



Introduction and updates of the Visaginas NPP new build

Nuclear New Build Congress 2014
Warsaw, Poland

Lietuvos energija, UAB

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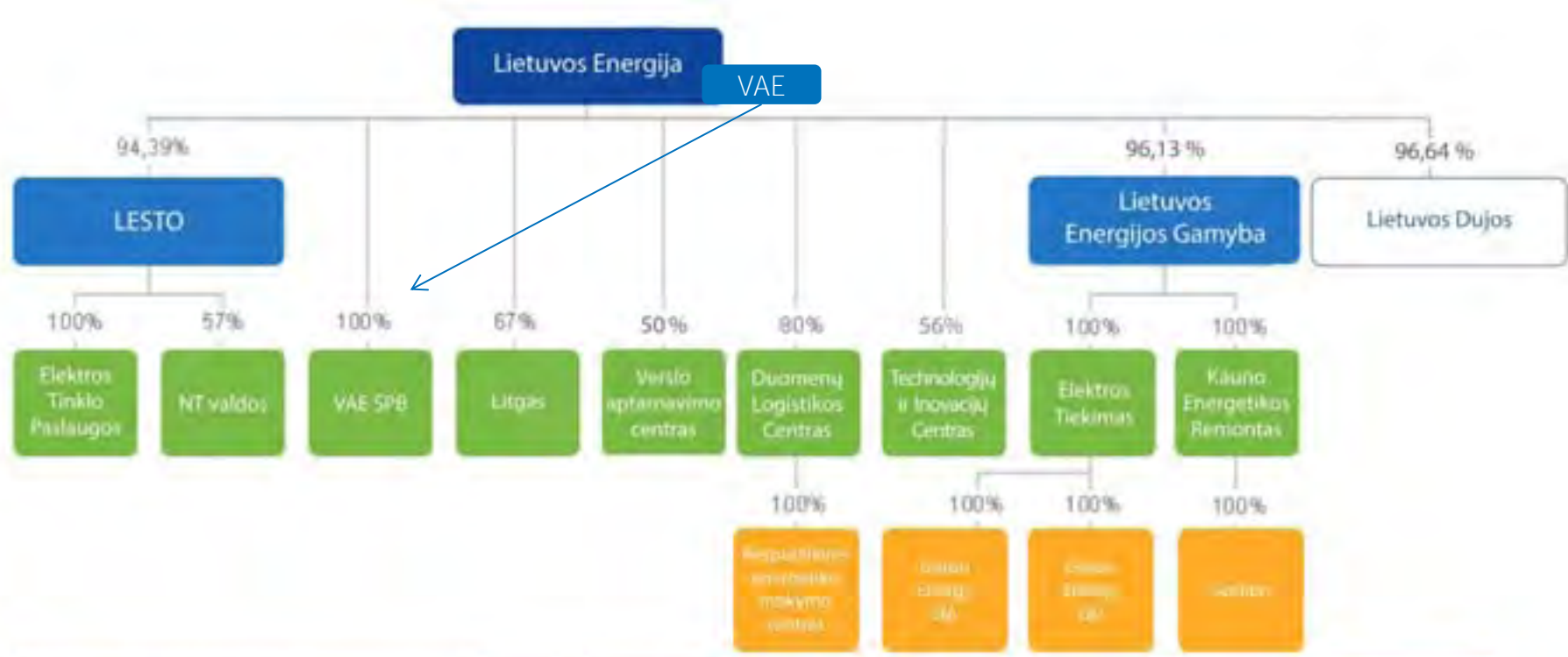
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The Structure of Lithuania's Energy Sector



