



Institute for Economic and Social Reforms

# Energy Sector Reforms in Slovakia

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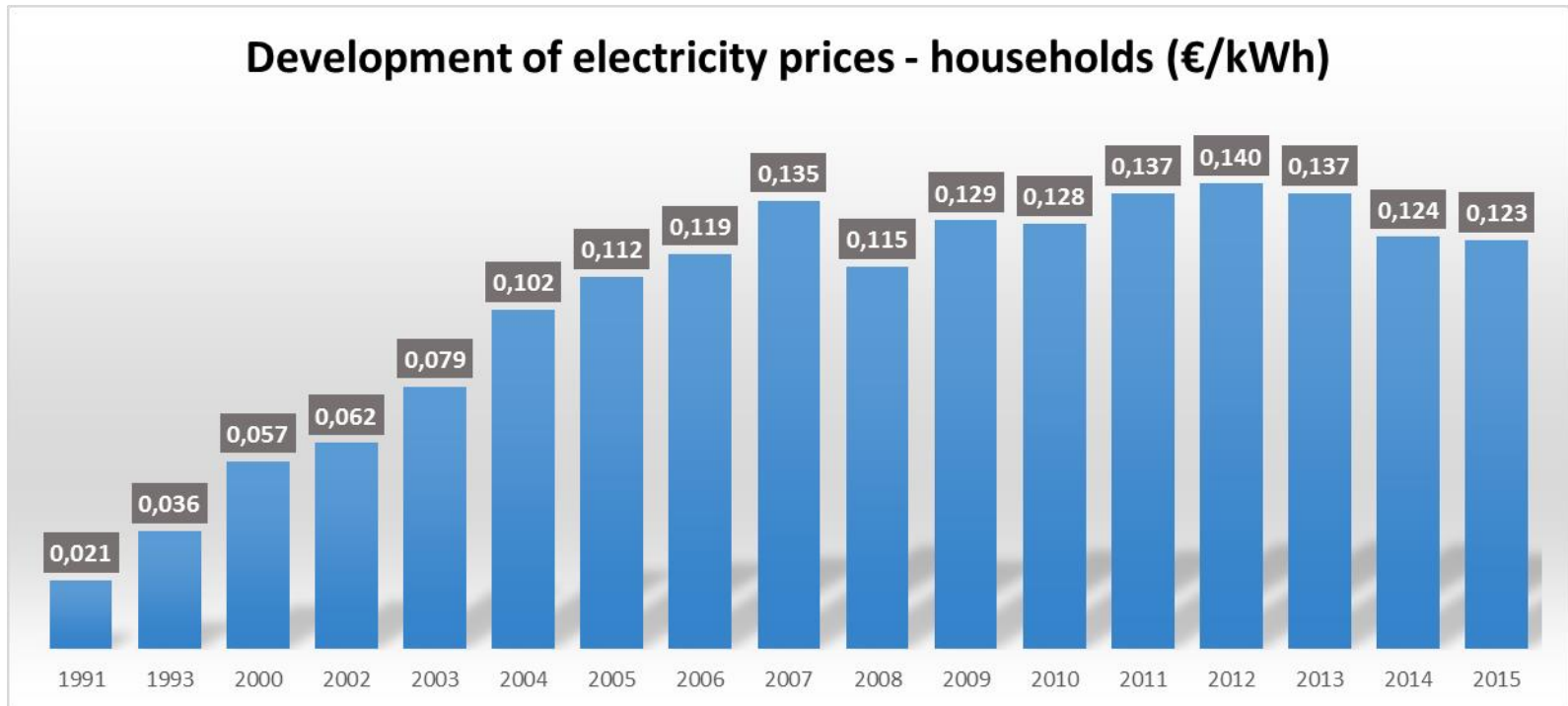
# Content

- Milestones of the energy sector development
- National Energy Regulator
- Energy Efficiency Funds/Programmes
- Lessons learned
- Recommendations for Ukraine

