

# Visaginas NPP Project and Factors Demonstrating Its Maturity

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UAB „VAE SPB”

IAEA Technical Meeting Establishing a Strategic  
Partnership and Contract Model for  
Expansion/Introduction of NPP  
Warsaw, Poland, 10-12 February 2016

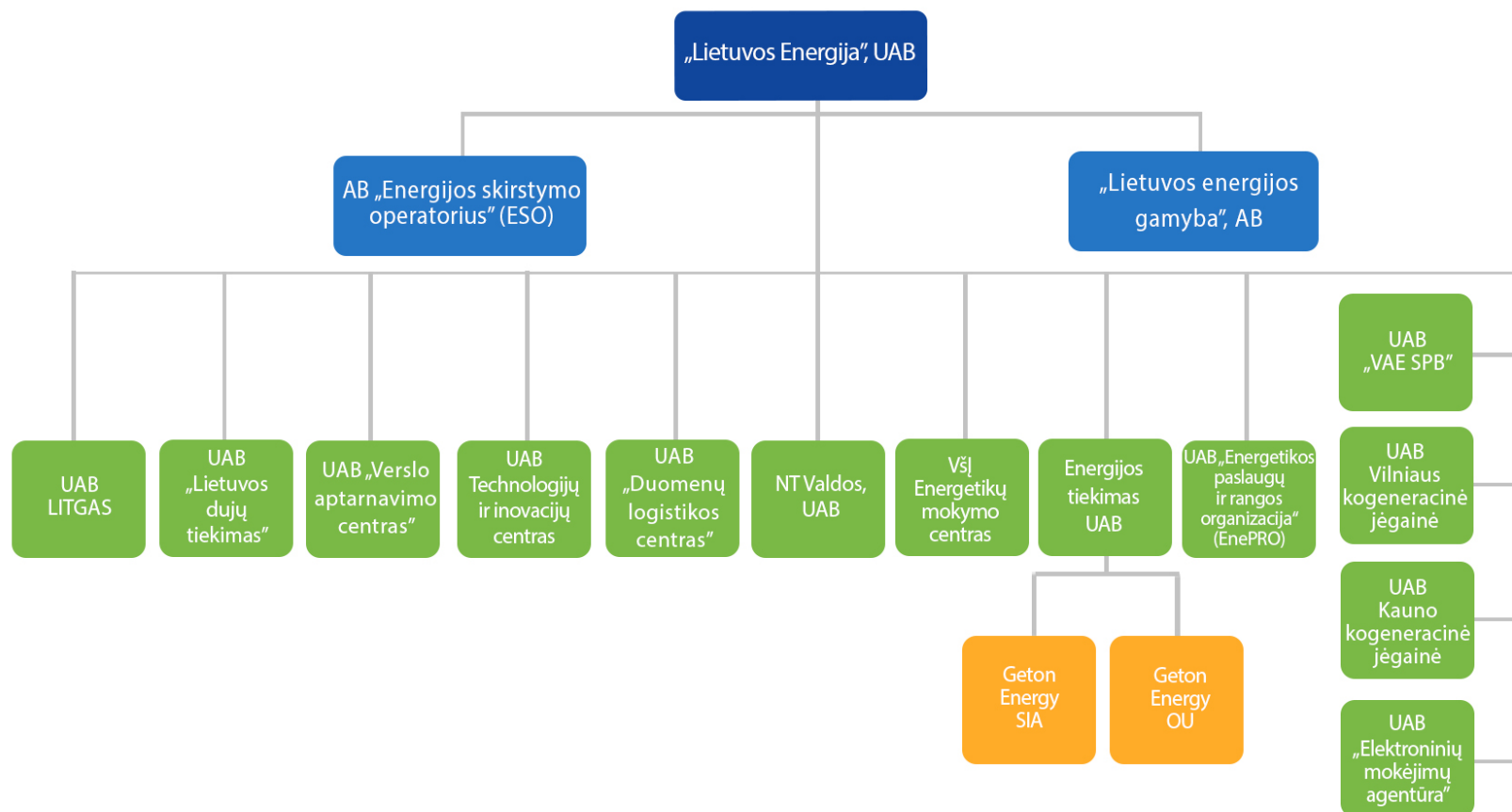
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# 1. Structure of Lithuania's energy sector



# 1. Management structure of Lietuvos Energija, UAB group



**Supervisory Board (7 members):**  
7=1(Finance)+1(Energy)+1(Economy)+1(Government)+3(I)\*;  
**Executive Board (5 members);**  
**Chief Executive Officer - Chairman of the Board.**  
\*I - independent member