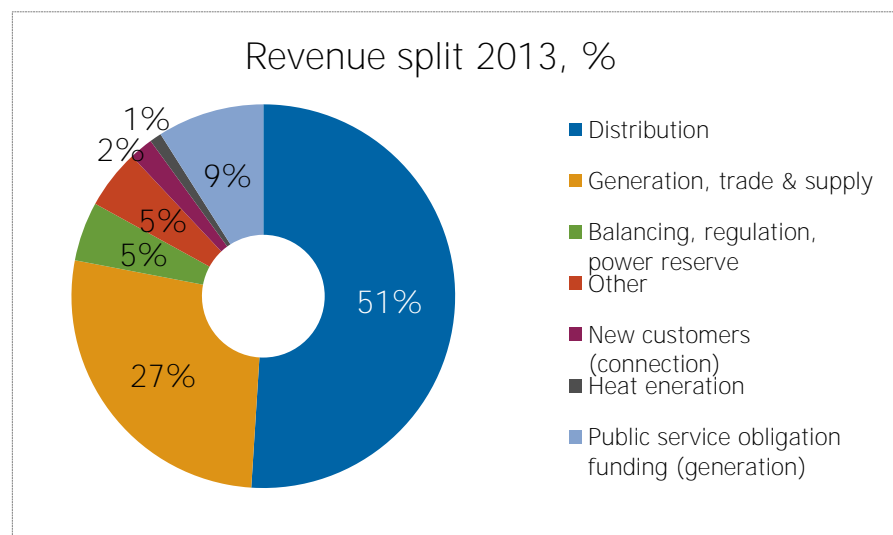
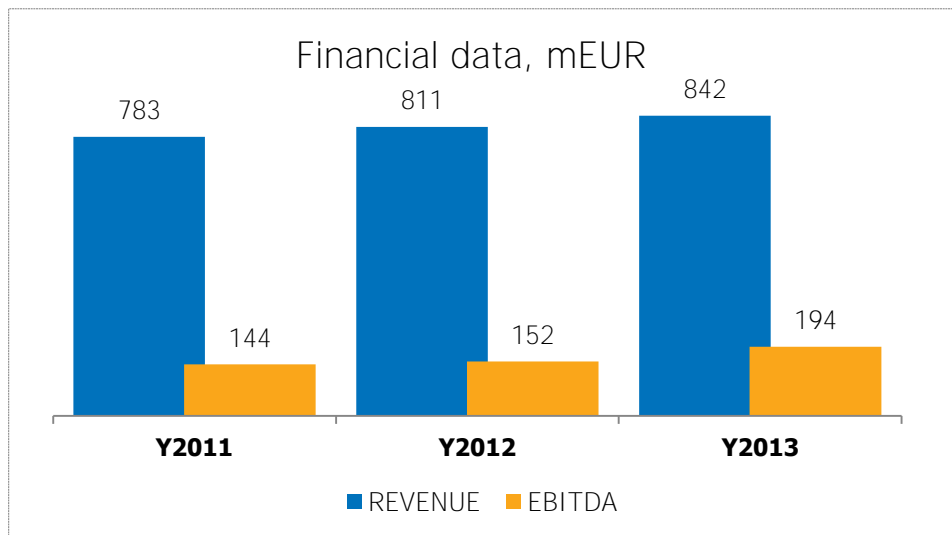
Management structure of LE group



