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MINISTRY OF ECONOMY THE REPUBLIC OF LITHUANIA

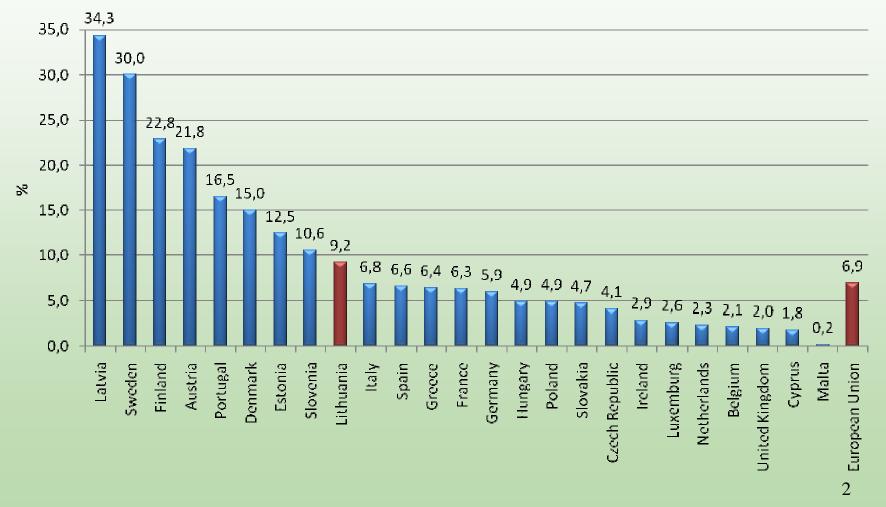
# RENEWABLE ENERGY IN LITHUANIA

### Vytas Navickas Minister of Economy of the Republic of Lithuania

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### SHARE OF RENEWABLE ENERGY IN PRIMARY ENERGY CONSUMPTION OF EU COUNTRIES IN 2006



Source: EurObserv'ER



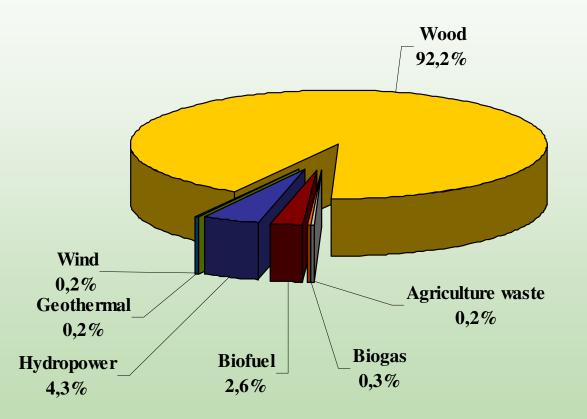
### UTILISATION OF RENEWABLE ENERGY RESOURCES IN LITHUANIA IN 1999-2006



Source: Department of Statistics to the Government of the Republic of Lithuania



### STRUCTURE OF UTILISED RENEWABLE ENERGY RESOURCES IN LITHUANIA IN 2006



Source: Department of Statistics to the Government of the Republic of Lithuania

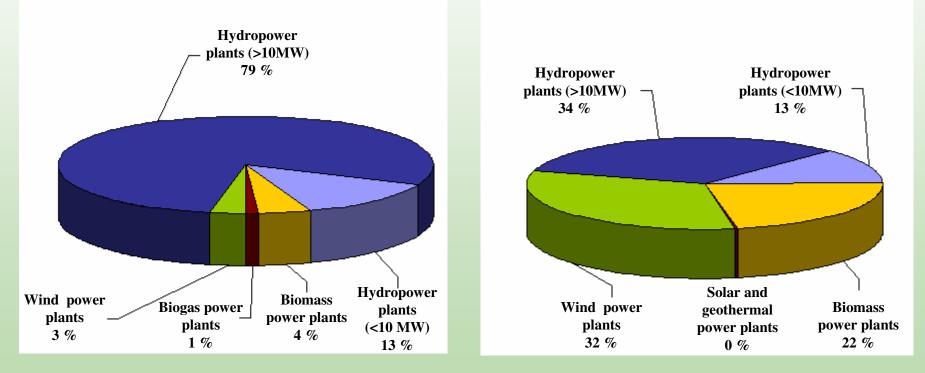
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## ELECTRICITY PRODUCTION FROM RENEWABLE ENERGY SOURCES

in 2006

in 2010



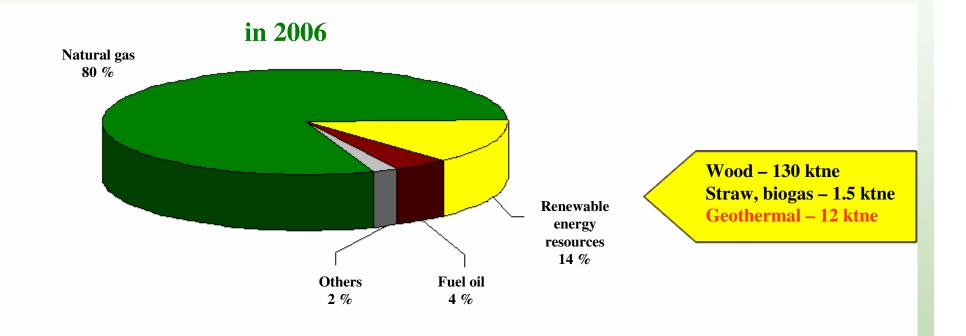
Sources:

- 1. AB Lietuvos energija (2006).
- 2. Procedure for the Promotion of Generation and Purchase of Electricity Generated from Renewable Energy Sources (2010).

