



SUPREME AUDIT OFFICE

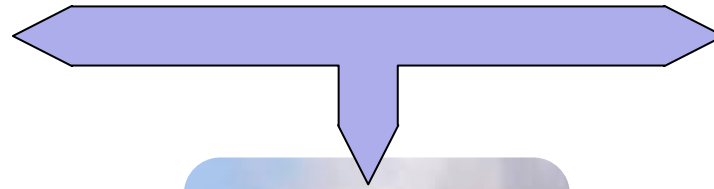
Generation & Transmission

Audits` Conclusions and Recommendations

Tallinn, 8 – 10 June 2015

Elżbieta Sikorska

The key elements of electricity market



Generation

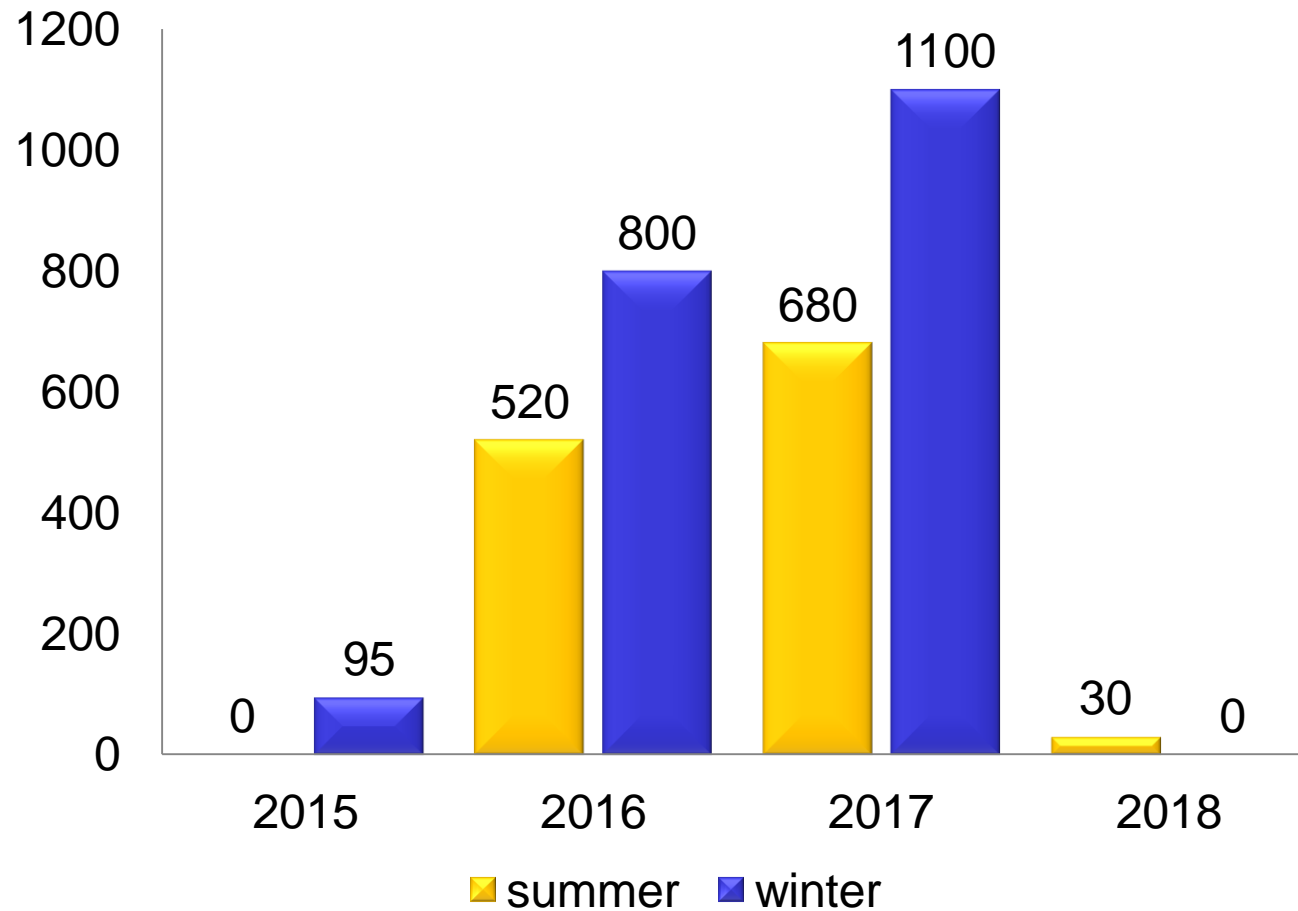


Transmission



Energy supply

Deficit of available capacity in peak demand [MW]



