Sustainable energy initiatives in Latvia

Alda Ozola-Matule

Latvian Green Movement
CEE Bankwatch Network

Current trends in Latvia and key challenges

Energy seminar in Parliament of Lithuania,
December 17, 2008

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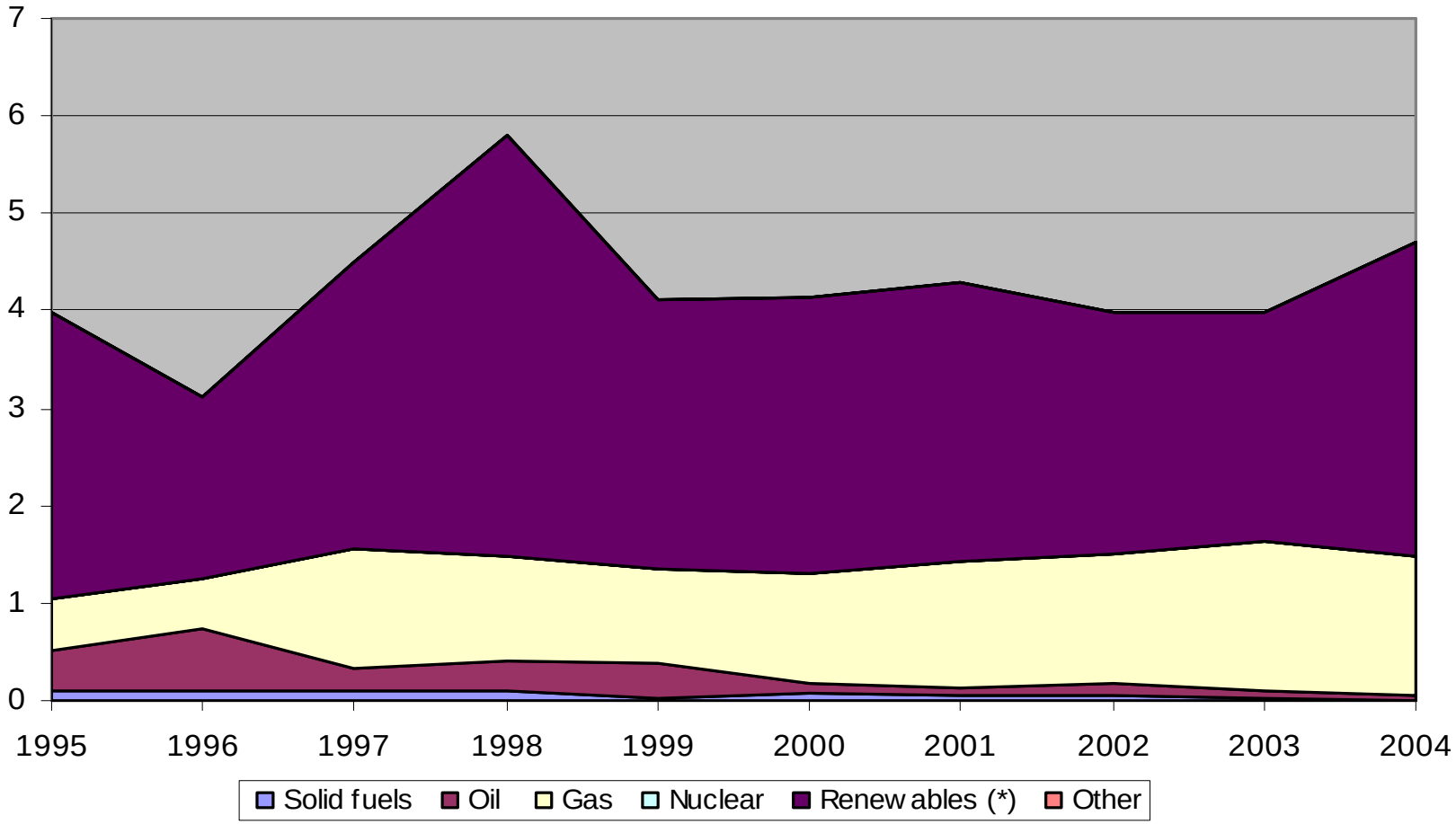
Situation and challenges in Latvian energy market