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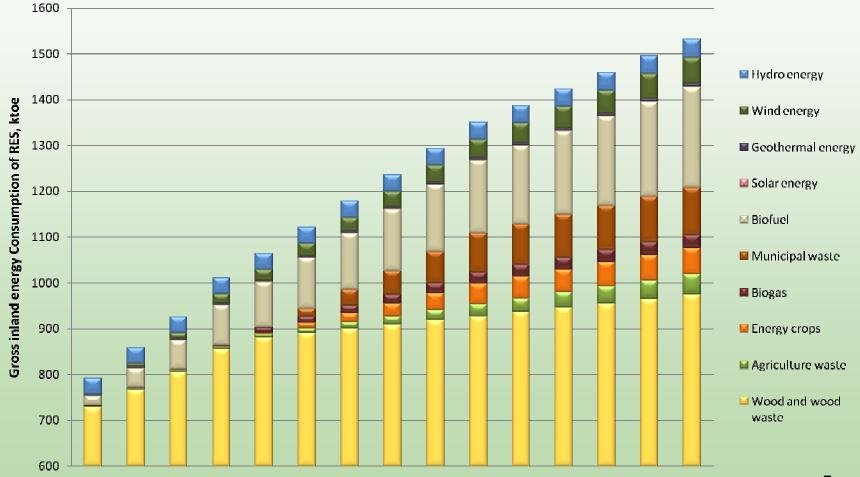
### **ENERGY USE IN SECTOR OF DISTRICT HEATING**