**Supervisory Board (3 members):** 3=2(LE)+1(I)  
**Board (5 members);**  
**CEO - Chairman of the Board.**

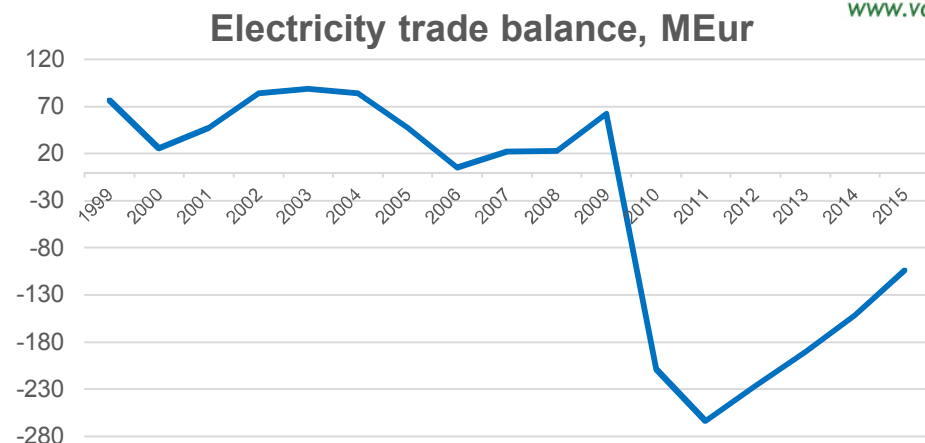
**Board \*\* (3 members):**  
3=2 (shareholders)+1(I);  
**CEO - not a member of the Board.**

**CEO**  
(Board is not formed)

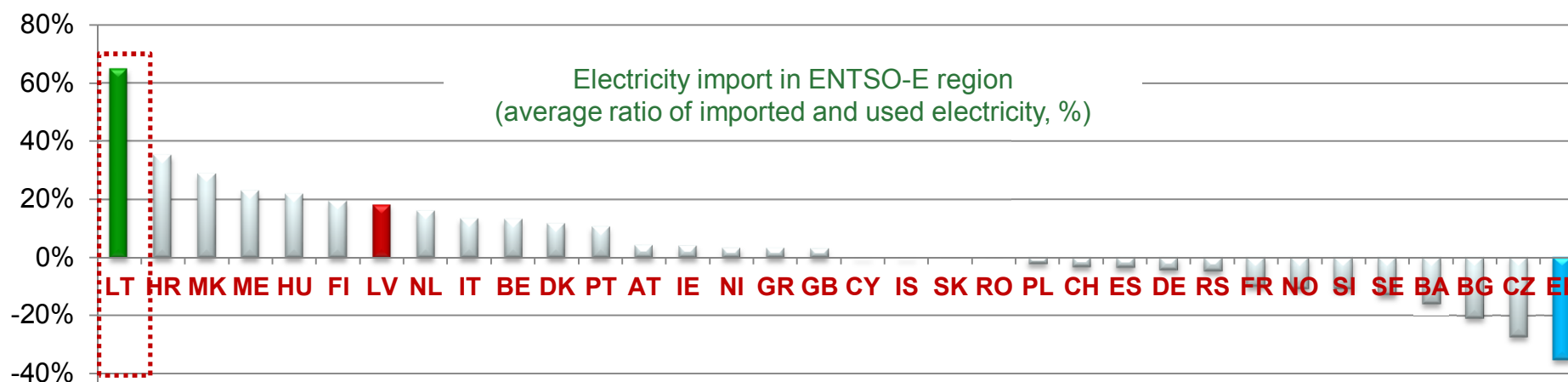
\*\*Board structure is different across companies: the Board is not formed in special purpose companies until active operations thereof; the Board of service providers is formed ensuring the representation of all shareholders

## 2. Current situation: electricity sector

- After closing of Ignalina NPP Lithuania imports more than 60% electricity and more than 80% fuel for energy production.
- Current generators in Lithuania are not competitive, subsidized and dependent on fossil fuel.