- **Large share of renewables**
  - About 36% RES in primary energy balance
  - About 45-50% RES in electricity production
- Key sources of renewable energy: biomass, large hydro...
- Increase of energy demand – 6,5% increase in 2006; about 2-3% increase in 2008
- Open & functioning electricity market

Production of electricity by sources, TWh



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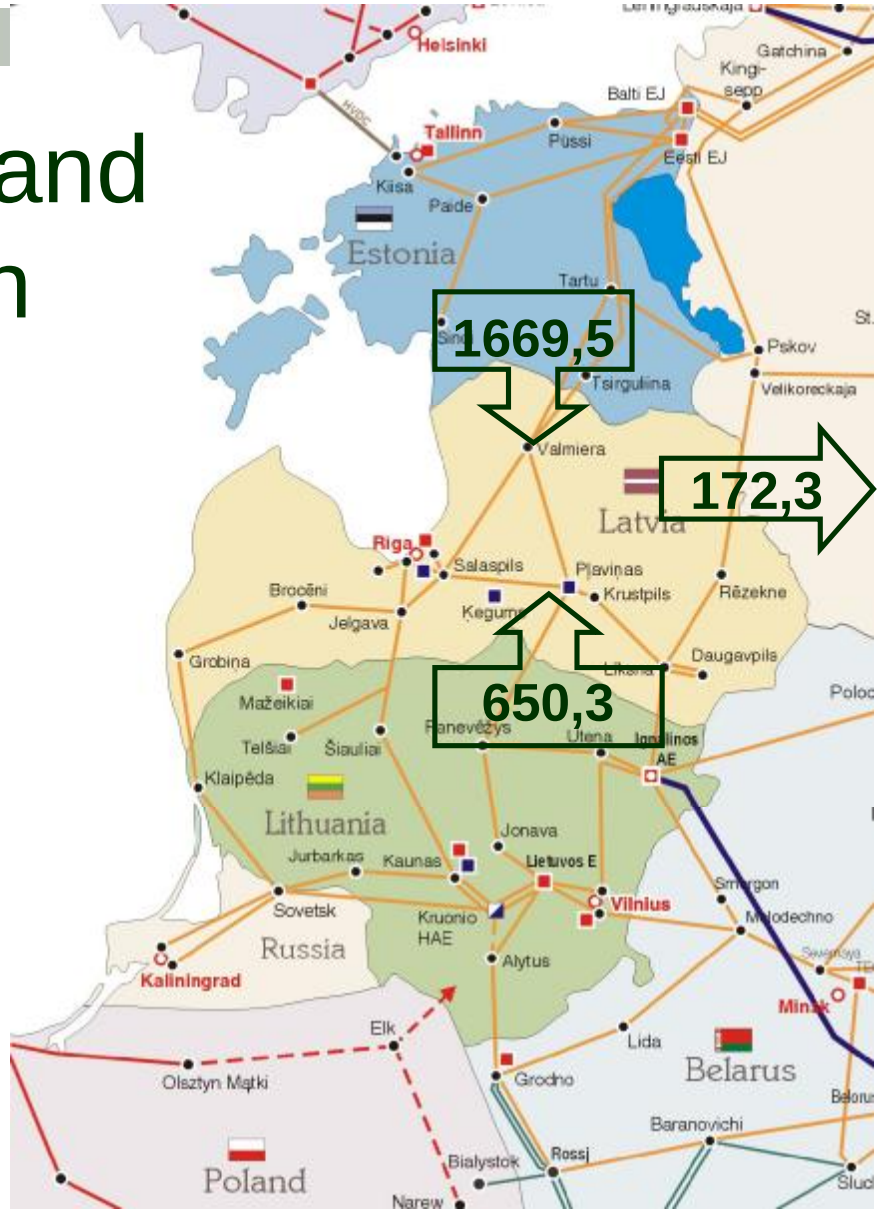
Electricity production and domestic consumption

