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UPDATE ON HYDROCARBON LAW AND PROJECTIONS OF SHALE GAS RESOURCES

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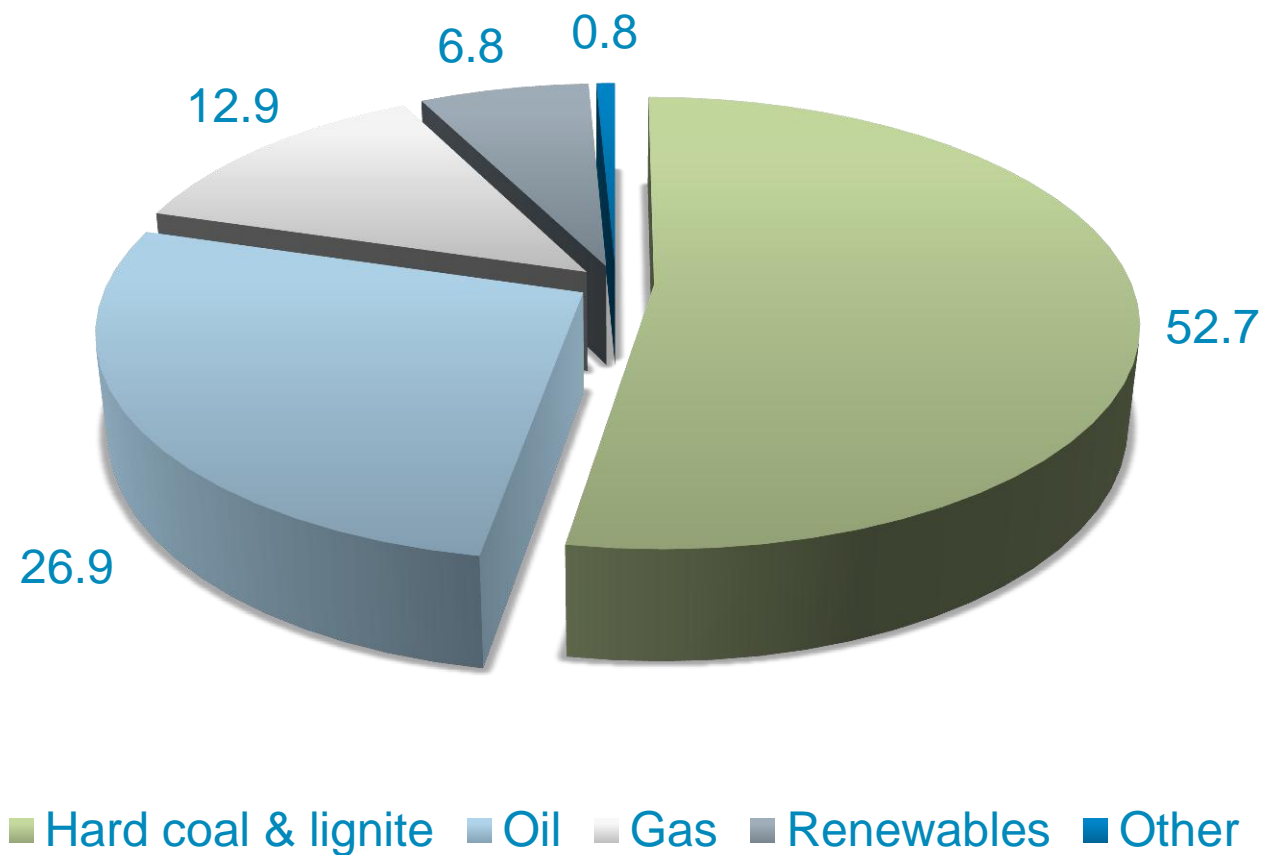
April 24th, 2013