### Electricity import to Lithuania



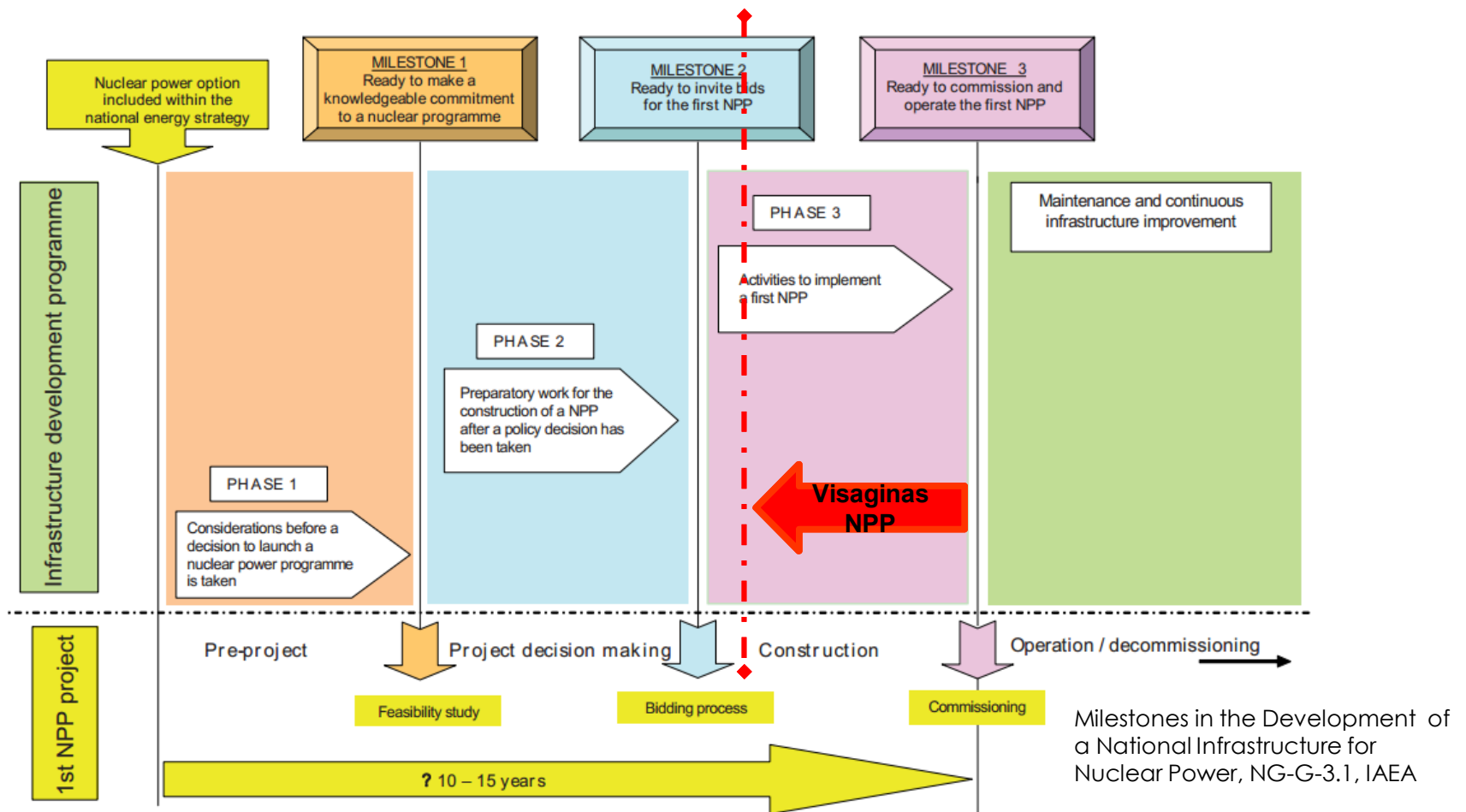
**Lithuania is the most electricity import - dependent country in Europe**

