Board Committees and Executive Management Committees (Q1 2022)

7 THE UK EPR FOR SZC

7.1 SZC Site

The Sizewell C site will be within the civil parish of Leiston cum Sizewell in Suffolk. (Figure 8. 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 (see fig 7 below). 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.

Figure 7; Architects view of SZC

The land that comprises the SZC nuclear licensed site is currently owned by ENGL and the land will be transferred at (or shortly) after the point time at which NNB GenCo (SZC) obtains its Nuclear Site License.

SZC will enter into Nuclear Safety Cooperation Agreements between NDA and Magnox Limited (the owners of Sizewell A), the Nuclear Decommissioning Authority and EDF 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.

Agreements and arrangements are in place with EDF to allow NNB GenCo (SZC) to undertake preliminary works on the SZC site.

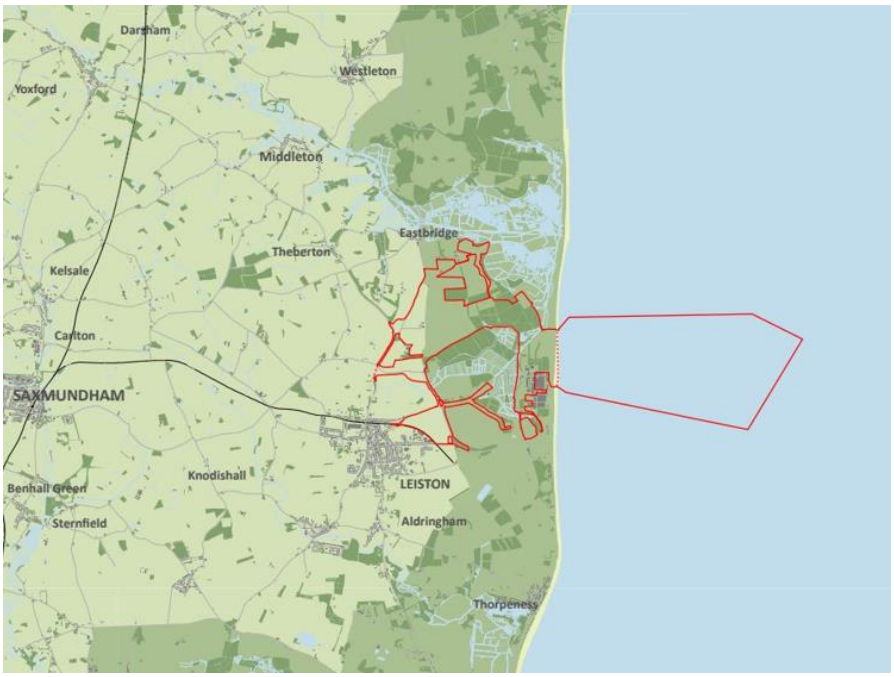

Figure 8. Location of Site.

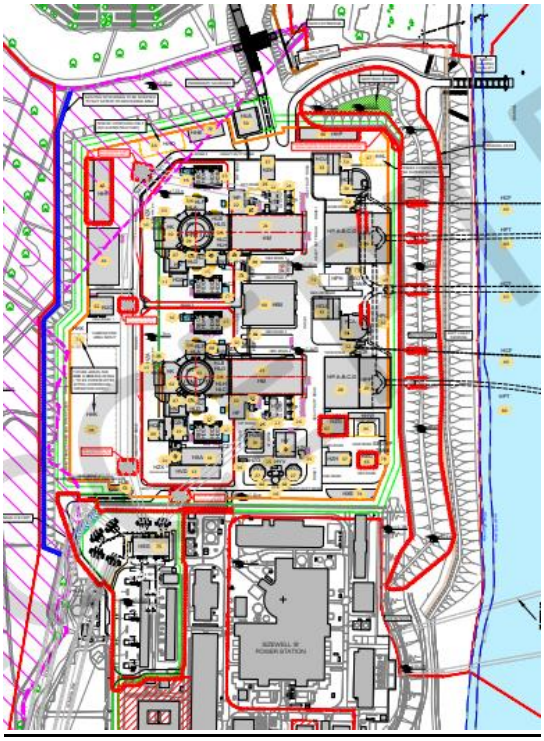

Figure 9. Site Layout [for full details see plot Plan Ref 22].

