

Updated energy strategy: strategic projects and their implementation

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Power balance in Poland

- Due to the ENTSO-E in the winter reference point the reliable available generation capacity in Poland counts for 26,15GW, while the load peak is estimated at 24.5GW with the import capacity of 0,82GW.
- The current power reserve equals 6% and is diminishing every year.
- The power balance to 2020 is artificially ensured by keeping by the TSO old, worn out installations on the grid in a form of the reserve used in peak demand periods.

Worn out equipment

Age in Year	Generation installation number	Installation in %	Generation power in Mwe	Generation power in %
over 30	183	57,7	17 250	54,8
21-30	33	10,4	6 269	19,9
11-20	52	16,4	3 733	11,9
0-10	49	15,5	4 216	13,4
Total	317	100,0	31 468	100,0

No new investment

- Despite the number of planned investments only one generator is currently under construction (Kozienice).
- Taking into account the lead time, new investments are unlikely before 2019-2020.
- The current market prices for electricity in the Polish Power Exchange oscillate around 40 Euro/MWh, what counts for about 30% lower than the cost of new entry.

Renewables

- A new incentive scheme for renewables aims and the reduction of subsidy.
- The current subsidy (green certificates) reach 1 billion Euro per year.
- Without a new scheme the subsidy required in 2020 could be 2-3 billion Euro
- It will be based on the auctions with the support of feed-in and premium tariffs for small and micro installation.
- Near 5 billion Euro will be spend to implement smart meters.

Integration of national markets

- A vast transmission network refurbishment should allow for more national market integration reducing the bottlenecks in the internal system.
- A new cross border power connection between Poland and Lithuania should be in operation late 2015 with the capacity of 500MW.
- The second stage with the capacity of 1000MW is planned in 2020.
- The German (50HzT) and the Polish transmission system operators are planning to construct the third power connection and handle the uncontrolled loop flows.

Addressing specific problems

- **The main Polish problem is a lack of generation adequacy, which results from missing capacity problem.**
- **The power balance to 2019-2020 can be maintained by keeping alive on the grid old installations**
- **However; new power generating installations of 800-1000MW should be commissioned every year between 2019-2030.**

Investment support scheme

- **New investments require a support scheme which can be able to reduce the risk of the return.**
- **Such a scheme can be implemented as optional balancing contracts for new power generating capacity.**
- **Balancing contracts will be an obligation to offer power capacity to the electricity and balancing markets providing the warranty of the compensation for spreads, calculating as the difference between market prices and the cost of operation including fuel and O&M costs.**

Minimizing impacts on electricity market

- **The balancing contracts will be granted in the limited amount – no more than 800-1000MW per year for a period not longer than 10 years with the estimated cap price about 0,25mln Euro per MW.**

Technological neutrality and emission reduction

- **All technologies will be considered in the supporting scheme giving the preferences to the installations able to replace worn out equipment and reduce CO2 emission at least 20%.**