## 2. Rationale of Visaginas NPP Project

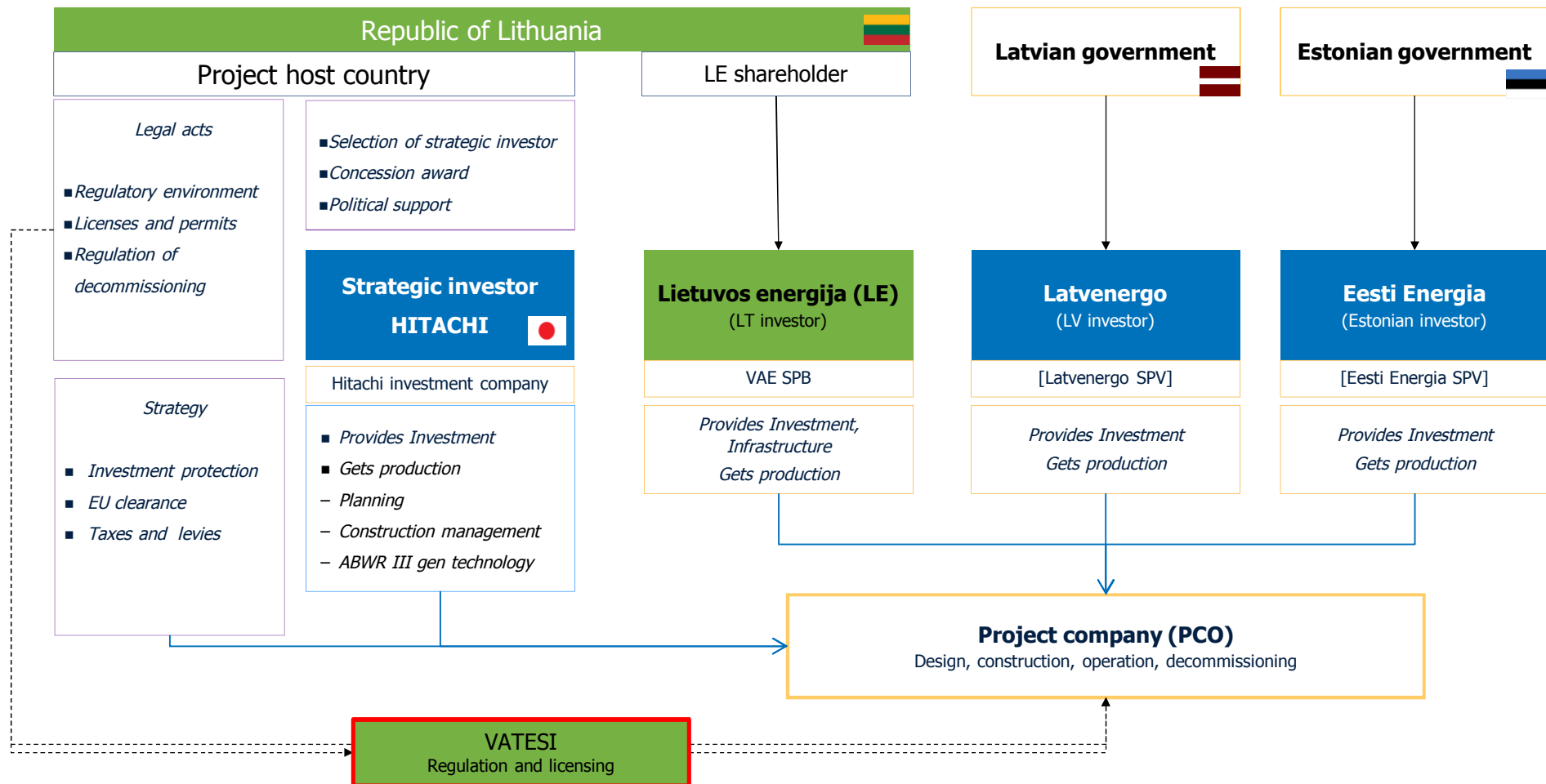
- Security of supply
- Diversification of energy mix
- EU environmental goals