Source: Lithuanian District Heating Association

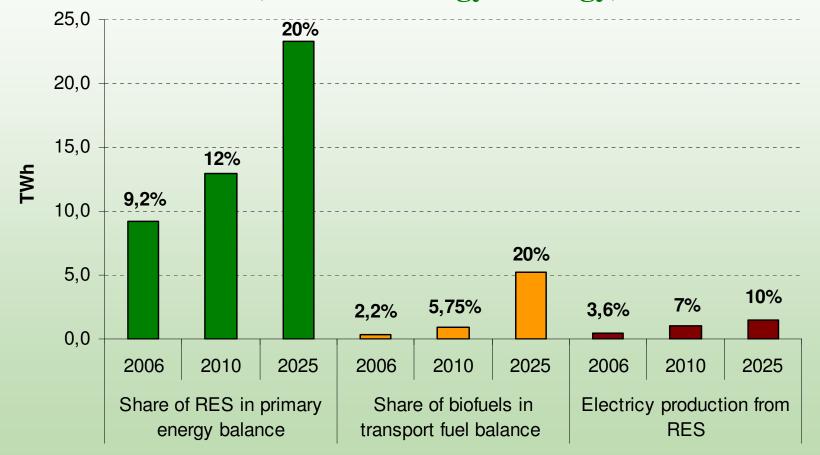


### FORECAST FOR UTILISATION OF RENEWABLES



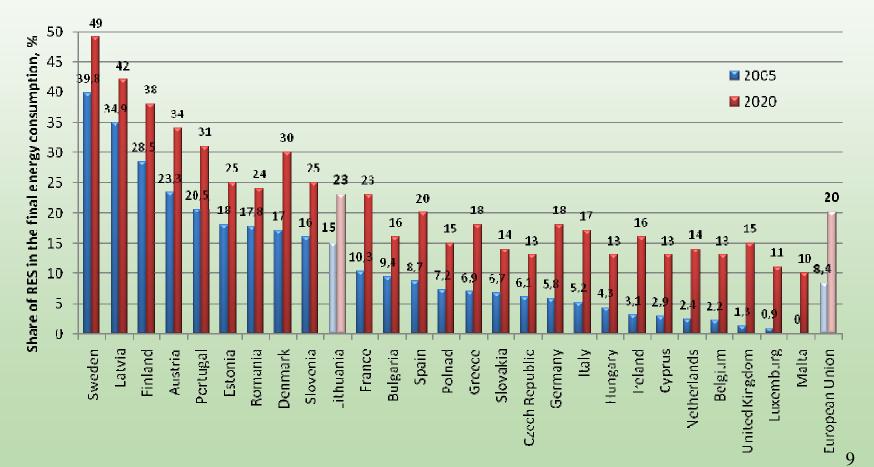


### LITHUANIAN NATIONAL TARGETS FOR RENEWABLE ENERGY SOURCES (National Energy Strategy)

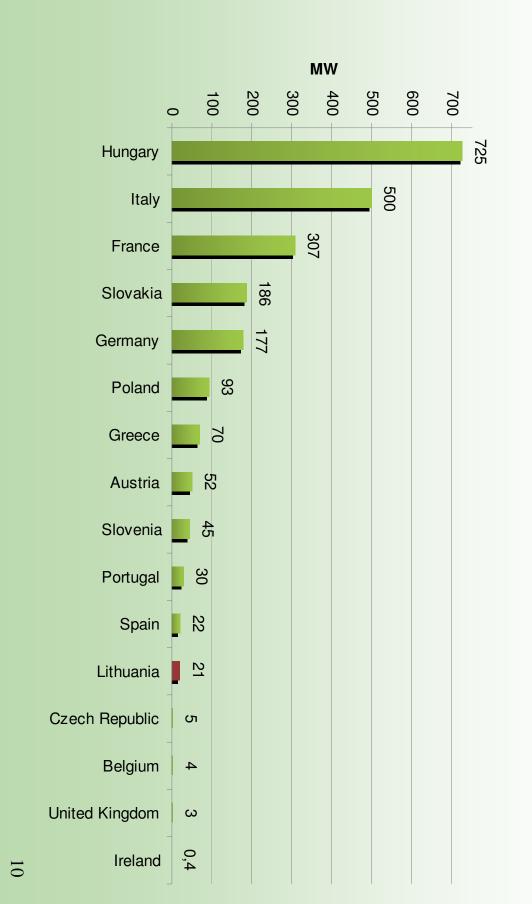




### NATIONAL OVERALL TARGETS FOR THE SHARE OF ENERGY FROM RENEWABLE SOURCES IN FINAL ENERGY CONSUMPTION IN 2020



Source: EurObserv'ER

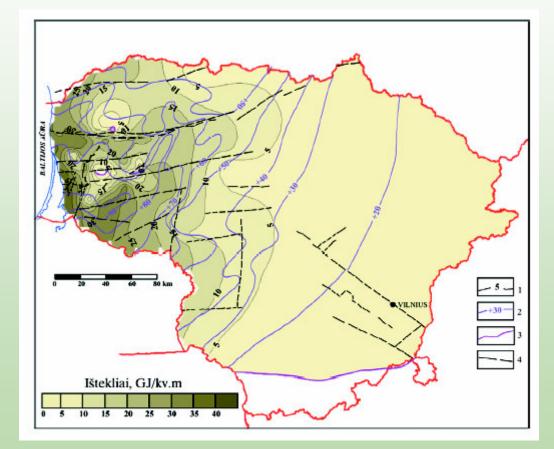


MINISTRY OF ECONOMY THE REPUBLIC OF LITHUANIA

# **INSTALLED CAPACITY OF GEOTHERMAL PLANTS IN 2006**



### MAP OF TEMPERATURE DISTRIBUTION AND FORECASTED DENSITY OF GEOTHERMAL SOURCES IN DEPTH OF 1900-2200 M



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### DEVELOPMENT OF UTILISATION OF GEOTHERMAL ENERGY IN LITHUANIA

- ✓ In 1988 Institute of Geology started research on geothermal energy potential in Lithuania.
- ✓ In 1991 company "Geoterma" was established. The main aim of this company was organization of construction of geothermal plants and heat supply piping; exploitation and realization of produced heat for consumers; ordering and arrangement of geothermal energy production projects, expertise and installation.
- ✓ In 1992 Institute of Geology performed assessment of geothermal energy potential in Lithuania;
- ✓ In 1992-1994 execution of international project "Baltic geothermal project". Participating countries: Lithuania, Latvia, Denmark. Perspective place of construction of geothermal plant was selected Klaipėda city.
- ✓ In 2001 Klaipėda geothermal plant started supply of heat to the net of the district heating company "Klaipėdos energija".



### DEMONSTRATIVE GEOTHERMAL PLANT IN KLAIPĖDA





### PROMOTIONS OF RENEWABLE ENERGY RESOURCES IN LITHUANIA

✓ Purchase of electricity generated in biomass CHP plants (when biomass amounts not less than 70% in fuel balance, and ratio of plant electricity and heat capacity is not less than 0,23)

✓ Feed-in tariffs:

- hydro power 20 ct / kWh (5,8  $\epsilon$ /kWh);
- wind power 22 ct / kWh (6,4  $\in$  c/kWh);
- biomass 22 / 24 ct / kWh (6,4/7,0 €c/kWh).
- ✓ Price guarantee until 31 December 2020;
- ✓ 40% discount for power plants connection to the grid;
- Priority for transportation of electricity produced from renewable energy sources;



### PROMOTIONS OF RENEWABLE ENERGY RESOURCES IN LITHUANIA

- ✓ Obligation for heat suppliers, in case of the same price proposed, to purchase heat in the following priority:
  - 1. From combined CHP plants heat produced using renewable energy sources;
  - 2. Heat produced from renewable energy sources and geothermal energy;
  - 3. Waste heat from industrial processes;
  - 4. Heat from effective cogeneration plants;
  - 5. From fossil fuel heat plants.
- ✓ Available financial support for investments;
- ✓ Environment tax exemption;
- ✓ Biofuel blending obligation;
- $\checkmark$  Excise duty exemption for energy products of biological origin.