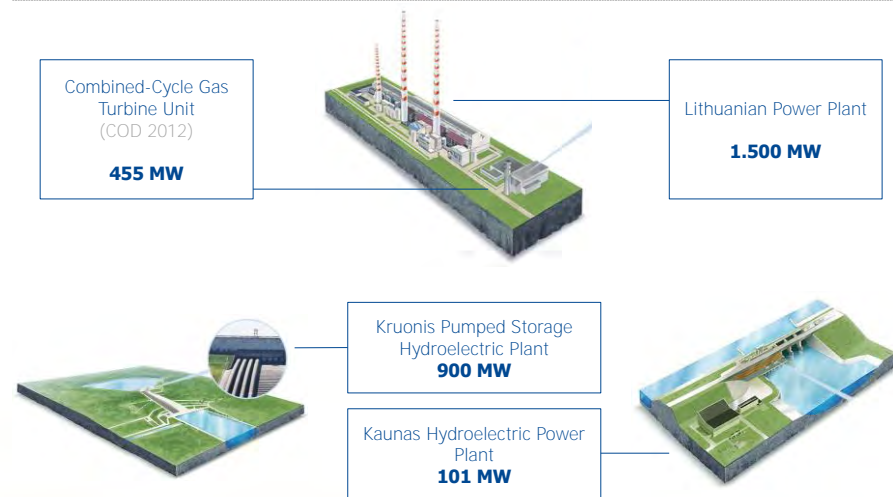
Supervisory Board (7 members): 7=1(Finance)+1(Energy)+1(Economy)+1(Government)+3(I)* Executive Board (5 members): Chief Executive Officer – Chairman of the Board. * I – Independent member	Supervisory Board (3 members): 3=2(LE)+1(I) Board (5 members): CEO – Chairman of the Board.	Board (3 members): 3=2 (shareholders)+1(I) CEO – not a member of the Board	CEO: Board (1 – not formal)
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System of management and supervisory bodies in the companies

LE electricity figures and business segments



TWh	Y2013	Y2012	+/-	%
Business indicators				
Produced electricity	1,96	2,20	-0,24	-10,9%
Distributed electricity	8,21	8,11	0,10	1,2%
Public and guaranteed supply	3,06	3,61	-0,55	-15,2%
Sales of electricity in the market	1,16	1,90	-0,74	-38,9%



Nuclear facilities in Lithuania

Existing

- Ignalina Nuclear Power Plant:
 - 2 RBMK-1500 units (2X1500MW);
 - 1983-2004 and 1987-2009.
- Spent Nuclear Fuel Storage Facility;
- Liquid radioactive waste management facilities;
- Cemented and Solid radioactive waste storage;
- Radioactive waste storage facility (**Maišiagala**).

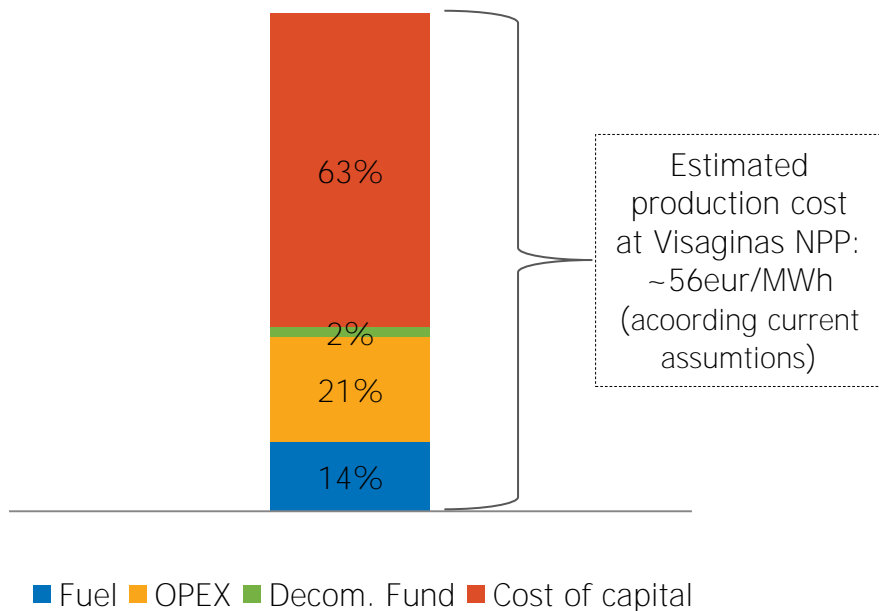
Planned or under construction

- New Spent Nuclear Fuel Storage Facility;
- New solid radioactive waste treatment and storage facilities;
- Storage facility and a repository for very low activity waste;
- Repository for low and intermediate activity radioactive waste;
- Visaginas New Nuclear Power Plant.