7.2 Security of Tenure

The area of land that will be occupied by the proposed SZC station is currently owned by ENGL, and the land transaction will complete, and ownership transferred to NNB GenCo (SZC) as owner of the land at (or shortly) after the point time at which NNB GenCo (SZC) obtains its Nuclear Site License.

This land transaction will also include a transfer of some land which is part of the existing SZB Nuclear Licensed and RSR Permitted area which will ultimately become part of the Nuclear Site Licenced and RSR Permitted area of SZC. NNB GenCo (SZC). Prior to ownership, NNB GenCo (SZC) will enter into an option agreement for this land. In addition, the National Grid compound in its entirety will become part of the SZC licensed and RSR permitted area, however the area will be outside the security fence of the station.

7.3 Basic EPR Description

The SZC Site will have two UK EPRs, each is a Pressurised Water Reactor with a rated thermal power of 4500 MW and an electrical power output of ~1630 MW based 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 detailed safety case for the EPR and its construction will be contained in the SZC Pre-Construction Safety Report (PCSR).

7.4 Technical Support

7.4.1 EPR Engineering & OEM Expertise

NNB GenCo (SZC) will be supported by NNB GenCo (HPC), EDF Group companies and divisions, including Division Ingénierie Projects Nucléaire Nouveau (DIPNN), Edvance, the Technical Services Organisation [Ref 37] and key Original Equipment Manufacturers (OEM), via formal contractual arrangements.

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. In particular, a formal arrangement for support from the Technical Service Organisation will be in place, with SZC staff incorporated within the team to provide engineering expertise, in particular the "Design Authority" role.

Whilst for the sister plant of HPC, there was an "Architect Engineering" role, as the SZC plant is a replica, the "Architect Engineering" role is incorporated in the "Responsible Designer". 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) and in keeping with the principle of Best Available Techniques (BAT).

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

7.5 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 suppliers is either licensed to or owned by HPC, depending on whether the intellectual property is background or foreground intellectual property and depending on the supplier. 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 relating to the HPC project 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 into standalone contracts with relevant EDF entities and relevant suppliers.

These agreements will be in place prior to or at FID or financial close, depending on the relevant contracting arrangements, and will apply retrospectively to cover any period prior to these agreements coming into force where SZC Co may have exercised any intellectual property rights.

7.6 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. The systematic gathering of strategic and tactical learning is gathered in database system

"Insight" which allows access to lessons learned from HPC and other projects to be accessed and utilised on the SZC project. In addition, NNB GenCo (SZC) is an observer member of the EPR Owners and Operators Group (EPROOG) and will, at J0, join the World Association of Nuclear Operators, (WANO).

8 ORGANISATIONAL CAPABILITY

8.1 Nuclear & Environmental Baselines

SZC is constructed such that it ensures clear lines of control and accountability for all activities carried out by its employees, and on its behalf across all the delivery programmes. The Nuclear Baseline (NB) and Environmental Baseline (EB) are an integral part of the arrangements that demonstrate that SZC is a capable licensee and permit holder and has core capability which is suitable and sufficient resource to meet its obligations under the Nuclear Site Licence (NSL) and Radioactive Substances Regulation (RSR) Environmental Permit. An integral part of this capability is the ability to act as a nuclear safety and environmental 'Intelligent Customer' (IC) which is core to SZC's control. This demonstration is required for the Office for Nuclear Regulation (ONR) and the Environment Agency (EA) to inform their regulatory decision making.

Nuclear safety in the context of the NB is an inclusive term and in line with industry guidance and refers to nuclear and radiological safety, security of nuclear materials and protection of the environment from radioactive discharges.

The development of the EB has been undertaken in parallel with the NB, with the two baselines performing a very similar function – except that where the NB is associated primarily with Nuclear Safety, the EB is focussed on Environmental Management. However, these two areas are not mutually exclusive and therefore there is some overlap in applicability specifically related to compliance with regards to the Nuclear Site Licence and RSR permit

The NB and EB for the SZC Project has been used in an appropriate and proportionate manner to guide and inform resourcing priorities. The HR Director is responsible for compliance with LC36- Organisational Capability and RSR Permit 1.1.1b and owns the NB and EB on behalf of the SZC Board of Directors.

Figure 9 below illustrates how the different parts of the SZC Project come together as one team and following on from this diagram is a description of how the model works in practice so that accountabilities are discharged correctly, and decisions are taken by those who are authorised to take them.