American-Polish Energy Roundtable



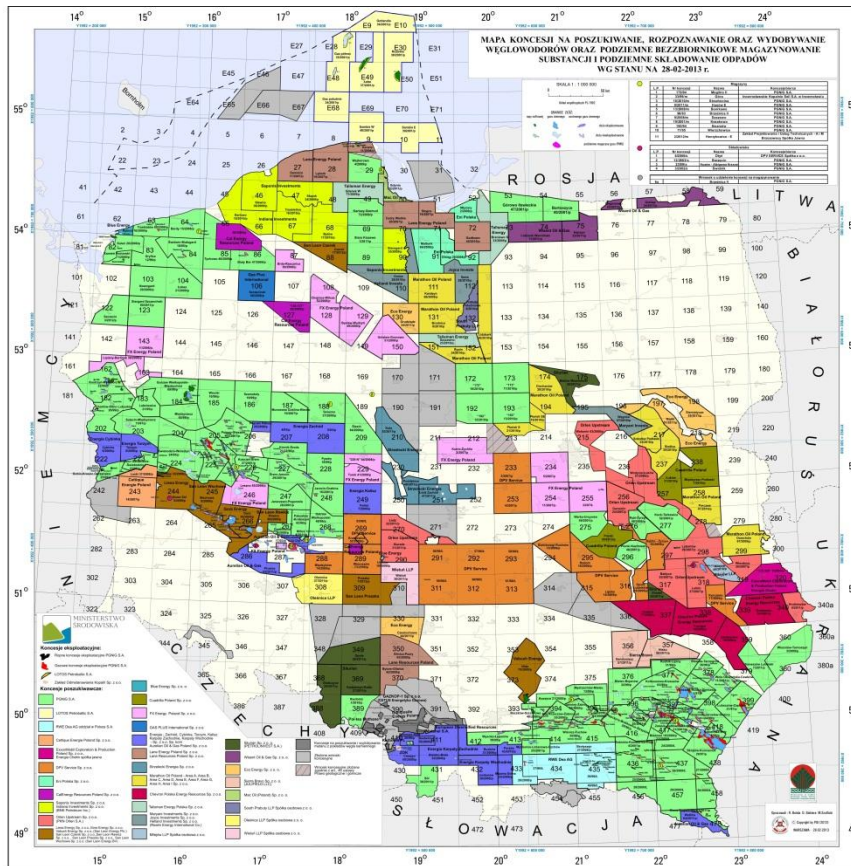


Primary energy demand in Poland (2010)





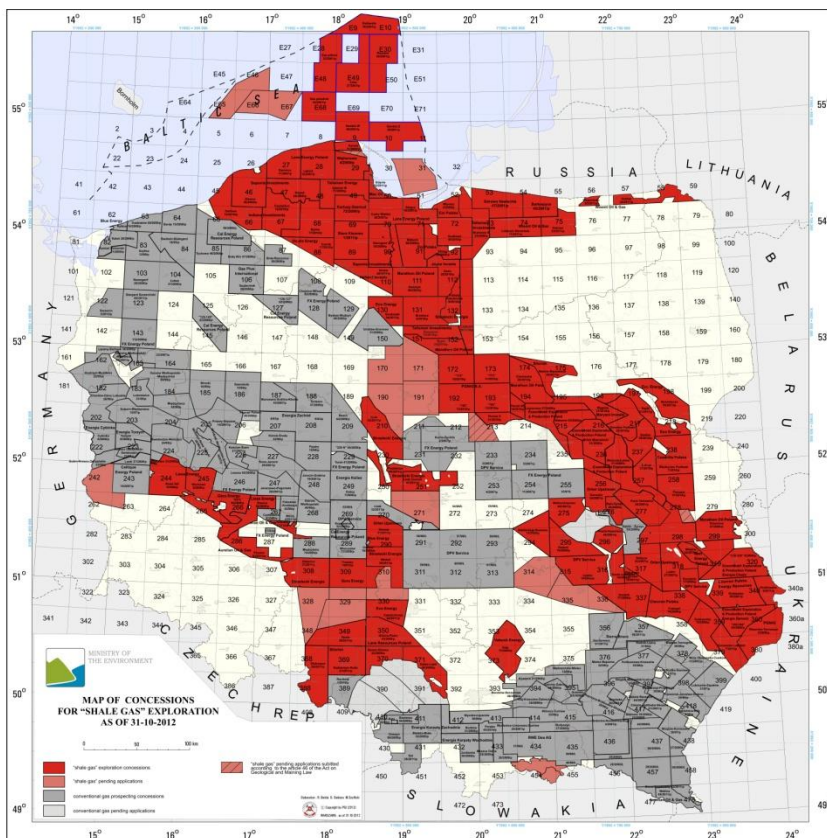
Oil & gas operations in Poland



- 256 exploration concessions for hydrocarbons
- 237 production concessions for hydrocarbons
- 10 concessions for underground gas storage
- 1 concession for underground petroleum and fuel storage



