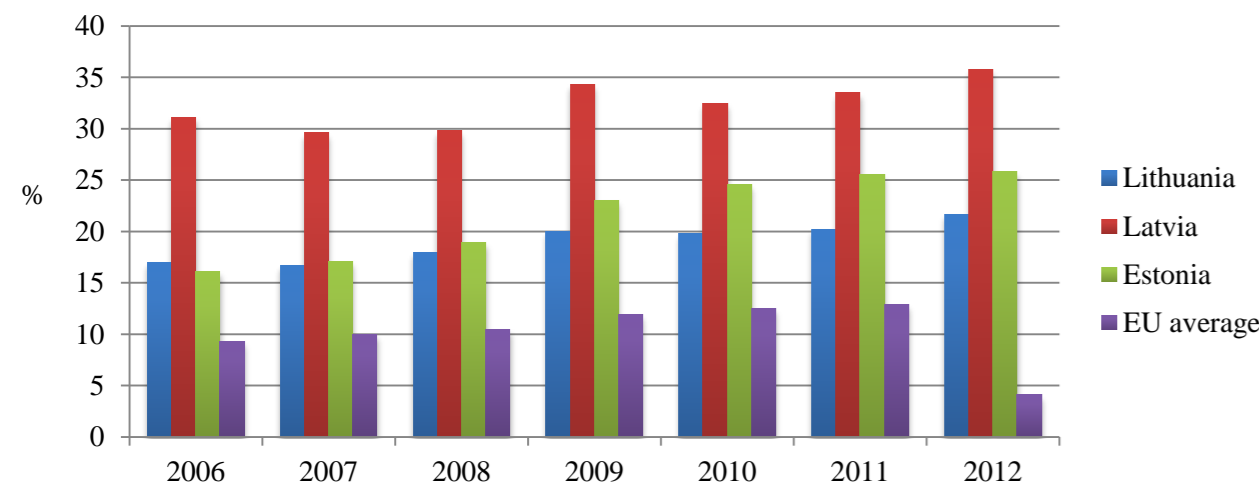




Introduction

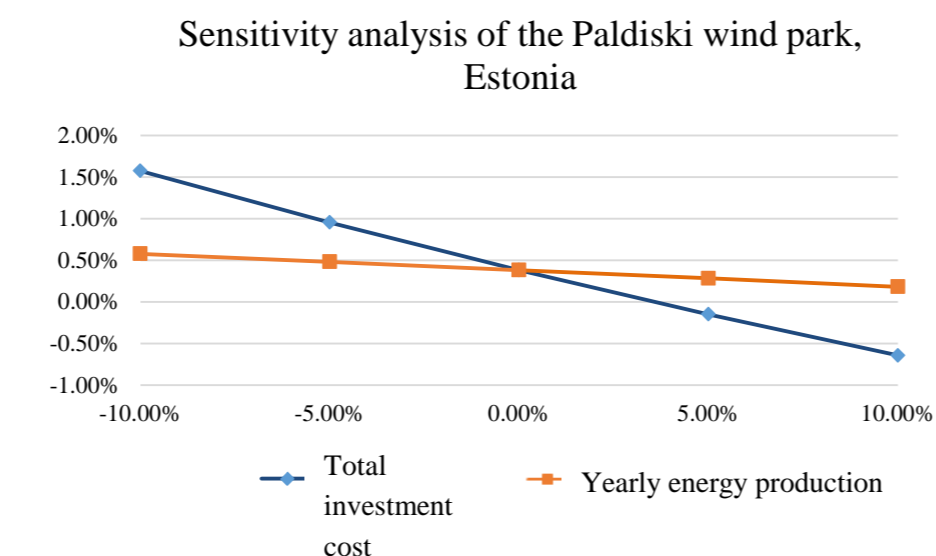
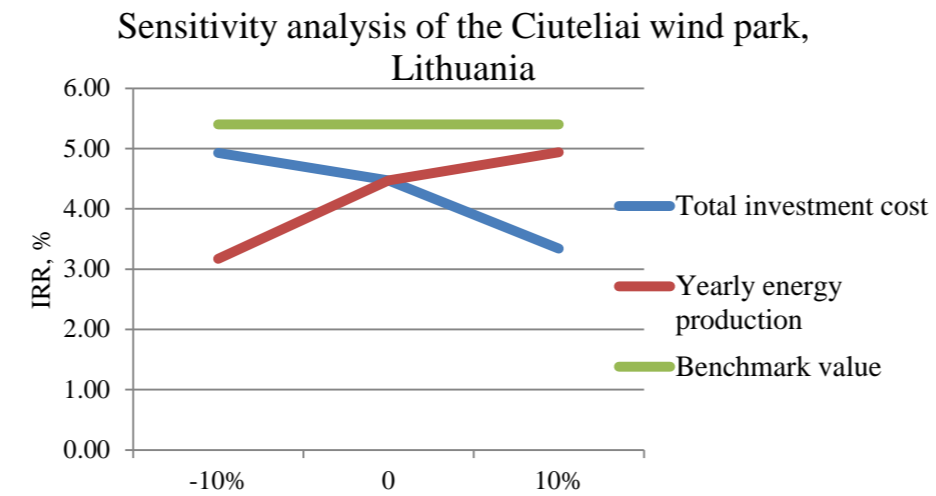
- ❖ Study examines the current energy sector in the Baltic States – Lithuania, Latvia and Estonia.
- ❖ The Russia's oil monopoly has a major impact in terms of the oil and gas supply.
- ❖ The Baltic States are trying to find the environmentally friendly alternatives for the usual oil and gas production.