# Price liberalization

- Goals: Setting right incentives, financial stabilization, partial privatization, increased competition, efficiency
- 1990-93:
  - Electricity: +70-80%
  - Natural gas: +130%
  - Coal: +240%
  - Heat: +320%
- 1999-2007:
  - Electricity: +100%
  - Natural gas: +100%

## Development of electricity prices - households (€/kWh)



Source: Eurostat, other sources, until 2009 rough conversion local currency/euro

# Unbundling

- Goals: Eliminating cross-subsidies, partial privatization, trade liberalization, increased competition, efficiency
- 1990-94:
  - Separating three territorial distribution companies from the power generation
  - Separating storage and local exploration & production of hydrocarbons from the transmission and distribution of natural gas
- 2002:
  - Separating high-voltage electricity transmission from the power generation
- 2006:
  - Legal separation of gas distribution and transmission
- 2007:
  - Legal separation of electricity trade from distribution

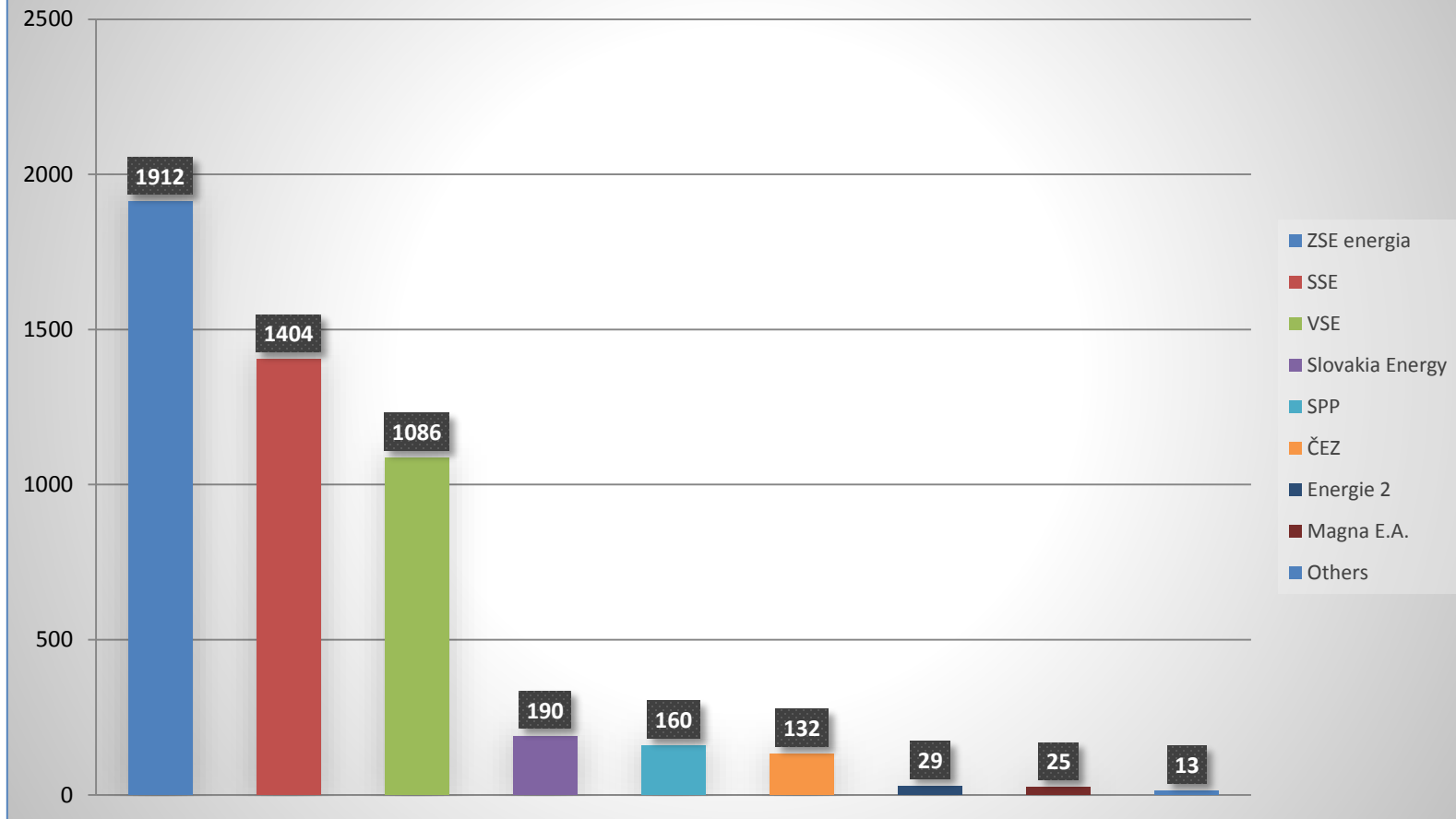
# Privatization

- Goals: Financial stabilization, state budget revenues, unbiased regulation, increased competition, efficiency
- 1992-96: Direct non-transparent sales to local investors (almost 100% of shares privatized):
  - Oil producer and distributor, gas storage and local exploration & production (both were later re-sold to strategic foreign investors)
  - Coal mining company
- 2001-04: Transparent international tenders (49% of shares with managerial rights)
  - Oil transit sold to Russian Yukos; in 2009 re-sold back to the state
  - Transmission and distribution of natural gas sold to Gazprom, Gaz de France and Ruhrgas; in 2013-14 re-sold to the Czech company EPH except for the gas trade that was re-sold back to the state
  - Three electricity distribution companies sold to E.ON Energie, Elektricite de France International (in 2013 re-sold to EPH) and RWE Plus
  - Power production (66% of shares) sold to the Italian company ENEL; in 2015-16 re-sold to the EPH