Ensuring capacity in conventional energy sources - NIK`s audit



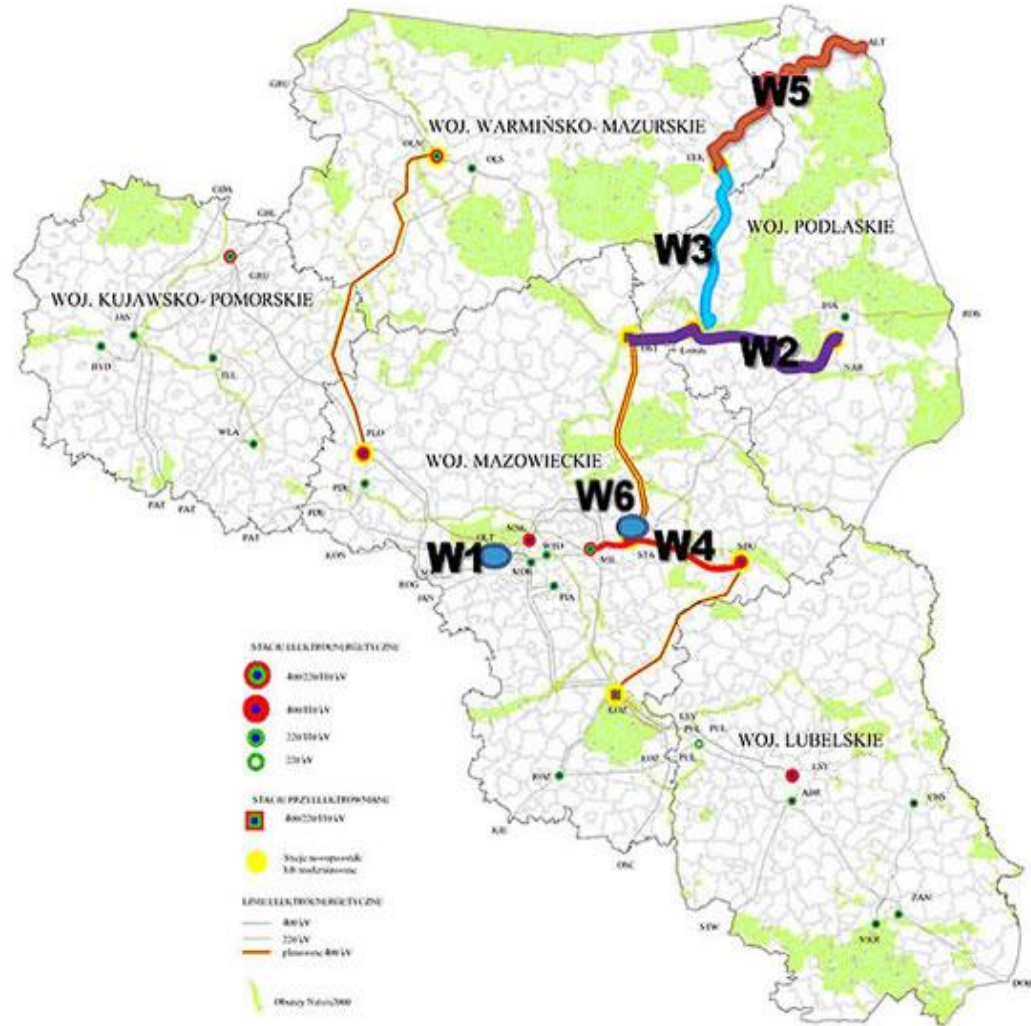
- 10 large investment projects were cancelled in last 5 years
- in 2050 only 5 GW of existing capacity will be in operation
- need for replacement of old energy units
- need for reduction of carbon emissions
- incentive system for generating capacity is needed