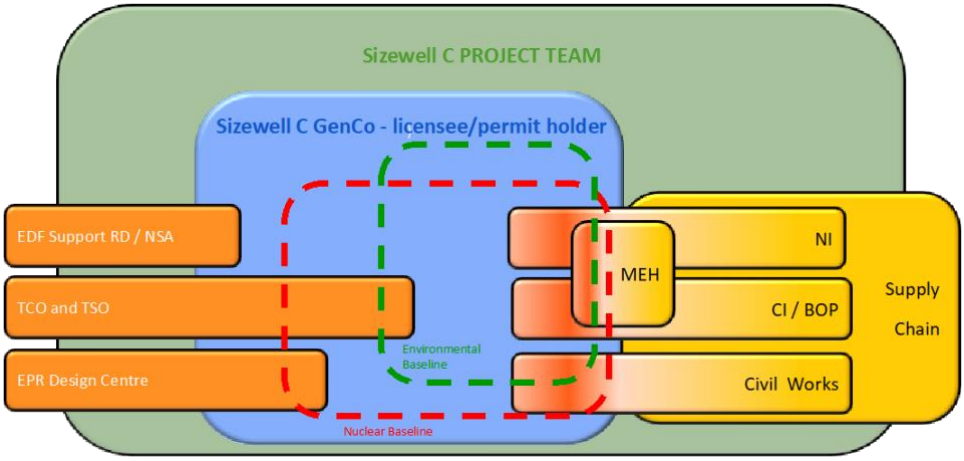

Figure 10 – Illustration of the SZC Licensee / Permit Holder Perspective

The SZC NB capability is illustrated by the dotted red line in the diagram. A proportionate EB, illustrated by the dotted green line, demonstrates the environmental capabilities to enact control of permits across all lifecycle phases.

The SZC NB and EB are activity-led. The activity scope for each NB update is designed to support Project progression and is aligned to Hold Points and key Project decision points.

The activities across the project lifecycle will evolve in line with the work breakdown structure from design, to manufacture, construction, commissioning and on to operations.

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

The NB and EB have 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, security and environmental management;
- 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 Intelligent Client capability for the oversight of nuclear and environmental safety and nuclear security 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 security and on nuclear, environmental, and industrial safety;

- To demonstrate how responsibilities for safety, environment and security are allocated across the organisation to achieve legal compliance;
- To provide an overview of the staffing levels for this Pre-Construction phase and a look ahead to the future.

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

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

To achieve the NB and EB as described above, the overall resource requirements and manpower needs within NNB GenCo (SZC) are managed through a business planning process and the supporting budgets and Medium-Term Plan.

8.2 Resourcing

SZC is taking forward lessons learned from how the HPC Project has set up its 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 improve control of the schedule, costs, quality, nuclear safety and environmental management, and is aided by the Organisational Capability Committee (OCC).

The OCC is currently a shared committee operating across HPC and SZC and is chaired jointly by the HR Directors for SZC and HPC. During 2022, SZC will establish its own OCC in advance of GID. The OCC provides the governance over the organisational development of HPC and SZC, overseeing and monitoring performance so that HPC and SZC are both capable of meeting key project milestones and future operations.

SZC will be an employing entity and the type of skills and resources it has in-house at each stage of the SZC Project Lifecycle will change so that it can continue to enact licensee and permit holder accountabilities as the activities change. It will be resourced through a combination of employees (including apprentices and graduates), TSO capability and embedded contractors from the supply chain.

The SZC Resource Strategy is being developed taking account of the needs of the project now and in the future:

- Short-term: this includes a tactical delivery plan which is aligned to the MTP (current MTP covers the period up to the end of 2022) and the focus is to fill all vacancies in the time required;
- Medium-term: this ensures future phases of the project are resourced appropriately when needed, searching the external markets and collaborating with EDF via the Joint Resource Forum;
- Long-term: the project will ensure key resources and skills are built, bought or borrowed via the necessary channels as required.

An estimate of SZC's workforce requirements to 2033 has been developed against key project milestones (Financial Close, J0, Dome Lift, CFT, COD). These have been developed based on activities required to be performed within the key functions and including factors such as SOAK benchmarking with HPC.

The HR Director is responsible for implementing and operating succession planning and contingency arrangements for:

- Temporary Succession: individuals who could hold the role on an immediate but short-term basis if the incumbent cannot fulfil the required duties;
- Planned Succession: individuals who would be suitable candidates to fill the role with suitable planned development.

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 to transition key skills from HPC across to SZC, and 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.