- Imports from:
  - Estonia
  - Lithuania
  - Russia
  - Finland (since 2007)
- Latvia imports about 30%-40% of its domestically consumed electricity



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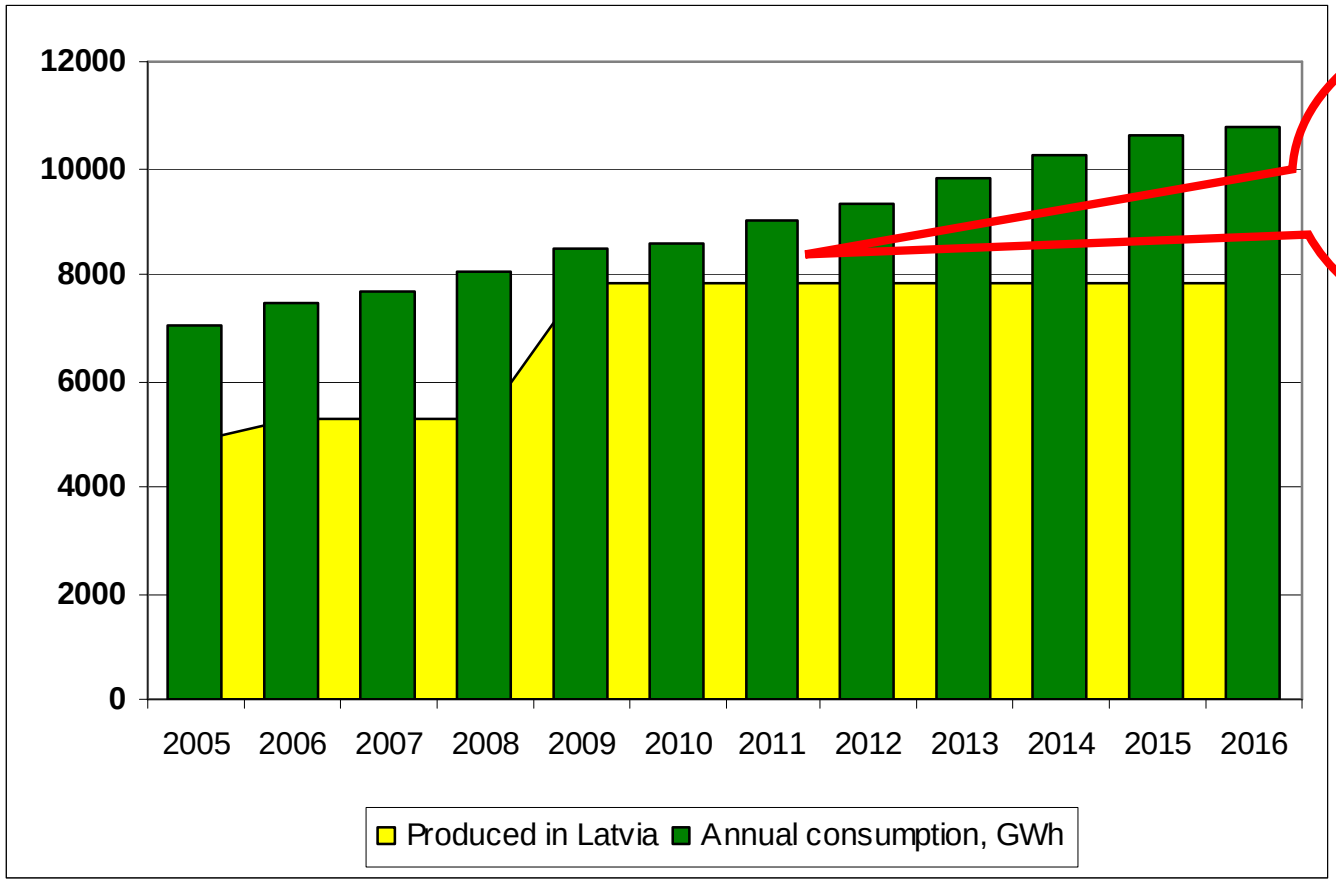
National energy policy and commitments

