

Energy reforms in Poland

RECCOMENDATION FOR UKRAINE

Milestones of the country's energy sector development - State price deregulation

State price deregulation

- 1998 - The Minister of Finance/ The Ministry of Industry and Trade set energy prices

1998 - Tariff system introduced

2001 - Relief from the duty to approve a tariff issued on electricity generation and electricity trading companies

2008 - Electricity prices for industry are no longer regulated (prices for household still regulated)

Milestones of the country's energy sector development - Unbundling of energy companies

Unbundling of energy companies

1989 - "The Community of Power Industry and Lignite Coal" was the only one vertically integrated undertaking

1990 - Dissolving the energy districts and Community of Power Industry and Lignite Coal, Polish Power Grids Company was established

2004 - TSO established in electricity and gas sector

2007 - separation of TSO and DSOs

2013 - Amendment to the Energy law act (EU third energy package)

Milestones of the country's energy sector development - Opening Energy Markets

Opening Energy Markets

1995 - In October 1995 Poland was successfully connected to the UCPTÉ system

1997 - Adoption of the Energy Law act

2000 - The Polish Power Exchange started

2007 - TPA principle was introduced in energy market in Poland

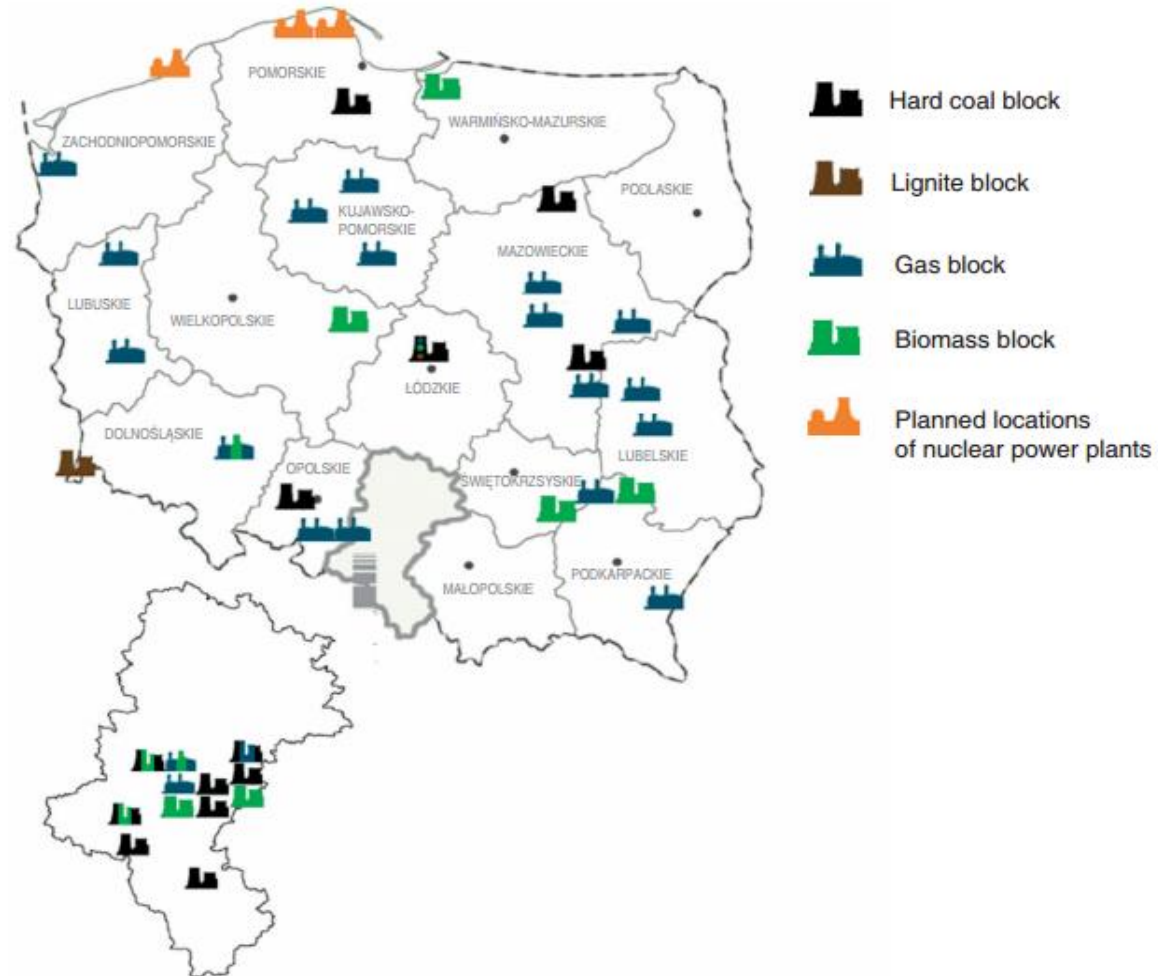
2007 - A new law on the recovery of stranded costs due to the cancellation of LTCs