8.3 Management 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 has 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 and EB (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 (Licence Condition 36) and Radioactive Substances Regulation (RSR) Permit arrangements;
- Post implementation assessment of the change and close out.

The Management of Change (MOC) process and Management of Change Committee (MOCC) have been established for NNB GenCo (SZC) and terms of reference for the MOCC are in place as the basis for shadow working which will commence at the start of 2022. In summary, the MOCC provides oversight and challenge on the organisational design of each function as the project matures into a stable baseline. The MOCC will move into a full implementation mode with a traditional oversight role at an appropriate point of the project evolution.

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 and permit holder, are justified, and that the NB and EB are appropriately maintained by keeping a record of organisational changes.

9 DELIVERY MODEL

9.1 Overview

SZC has a Project Execution Plan for the SZC project [Ref. 36] This defines in more detail the delivery organisation and roles of departments within the organisation. The Delivery team (known as 'Project Delivery Organisation – PDO') will be responsible for the delivery of the project works against SZC's defined requirements, from design to hand over to the Operations team, efficiently managing the integration with the supply chain, see Fig 10 below.

The PDO will be a matrix organisation split between:

- **PDO Delivery Programmes:** The integrated EPCC (Engineering Procurement Construction and Commissioning) delivery is organised through three main programmes; Civil Works, Nuclear Island and Conventional Island- Balance of Plant;

- **PDO Integrator** with the role of control and coordination of the PDO scope, including the integration of the individual PDO Programmes and all activity outside these programmes needed to deliver the PDO scope into operation.

The delivery programmes will be split into three key areas;

- **Civil Works Programme** is responsible for the provision of all required civil construction works (including design), site establishment, along with overall site operations and logistics. This will be delivered by an Alliance that builds upon HPC replication and lessons learned;
- **Nuclear Island Programme** is responsible for the provision of all design, procurement, installation and commissioning to handover of all systems required for the operation of the reactor. This will include the management of several NI specific equipment and major supply contracts e.g., the Framatome contract;
- **Conventional Island/ Balance of Plant Programme** is responsible for the provision of all design, procurement, installation, and commissioning to handover of all systems required for the operation of the conventional island (effectively all systems contained within the Turbine Hall) and the Balance of Plant including the heat sink/ main cooling water. This will include the management of several major supply contracts e.g., the General Electric contracts.

