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Wind Potential in Slovakia

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Slovakia – Country Specific Information



Slovakia

Area:
Population:
Population density:
Gross electricity demand
Energy Share from RES
Target Share from RES in 2020

49 035 km²
5,5 Mio.
110 ppl. / km²
28,6 TWh/year
9,5%
14%

Germany

357 104 km²
82 Mio.
229 ppl. / km²
639,1 TWh/year
14,8%
18%

Slovakia submitted its 2010 NREAP to EC with the following assumptions

Hydropower

- covers 90% of production from RES

Biomass

- preferable renewable energy source (Slovakia exports pellets and briquets)

Biogas

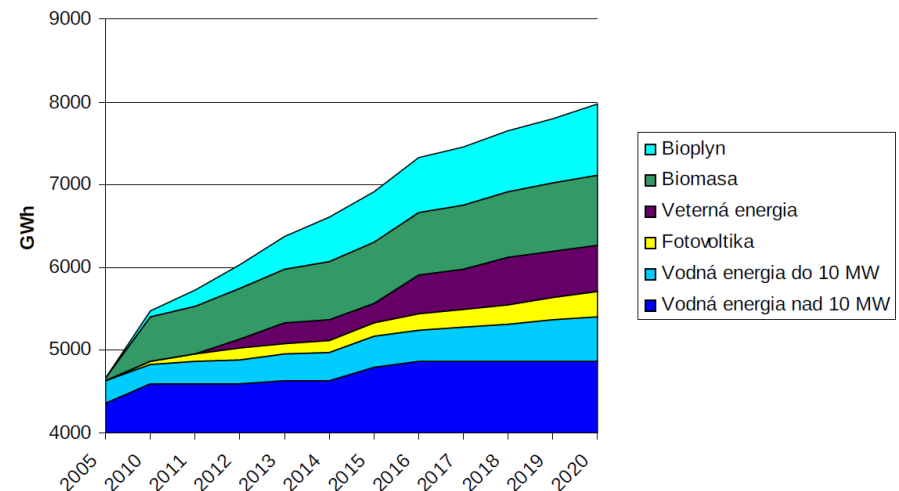
- Preferred energy source for next years, done change of law to sale biogas or electricity from cogeneration source

Wind

- expected development:

Wind sector - Estimate the total contribution											
Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Power [MWp]	5	5	150	150	150	300	300	300	350	350	350

RES - Electricity production



Map of Installed Wind Turbines in Slovakia



Currently only nine wind turbines in three wind parks Cerová, Ostrý Vrch and Skalité are operated with an installed capacity of 5 MW.



Slovakia – Key Energy Sector Players and Regulatory Bodies



Slovenská elektrizačná prenosová sústava, a.s.
(Slovak Electricity Transmission System, Plc)



Slovenské elektrárne, a. s.
Is the largest power generating company in Slovakia, operates 5,693.24 MW of gross capacity, incorporated on 21 January 2002 after separation of the transmission grid and Heating Plant Košice. Operator of two nuclear power plants, two thermal power plants and 34 hydroelectric plants



Stredoslovenská energetika a.s.



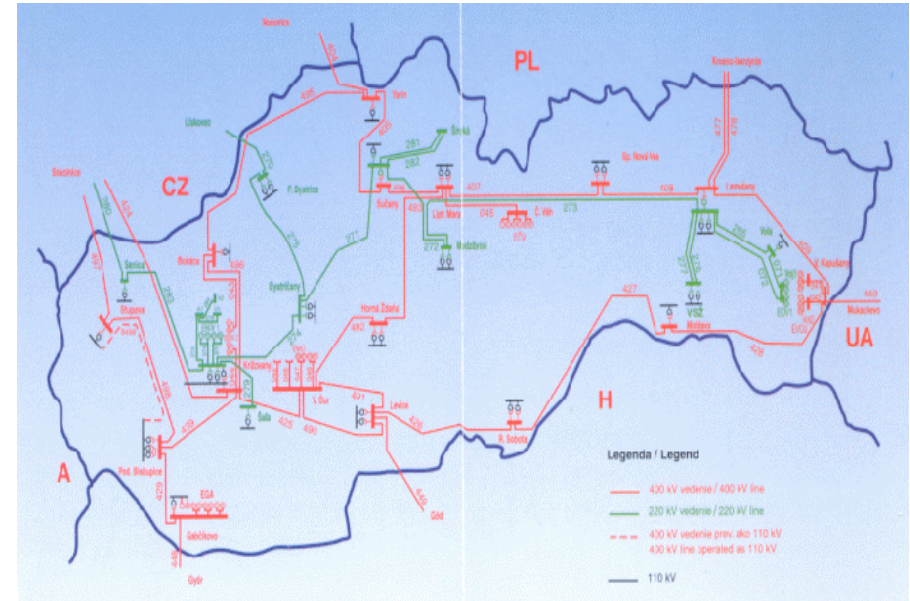
Východoslovenská energetika a.s.