2010 - Amendments to energy law act - obligation to selling energy on energy exchange (15%)

2012 - Gas spot market was launched

Milestones of the country's energy sector development

Fig. 4. Location of newly-created energy blocks



Power plant / heat and power plant	Inwestor	Power	Fuel	Stand of performance
Power plant Turów (no. 11)	PGE	430 - 450 MW	Lignite	2016-2019
Power plant Opole (no. 5 i 6)	PGE	2 x 900 MW	Hard coal	2014- 2017/18
Power plant Jaworzno	Tauron	910 MW	Hard coal	2014-2019
Heat and power plant Tychy	Tauron	50 MW	Hard coal	is planned
Power plant Kozienice (no. 11)	Enea	900 - 1000 MW	Hard coal	2012-2017
Power plant Ostrołęka	Energa	1 000 MW	Hard coal	is planned
Power plant Rybnik	EDF	900 MW	Hard coal (with biomass combustion)	Is planned
Power plant Pólnoc	Jacek Strzelecki, Radwan Investments GmbH, Kulczyk Holding	2x1000 MW	Hard coal	Is planned
Heat and power plant Włocławek	PKN Orlen	463 MWe	Gas	2013 - 2016
Power plant Grudziądz	Energa	420 - 600 MWe	Gas	Is planned
Heat and power plant Żerań	PGNiG Termika	450 MW _e i 300 MW _t	Gas	Is planned
Heat and power plant Stalowa Wola	Tauron i PGNiG	450 MW _e i 240 MW _t	Gas	2014-2018
Power plant Puławy	ZA Puławy i PGE Górnictwo i Energetyka	400 MW _e	Gas	Is planned
Heat and power plant Płock	PKN Orlen	596 MWe	Gas	2015-2018
Power plant Łagisza	PGNiG i Tauron	413 MW	Gas	Is planned
Nuclear power station	PGE	2 x 3000 MW	Nuclear	Is planned

Milestone in gas infrastructure development

1999 - construction of a Jamal pipeline in Poland finished

2011 - an interconnector with the Czech Republic was implemented in the Cieszyn area

2011 - interconnector with Germany in Lasów was developed

2011 – virtual rewers on Jamal pipeline finished

2014 – physical rewers on Jamal pipeline finished

2016 - The completion of this project of LNG terminal in Świnoujście

2018/2019 - new interconnectors finished (Czech, Slovakia, Lithuania)

National Energy Regulator - mission

Mission - The President of ERO regulates the activities of energy enterprises in accordance with the national energy policy, in order to balance the interests of all of the energy market actors, i.e. end users and energy enterprises

National Energy Regulator – institutional issues

ERO has been established in 1997

- The President of Energy Regulatory Office is a central government body
- The President is appointed by the Prime Minister from the candidates chosen in an open competition
- The President's authority is supported by the Energy Regulatory Office that comprises of the head office and 9 regional offices (In operation from 1998)
- 5-year cadency (can be prolong one time)

National Energy Regulator – areas of activities of ERO

Main activities of The President of ERO:

- Regulatory activities
- Promotion of competition and strengthening the consumer's position
- Tariffication
- Security of energy supply
- International cooperation
- Education and information

National Energy Regulator – activity of ERO

Activity of ERO

- 10 251 – number of energy enterprises licensed by ERO
- Nearly 4000 – number of complaints lodged to ERO in 2010 against energy enterprises
- Over 200 - number of decisions settling disputes were issued by ERO President in 2010, inter alia, on suspending supplies, on refusing to enter into sales agreement or on refusing to enter into grid connection agreement
- Nearly 5000 – number of administrative decisions issued yearly by the President of ERO

Energy Efficiency Funds/Programmes

The system of financing environmental protection in Poland is based on environmental funds:

- **National Fund for Environmental Protection and Water Management (NFEPWM),**
- **Voivodeship Funds for Environmental Protection and Water Management (VFEPWM),**

Moreover there are separately **thermo-modernization fund**

National Fund for Environmental Protection and Water Management

- key element of the environmental funds' system
- established in 1989 – executing tasks of strategic importance at the national level
- state legal person
- mission - “We provide effective and efficient support for environmental activities”
- approximately 550 employees, including more than 200 engineers
- the years 1989-2012 the NFEPWM co-financed environmental projects with approximately PLN 33 billion (**EUR 8 billion**) of its own funds.

Voivodeship Funds for Environmental Protection and Water Management (VFEPWM),

- acquired legal personality in 1993
- supporting tasks of regional scope in each of the 16 voivodeships in Poland.
- Within 20 years of its operations, in the period between 1993-2012, the financial outlays of all VFEPWM for environmental protection tasks exceeded PLN 29 billion (**EUR 7 billion**).

