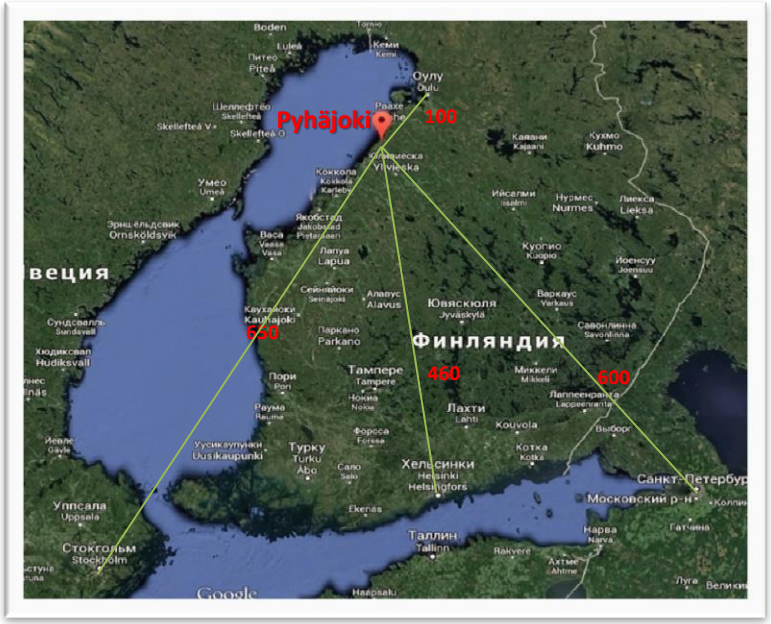
ADVANTAGES OF ROSATOM SOLUTIONS AND RISK MANAGEMENT – «HANHIKIVI-1» CASE STUDY

Moscow, 10 June 2014

NPP «Hanhikivi-1» in Northern Finland

- **Vendor ant technology:** Rosatom is the exclusive turn-key EPC-contractor of the project
- **Shareholders of the project company «Fennovoima»:** 44 Finnish industrial and municipality-owned companies and Rosatom (34%)
- **Project timetable:**
  - 13 February 2014 Environmental Impact Assessment Report was completed
  - 27 March 2014 Rosatom acquired 34% of Fennovoima
  - 23 May 2014 STUK has submitted a Preliminary Safety Assessment concerning project
  - Start of construction work - 2018
  - Commercial operation date - 2024
- **Mankala structure:** All produced electricity will be sold to shareholders of Fennovoima at cost
- **Competitiveness:** With target average Mankala price less than € 51/MWh (in nominal terms) over 2024-2035