- Energy policy priorities
  - Security
  - Independence
  - 100% self-sufficiency in electricity production for domestic consumption by 2016)
- Tools and activities:
  - Development of external links
  - Diversification of energy sources
  - Increase in energy efficiency
- Commitments towards EU:
  - 49,3% from electricity produced using RES by 2010 (transposition of Directive 2001/77/EC)
  - Climate and energy package – ensure 42% (currently 35%) of RES from primary energy balance by 2020

Prospects for annual consumption of electricity and production in Latvia, GWh



How to ensure self-sufficiency as stated in energy policy?

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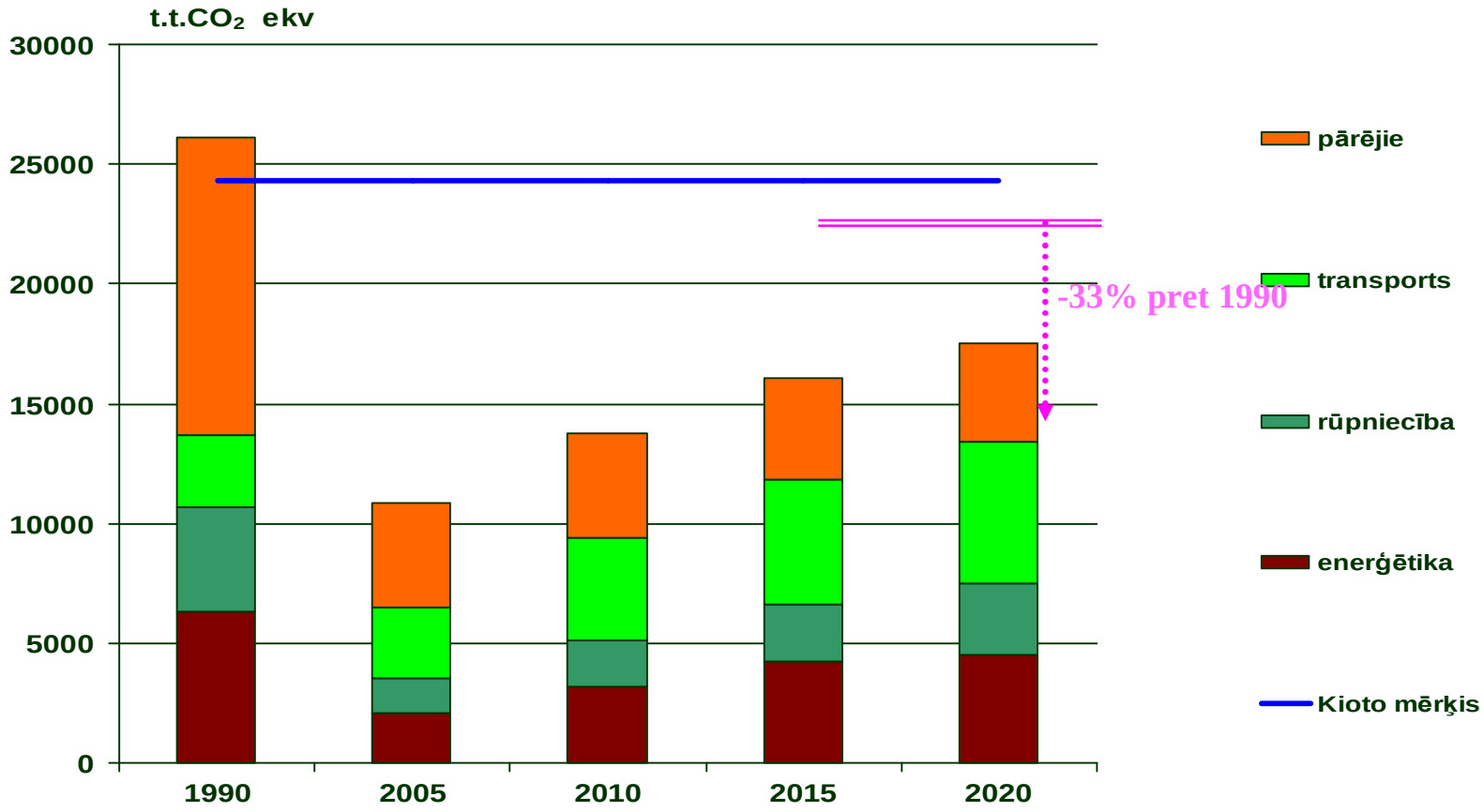
GHG emissions until 2020