Západoslovenská energetika a.s.



Regulatory Office for Network Industries – URSO





Feed-in tariff for Wind Turbines in Slovakia

80,91 Eur/MWh (year 2010)

Conditions for Project Development

Ministry of Economy (MoE) this year issued a certificate for construction of 32 power plants. REN sources would be increased about 29 new solar power plants, a small hydroelectric plant and two certificates for project construction of biomass CHP.

Approved plant this year (2010) should have a total installed electrical power of more than 102 megawatts.

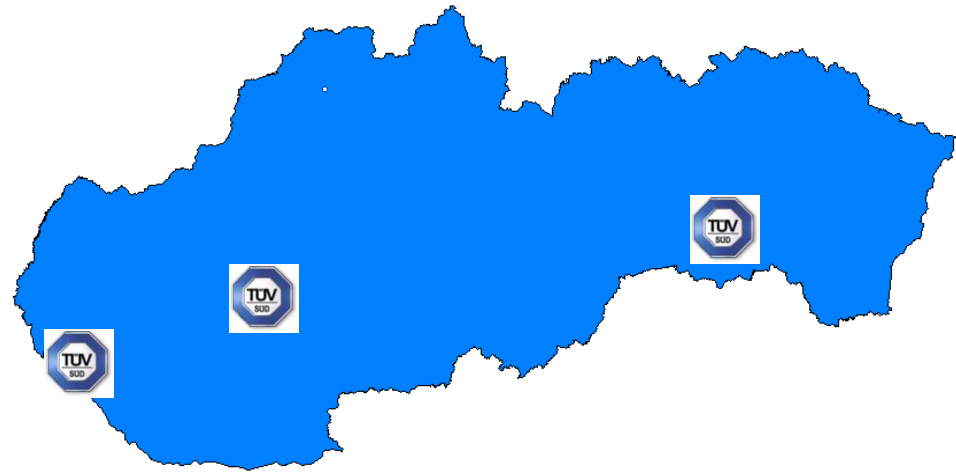
Wind

Ministry of Economy

-in the past five years a certificate of compliance has not given to any investor who wants to build a wind power plant in Slovakia

-Wind farms are among the unstable sources

Rules for the construction of wind power plants in Slovakia are issued by Slovak Electricity Transmission System, Plc . There are no plans to issue it in the near term.



Scope of activities

- Management systems certification to ISO 9001, ISO 14001, ISO / TS 16949, OHSAS 18001, HACCP, ISO 22000, ISO 27001, ...
Certification of persons, Product Certification , Inspection activities
Conformity Assessment, Technical supervision of construction , ...