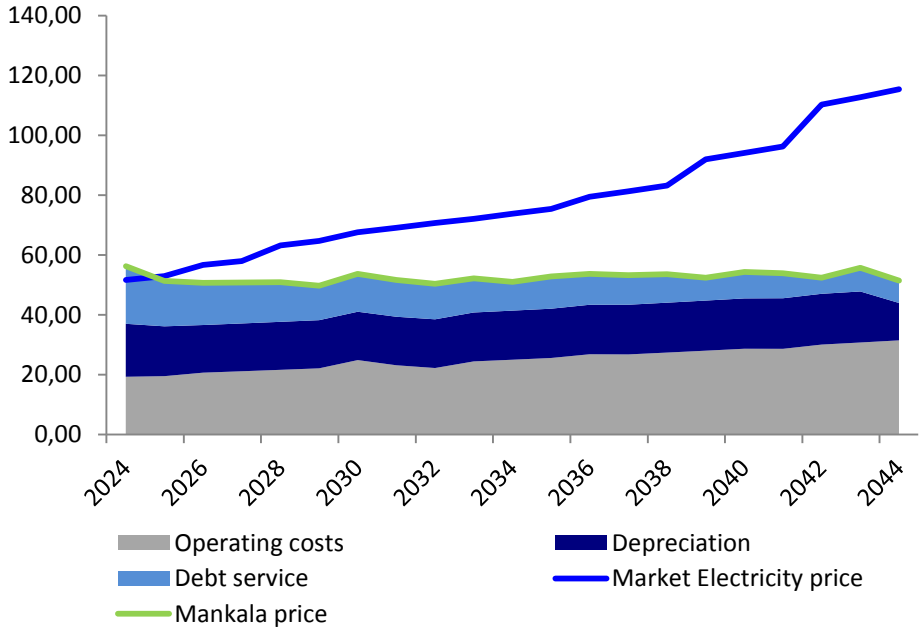
Key project strength

- Finland is **nuclear friendly country** with high level of Public Acceptance of nuclear technologies
- Proven and competitive **Russian technology**
- **Strong and balanced** shareholding structure
- Mankala structure providing **optimal risk diversification** among shareholders and open-ended **full recourse**
- EPC contract with fixed price provides **protection from cost overrun and delay risk**

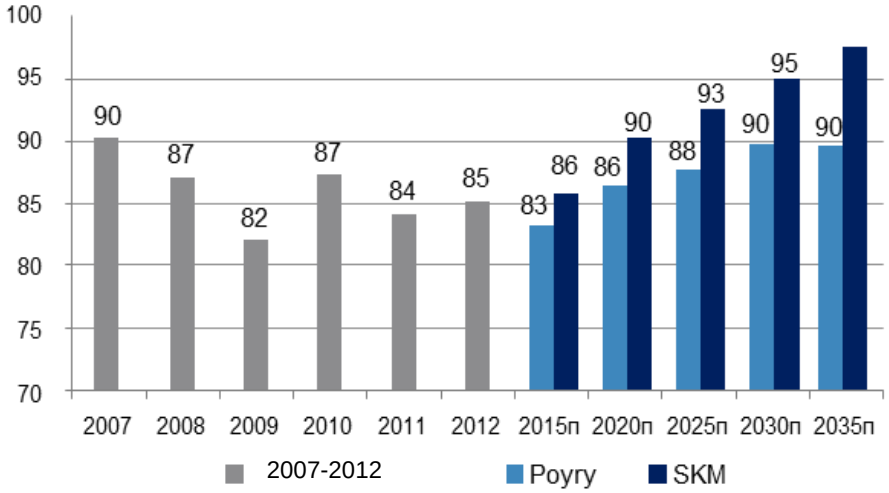
Mankala – our first word in Finnish

- Forecast Finnish Nord Pool electricity prices provides the project with very **healthy margin**
- **Rosatom integrated solution** allows to attain Mankala price at **highly competitive level**
- Mankala structure and strong forecast electricity demand in Finland **guarantee** stable sales of electricity produced

Forecast Mankala price and Market electricity price, euro/MWh



Domestic electricity consumption, TWh



Rosatom integrated solution

- Optimal financing structure of the project: to raise funds from **various** sources at **competitive** rates
- Project realization based on «**Alliancing**»
- **High level of mutual control** in the project during all stages: from initial design to decommission
- **Mutual guarantees of supply** of complete life-cycle products and services
- Investments in **knowledge** and **human capital:** personnel training, R&D, exchange of NPP operating experience