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How Latvia is responding to the challenges?

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Proposals for increasing domestic base load capacities

- According to the report from Transmission system operator 800 MW capacity deficit in 2016
- Most discussed options to be implemented by 2014:
  - Gas-fired power plant
  - Coal-fired power plant (about 400 MW, in Liepaja, feasibility study prepared)

Nuclear?

- National energy company “Latvenergo” has received mandate from Government to work on preparations for new Ignalina NPP (Visaginas NPP) together with other energy companies from Baltic countries and Poland
- **No public discussion:**
  - No discussion within Cabinet of Ministers .... but Minister of Environment is opposing NPP
  - No discussions in the Parliament
- **Public opinion on nuclear energy use**
  - 59% of population is opposing
  - Nuclear energy is considered as expensive and dangerous option
  - Ministry of Economy wants “to educate” public – correlates with ever increasing information from scientists about the need to build own nuclear power plant (to be built by 2030)

Sustainable energy vision for Latvia 2050

- Made within the project **"**Baltic-Nordic cooperation for sustainable energy**"**
- Partners: Inforse (Denmark), Green Liberty (Latvia), Latvian Green Movement
- Vision includes a transition of the energy supply and demand with phase-out of fossil energy and energy imports over a 50-year period.

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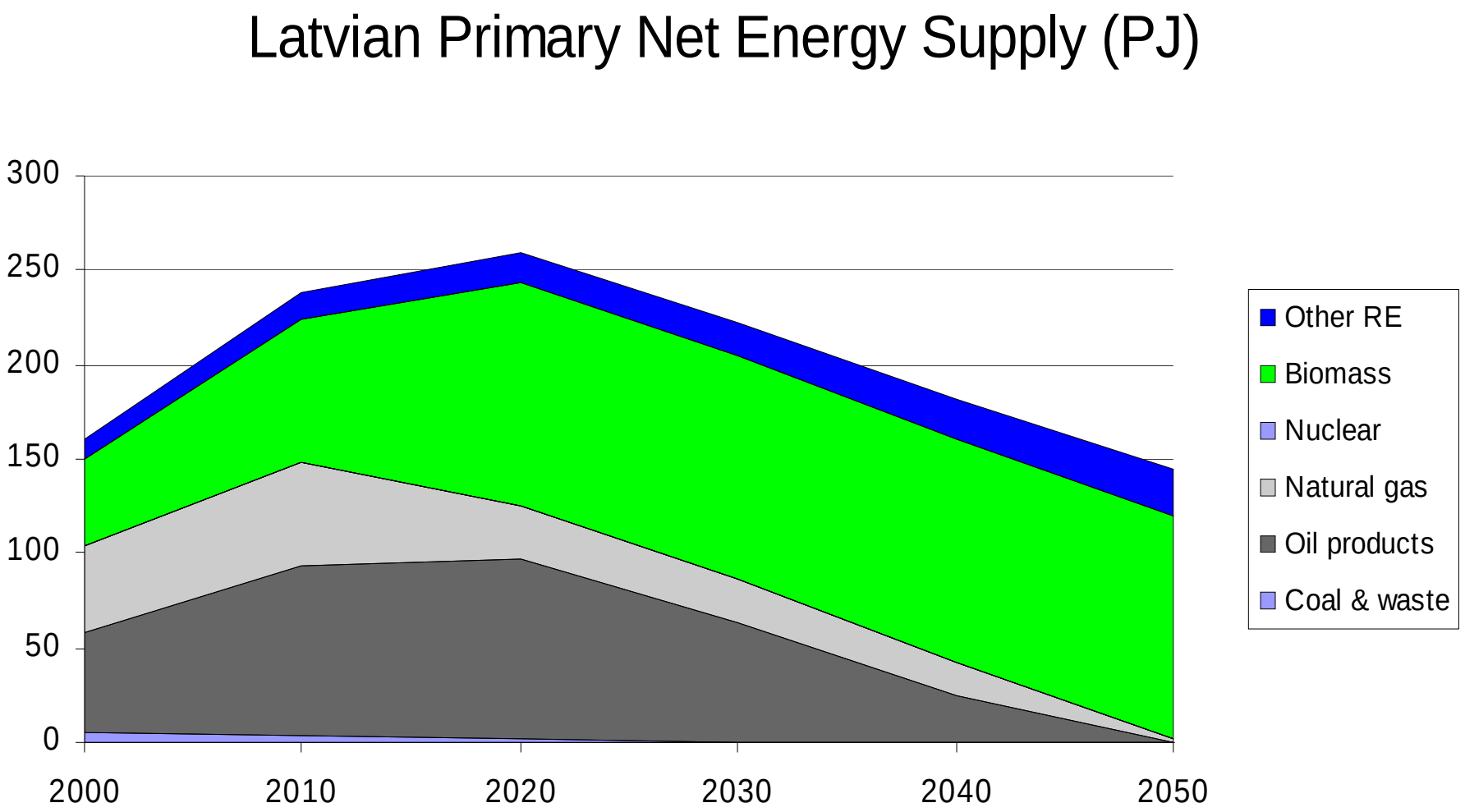
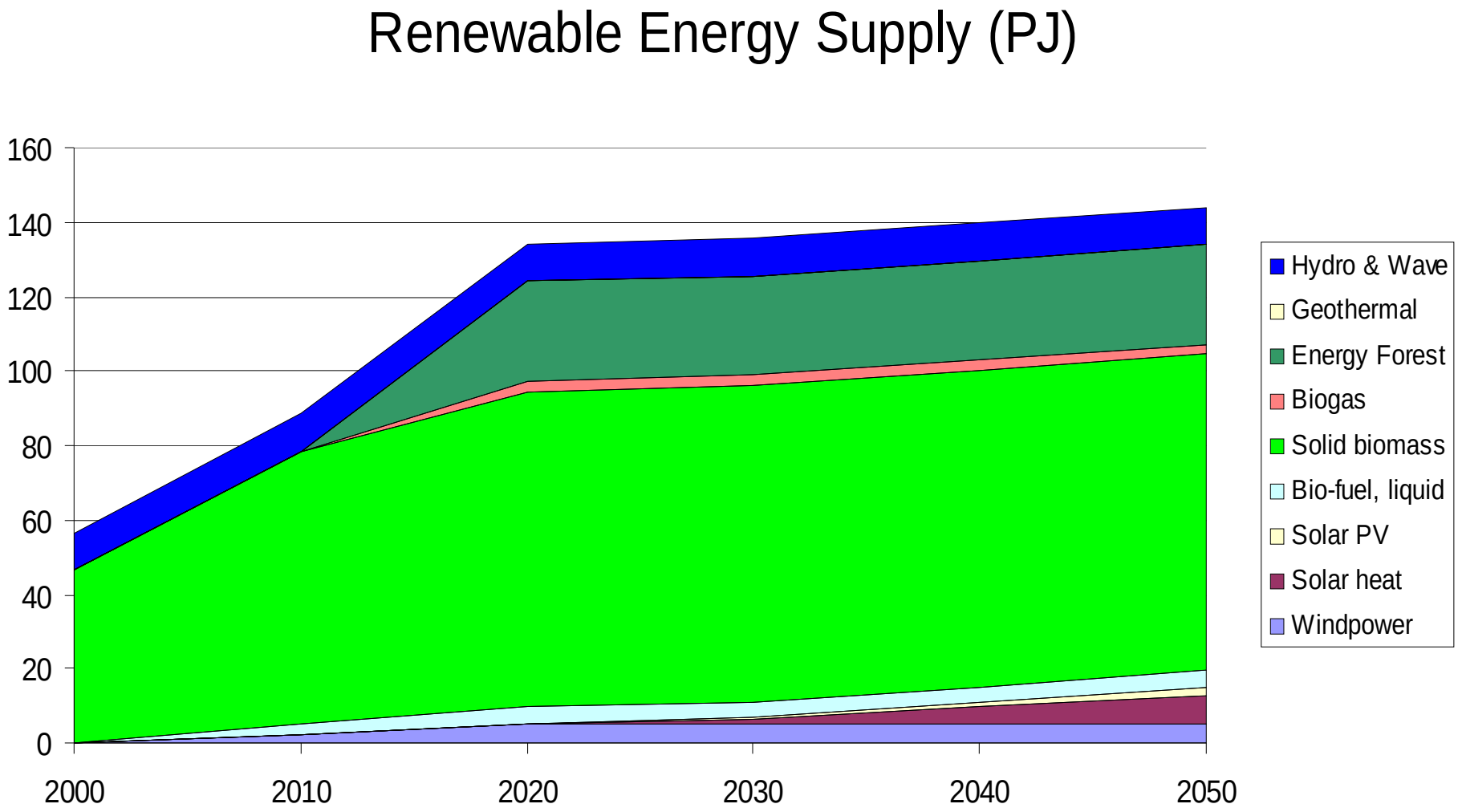
How about wind, biomass and solar?

