



# Competitive PV production in Vilnius, Lithuania

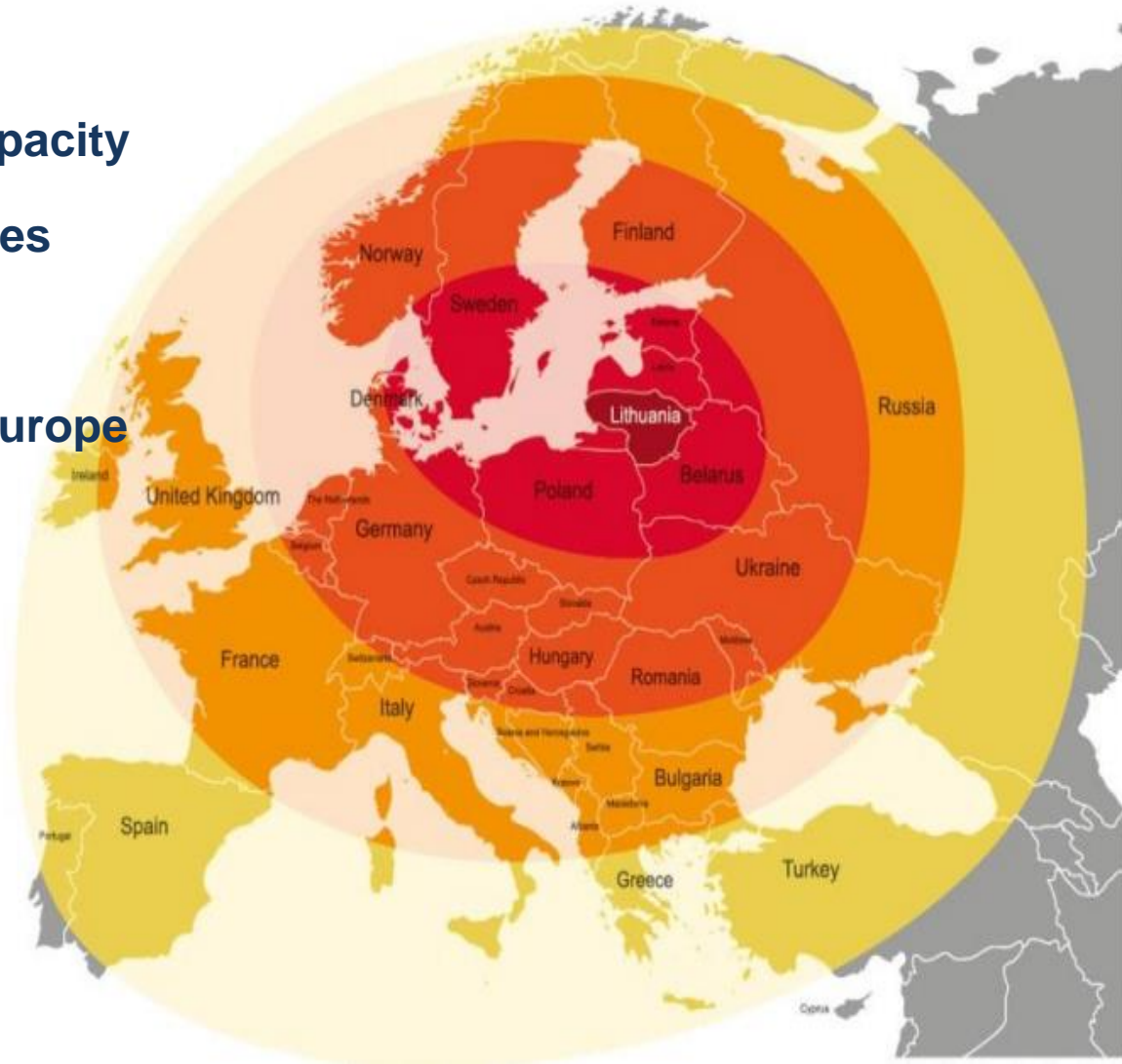
Vidmantas Janulevičius

CEO of BOD Group

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# BOD Group fact sheet

- The first optical disc manufacturer in Baltic States and one of the first manufacturers in Eastern Europe.
- 16 years of manufacturing experience.
- Partners –SINGULUS TECHNOLOGIES, BAYER, VIASOLIS, SOLSOL, Visoriai informational, technology park, etc.
- Established in 1998, today BOD Group includes:



# BOD Group strategy

- **Business directions:**

1. Optical discs manufacturing
2. Solar cells and modules manufacturing
3. Ophthalmological business



- ➔ **Vertical integration from cells manufacturing till the end-customer**
- ➔ **Technologically advanced production (PERC Technology)**
- ➔ **Trustworthy partners like Singulus Technologies**
- ➔ **Highly-skilled technical employees**
- ➔ **Customised solutions for end-customers**

