New Nuclear Power Plant in Lithuania

Case of New Thinking in New Environment

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The future of Baltic energy market: shortage of supply

The Baltic Sea region is set to experience a tightening energy balance

- Ignalina Nuclear Power plant is closed down
- Ageing power plants are retired (notably in Estonia and Poland)
- Existing plants are deemed insufficient
- Current capacity is less efficient
- Significant new generation capacity is required in the Baltic’s from 2016
New NPP is Project for the Region

NPP Project meets Common Goal

- Provides CO$_2$ free base load capacity for the Baltic countries & North East Poland
- Provides security of supply via
  - Diversity of primary energy sources
  - Reduction of reliance on imported electricity
- Contributes to regional supply-demand balance
History

Visaginas Nuclear Power Plant (NPP) project

Considering the shutdown of Ignalina NPP planned in 2010, the Baltic States, in collaboration with Poland, are intensively working on the development of the future newly-built NPP project. Currently, the management representatives of the power companies involved in the project – VAE (Lithuania), Latvenergo (Latvia), Eesti Energia (Estonia) and PGE (Poland) – have been carrying on discussions on the new nuclear power plant construction.

Chronology of events

• On 27 February 2006, in Trakai, Lithuania, the prime ministers of the Baltic States adopt a communiqué stating that the prime ministers “come to an agreement to involve the state-owned Baltic power industry sector companies Lietuvos energija, Latvenergo and Eesti Energia as participants on equal participation conditions in the design and construction of the new nuclear power plant in Lithuania;
• On 8 March 2006, the CEO’s of the Baltic State energy companies Lietuvos energija AB, Eesti Energia and Latvenergo AS undersign the Letter of Intent on preparation for the nuclear power plant construction in Lithuania.
• On 24 May 2006, during the meeting of the CEO’s of the Baltic State energy companies Lietuvos energija AB, Eesti Energia and Latvenergo AS in Riga, at the regular session of the Ignalina NPP construction research project management committee, a resolution is passed to compose the Scientific Advisory Committee, whose main task is to issue its opinion on the reports submitted by the task groups.
• On 8 December 2006, in Vilnius, the government leaders of Estonia, Latvia, Lithuania and Poland adopt a communiqué in which they “emphasise the significance of joining the electrical networks of Lithuania and Poland and encourage the initiation of expert consultations among the three companies specified in the announcement undersigned in Trakai on 27 February 2006 and a company specified by the government of Poland on collaboration opportunities for the construction and operation of the new nuclear power plant in Lithuania”.
• On 9 January 2007, a meeting of the Baltic nuclear power plant (NPP) construction research project management committee takes place in Warsaw. During this meeting, the CEO’s of the three Baltic State energy companies Lietuvos energija AB, Eesti Energia and Latvenergo AS meet with the Polish company Polskie Sieci Elektroenergetyczne S.A., which is the company that the government of Poland delegated for consultations concerning the nuclear power plant feasibility study.
Need for a Project Leader

- Lithuania, following commitments to the EU, closed Ignalina NPP on 31 December 2009

- Ignalina NPP provided 70% of Lithuanian power – key to Lithuanian energy independence

- Investment in replacement generation is critical to reduce future reliance on imported fossil fuels from one source

Lithuania has an existing nuclear infrastructure, has an obvious need and is well positioned to drive Regional nuclear project
Role of the NPP Project’s host country should not be underestimated

Lithuanian Government infrastructure includes:

- National legal framework
- International treaties and international cooperation
- Regulatory framework
- R&D
- Human resources
- Education and training
- Finance
- Economics
- Grid system
- Public information and acceptance
- Transportation
Need for a New Environment

Project is developed within EU framework

- Liberalization of electricity markets & Common trade principles
- Baltic Energy Market Interconnection Plan
- High Level Task Force on Nuclear Power Generation

... and MONEY behind!
High Level Task Force (HLTF) on Nuclear Power Generation

Working Group No.1
Risks and Interactions

Objective: By identifying and analyzing key generic risks to elaborate appropriate mitigating measures

Topics:
• The current electricity market situation and potential obstacles for investments in generation capacities
• The issues stemming from implementation of the 3rd Internal Market Package
• The integration of the new NPP into the BEMIP
• The enlarged electricity market when the Baltic States will be fully integrated in the EU electricity network

Working Group No.2
Regional Partners Forum and Financing

Objective: Support the development of the financing model for the new Regional Nuclear PP

Topics:
• Discuss key project developments between Visaginas NPP Regional Partners and other utilities as well as stakeholders involved in the Project
• Assess current project funding availability and project funding support options/mechanisms as well as pre-conditions of funding support

Two existing sites in Visaginas, Lithuania
Access to cooling water – Lithuania’s largest freshwater lake
Fully integrated into the electricity transmission, road and railway systems
Technological auxiliary facilities
Logistics storage facilities, workshops and administrative buildings
Facilities for radioactive waste treatment and storage

Project Development is well advanced
Site Development activities are completed, including Environmental Impact Assessment and other essential studies
Commissioning: 2018 - 2020

Already recognised Lithuania’s contribution
NPP Project Structure – Key Principals

Project is developed within EU framework

- Project’s Partners – Private partnership of Strategic Investor and 4 Energy Utilities ultimately controlled by Governments of 4 EU Member States

- Project Output - Electricity off taken in proportion of Equity Participation

- Project Market – Single Baltic Price Area interconnected to Nordics & Poland

- Electricity will be sold via Regional Power Exchange operating based on NordPool principles
New NPP Participants and their Roles

**Lithuanian Government**
- Energy sector and nuclear legislation
  - Regulatory regime
  - Consenting regime / licenses
  - Decommissioning regime
- Policy setting
  - Considers and approves investment incentives
  - Interacts with European Commission including any State Aid approvals
  - Tax and Customs regime

**Strategic Investor**
- Selects successful Strategic Investor (via Tender Commission)
- Awards Concession
- Political support
- Owns VAE
- Contributes capital
- Has relevant expertise and capability to lead construction and project management

**VAE (Lithuanian Investor)**
- Contributed capital and in kind: site, infrastructure etc

**Regional Partners (Regional utilities)**
- Own; Control
- Contribute capital

**Lithuanian Nuclear Regulator (VATESI)**
- Regulation and licensing

**PROJECT COMPANY**
- Develops, builds, runs and decommissions NPP
Project output – electricity off taken

- Off take received at marginal cost in proportion to shareholdings
- Shareholding and off take “stapled” for life of plant (in principle, shareholding has no / limited value and most / all of the value is embedded in the right to buy electricity at marginal cost)

Collectively referred to as Regional Partners (RPs)
New NPP in Lithuania - next steps

Selection of Strategic Investor in 2010

Establishment of Project implementation company in 2011 between:

- Strategic Investor
- Lithuania
- Regional Partners (Estonia, Latvia and Poland)

Project implementation company is to continue project development from 2011

Project is to be completed by 2018-2020
New NPP in Lithuania - Case of New Thinking

Key Conclusions

- Countries in the region endeavor for the common goal – shared vision
- EU policy enables to develop projects like new NPP in Lithuania to fulfill the needs of the entire region
- With creative attitude even small countries can ensure their security of supply via Nuclear programs…
  … but you need project driver – host Government

Long-term Governments commitments and practical actions to further develop an efficient, transparent and streamlined legal and regulatory environment which in return reduces risks and facilitates financing arrangements creates favorable investment climate – key for the Project success