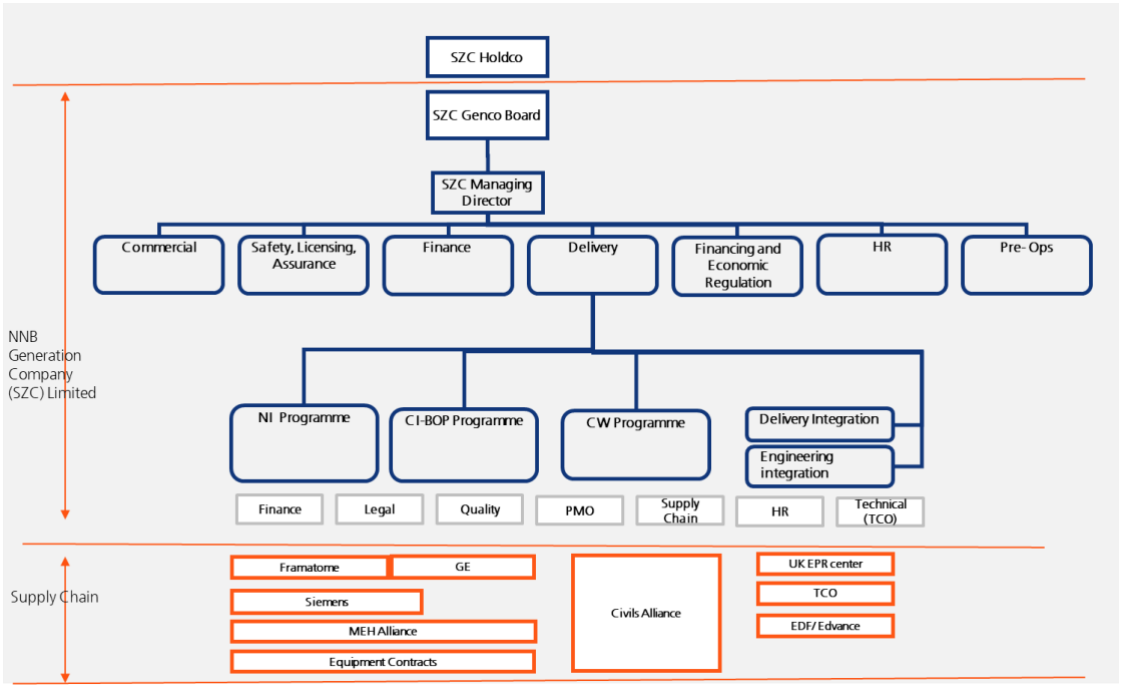

Figure 11. PDO and Integrator Model

9.2 SZC Site Organisation

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;
- 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 Nuclear Baseline and Environmental Baseline prior to first nuclear safety concrete and will be described in the PEP in more detail.

9.3 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, 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:

- Development Phase – the development phase brings together a number of strands of the project (including obtaining the Development Consent Order and Nuclear Site License) in order to provide confidence for the project to move into its construction phase. It includes the pre-construction activities described in the next bullet.
- 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 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;
- 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.

9.4 Hold Points

The project will have set hold points to ensure ordered and sequential progress between defined steps in the programme that relate to project risk, be it nuclear, environmental or industrial safety, or commercial or reputational risk, and that they are managed in a safe, cost effective and controlled manner. NNB GenCo (SZC) recognise that ONR, HSE or EA may select any of the identified hold points as 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.

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.

9.5 Procurement and Contracting Strategy

NNB GenCo (SZC)'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 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 first of a kind 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 know-how and experience from HPC to SZC. Use of the same construction and erection contractors ensures replication of the build and sequence methodology, reducing construction risk and optimising productivity.

10 SAFETY & ENVIRONMENTAL GOVERNANCE

NNB GenCo (SZC) has developed 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.

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

- Establishing and implementing effective safety, security, 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;
- 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, Environmental and Security performance, including receiving and reviewing reports and implementing recommendations from the Safety, Health and Environmental Committee and the Security Committee (when such Committee is operational);
- Ensuring a culture of constructive challenge to seek opportunities to improve including ensuring a systematic robust challenge from the Independent Nuclear Assurance (INA) as well as independent review of designs, safety and environmental documentation;
- Overseeing the implementation of adequate arrangements to control any change to NNB GenCo (SZC)'s organisational structure or resources which may affect Safety or Environmental Management;
- Ensuring Safety and Environmental Management takes priority over commercial performance objectives;
- Ensuring the effectiveness of NNB GenCo (SZC)'s safety, security, radiation protection, environmental, decommissioning and emergency arrangements;
- Overseeing an effective safety, health, and environmental protection culture, specifically implementing a strong nuclear safety and environmental management culture within the project enabling a proactive

identification and mitigation of safety hazards and ensuring that environmental impacts are as low as reasonably achievable.

10.1 Industrial Safety

The Industrial Safety function, within the safety directorate, provides leadership for the development and effective implementation of policy and standards, and will ensure 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 and oversee the development of industrial safety strategy and policy as 'Client' under the CDM regulations.

10.2 Independent Nuclear Assurance

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

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 site's Nuclear, Environmental and Industrial Safety during the construction phase, and will provide feedback findings directly to the relevant functions and to management. This is 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 the project's regulators, identifying key issues and ensuring their effective and timely management and resolution within a framework of proportionate regulation. The team also optimises 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.

10.3 Security

NNB GenCo (SZC) has developed an overarching Security Policy (Ref. 34). The underpinning management arrangements reflect best practices, processes and procedures as reflected in IAEA requirements, WANO advice, ISO standards (e.g., ISO 27001, 27002, 27005 and IEC 62645) and guidance from ONR Civil Nuclear Safeguards and Security (CNSS) through the Security Assessment Principles (SyAPs).

The NNB GenCo (SZC) Managing Director is the responsible person under Nuclear Industries Security Regulations (NISR) 2003 for security and is ultimately accountable for all security related decisions. The Senior Information Risk Owner (SIRO) is the Safety, Licensing and Assurance Director, who is responsible for ensuring that cyber security and information assurance risk management is driven at Board level. In addition to duties as the SIRO and the protection of Sensitive Nuclear Information (SNI), the Safety, Licensing and Assurance Director has Board level ownership of the security requirement and provides associated advice and oversight for all security matters. The Delivery Director is accountable for adversarial risk on the NNB Construction Site, and the responsible Senior Risk Owner (SRO) is the Site Establishment and Operations Director.