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- ▶ Main office in Bratislava
- ▶ 3 regional offices
- ▶ 60 employees
- ▶ 2,99 mil. Euro revenues

Services of TÜV SÜD for Wind Business in Slovakia



Manufacturers

CE Marking, Type certification

Investors

Site assesment

Wind Measurement, Wind Expert Report

Environmental Impact Assessment

Technical Due Diligence

Supervision during Construction, Witness of Commissioning

Wind farm certification

Operators

Assessment of documentation acc. to Slovak and European requirements

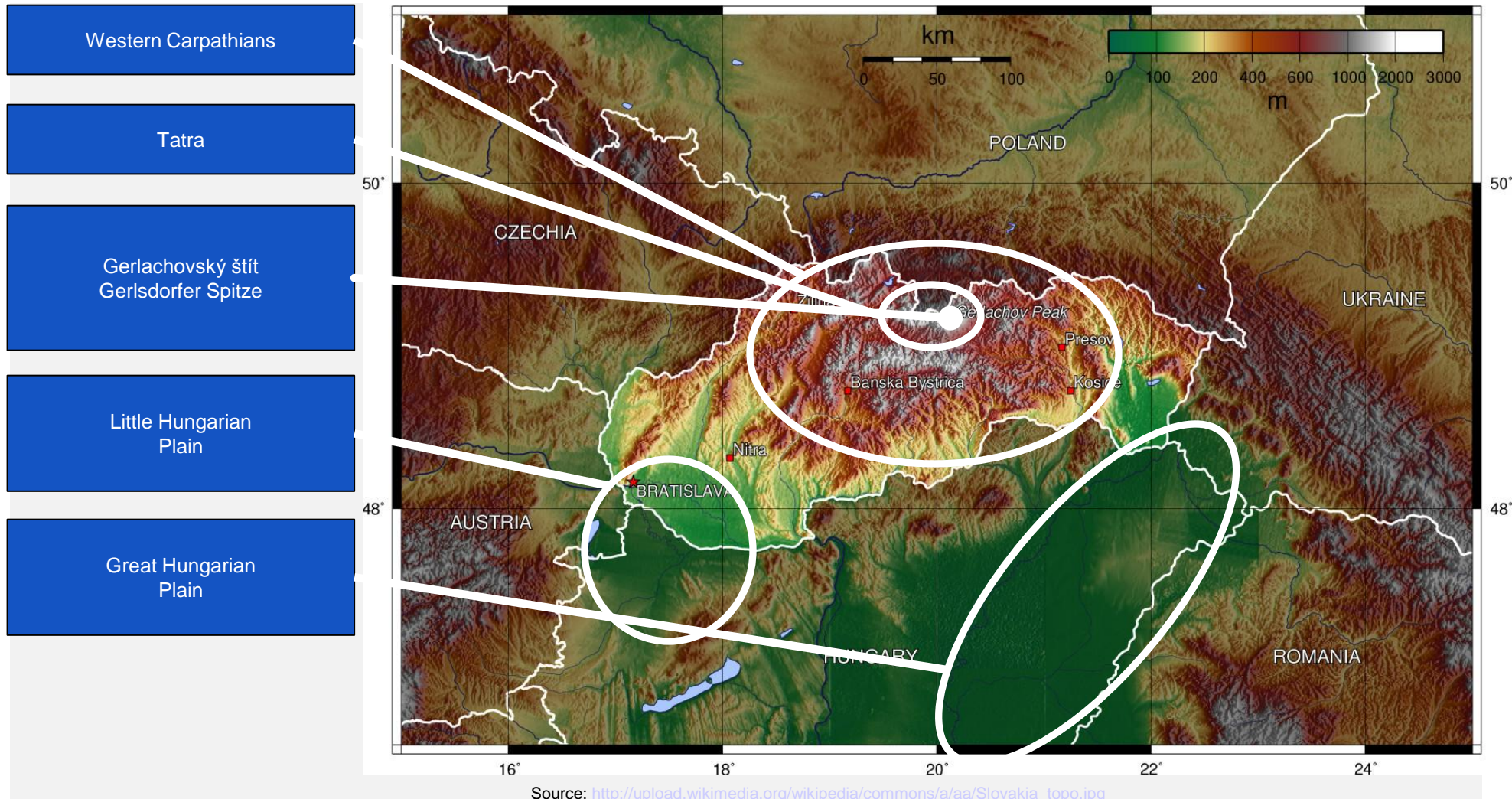
**Regular inspections of machinery and electrical equipment, elevators,
personal protection equipment**