# PV production and capacity

- PV cells – 70 MW / year
- PV modules – 50 MW / year



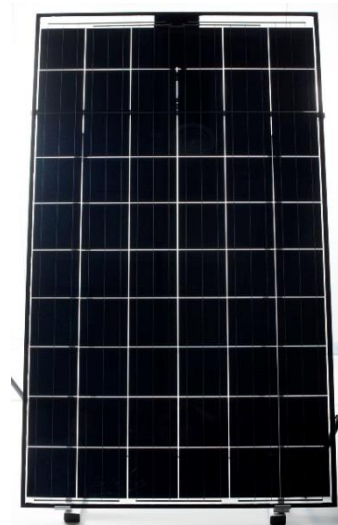
## Products

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PV cells



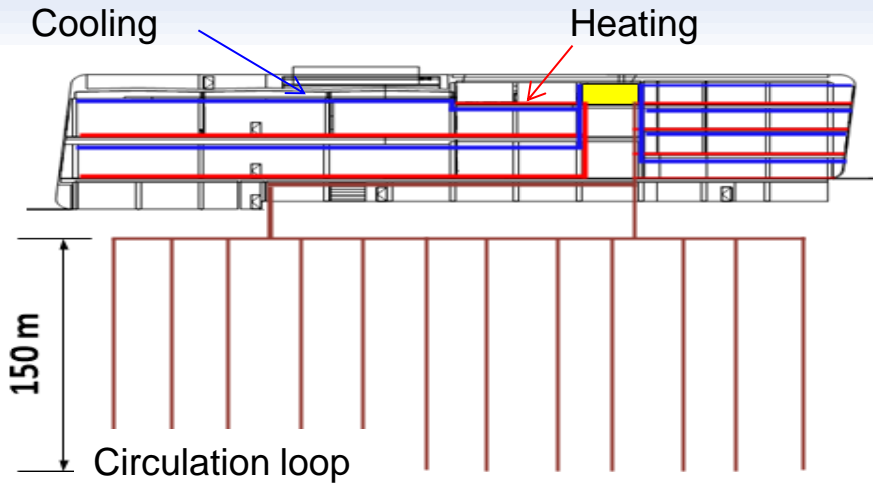
Glass/Glass modules



BIPV solutions



# L.I.G.H.T. WING building – 30 250 m<sup>2</sup>



Geothermal equipment cooling by HVAC (Heating, Ventilation and Air Conditioning) system.

System maintains a proper equipment temperature, also heats and cools the building.

Geothermal heating/cooling solution allows maximum manufacturing costs savings.

**Patented heating/cooling system created by BOD Group and partners' engineers.**

Geotherm heating	Central heating
2.6 Euro cent/kWh	7.8 Euro cent/kWh

Geothermal cooling	Regular cooling system
2.02 Euro cent/kWh	3.48 Euro cent/kWh



**40% of building exploitation costs are saved.**

# Competitive advantages

## Financing

- Total value of building and infrastructure - €44 M (€17 M financed by EU funds)

## Technological advantage

- PERC technology in cells manufacturing – allows higher efficiency and better price/quality ratio

## Costs saving

- 40% saved energy due to geothermal energy

## Customised production

- Asian suppliers meet difficulties to match customised requirements

# PV modules case in Europe

0,28 €/Wp

IQ of 2014 Asia made

0,38 – 0,45 €/Wp



Embedding cost  
**0,15 €/Wp**



IQ of 2014 Europe made

**0,32 €/Wp**

Real cost of  
embedding  
**0,25 €/Wp**

**0,57 - 0,65 €/Wp**

It is obvious that not disclosed financial support has been provided



# Dumping

- 1. The reality shows that non-European manufacturers receive different kinds of subsidies which are the major reason of dumping cases.**
- 2. Dumping frustrates local manufacturing, leads to social problems and reduces total added value by EU countries.**
- 3. The creation of favorable environment for business - one of the main targets for politicians.**
- 4. Latest PV case has shown, that even in a complicated structure of the EU, anti-dumping decisions should be made quickly and efficiently.**

# Summary

- **Strict actions for anti-dumping required!**
  - Asian manufacturers are financially strong. If they find other ways to fight in EU market, the **1 GW European factory for a standard production will not be a solution.**
  - For quality production Asian factories can be cheaper max. 10% due to vertical business integration. All additional **price cuttings emerge from hidden financing.**
- **The manufacturing industry must be created in Europe.**
  - To maintain a middle-class of population;
  - To gain independent market.





**Thank you for your attention**

Vidmantas Janulevičius  
CEO of BOD Group