# Opening markets

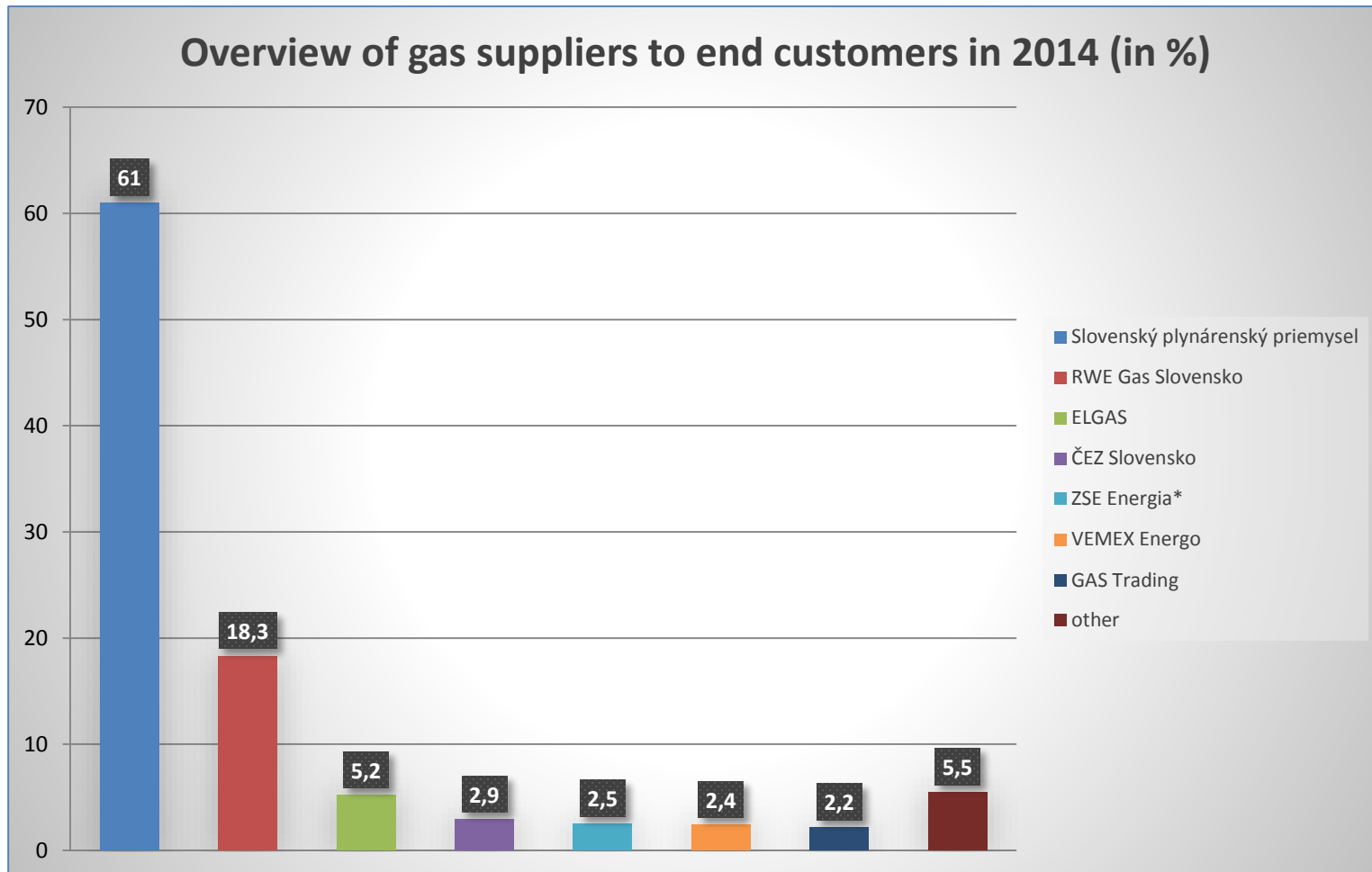
- Goals: Fair access to infrastructure, higher transparency, increased competition, efficiency
- 2001: Opening markets to large electricity and gas customers
- 2005: Opening electricity market to all businesses
- 2008: Opening electricity market to all households
- 2009: Opening gas market to all businesses
- 2011: Opening gas market to all households

## Suppliers of electricity - households in 2014 (GWh)



Source: Regulatory Office for Network Industries





Source: Regulatory Office for Network Industries

# Infrastructure development

- 1992: Gabčíkovo hydropower plant
  - 10% of the total electrical power generated
  - Owned by state
- 1998-99: Two blocks of the Mochovce nuclear power plant
  - 25% of the total electrical power generated
  - Other two blocks to be launched soon
- 2006-08: Shutting down two blocks of the Jaslovské Bohunice nuclear power plant
  - Due to the EU accession and security requirements
  - Loss of 20% of power generation
- 2009: Gas transit reverse operation due to Ukrainian-Russian controversies
- 2015: Gas transmission connection between Slovakia and Hungary
- 2015: Oil pipeline Adria renovated connecting Družba

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# Independent regulation

- Goals: Fair prices, fair access to infrastructure, higher transparency and predictability
- 2001: Setting up the Regulatory Office for Network Industries (RONI)
- 2003: RONI assumes full responsibility for regulation of energy and legal unbundling
- 2012: Creation of a Regulatory Council totally independent in adopting regulatory policy
- Funded from the state budget

# Regulated areas

- Electricity
  - Generation, transmission, distribution and supply
  - Performance of the short-term electricity market administrator's activities)
- Gas
  - Production, transport, distribution, storage and supply
- Heat
  - Production, distribution and supply
- Water
  - Production, distribution and supply of potable water,
  - Abstraction of surface water and energy water from water flows
  - Utilization of the hydro-potential of the water flows
  - Diversion and purification of sewage through public sewerage system