**EPC contractors,
O&M providers**

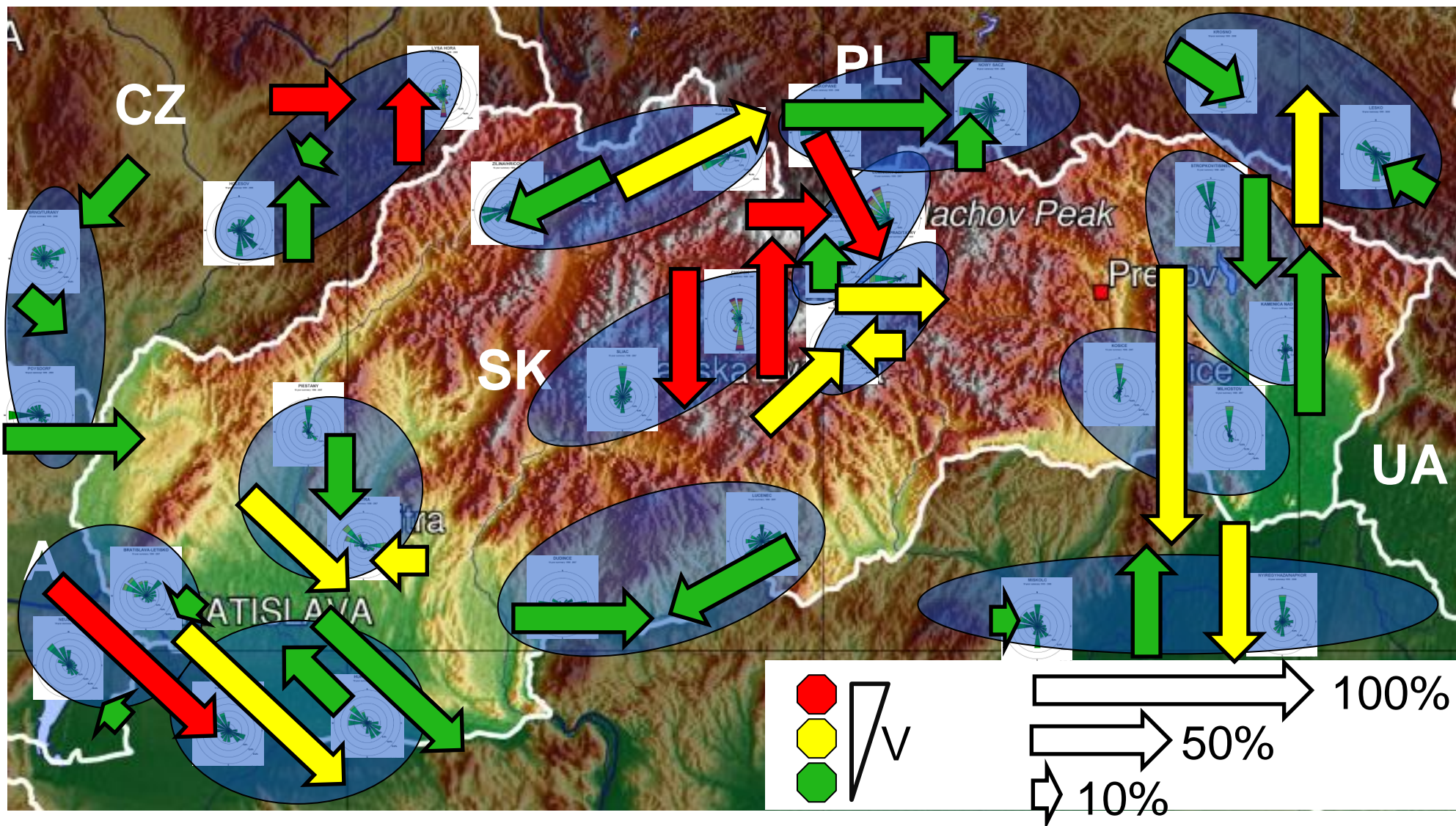
Certification of competence for developers and service organization