Electricity interconnections



The functioning and security of electricity transmission networks - NIK`s audit

- Power interconnection Poland – Lithuania
- Capacity of internal network



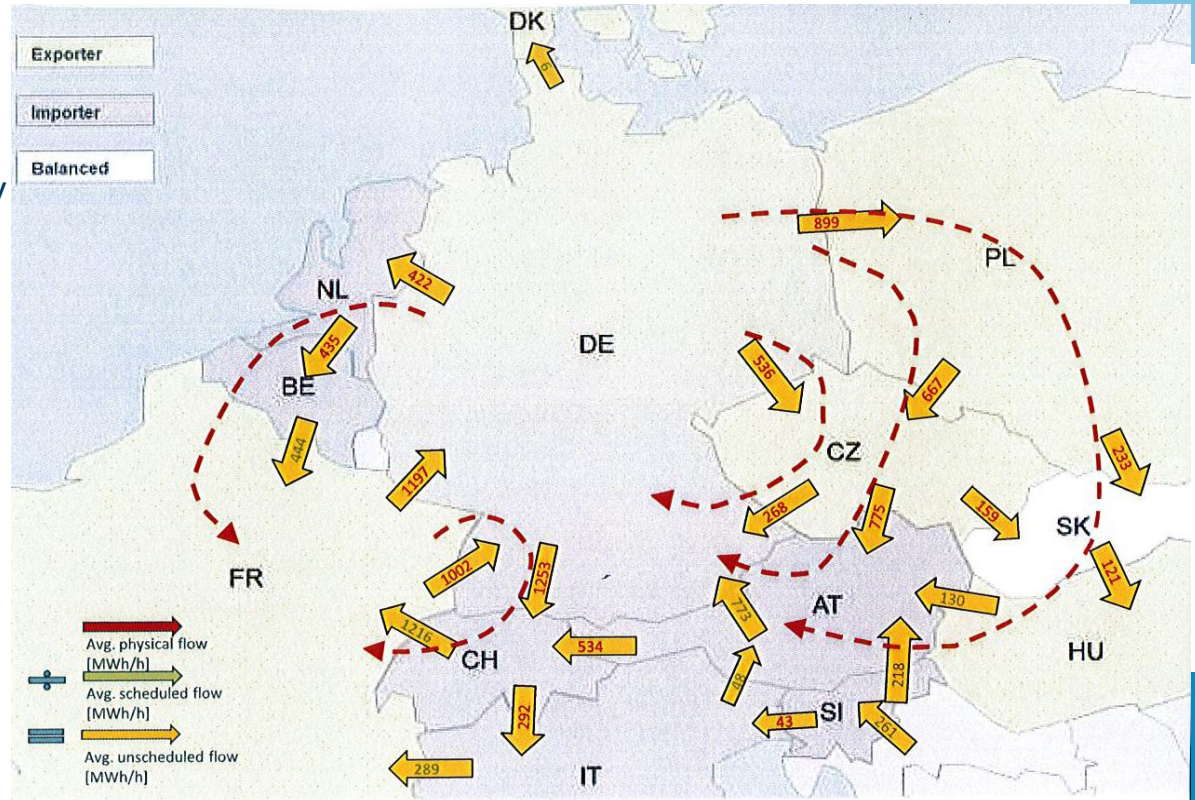
Loop flows

Causes

- Problems associated with loop flows increase both in numbers and scale
- Massive renewable energy sources development not corresponding with grid development

Effects

- The system security in Poland may be seriously distorted (even blackouts)
- Continuous decrease of capacity used for cross-border trade
- Can inhibit cross-border investment



Source: THEMA-Report 2013-36 Loop flows – Final advice

Europe without borders?

Phase-shifting transformers installed in the EU/EEA at a selection of borders