Express valuation based on report for European Commission

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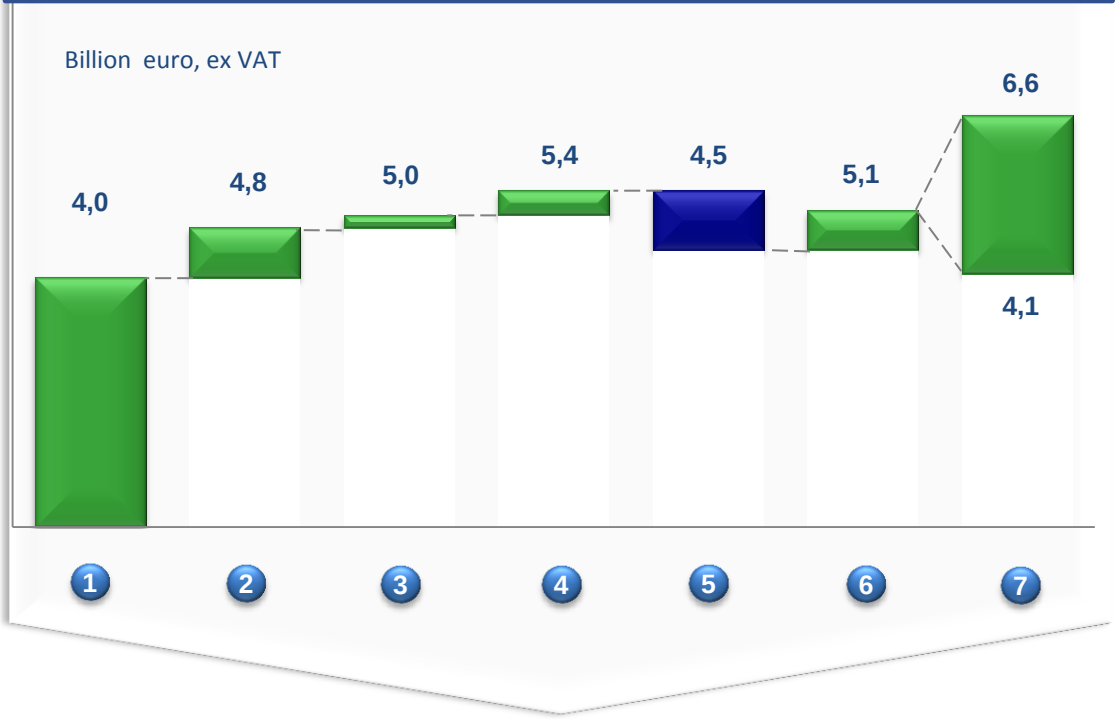


Stages of express valuation

1. Cost of serial NPP (1175 MW) in Europe is about 4 billions euro in 2012 prices
2. Finnish legal requirements increases cost of construction on 20%
3. Single unit NPP solution increases cost per kW on 5%
4. Greenfield site increases cost of construction on 10%
5. Minus cost of ownership 17,5%
6. Cost escalation annual rate 2% during 2012- 2023
7. Range accuracy (-20%;30%)

EPC contract value range with inflation price escalation can be between 4.1 and 6.6 billion euro

1. William D. D'haeseleer, «Synthesis on the Economics of Nuclear Energy», Study for the European Commission, DG Energy, Final Report, 2013

«Alliancing»: new approach to project realization

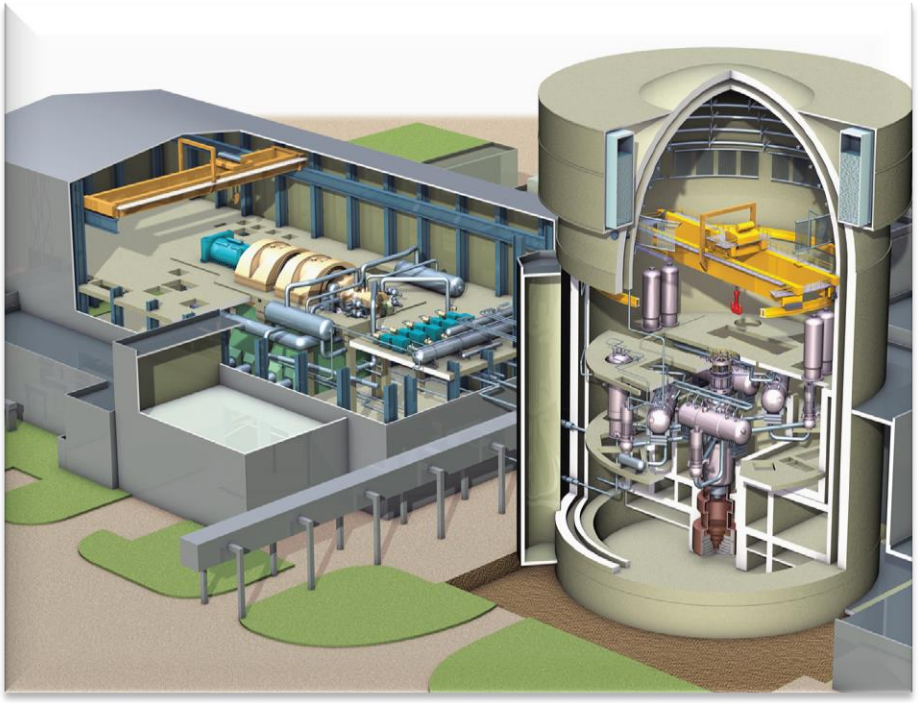
Objective: risk management and additional value creation