The Security team, which is under development, is responsible for leading the development and delivery of the Project Security Strategy, the approved Nuclear Site Security Plan (NSSP), Construction Site Security Strategy (CSSS) and approved Construction Site Security Plan (CSSP) and ensuring the required security outcomes are achieved.

10.4 SZC Technical Programme

The SZC Technical Programme will contain a robust Design Authority (DA) and will maintain oversight of, and contribution to, mitigation of technical risks across the Engineering and Delivery organisation. The DA will form part of a collaborative platform that sits within the Technical Client Organisation (TCO). The combined resources within the TCO arrangement satisfies the broader INSAG-19 Design Authority definition.

The Sizewell C Technical Programme will be accountable to the SZC Board for the delivery of the site's programme and safety case, and to the TCO Managing Director. Responsibilities include the assurance of the design, in line with UK legal requirements and international standards and to formally manage and accept the nuclear safety case required to allow construction and commissioning to proceed.

The Sizewell C Design Authority (DA) sits within the licensee organisation and has the responsibility and knowledge to maintain Sizewell C's design integrity and the overall basis of safety. The Sizewell C DA's role is to develop and maintain the Intelligent Customer (IC) capability for the UK EPR design, ensuring that nuclear safety and quality are embedded throughout, while supporting the project delivery. The DA leads interaction with the regulators (primarily ONR but inclusive of EA where appropriate) on the overarching nuclear safety case and nuclear safety case technical topics.

The TCO is a cooperative and co-located grouping of EDF Energy staff, providing a technical capability to, and forming part of, the nuclear baseline for Nuclear Generation, HPC and Sizewell C. The TCO is defined by a joint set of arrangements between the Client licensee organisations, represented by their Design Authorities (DA) and the Technical Services Organisation (TSO), which provides the underpinning technical nuclear expertise and problem solving capability (See Fig 12). The agreement is that they will act collaboratively to address skills development and the resolution of technical challenges. This collaborative platform allows Licensees to own their resource whilst getting the benefits of a larger, more resilient entity.

