FORCE Technology Profile and Nuclear Strategy

Introduction

FORCE Technology, company registration number CVR 55117314, is one of the leading technological service companies in the Nordic region, with offices in Denmark, Sweden, and Norway. We currently hold ISO 9001, 14001 and 45001 certification.

Together, FORCE Technology forms a competent partner throughout the entire value chain for the establishment of a nuclear power plant, especially where high demands are placed on materials technology, inspection, safety, and documentation.

FORCE Technology Denmark has extensive expertise in consulting, testing, and inspection within the existing energy infrastructure and Power-to-X, including nuclear power and infrastructure.

FORCE Technology Norway AS adds extra capacity and specialized knowledge in offshore, subsea, welding, and advanced NDT competencies built up over decades in the Norwegian oil and gas industry.

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Strategic Interest in Norway's Nuclear Future

Norway is actively exploring nuclear energy as part of its long-term energy strategy. Several key developments make this an opportune time for FORCE Technology to engage:

Rising Energy Demand: Norway anticipates a significant increase in electricity needs due to industrial electrification, green fuel production, and population growth. Nuclear energy is being considered to help this demand reliably and sustainably.

Government-Led Initiatives: In 2024, the Norwegian government established a Nuclear Commission to assess the feasibility of nuclear power, including Small Modular Reactors (SMRs), as part of the national energy mix.

Feasibility Studies Underway: In 2025, Amentum and Multiconsult Norge AS were commissioned to conduct a comprehensive study on nuclear power options for Norway, focusing on technology readiness, cost, and integration with existing infrastructure.

FORCE Technology's Strategic Fit: With decades of experience in nuclear inspection, offshore engineering, and advanced NDT, FORCE Technology is well-positioned to support Norway's nuclear ambitions - particularly in early-stage design, QA/QC, and operational readiness.

Nordic Synergy: FORCE Technology's active role in Sweden and Finland's nuclear sectors enables cross-border collaboration and harmonized safety standards, making it a natural partner for Norway's emerging nuclear initiatives.

1. Preliminary Studies and Design Phase

- Consulting on material selection for pressure-bearing systems (pipes, tanks, and valves) based on environmental loads such as temperature, pressure, humidity, and corrosion.
- Design validation according to international standards (ASME, ENIQ, ISO, PED) and nuclear requirements.
- Quality assurance (QA/QC) of national and international standards requirements.
- Radiation and radiation protection through many years of equipment development and services.
- FORCE Technology Norway contributes special expertise with design review of safety-critical welded structures and pressure equipment, based on offshore experience.

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2. Construction Phase

- Non-destructive testing (NDT): ultrasound, X-ray, magnetic testing, visual and penetrant testing. Leading in advanced ultrasound techniques such as PAUT and TOFD, with mobile units for onsite inspection during construction and operational phases.
- Welding procedure qualification (WPQR) and certification of welders according to EN ISO 9606, which is essential in nuclear installations.
- Material and welding inspection directly at subcontractors in Denmark, Norway, and globally, with extensive experience in third-party inspection.

3. Commissioning and Testing

- Handling of pressure testing, leak testing, and leak detection on pipe and tank systems.
- Calibration and functional testing of measuring equipment and safety instruments.
- Delivery of specialized equipment for inspection of hard-to-reach welds and steel structures, e.g., in the containment area of the reactor building, subsea, and turbines.

4. Operation and Maintenance

- Regular lifetime inspections, corrosion mapping, and assessment of material degradation (e.g., from radiation or stress corrosion).
- Lifetime extension assessments (LTO) and structural integrity evaluations based on experience from lifetime analyses in the offshore industry.
- Rapid response in case of failure or component breakdown with failure analysis and recommendations for remediation.

5. Compliance and Documentation

- Establishment and/or revision of quality assurance systems (QA/QC) and assistance with the extensive documentation required in a nuclear power project.
- Inspection reports, welding records, and procedure documentation that meet nuclear standards.
- Extensive experience with third-party and customer audit processes, e.g., during construction and operation of critical infrastructure.