Shale gas in Poland – prospects



Between 2007 and 2013

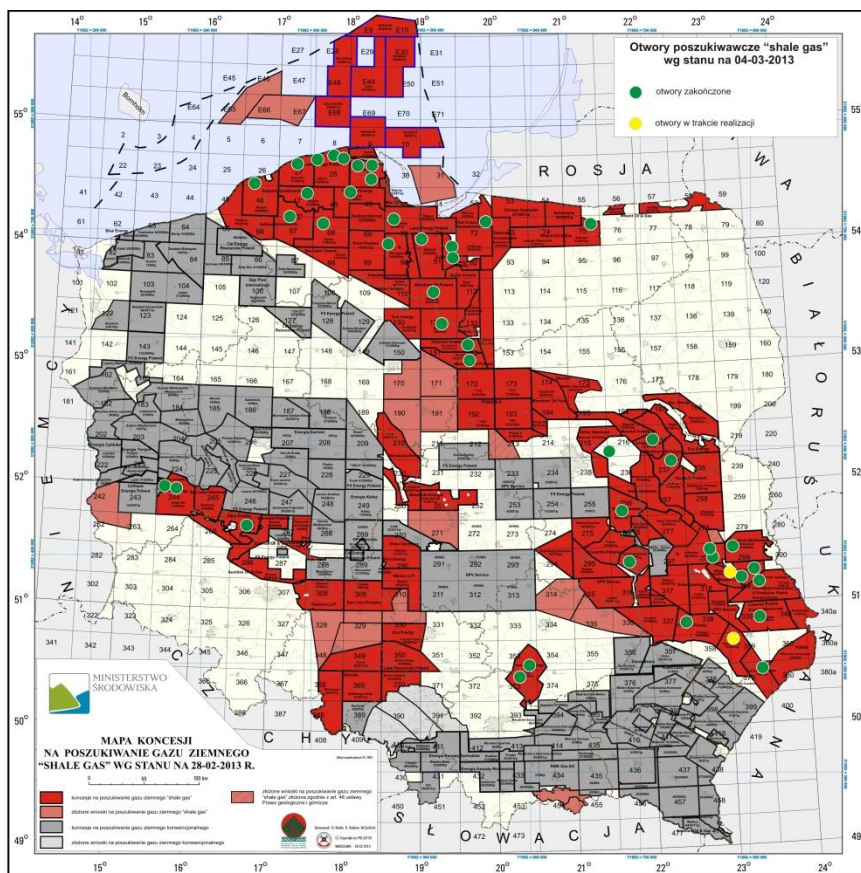
- **Over 100** concessions for shale and tight gas prospection and exploration have been granted (**109** as of April 2013)
- **0** concessions for shale and tight gas exploitation / production has been granted

Total acreage of 109 concessions:

- **Approx 88 thousands km² (20 886 417 acres)**



Shale gas in Poland – prospects



➤ **43 exploration wells completed by April 9th 2013**

9 with fracking

4 with horizontal sections

➤ **309 new exploration wells planned until 2021**

128 obligatory wells

181 optional wells

➤ **18 Polish and foreign capital groups in the shale gas exploration**



Not a simple copy & paste - geology.

POLAND (EUROPE)		USA	
Late Palaeozoic formations		Younger formations	
Different (across basins) key parameters (TOC, maturity, clay mineral content, minimum thickness and acceptable depth)			
Low pressure in the shale complex		High & overpressure in shale complex	
Lower permeability of shales		Higher permeability of shales, well recognised	
Low seismic hazard		Various	
Perfect sealing of Zechstein salts		Various overburden	



Not a simple copy & paste –
permitting, environment.

POLAND (EUROPE)		USA	
Private land ownership but state ownership of mineral resources		Private ownership of land& mineral resources	
Smaller acreage		Vast acreage	
High density population		Low density population	
Unlimited access to drilling services			
Need of certification for non - EU equipment		High technical and safety standards	
Strict EU environmental regulations (water, biotops, polution, noise)		Environmental regulations vary from state to state	
High public profile & general public acceptance/ general public acceptance			



Shale gas in Poland – key points

- » We acknowledge a constant need for new drillings and expertise
- » More active and reliable companies could accelerate the process of documentation of the shale gas fields
- » We can observe a growing demand for gas, favorable pricing of gas and ongoing development of the gas transmission infrastructure
- » Law changes in Poland:
 - Hydrocarbon's Extraction and their taxation and Hydrocarbon Fund - draft of the Act





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Shale gas in Poland – New Regulations Enter into Force



➤ New Regulations Enter into Force



Shale gas in Poland – New Regulations Enter into Force

(I) New Applicants – new regime

- only Exploration&Production licence
(full continuity upon geological documentation)
- only by bidding
- prequalification (as a part of a bidding procedure)
- JOA (farming fully eligible)
- NOKE S.A. (100% state-owned, commercial partner)





Shale gas in Poland – New Regulations Enter into Force

» (II) Incumbents – transitional provisions

» (i) Production licence Holder

- **No change – Production Licence – Old Regime**
- » **until expiration of a granted licence**
- » **modification of reporting scheme**



Shale gas in Poland – New Regulations Enter into Force



(II) Incumbents - transitional provisions



(ii) Prospection&Exploration licence Holder



- Geological Documentation Owner

- application for production licence (modified), no bidding, no NOKE, no negotiations; 5 years exclusivity for geological information and 5 years priority for mining usufruct, preserved
- upon request entering in JOA, NOKE, negotiations, no bidding





Shale gas in Poland – New Regulations Enter into Force

(II) Incumbents - transitional provisions

(ii) Prospection&Exploration licence Holder

- No Geological Documentation filed

- if geological documentation filed:
 - no bidding, no NOKE, no negotiations, 2 years exclusivity for geological information and 2 years priority for mining usufruct
 - upon request entering into JOA, no bidding, NOKE, negotiations
- upon request transformation of Prospection&Exploration licence into E&P licence (JOA with NOKE)





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**THANK YOU
FOR YOUR ATTENTION**



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