- **Windpower** - 600 MW
- Better **biomass** use (clean and efficient)
- **Straw** use and **energy plantations** (180,000 ha for liquid + 220,000 ha for solid fuel)
- District **heating** and **CHP** plans, 1150 MWe CHP

Primary Energy Supply

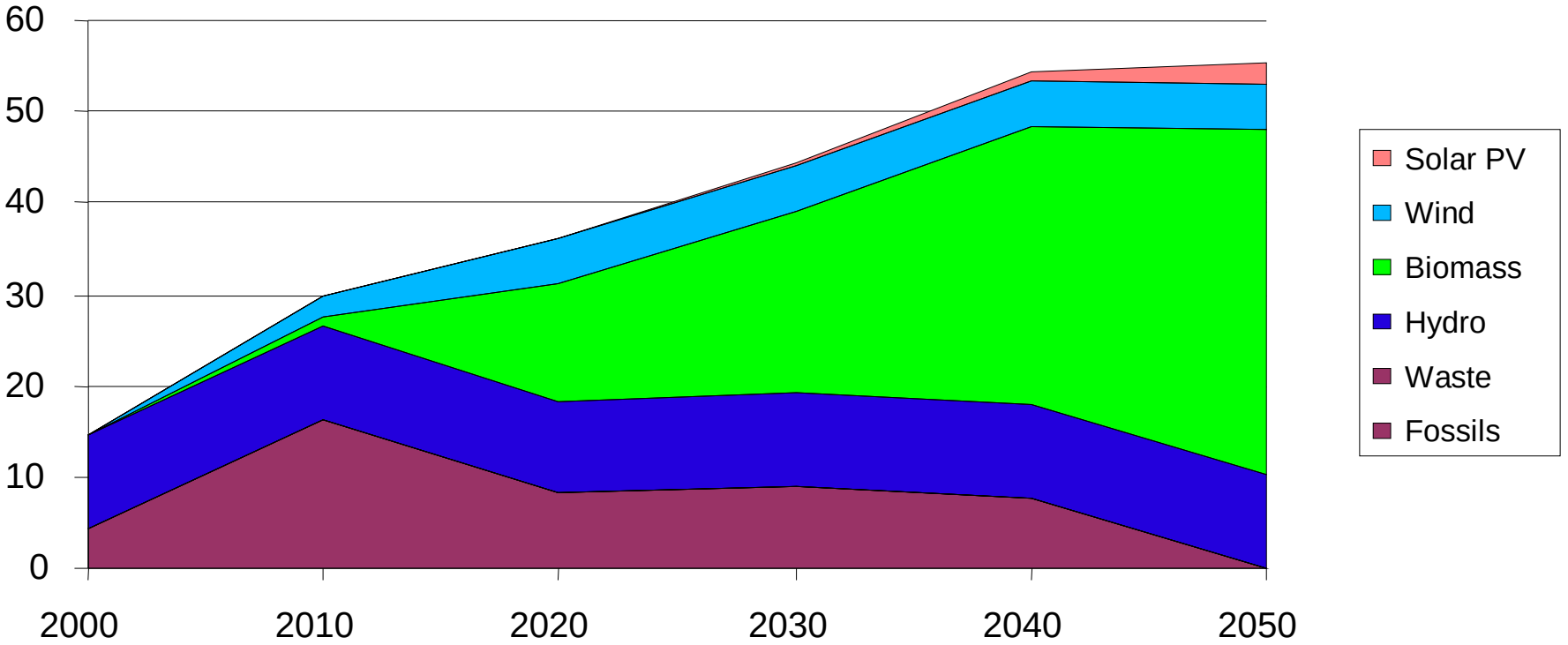


Renewable Energy Supply



Sources of Electricity

Latvian electricity supply divided by sources



Follow-up of the vision 2050

- Presentation to the energy experts
- Communication with various stakeholders
- Updating of input data
- Elaboration of proposals for actvities that would lead towards implementation fof the vision

Jauna vīzija atjaunojamo resursu iz

Dace Pizzo EF

Līdz 2050. gadam Latvijai pilnībā jāpāriet no fosilajiem energoresursiem uz atjaunojamajiem energoresursiem (AER), kā arī jāpārtrauc enerģētisko resursu imports. Tāds mērķis izvirzīts Latvijas ilgtspējīgas enerģētikas stratēģijā 2050. gadam. Dokumenta autori ir Starptautiskā organizācija *INFORSE-Europe*, biedrības *Latvijas Zaļā kustība* un *Zaļā brīvība*. Enerģētikas un vides speciālisti vīziju atzīst par ekstrēmu scenāriju, kas nesniedz atbildi, kā ambiciozos mērķus sasniegt.

Biokurināmais no plantācijām

Dokuments balstīts uz Klimata pārmaiņu starpvaldību padomes (IPCC) 2007. gada ziņojumu, kas prasa nekavējoties samazināt CO_2 izmešus pirms 2020. gada.

Ekspertu viedoklis

Nils Freivalds,
EM Enerģētikas departam

New strategy “Latvia 2030” PRINCIPLES

- Availability of fossil fuels
- Climate change as a challenge and international priority
- Promotion of energy independence through increase of share of RES
- Energetic self-sufficiency – an opportunity or prejudice?

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New strategy “Latvia 2030” RESOURCES

- Re-inventory of available solid biomass
- Off-shore wind energy (up to 15% from overall consumption
- Solid biomass: economically most reasonable RES
- Biogas: 120 million m3 annually
- Straw: 150-170 thousands t available annually
- Solar energy: photovoltaic and solar collectors

New strategy “Latvia 2030” SOLUTIONS

- Increase in energy efficiency
  - Decrease heat consumption from 230 kWh/m^2 to 150 kWh/m^2 in current buildings and set the standard for new buildings 80 kWh/m^2
  - Reducing energy losses in transmission networks (heat and electricity by 18% and 10% respectively)
- Installing new generating capacities
  - Off-shore wind energy (up to 15% from overall consumption
  - Medium-scale co-generation plants using solid biomass
  - Biogas – 120 million m^3 annually
  - Solar energy – photovoltaic and solar collectors

Thank you!

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