Visaginas NPP main aspects

Split of the production cost (estimation)



Project data

- Reactor type: ABWR
- Technology provider: Hitachi-GE
- Power: 1350MW

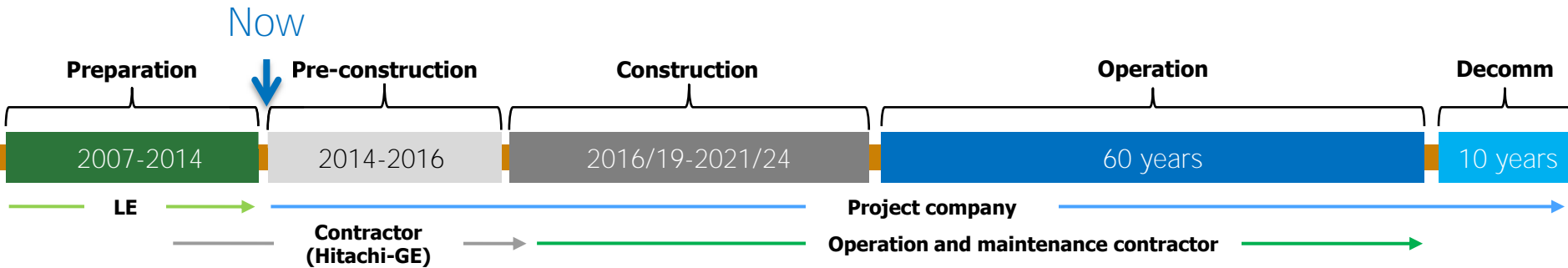
- LT share in the Project: 38% (526MW)
- Partners: LV, EE, Hitachi

- Total investment*: 5.000 mil eur
- Investment / MW: 3,7 mil eur
- Infrastructure Costs: 320 mil eur
- Load factor: 90%
- Construction: 5 years
- Lifetime of the plant: 60 years

*Project investments and financing depends on:

- FID: sources, conditions, duration, investors, appetite for return, risk appetite, etc. (and these factors depends on other..)
- DOR, EPC conditions, project management on time, on budget, etc.

Project timeline



Preparatory activities

- ✓ Technical preparatory activities including EIAR
- ✓ Regulations and licensing, appropriate legal and investment environments
- ✓ Organization for direct negotiations and selection of strategic investor
- ✓ Site evaluation
- ✓ Project notification to EC

Pre-construction period

- Establishment of the Project company
- Detailed plant design activities
- Preparatory activities for equipment ordering necessary for reactor construction
- PSAR preparation and coordination; License for construction and operation

Construction period

- Main haul road construction and finishing the route construction
- NPP Construction activities
- Systems' testing, adjustments, testing, FSAR preparation and adjustment

NPP operation

- New nuclear power plant operation
- Plant improvements

Decommissioning

- Decommissioning activities
- Utilization of the decommissioning fund

Latest updates

10 Dec 09

Publication of tender document in OJEU (invitation to invest)

14 Oct 2012

Referendum/
Parliament elections

17 Sept 2013

Hitachi and JBIC visit to LT. Improved project financing.

06 Mar 2014

Visaginas site in principal approved by regulator (VATESI)

Jul-Oct 2014

Discussion on interim project company (iPCO)

14 Jul 11

Selection of Hitachi as preferred SI.

21 Jun 12

LT Parliament approved CA and law package

30 Sep 2013

Potential investors provided list of investment protection requirements (open issues)

28 Nov 2013

Environmental analysis validity extended

29 Mar 2014

Accord of political parties on guidelines for security and defense.
Support for VAE project.