Areas of funding from NFEPWM and VFEPWM

- Water protection and management
- Climate and atmosphere protection
- Protection of earth surface
- Waste management, including recycling
- Nature and landscape protection
- Forestry
- State Environment Monitoring
- Environmental threats prevention
- Mining and geology
- Environmental education
- Professional analyses and scientific research
- **Energy efficiency**
- Renewable energy sources

Thermo-modernization and Renovation Fund

- The main objective of the Fund is to provide financial assistance in the form of **premiums for investors** i.e. housing associations and cooperatives, households etc which carry out thermomodernization and refurbishment projects aimed at energy consumption reduction
- The Fund supports an accomplishment of thermo-modernization and refurbishment undertakings.
- Its' framework covers, among others:
 - thermal refurbishment of all types of residential buildings;
 - buildings used by municipal entities for purposes of public services (schools, hospitals etc);
 - local district heating network and local sources of heating;
 - installation of renewable energy sources or high efficiency energy equipment.

Thermo-modernization program – conclusions

- Efficient tool for thermo-modernization and energy consumption savings
- Well accepted by investors, some banks and government – every body benefits from it
- Some potential investors are not interested in the program participation mainly because of complex procedures, obligation to prepare additional documentation, lack of assurance that premium shall be granted
- Investors apply to banks for loans and apply for premiums; credit risk is taken by banks
- Some banks are not interested in the program, partly because of complex procedures and doubts on loan repayment
- Strong demand because of investors thermo-modernization plans
- Demand exceeds supply significantly because funding is not sufficient
- Improved safety, insulation and aesthetics of buildings are extra benefits

Lessons learned from Energy Efficiency Fund/Programs

- Positive effect of energy efficiency in industry and multifamily construction
- Lack of strategy of supporting energy efficiency for household
 - Construction - 30% of energy consumption
 - Half of polish household live in houses - usually poor people in villages
 - Most of houses build in 1960s, 1970s - weak termomodernization
 - 70% of houses in Poland use not efficient coal heating - It cause not only higher use of energy but higher particulate matter emission and smog
 - Technical problems with programs
 - Lack of financial support - the only program dedicated to household (part of NFOŚiGW)- “RYŚ” - 30 mln EUR for 5 year (0,16 EUR per person!)
 - Lack of regulation related to quality of coal
 - Huge potential for improvement in this sector

Lessons learned from Electricity market

- unbounding, Energy exchange and TPA was important positive step in developing Energy market in Poland
- success of increasing Energy efficiency
- crucial element was dissolving long term contracts between Energy plant and Energy operator
- controversial is structure of the market - domination of big „4”
- ineffective role of price regulation by ERO
- controversial is strong state control over the market control over „big 4” it cause:
 - lack of foreign investors which are needed to invest in old infrastructure
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Lessons learned from Poland's Energy policy

- EU Energy policy crucial factor determining Energy policy
- positive effect of EU liberalisation reforms – level of competitiveness is better and better
- crucial role of dissolving long term contract between generators and network operators
- crucial role of Energy exchange – obligation of selling Energy from 2010
- lack of stable policy – very often change of political aims
- lack of decision – i.e. nuclear Energy plant

Recommendations for Ukraine – Energy policy part I

- crucial role of political consensus over shape of Energy market
- long term strategy of Energy policy (it should be created by prime minister office as part of general strategy of state development – ministry of Energy should implement that strategy)
- rules of Energy policy - principles of non-discrimination, proportionality, transparency, accountability and predictability,
- transborder interconnectors (potential to export)
- Energy efficiency as priority - removal of subsidies for gas, coal and electricity and reallocation of budget resources towards energy efficiency support measures.

Recommendations for Ukraine – Energy policy part II

- strong and independent Energy regulator and anti-monopoly agency are needed
- market-oriented price of Energy
- full implementing EU law – unbundling, third party access to Energy network,
- improvement of business climate in order to enhance
- foreign investors in generation sector are needed (transfer technology, benchmarks for state companies) – it is needed to clearly specify the conditions for foreign participation in energy infrastructure investment
- no need to subsidize renewables - there is no obligation from EU

Recommendations for Ukraine – thermo modernization – part I

- At least three factors are absolutely necessary for successful functioning of thermomodernization program:
 - Investors who are willing to participate in the program
 - Banks which are willing to grant loans with subsidies
 - Government which is willing to provide steady and appropriate financing
- There is a need to increase awareness of energy efficiency in the society
- There should be appropriate promotion of an EE program directed to potential beneficiaries
- Investors should have real financial benefits from the EE program
- Application and verification process must be relatively easy and not too expensive
- Government, especially budgetary spending decision makers, must be constantly informed on the importance of EE programs

Recommendations for Ukraine – thermo modernization – part II

- There should be inter-ministerial coordination on different EE programs with the participation of involved parties
- It may be good for EE programs steady continuation continuation to state main parameters parameters to be achieved
- Well prepared programs with relatively high subsidies are needed to increase detached houses participation in the thermo-modernization process
- Subsidies program for construction of energy efficient buildings must address investors benefits and should not be too complex and expensive
- Banks involvement, as lending parties, is beneficial for EE programs