Share of the RES in the Baltic States



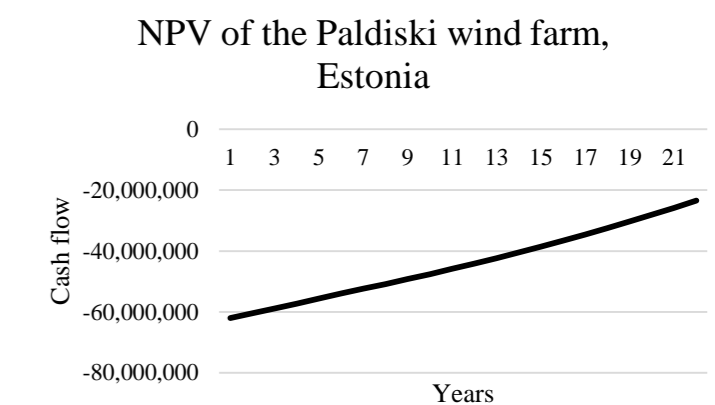
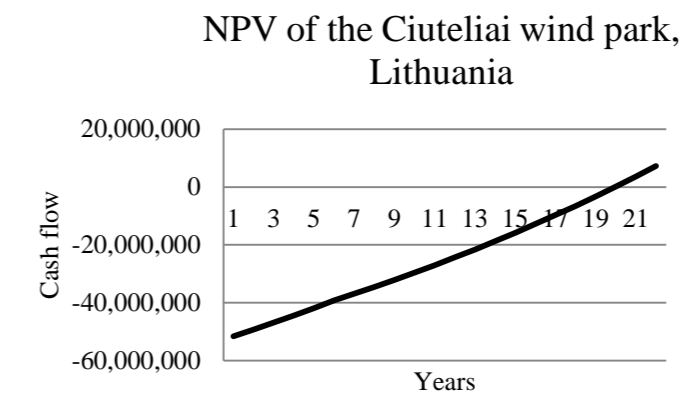
Methodology

- ❖ The Cost – Benefit Analysis (CBA) is undertaken for the wind power plant projects in Lithuania (Ciuteliai) and Estonia (Paldiski).
- ❖ The model is evaluated using the Sensitivity Analysis, Net Present Value (NPV) and Internal Rate of Return (IRR) approaches.



Results

- ❖ Both projects require an additional European Union (EU) financial support:
 - ❖ even though both the NPV and IRR are positive, the IRR of the Ciuteliai wind park (Lithuania) is lower than the discount rate;
 - ❖ both the NPV and IRR of the Paldiski wind farm (Estonia) are negative.



- ❖ The CBA shows that both projects face the environmental externalities due to:
 - ❖ the loss of the land and its surroundings;
 - ❖ negative impact for the migrating birds.

Conclusion

- ❖ The Ciuteliai wind park requires high investment cost but it provides the electrical energy for the 27,000 households.
- ❖ The new wind power plant in Estonia will reduce the CO₂ emissions by approximately 70,000 tones.
- ❖ The Baltic States are better off having increasing number of the renewable energy plants because:
 - ❖ they allow reducing the dependency from Russia;
 - ❖ they reduce the Greenhouse Gas (GHG) emission level.