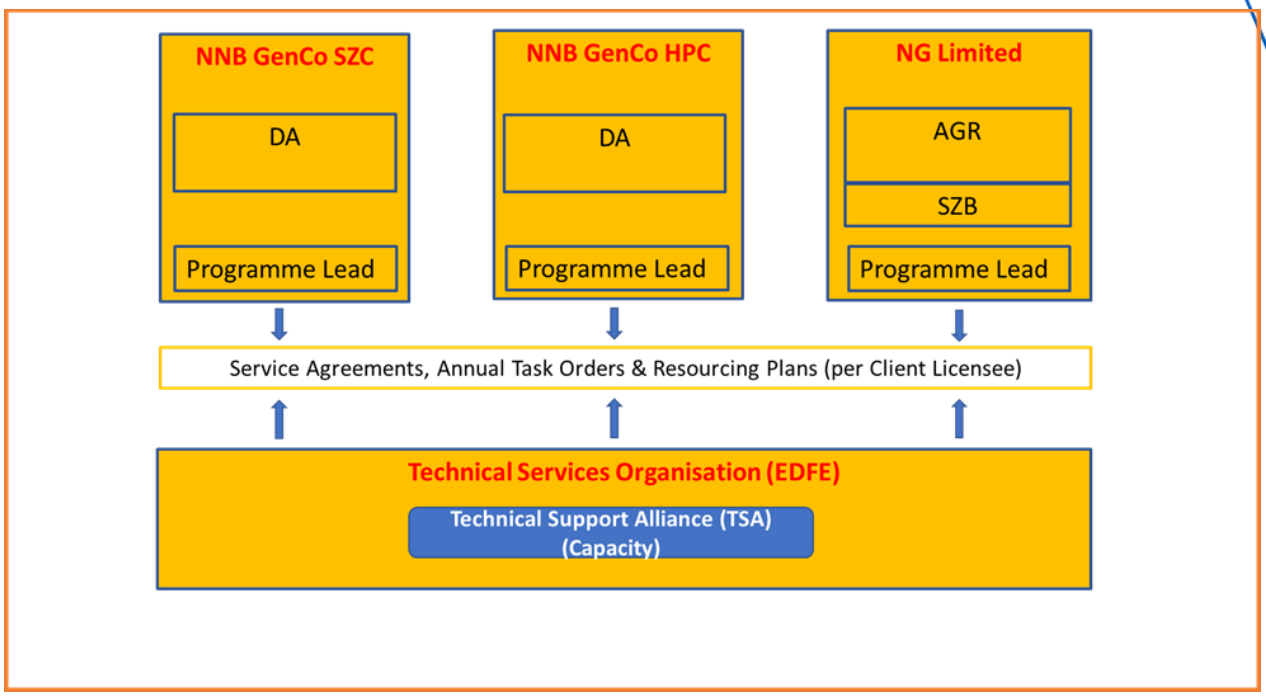

Figure 12; TSO Relationship

10.5 Environment, Decommissioning and Radiation Safety

The primary purpose of the Environment, Decommissioning and Radiation Safety Function (Environment Team) is to manage the delivery of the permit applications required for the construction and operation of SZC through to permit grant and ensure that appropriate organisation and proportionate environmental arrangements are in place for the various stages of the SZC project to maintain compliance with these permits.

The Environment Team is responsible for the development and review of appropriate arrangements to deliver the requirements of company environmental, radiation protection and emergency preparedness and response policies, environmental objectives & targets, as well as legal compliance. The delivery of compliance with the environment team's scope is the responsibility of project functional leads. The environmental team provides assurance and advice to the wider SZC project functions to ensure that any work delivered including any awarded contracts meet the environmental compliance and requirements of the project as laid out in standards, procedures, guidance and plans.

The team provides authoritative expertise and advice on all environmental, radiation safety, emergency preparedness and decommissioning aspects of the SZC project. This includes responsibility for delivery and management of the Decommissioning and Waste Management Plan (DWMP) in support of the SZC Funded Decommissioning Programme (FDP), supporting the design change process, and where required inputting into the Nuclear Safety Case.

A summary of the key activities undertaken by the function to deliver its objectives are outlined below:

- **Operational Permits and Supporting Arrangements** - Under the Environmental Permitting Regulations (England and Wales) 2016, SZC requires three operational environmental permits, granted by the Environment Agency (EA) to operate SZC. This includes a Water Discharge Activity Permit, Combustion Activity Permit and Radioactive Substances Regulation Permit. The Environment Team is responsible for

overseeing the delivery of the permit applications through to permit grant and the implementation of management arrangements to support these permits;

- **Construction Permits and Consents and Supporting Arrangements** - Various environmental permits and consents are required for activities taking place throughout construction. Responsibility sits with the Environment Team for the management of delivery of the application for the construction environmental permit and consents applications, through to grant. The Environment Team is responsible for ensuring that appropriate arrangements are in place to ensure compliance with all environmental requirements including construction permits. The Environment Team also provides an approval and oversight function to ensure compliance with the arrangements which have been put in place;
- **Decommissioning Support** - Under the Energy Act 2008, an operator of a new nuclear power station must obtain the approval of the Secretary of State for a FDP. The FDP consists of two documents: a Decommissioning and Waste Management Plan (DWMP) and a Funding Arrangements Plan (FAP), along with related supporting documentation. Responsibility for the delivery and maintenance of the DWMP sits with the Environment Team. The Environment Team additionally provides technical knowledge, expertise and advice relating to decommissioning and waste management liabilities, and decommissioning safety case management in support of the construction and operation of SZC;
- **Emergency Preparedness and Response** - The Environment Team will develop robust EP Policy, EP Standard, EP Arrangements & On-site Emergency Plans and provide a framework for functions to maintain and comply with the Emergency Arrangements. In addition, the Environment Team will act as the source of technical knowledge on EP for other functions within SZC, including the Safety Case and Contract Deliverables inter alia;
- **Radiation Safety** - The Environment Team hold responsibility for demonstrating SZC compliance with the Ionising Radiations Regulations 2017 and related Nuclear Site License Conditions. This includes ensuring that adequate arrangements are in place to enable compliance, and appropriate oversight and surveillance of SZC activities to ensure compliance with the arrangements;
- **Nuclear Safeguards** - The Environment Team is responsible to ensure compliance with its Nuclear Safeguards obligations and arrangements are in place to provide the Nuclear Material Accountancy Control and Safeguards declarations required under the Nuclear Safeguards Regulations 2019.