Visaginas NPP sites

Preferred site: Nr1

Site preparations completed on 2 alternative sites;



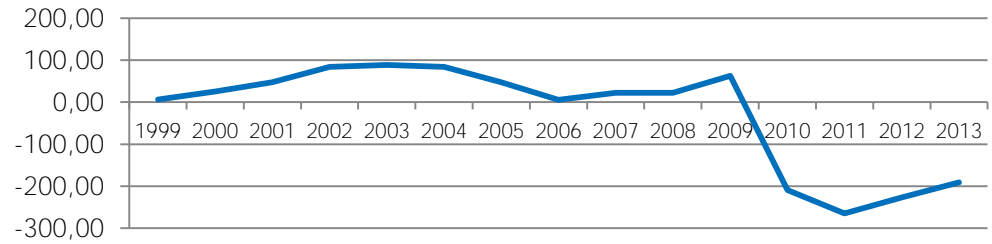
Site readiness

- Strategic Investor selected – July of 2011 Hitachi Ltd. together with Hitachi-GE Nuclear Energy Ltd.
- Technology chosen: III+ generation 1350 MWe ABWR;
- 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 handling program;
- Territorial planning;
- Supply Chain Study;
- Visaginas site approval by regulator (VATESI) in final stage;
- Existing infrastructure assessment and other activities.

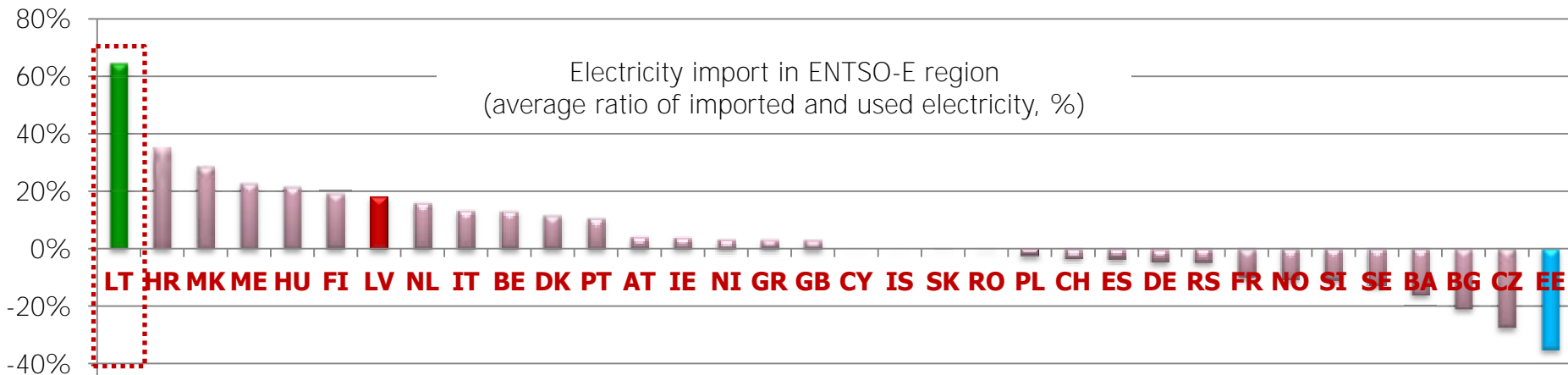
Current situation: electricity sector

- After closing 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 trade balance, million eur