### 3. Nuclear project development overview: maturity evaluation (according to IAEA)

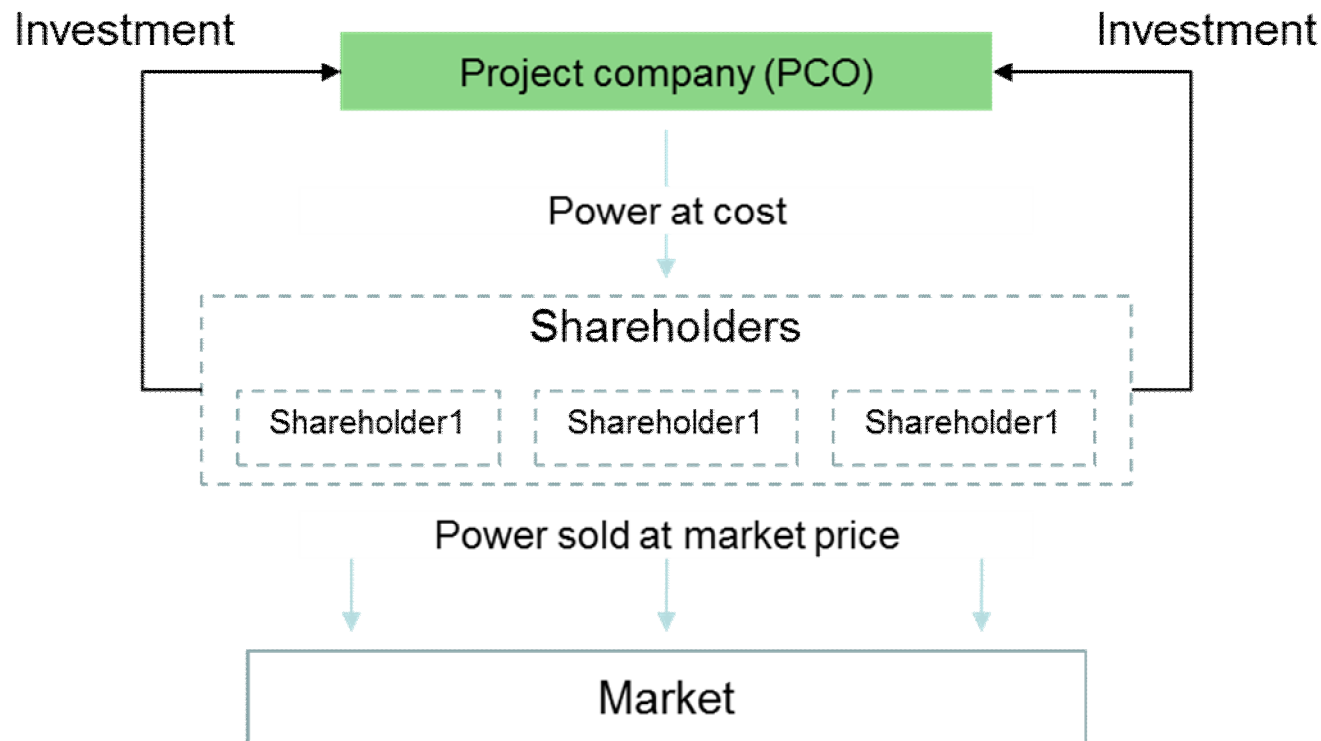


### 3. Visaginas NPP Project organization





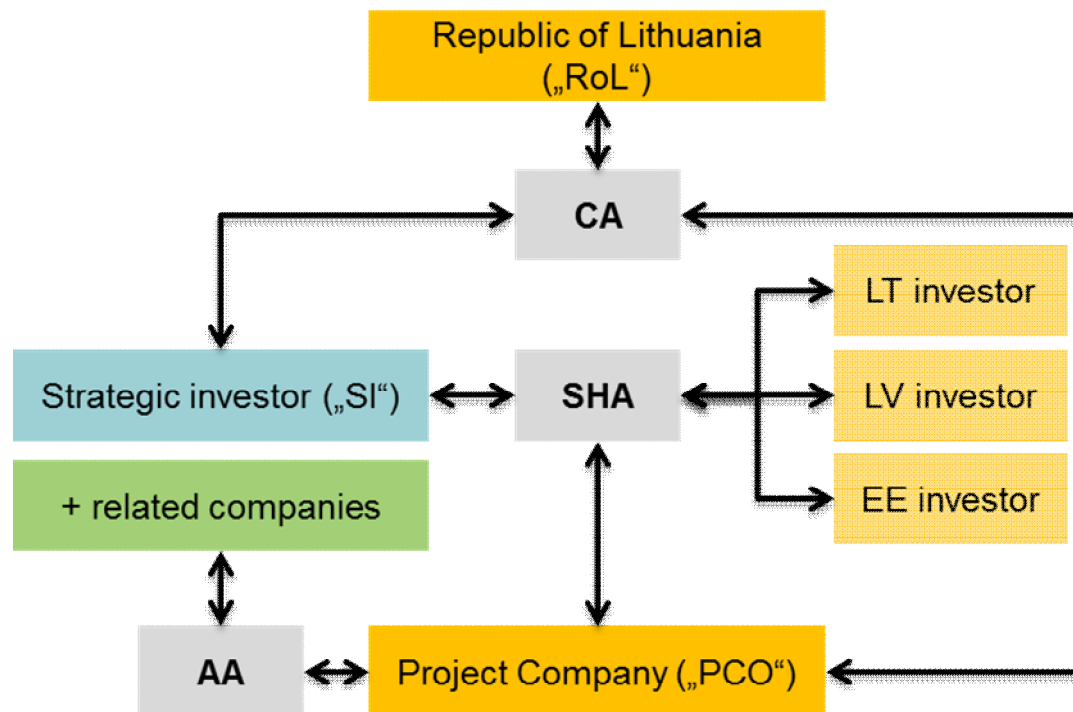
### 3. Contract model: Power at cost model (“Mankala”)