11 REFERENCES, BIBLIOGRAPHY & ABBREVIATIONS GLOSSARY

11.1 References

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	EDRMS	100196816
13	NNB GenCo (SZC) Company Procedure – Define, Manage and Release Key Hold Points.	EDRMS	NNB-209-PRO-000025_SZC
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	Development Phase SZC Shareholders' Agreement	EDRMS	Contact Company Secretary
18	Executive Committee Meeting (formerly known as SZC Project Board) – Terms of Reference	EDRMS	100320253
19	Organisational Capability Committee – Terms of Reference	EDRMS	100832317
20	Nuclear Safety Committee – Terms of Reference	EDRMS	100197655

21	Independent Advisory Committee – Terms of Reference	EDRMS	100320230
22	SZC Site Plot Plan	EDRMS	SZC-CNEPEX-AU-ALL-DRW-200073
23	CODEM – Terms of Reference	EDRMS	100813206
24	Transition Steering Committee – Terms of Reference	EDRMS	100961319
25	Plot Plan Committee – Terms of Reference	EDRMS	100813221
26	Information Management Committee – Terms of Reference	EDRMS	100961274
27	IMS Review Panel – Terms of Reference	EDRMS	100934564
28	Management of Change Committee – Terms of Reference	EDRMS	100887264
29	Risk, Opportunities, Trend & Change Committee – Terms of Reference	EDRMS	100903456
30	No Change Committee – Terms of Reference	EDRMS	100804536
31	Employment, Skills and Socio-Economic Impact Committee – Terms of Reference	EDRMS	100961467
32	SZB/SZC Interface Project Board – Terms of Reference	EDRMS	100813089
34	NNB Gen Co (SZC) Security Policy	EDRMS	100884796
35	Environmental Baseline	EDRMS	100868306
36	Project Execution Plan	EDRMS	100645611
37	TSO Organisation	EDRMS	100286808
38	NNB GenCo (SZC) Board – Terms of Reference	EDRMS	100960437
39	NNB HoldCo (SZC) Board – Terms of Reference	EDRMS	100960435

11.2 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/tech_asst_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/tech_asst_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/tech_asst_guides/ns-tast-gd-077.pdf

11.3 Abbreviations Glossary

Term / Abbreviation	Definition
ALARP	As Low As Reasonable Practical
BEIS	Government Department of Business Enterprise and Industrial Strategy
CDM	Construction, Design and Manufacture Regulations
CGN	China General Nuclear
CSSP	Construction Site Security Plan
CSSS	Construction Site Security Strategy
DA	Design Authority
DCO	Development Consent Order
DIPNN	Division Ingénierie Projet Nouveau Nucléaire, the engineering division of EDF
DWMP	Decommissioning Waste Management Plan
EA	Environment Agency
EB	Environmental Baseline
EDF	EDF SA or a group company of EDF SA, either in France or the UK
EDRMS	Electronic Document and Record Management System
EDVANCE	An engineering support company, jointly owned by Framatome and EDF
ENGL	EdF Nuclear Generation Limited
EP	Emergency Preparedness
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.
FDP	Funded Decommissioning Programme
FID	Final Investment Decision
GDA	Generic Design Assessment
HMG	Her Majesty's Government
HPC	Hinkley Point C
HR	Human Resources
HSE	Health and Safety Executive
IACO	Independent Assessment, Challenge and Oversight
IAEA	International Atomic Energy Agency
IC	Intelligent Customer
IMS	Integrated Management System

INA	Independent Nuclear Assurance
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
KPI	Key Performance Indicators
LWR	Light Water Reactor
MD	Managing Director
MOC	Management of Change
MOCC	Management of Change Committee
MWh	Mega-Watt Hour
NB	Nuclear Baseline
NDA	Nuclear Decommissioning Authority
NIA	Nuclear Installations Act (1965) as Amended
NISR	Nuclear Industry Security regulations
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
NSSP	Nuclear Site Security Plan
OCC	Operational Control Committee
OEM	Original Equipment Manufacturer
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
RAB	Regulated Asset Base
REPPIR	Radiation (Emergency Preparedness and Public Information) Regulations 2019
RSR	Radiological Substances Regulations
PWR	Pressurised Water Reactor
QA	Quality Assurance
RD	Responsible Designer
RSR	Radioactive Substances Regulation
SHEQ	Safety, Health, Environment and Quality
SIRO	Senior Information Risk Manager
SMR	Small Modular Reactor
SOCC	Statement of Community Consultation
SoDA	Statement of Design Acceptability

SSER	Safety, Security and Environmental Report
SyAPs	Security Assessment Principles
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