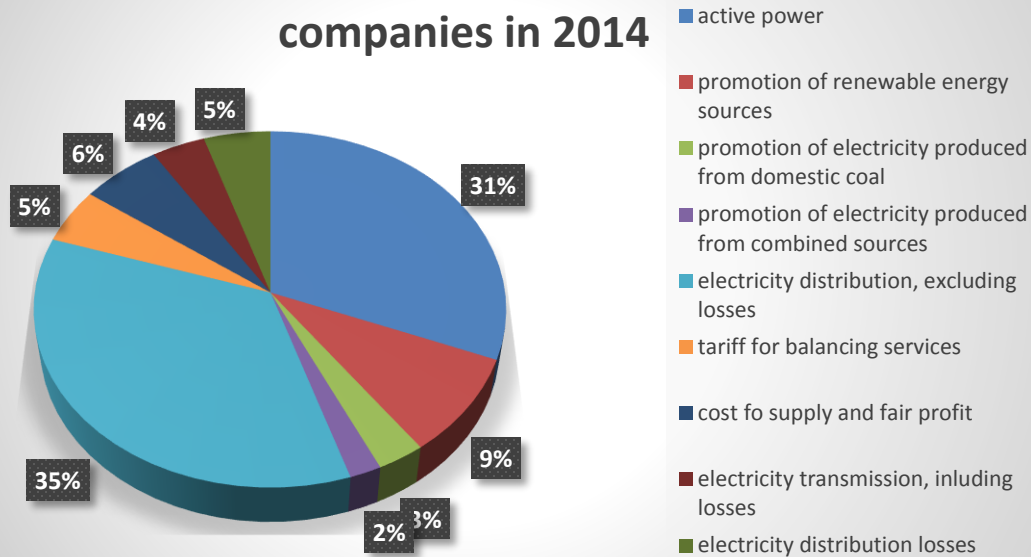
# Key activities

- Issuing licenses for performance of regulated activities
- Price regulation based on the price cap method
  - The regulated entity can appeal against the Office`s decision within 40 days from the notification date

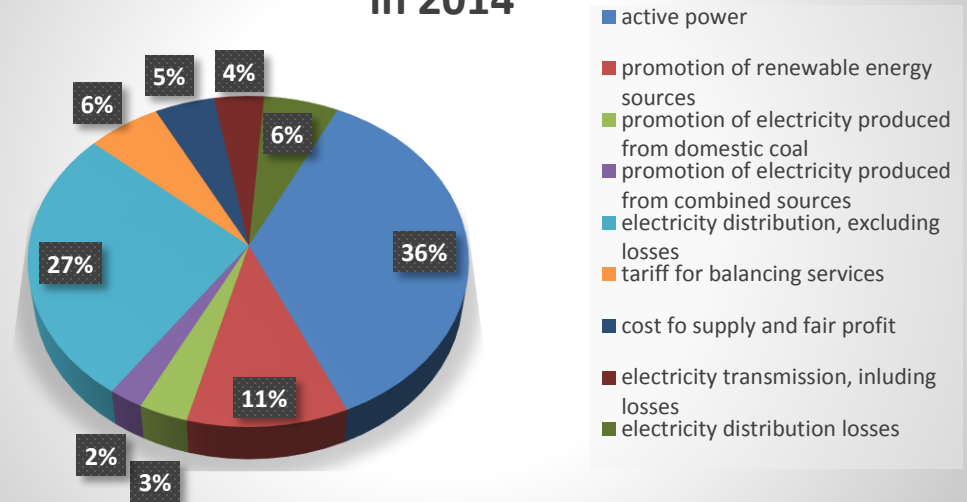
Setting of energy prices for end-consumers in the Slovak Republic

	Households	Small companies	Large companies
Electricity	regulated	regulated	deregulated
Gas	regulated	regulated	deregulated
Solid fuels	deregulated	deregulated	deregulated
Fuels in transport	deregulated	deregulated	deregulated
Heat - centralized supply	regulated	regulated	regulated