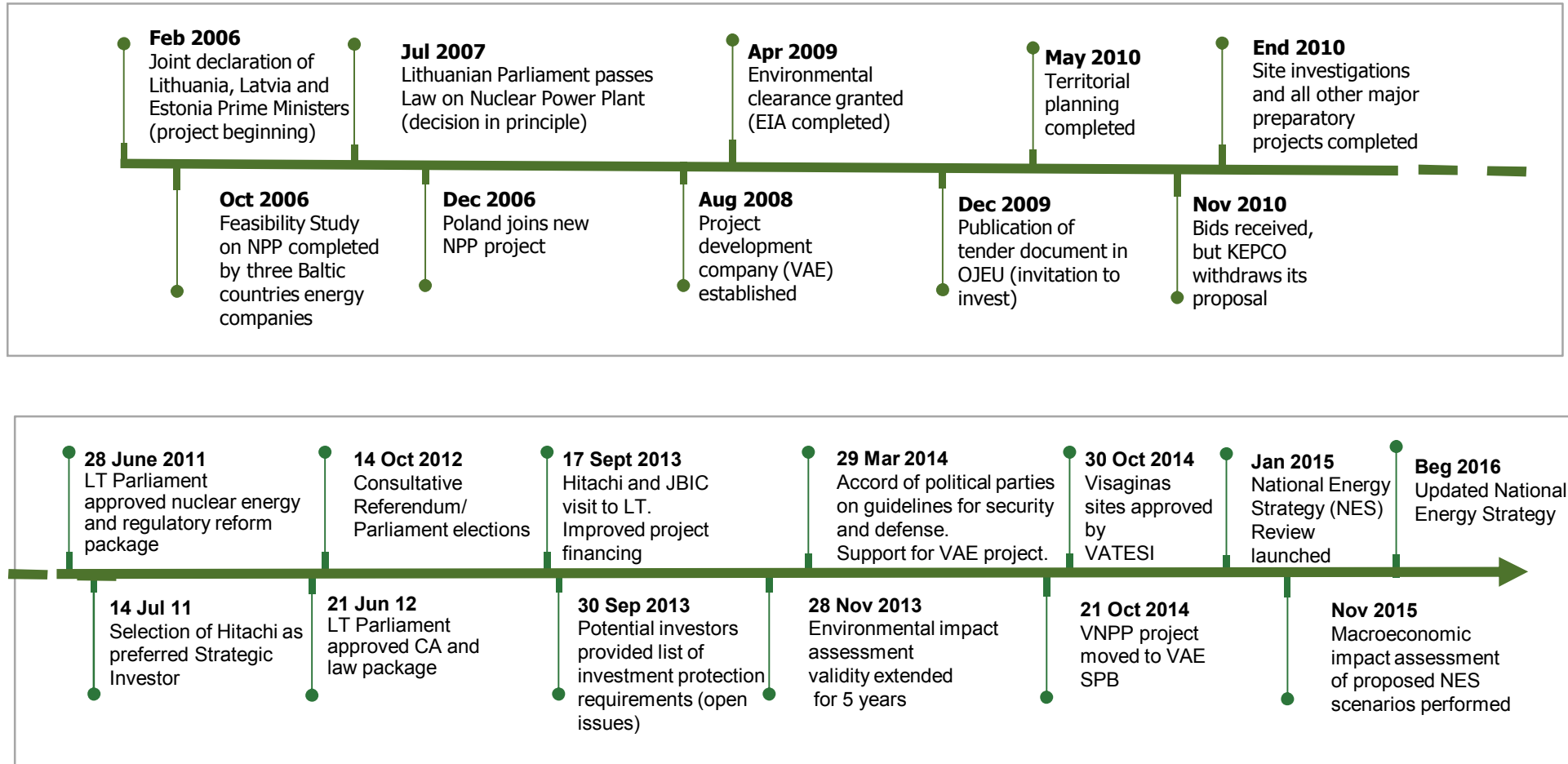
- PCO develops, builds, runs and decommissions the nuclear power plant. **Intended to be run as zero-profit-making entity for the benefit of its shareholders**
- Shareholders: all envisaged to contribute capital and meet PCO cash calls, receive right to power in proportion to their shareholdings and pay taxes in their jurisdictions