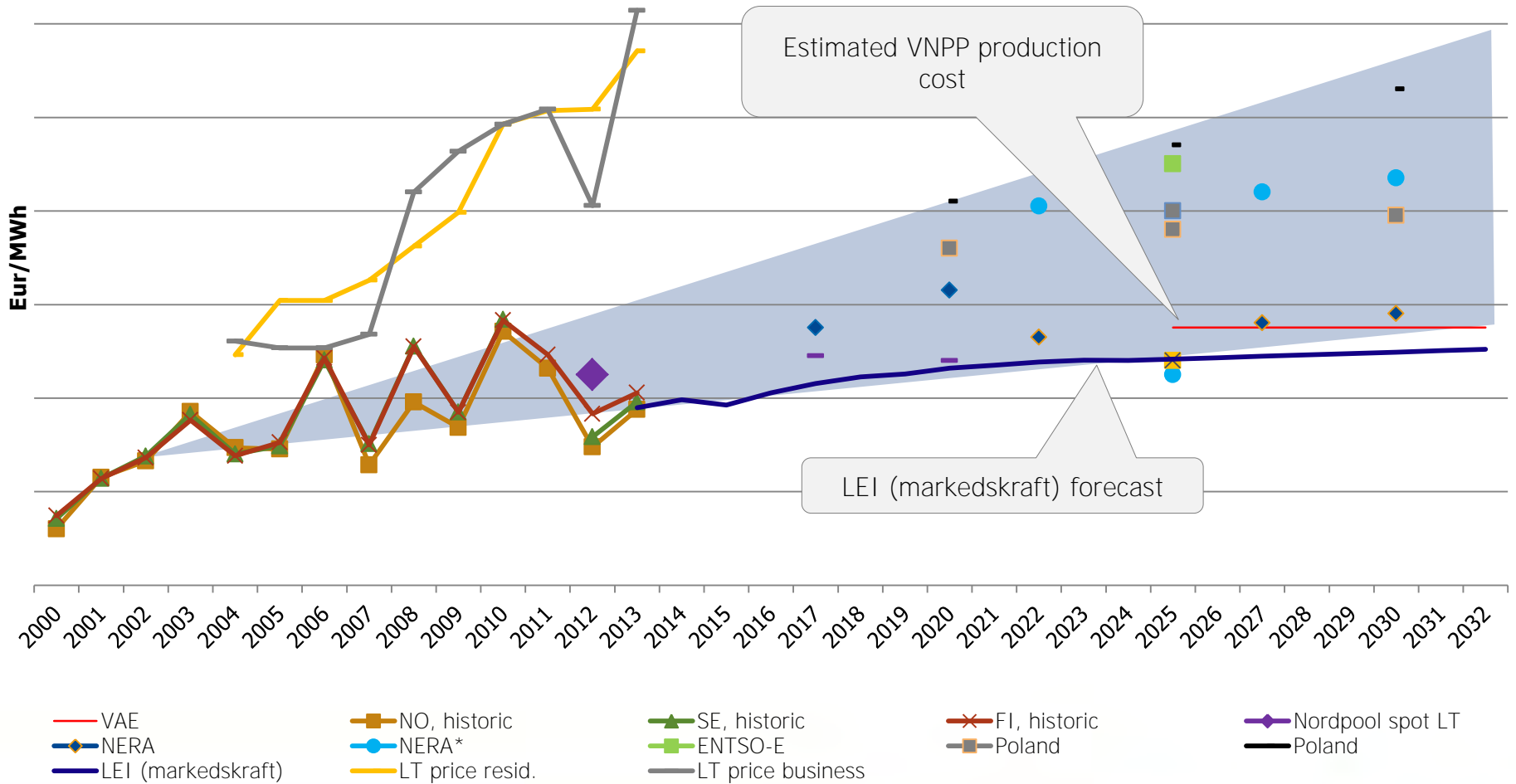


Import of electricity in Lithuania

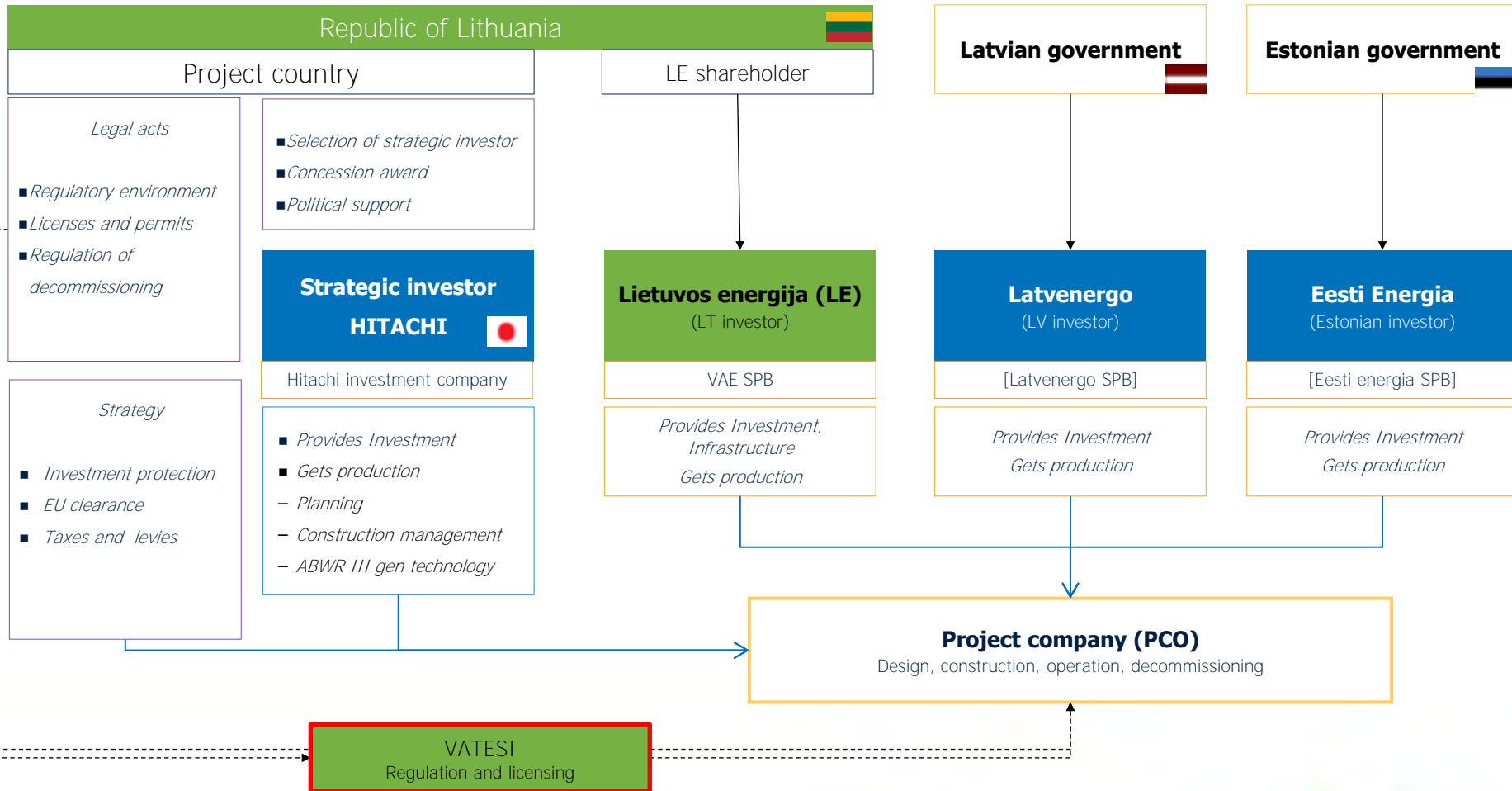


Lithuania is the most electricity import - dependent country in Europe

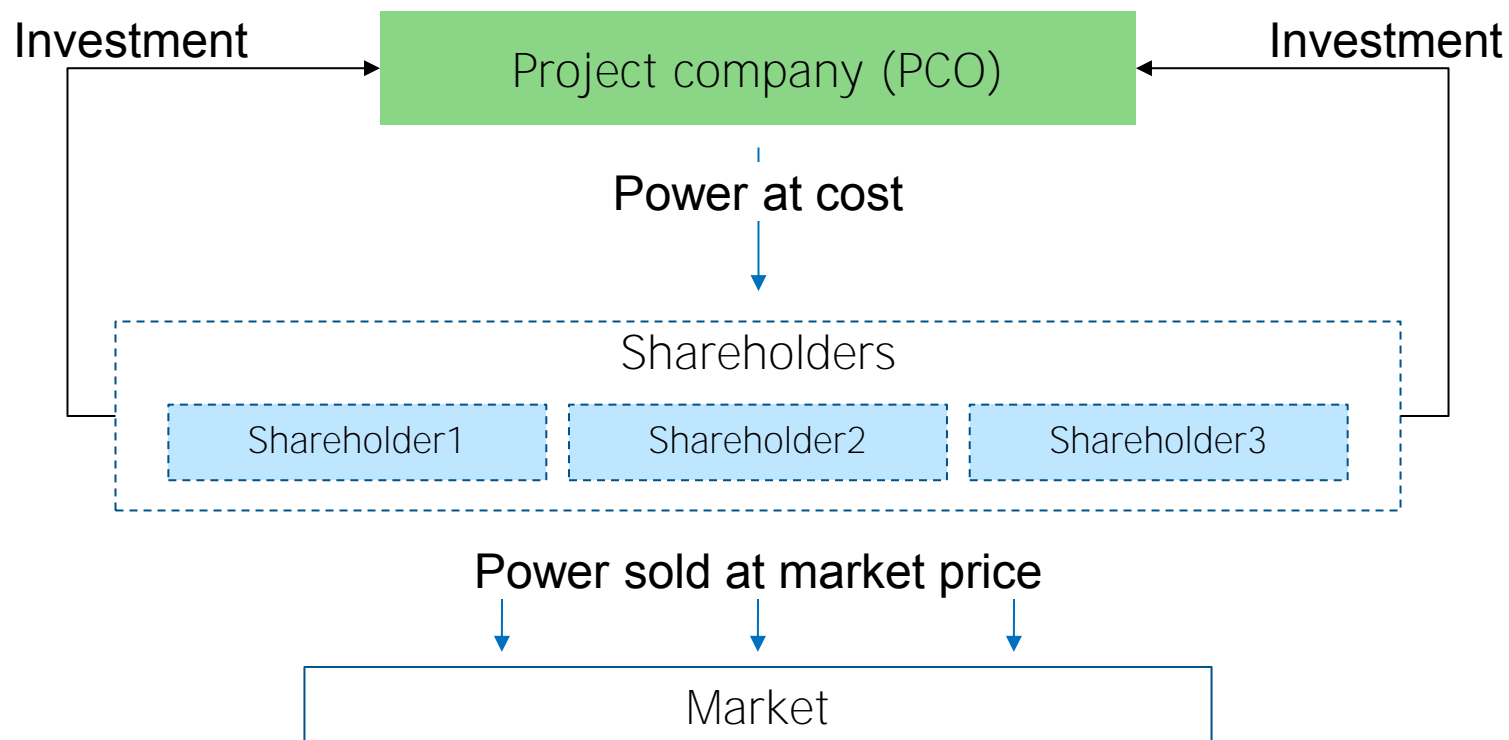
Market price history and forecast



Project organization*



Shared ownership model (Mankala)



- Shareholders take risk proportionally to amount of shares;
- Shareholders get power at cost proportionally to amount of shares;
- Shareholders are responsible for sales of electricity.

Nuclear plant construction legislation

Law on Nuclear Energy

- Sets up a basis for the state nuclear energy regulation, competence of state institutions in this field;
 - Establishes functions of nuclear safety regulatory authority;
 - Conditions for nuclear facilities design, construction and operation;
- Requirements for prevention of the nuclear accidents and liquidation of consequences;
 - Civil liability in the field of nuclear energy;
- Economical and financial conditions for operation of the nuclear facilities;
 - Employment specifics in the field of nuclear energy.

Law on Nuclear Safety

Law on Radiation
Protection

Law on Radioactive Waste
Management

Law on Nuclear Power
Plant

Law on
Decommissioning Fund

Set of Regulatory Requirements

General requirements

Detailed requirements

✓ Legal framework is being updated in order to address new NPP project needs

Thank you