## Structure of electricity price for small companies in 2014



## Structure of electricity price for households in 2014



Source: Regulatory Office for Network Industries

# Key bodies

- Chairman of the Office
  - Appointed (for 6-year term) and recalled by the President of the Slovak Republic upon proposal of the Government
  - Chairs the Council for Regulation
  - Governs the Office; acts on behalf of the Office externally in all matters; appoints and recalls the Vice-Chairman; decides in regulation procedures as the first-level authority; decides on the imposition of penalties in appeal proceedings
- Council for Regulation
  - Members are appointed (for 6 year term) and recalled by the President of the Slovak Republic upon proposal of the National Council of the Slovak Republic (3 members) and the Government (3 members)
  - The Council is renewed by replacing one third of members every two years
  - Strategic management; adopts regulation policy; decides in appeal proceedings
- Number of employees (2014): 106



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# Key drivers

- Market prices
- European Union:
  - Directive 2006/32/EC on energy services
  - Directive 2012/27/EU on energy efficiency
- Own legislation
  - 2007: Energy Efficiency Policy of the SR
  - 2007-14: Three Energy Efficiency Action Plans for 2008–2010; 2011–2013; 2014–2016 with an outlook up to 2020
  - 2014: Energy Efficiency Act

# Targets

	Energy savings based on the recalculated average final energy consumption in 2001–2005	
	[%]	[TJ]
Annual target	1 %	3 122
Three-year target up to 2010	3 %	9 366
Medium-term target up to 2013	6 %	18 722
Long-term target up to 2016	9 %	28 098
Long-term target up to 2020	11 %	34 342

Energy efficiency target – to achieve the following level of final energy consumption in 2020	105 TWh	378 PJ
Energy efficiency target – to achieve the following level of primary energy consumption in 2020	191 TWh	686 PJ

# Methodology

- Defined measures for specific sectors: buildings, industry, public sector, transport, appliances, energy transformation, transmission and distribution
- Each sector has its own sub-targets
- Measures are structured: specific programs, projects, legislative regulation, information campaigns, etc.
- Responsibilities of individual competent ministries are defined
- Annual targets are set as total amounts as well as broken down for individual areas
- The implementation of measures is evaluated on an ongoing basis (Annual reports) and any deflection relative to sub-targets triggers corrective action

# Funding

- Public sources:
  - State budget, state-owned companies
  - Funds of European Union
  - Municipalities
- Private sources (significant majority):
  - Loans from commercial banks
  - Voluntary contributions by parties to the agreement
  - Special offers from retailers and manufacturers
  - Consumer associations
  - Consultancy services of energy companies

	Investment cost			Total	Average annual amount
Years	2008 – 2010	2011 – 2013	2014 – 2020		
(EUR thousands)	3 890 550	6 886 333	19 589 886	30 366 769	2 335 905

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# Lessons learned

- Fair/Market prices are the best incentive to increase efficiency
- Keeping artificially low prices for a long time leads to steep price increases which is highly unpopular, often harming poor people, impeding political stability and reversing the reforms
- Direct non-transparent sales to local investors may create oligarchs capable of capturing the state
- Privatizing for low prices may lead to later re-sales to strategic investors for market prices – the state loses privatization revenues, the money pours into private pockets of oligarchs
- Privatization through transparent international tenders maximizes state budget revenues and welcomes strategic investors with better culture and know-how
- People are important – independent Regulator as well as the Government should employ the best people, who deserve to be well-paid

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# Recommendations

- Pursue solid Energy Policy: Set up long-term plans for market liberalization, unbundling, privatization, independent regulation, energy efficiency
  - Long-term, binding policy with a set final targets, concrete measures and programs, systems of interim reviews
- Consider the impacts of steep price liberalization
- Privatize through transparent international tenders with price as the chief/single winning criteria
- Set up a strong Regulator independent from the Government
- Install respectable and well-paid individuals in Regulatory and Government institutions

**Thank you for your attention!**