### 3. Main project agreements (envisaged)

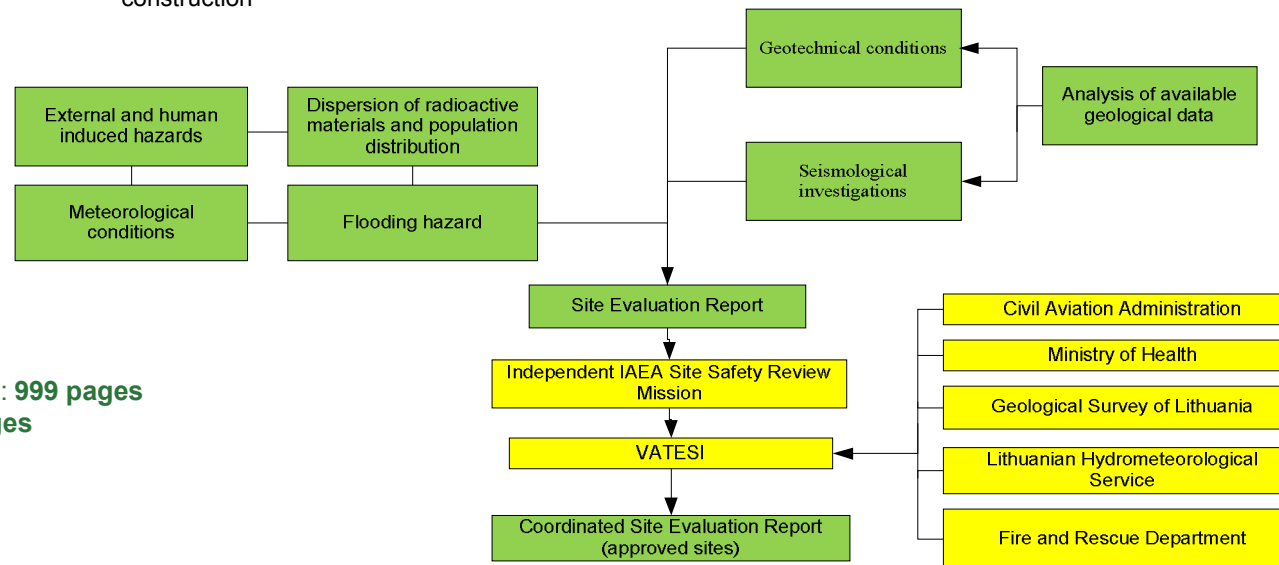
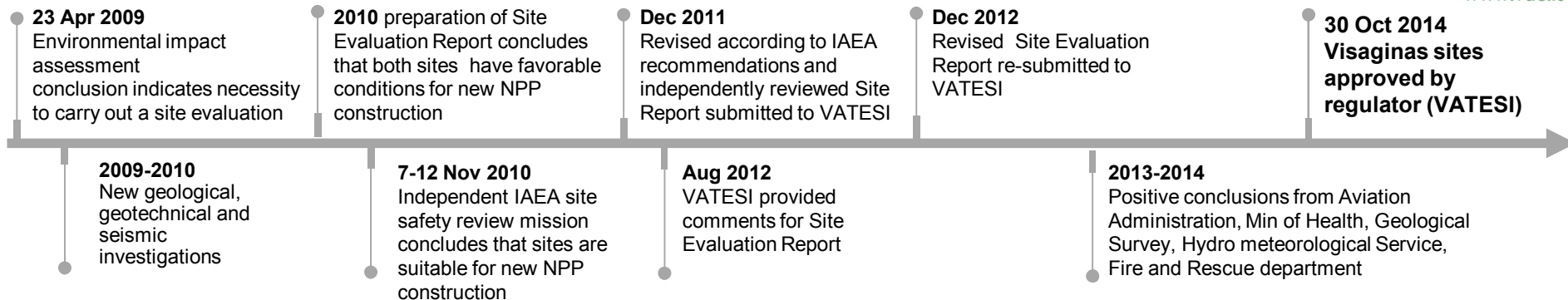
- Concession agreement („CA“):  
Republic of Lithuania awards concession to Project Company (and Strategic Investor)
- Shareholder's agreement („SHA“)
  - Shareholder's obligation to PCO, electricity offtake, financing, etc.
  - ❖ Parties: Strategic investor (SI) + other Investors + PCO
- SI electricity sale agreement (power purchase agreement, „PPA“)
  - ❖ SI sells own share of electricity. Parties: SI + Investors
- Other agreements: EPC, Operation & Maintenance support, Nuclear Fuel Supply („AA“)
  - EPC to be made between SI (or its associated company) and Project company
  - Nuclear Fuel Supply: Option for PCO to make fuel supply agreement with the company, associated with SI
  - O&M support: Option for PCO to make with the company, associated with SI



### 3. New nuclear power plant project – from the beginning up to now



## 4. Visaginas NPP sites: evaluation and approvals (EIA and site evaluation)



- Site evaluation report: **999 pages**
- Annexes: **~ 2300 pages**

### Coordination outcomes:

- Coordinated with 7 neighboring countries (Environmental Impact Assessment Report [EIA]);
- Coordinated with IAEA (EIA Report and Site Evaluation Report [SER]);
- Coordinated with 11 Lithuanian institutions with final decision from the Ministry of Environment (EIA);
- Coordinated with 7 Lithuanian institutions with final decision from VATESI (SER);
- Evaluation and approval **took 7 years and is fully completed**.