Solution: new process of business organization

Organizational and economic solutions	Technological solutions	Technical innovations
• System of guarantees • Insurance • Cooperation with international consulting companies • Proactive risk management • Participation of non-owners in project margin • Supply chain organization and control	• Construction solutions • «Just in time» principle • Overcoming restrictions	• Reduction of installation time • Installation possibilities(open top) • Optimized specification of turbo-generator and machine room equipment • Waste management technologies • Automated process control system

Risk management: technological risks

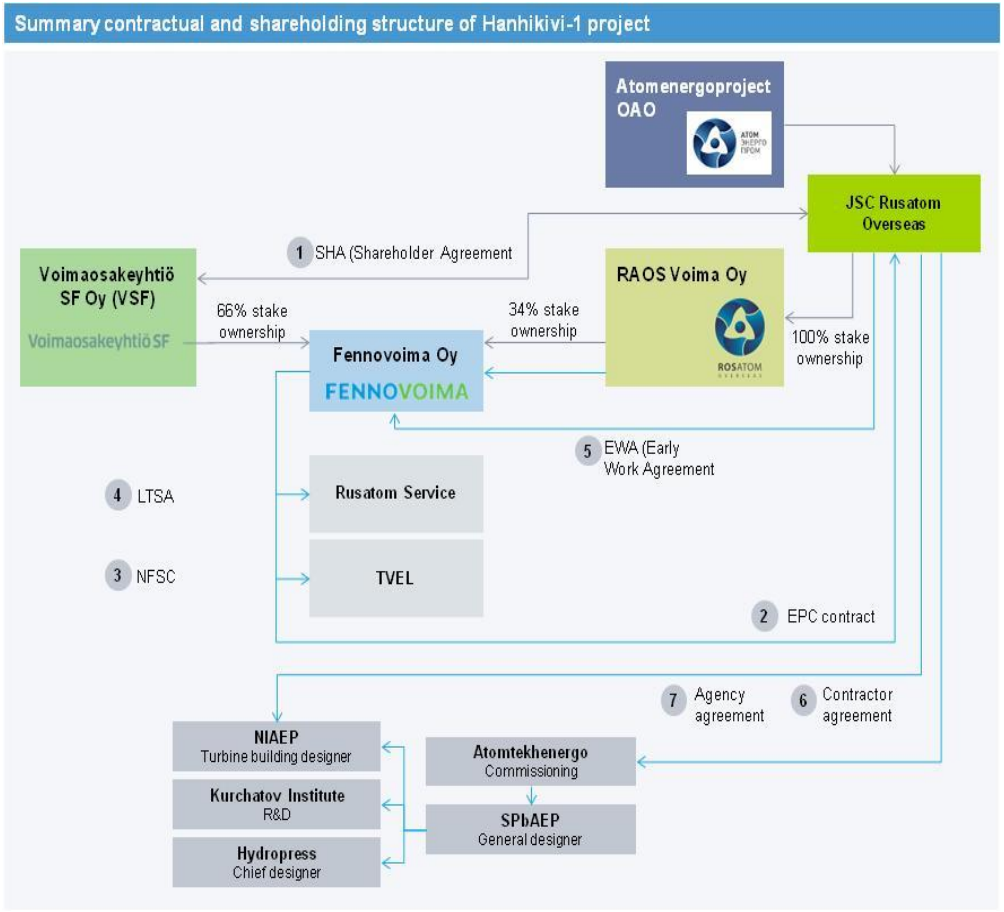
- Proven technology
- Turn key EPC contract with fixed price, date certain and payment upon delivery
- Long term fuel supply and service agreements
- Scope for change orders is limited and well defined
- Significant technical and design/ permitting work performed to date
- Detailed analysis of the lessons of OL3
- Monitoring of work performed on daily basis
- Insurance coverage