6. Current Nuclear Projects

- Qualification of an Inspection System and In-Service Inspection of Pressurizer Shell Welds, Surge Nozzle, Safe-End and Handhole Ringhals 4, Sweden.

- Qualified Inspection System for In-Service Inspection for Pressurizer Safety and Relief Nozzle to Shell Welds Ringhals 3, Sweden.

- Development and Qualified complex Cleaning Equipment for the Bottom Dome of the Reactor Pressure Vessel Oskarshamn 3, Sweden.

- Inspection of the Concrete in the Water-Cooling Channels and Inspection of the Reactor Containment Concrete and Steel Structure for Integrity Leakage Rate Test at TVO – Olkiluoto, Finland.

Integration with the Norwegian Nuclear Supply Chain

To naturally integrate FORCE Technology into the Norwegian nuclear supply chain - particularly with local suppliers FORCE Technology can leverage its existing strengths while aligning with Norway's industrial landscape and regulatory environment.

1. Local Manufacturing and Fabrication Partners

Norway has a strong base of engineering, fabrication, and offshore manufacturing companies.

Fabrication of pressure vessels, piping, and structural components, welding and assembly services, supply of certified materials and components.

FORCE to provide QA/QC, welding procedure qualification, and third-party inspection to ensure compliance with nuclear standards.

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2. Collaborate with Norwegian Engineering and Design Firms

Local companies understand national regulations, permitting processes, and environmental standards.

Co-develop early-stage feasibility studies, safety cases, and plant layout designs.

FORCE's Role: Offer design validation, material selection consulting, and radiation protection expertise.

3. Integrate with Norwegian Universities and Research Institutes

IFE (Institute for Energy Technology) and NTNU are central to Norway's nuclear R&D.

Engage in joint R&D, training programs, and technology qualifications.

FORCE's Role: Share expertise in advanced NDT, inspection systems, and lifetime extension analysis.

4. Support Local Workforce Development

Norway will need to build nuclear-specific competencies.

Partner with schools and training centers to certify welders, inspectors, and technicians etc.

FORCE's Role: Deliver training and certification programs (e.g., EN ISO 9606, EN ISO 9712 NDT Level II/III).

5. Align with Norwegian Regulatory Bodies

Compliance with the Norwegian Radiation and Nuclear Safety Authority (DSA) is essential.

Participate in regulatory consultations and standardization efforts.

FORCE's Role: Provide documentation, inspection records, and QA/QC systems aligned with DSA requirements.

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6. Offer Scalable, Mobile Inspection Solutions

Norway's geography and potential SMR deployment sites may be remote.

Deploy mobile NDT units and remote inspection tools.

FORCE's Role: Deliver on-site and remote inspection services using PAUT, TOFD, and robotic systems.

Conclusion

FORCE Technology Denmark, Norway, and Sweden offer a complete set of services that meet the requirements for technical integrity, documentation, and safety within design and manufacturing of advanced systems for Nuclear Power Plants, Renewable Wind Industry, Petrochemical and Oil & Gas for the last 40 years.

FORCE Technology Denmark has modified and adapted existing solutions and participated in many nuclear power projects globally, particularly in Sweden with upgrades at Forsmark, Ringhals, and Oskarshamn.

While FORCE Technology Denmark excels in inspection and consulting in energy projects, FORCE Technology Norway adds valuable offshore experience and high-tech NDT and structural monitoring competencies, have more than 25 years of experience in the energy industry, cooperating with all the major companies in Norway including public sector companies. We already have well-developed Norwegian supply chain and expect to continue contributing for the coming project in the nuclear energy industry.

With Norway now actively exploring nuclear energy, a decision which we fully support, FORCE Technology is uniquely positioned to support this transition through its proven expertise, regional presence, and scalable, cross-national partner solutions for quality assurance throughout the entire project lifecycle - from design to operation.