## 4. Visaginas NPP sites approval: results and readiness



### VATESI conclusions

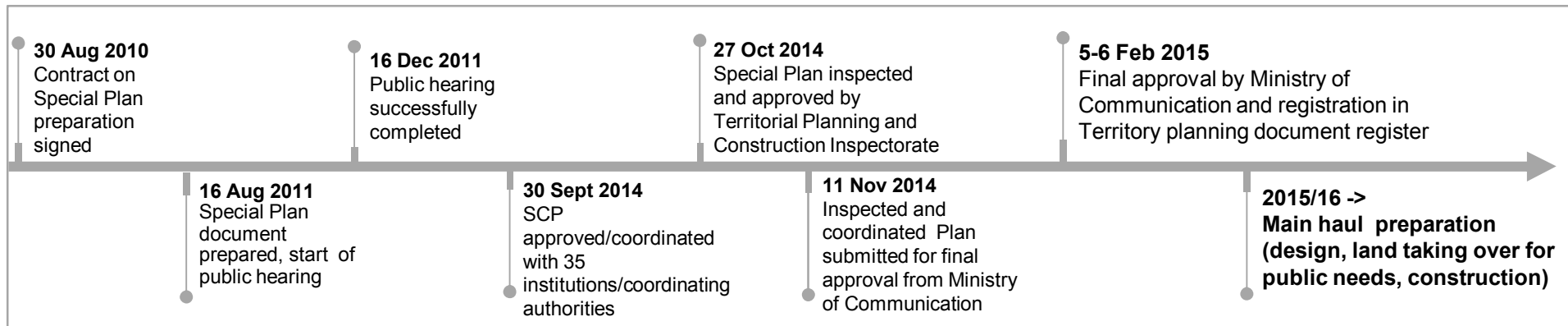
- Site evaluation performed in accordance to Lithuanian and IAEA requirements
- Evaluation methodology and conclusions made are justified
- Based on provided information and positive conclusions from coordinating authorities, the Site Evaluation Report is approved (coordinated) by VATESI in October 2014



### Approved Sites Evaluation Report

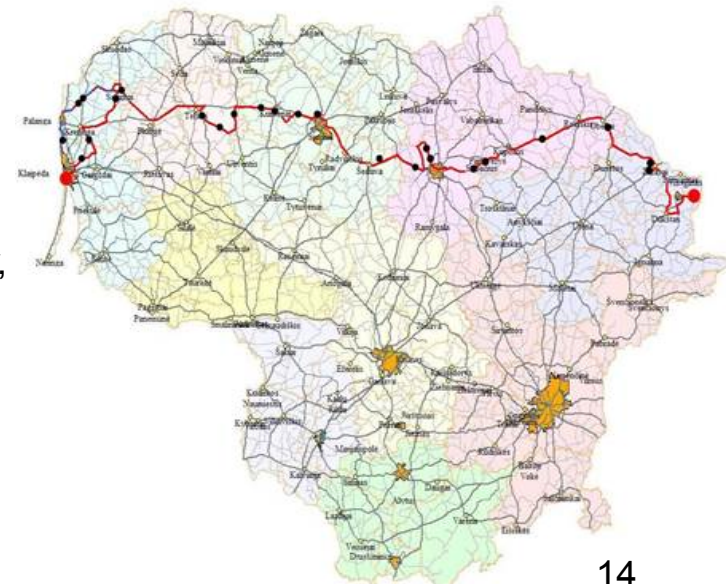
- **One of major licensing process milestones** – Sites Evaluation Report approval is a second major step in NPP construction licensing process in Lithuania. It comprises a part of application for Construction and Operation License
- **Permits to start design procedure** – Sites Evaluation Report shall be coordinated with VATESI before starting design process for new NPP (Nuclear Safety Law)
- **Provides Design Basis parameters and conditions** for new NPP design
- **The remaining license is Construction & Operation License** (to be obtained by the Operator before Final Investment Decision, FID)

## 4. Special transportation route plan development



### Owners of the process:

1. **Special transportation route plan development** – VAE SPB.
2. **Implementation of Route plan solutions** – Ministry of Energy, Lithuanian road authority under the Ministry of Transport and Communications, Municipalities.





## 4. Summary. Project maturity factors

**Visaginas NPP sites**



**Project technical and legal maturity**

- Strategic Investor selected: Hitachi Ltd. together with Hitachi-GE Nuclear Energy Ltd.;
- Technology chosen: III generation 1350 MWe ABWR;
- Favorable opinion from the European Commission regarding the Visaginas NPP project under Article 41 of Euratom Treaty received;
- Preparation and approval of 70 legal acts by the Government and Lithuanian Parliament;
- Valid Environmental Impact Assessment (EIA);
- Selection of equipment transportation routes;
- Radioactive waste management program;
- Territorial planning;
- Supply Chain Study;
- Existing infrastructure assessment and other activities accomplished;
- Visaginas NPP sites approved by regulator (VATESI).

Thank you very much for your attention!