Risk management: political risks

- Fennovoima applied for supplementing of Decision-in-Principle granted in 2010 by Finnish government
- Government and public support of nuclear industry
- Shareholder agreement restrictions on Rosatom to become majority shareholder

Risk management: financial risks

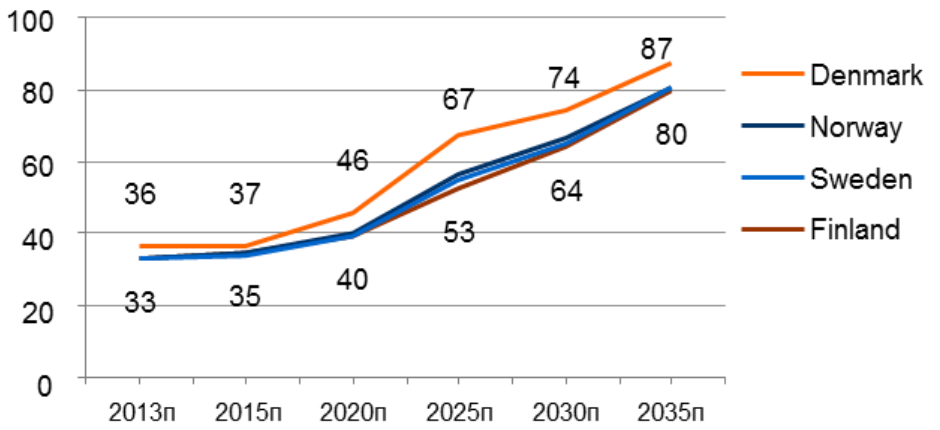


- Superior credit features of the Mankala structure
- Strong credit quality of shareholders
- Unconditional, irrevocable commitment from shareholders to contribute their equity
- Significant amount of equity financing
- Financial support from the Russian Federation

Risk management: market risks

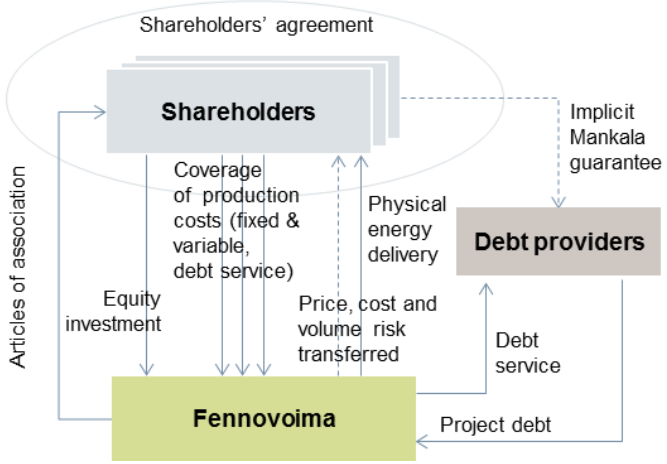
- Mankala structure means full transfer of risks with respect to price, volume and cost of electricity from the project company to shareholders
- The market price on average are expected to be higher than Mankala price

