30/06/2025

Committee Chair Kristin Halvorsen and Secretariat Chair Berit Tennbakk
Nuclear Power Committee

RE: Response to the Nuclear Energy Committee about Jensen Hughes contribute to support nuclear power plants in Norway

Feasibility Study for Nuclear Power Deployment – Services by Jensen Hughes Nuclear Services

Executive Summary

Norway is assessing whether advanced nuclear power can complement its world-class renewable-energy portfolio while preserving grid stability, industrial competitiveness, and climate-neutral ambitions. Jensen Hughes - a technology-neutral, safety-science leader with eight decades of nuclear experience - proposes to deliver a comprehensive, decision-ready feasibility study that enables the Norwegian Government to decide on moving forward with confidence. Our integrated approach consolidates strategic, technical, regulatory, economic, environmental, and stakeholder dimensions into a single approach aligned with IAEA Milestone Phase 1 guidance.

Why Jensen Hughes?

- **Unrivalled Nordic Track Record** – Experience in Scandinavian projects; deep familiarity with Scandinavian regulatory culture, labor relations, and supply chains.
- **Technology-Neutral & Independent** – We are not a vendor, EPC, or investor; our sole mandate is to protect Norway's public interest through objective, data-driven advice.
- **Full Life-Cycle Expertise** – 220+ reactor-unit engagements covering siting, licensing, construction, operation, and decommissioning - conventional LWRs, SMRs, and Gen-IV concepts.
- **Proven Feasibility Methodology** – national-level SMR studies across Europe and North America completed since 2019.

Feasibility Study Work Packages Tailored for Norway

Our typical study is structured as ten inter-locking work packages (WPs). Each WP culminates in a stand-alone deliverable and feeds a consolidated Integrated Decision Gate Report (IDGR). This approach can be customized based on Norway's needs.

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WP	Theme (Lead Discipline)	Scope for Norway	Key Deliverables
1	**Strategic Alignment & Energy-System Integration** *(Energy Systems)*	Quantify role of nuclear under multiple hydrology, electricity-price, and export-demand scenarios.	- Net-Zero Nuclear Contribution Model - Policy Gap Analysis - Dispatch & Curtailment Study
2	**Site Screening & Characterization** *(Geoscience / Civil)*	National GIS-based exclusion screening followed by top-quartile site dossiers (geotechnical, seismic, cooling, transport, emergency-planning).	- Site Long-List & Short-List - Site Data Packages (5–7 sites)
3	**Technology Shortlisting** *(Reactor Technology)*	Independent technology assessment, listenability, supply-chain, and cost benchmarking for LLWRs, SMRs, and high-temperature reactors suited to Norwegian conditions (islanded grids, district heat, hydrogen).	- Technology Evaluation Matrix - Top-Three Vendor Dossiers
4	**Licensing Pathway Assessment** *(Regulatory Affairs)*	Map current Norwegian legislation against for example IAEA SSG-16; develop phased licensing roadmap and regulator-resourcing plan.	- Regulatory Readiness Report - Draft Licensing Schedule (Gantt)
5	**Safety, Security & Environmental Baseline** *(PRA / ESIA)*	Preliminary deterministic & probabilistic safety evaluation; radiological source-term bounding; ALARA strategy; environmental & social scoping in line with EU Taxonomy.	- Preliminary Safety Analysis Outline - Scoping ESIA - Environmental & Social Risk Register
6	**Grid & Heat-Offtake Integration** *(Power Systems)*	Stability studies for grids; assessment of industrial heat sinks (data centers, ammonia, district heating).	- Load-Flow & Stability Studies - Heat Integration Concept Notes
7	**Economic & Financial Modelling** *(Finance / Economics)*	Bottom-up CAPEX/OPEX estimates, LCOE, and levelized cost of system(s); financing structures and risk allocation.	- Cost Model & Sensitivities - Funding & Financing Options Paper
8	**Supply-Chain & Workforce Assessment** *(Industrial)*	Gap analysis of Norwegian manufacturers and labor pools; localization potential and GDP impact.	- Supply-Chain Gap Report - Workforce Development Plan

WP	Theme (Lead Discipline)	Scope for Norway	Key Deliverables
9	**Stakeholder & Communications Strategy** *(Social Sciences)*	Mapping of government, Sámi, NGO, and public stakeholders; design of engagement roadmap; risk-perception baselines.	- Stakeholder Map & Influence Matrix - Draft Communications Plan
10	**Integrated Decision Gate & Roadmap** *(Programme Management)*	Synthesise WPs 1–9 into a coherent investment-grade package; develop phased implementation roadmap to 2040.	- Integrated Decision Gate Report (IDGR) - 15-Year Programme Roadmap

Delivery Plan & Governance

- **Kick-Off & Alignment Workshop** – Establish success criteria and agree on decision-gates with the Ministry of Energy and main stakeholders.
- **Monthly Steering-Committee Briefings** – Transparent progress tracking, budget adherence, and risk log review.
- **Quarterly Public-Facing Updates** – Support the Ministry's commitment to transparency and public trust.
- **Secure Data Room** – All models, datasets, and assumptions available for independent audit.

Risk Mitigation for Norway

Risk Category	Jensen Hughes Mitigation Approach
Schedule Slippage	Agile WP structure with stage-gates; critical-path monitoring.
Regulatory Uncertainty	Early regulator engagement; draft language for legislative amendments if required.
Public Acceptance	Data-driven communication materials; cooperation with local stakeholders for outreach.
Technology Obsolescence	Continuous market scan; decision rules to pivot technology focus before FEED.

Investment Logic: Value to Norway

1. **Decision-Quality Assurance** – Jensen Hughes's structured methodology assures Cabinet that go/no-go decisions are evidence-based, not vendor-driven.
2. **Budget Protection** – Parallel work-streams minimize re-work and front-load show-stoppers, protecting taxpayer funds.
3. **Capacity Building** – Secondees to Norway will play a key role in accelerating the development of domestic competence.
4. **Export Potential** – Early localisation strategy positions Norway to capture supply-chain opportunities in the emerging Nordic SMR market.

Conclusion

Jensen Hughes offers Norway an unparalleled blend of Scandinavian nuclear experience, state-of-the-art feasibility methodology, and strict independence from vendors and financiers. Our proposal delivers the clarity, confidence, and control the Norwegian Government requires to decide whether nuclear power should form part of its long-term energy strategy.