Training

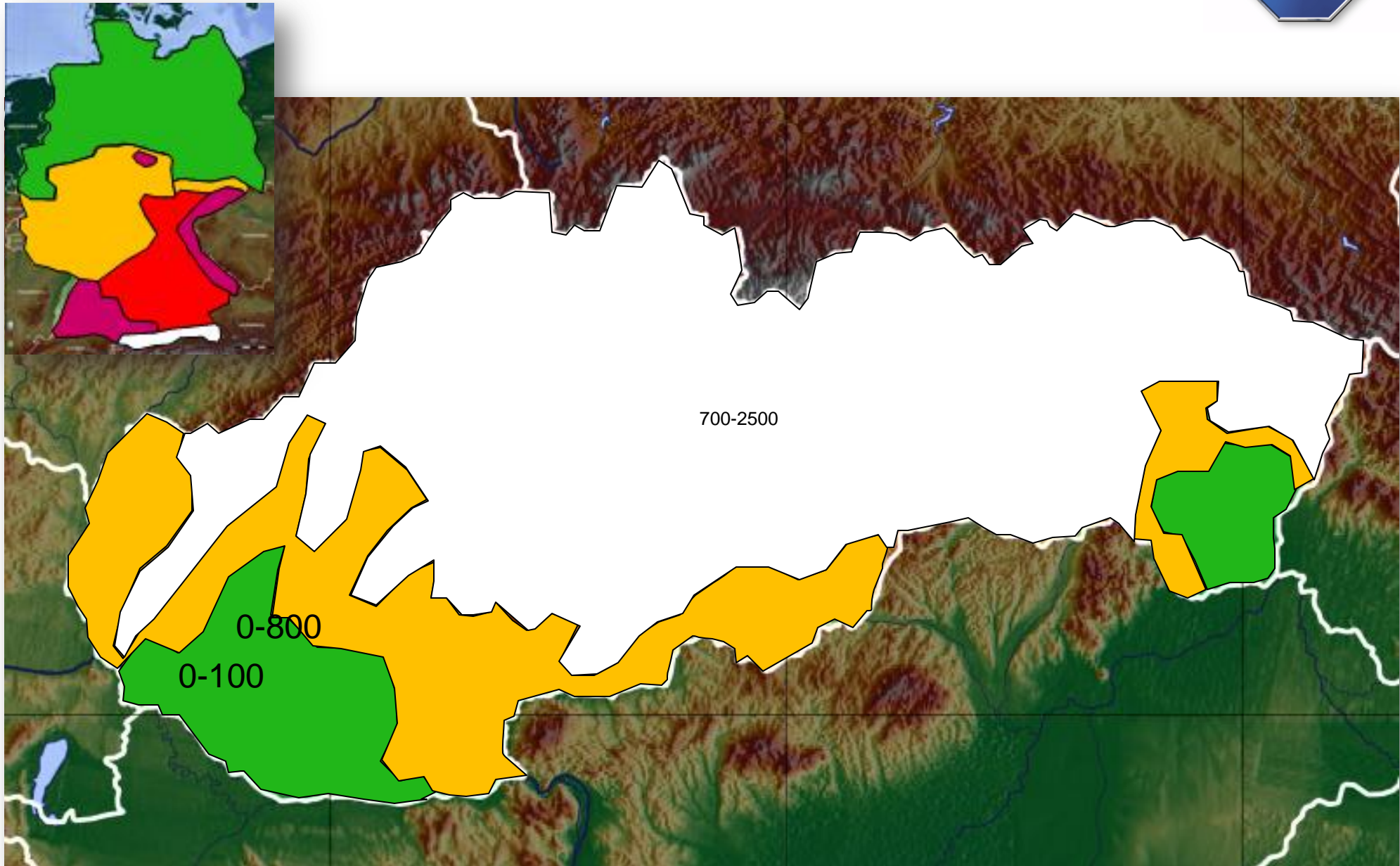
Slovakia – Geography – Orography



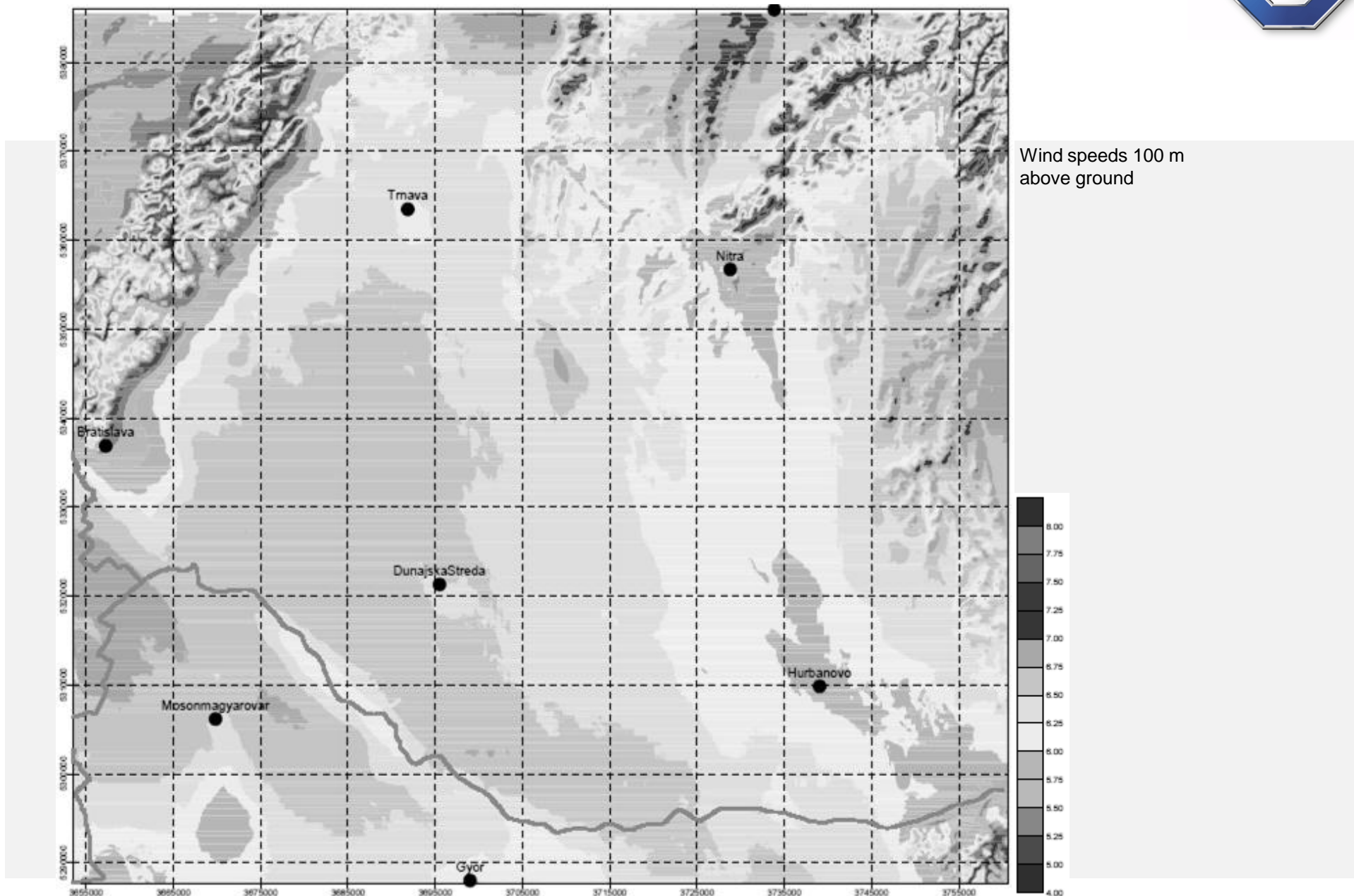
Slowakia – Meteorology – Wind roses



Germany – Slovakia: Orography Comparison



Slovakia – Potential Map



Slovakia – References



Wind meas.



Yield ass.



Potential calculations