Average yearly price (real 2012)[1] euro/MWh



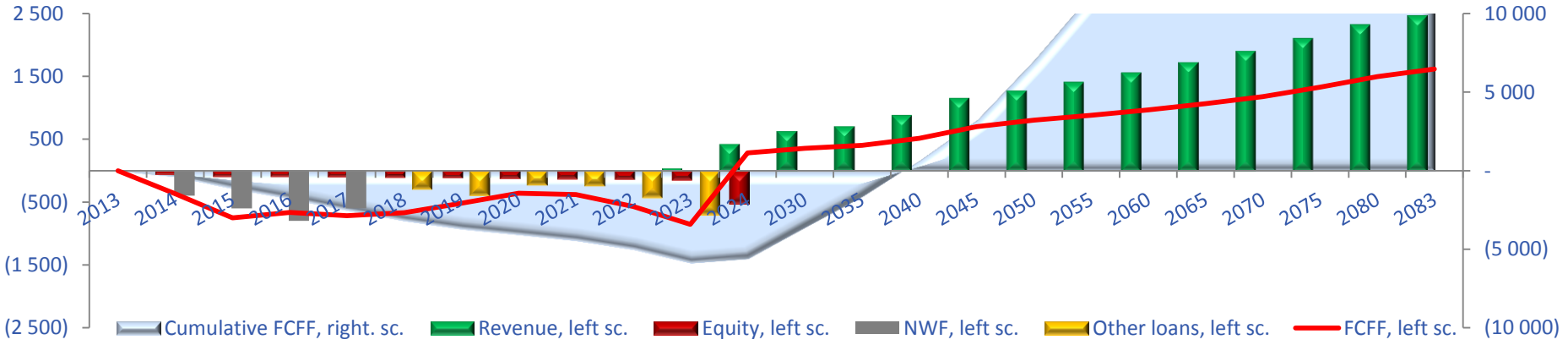
Source: Poyry

Mankala principle — Financing

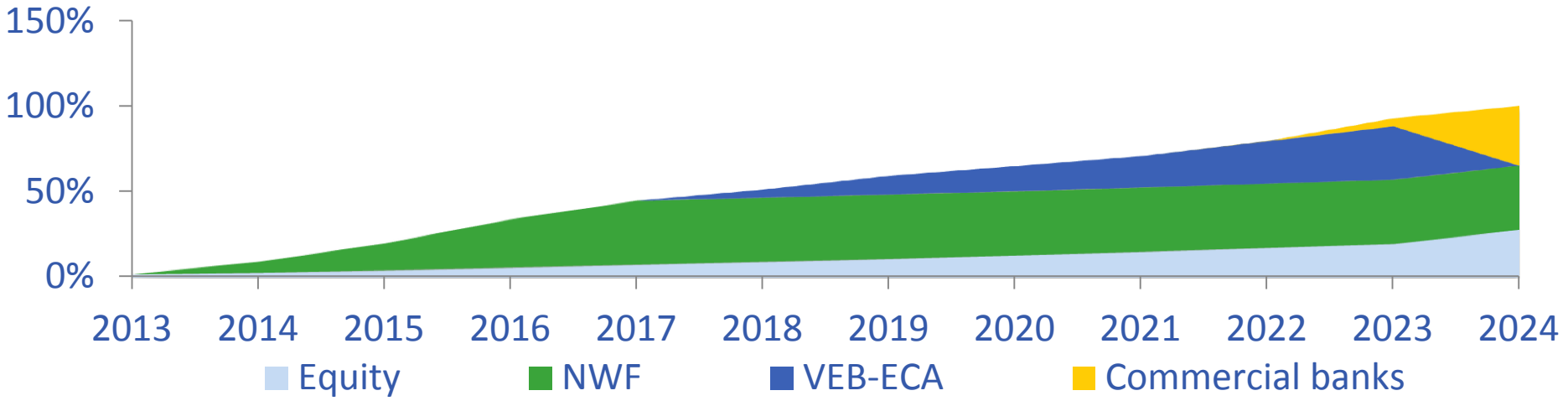


Attractive rate of return on investment for shareholders

Financials of the project, mln euro



Financing structure of the project



Investment attractive business model with high level of risk control

- **Strategic nature of the project to Russian and Finland** with high level of support in both countries
- **Multiplying effect** in both countries:
  - industrial orders
  - new jobs
  - taxes
- **Shift** from profit center of EPC-contractor to **profit center of BOO shareholders**
- **Raising funds** from various sources at competitive rates
- Mankala price over 2024-2035 is expected to be highly competitive vs. forecast Finnish electricity prices which makes the project investment attractive for **shareholders**

THANK YOU!

JSC «RUSATOM OVERSEAS»

June, 2014