

1st AIEE Energy Symposium
Current and Future Challenges to Energy Security



Enabling Demand Response (DR) in Poland

Understanding the major factors which impact the uptake of DR

Katarzyna Ewa Rollert
PhD Student
Leuphana University Lüneburg / Germany

Milano, 1st December 2016

1. Introduction

Untapped DR potential in Europe & Polish electricity system under pressure

DR offers numerous benefits & crucial for attaining EU 20-20-20 goals

Untapped DR potential in Europe

Discriminatory regulation - main barrier to DR?

Poland urgently needs to improve supply security / lack of reserves to satisfy peak demand

Little is known about factors which impact DR uptake and DR-related strategies of key actors

2. Methodology and data

- Methodology: Explorative case study approach
- Data

1) Primary data

- Semi-structured qualitative interviews with 15 experts representing key actors of the Polish electricity system
- Questions: Drivers of and barriers to DR in Poland, activities undertaken to implement DR and policy recommendations
- Interviews were carried out in April – September 2015; interview duration 1 – 1.5 hours
- Analysis: Methodology proposed by Philipp Mayring / combined deductive-inductive coding; software MaxQda

2) Secondary data

- Policy documents
- Media reports and comments
- Studies and analysis
- Scientific papers

4. Results

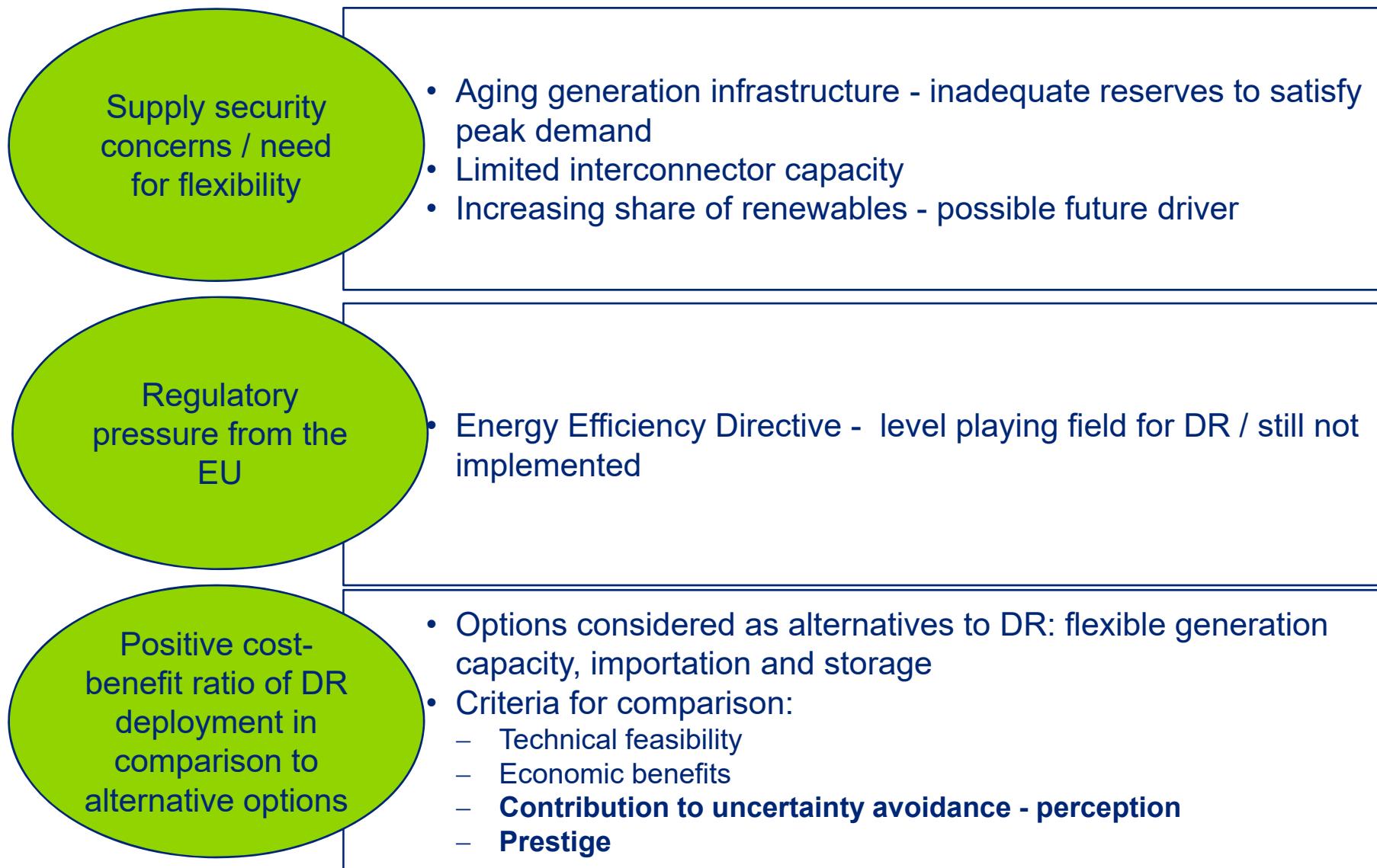
DR related behaviour: Profound interest and awareness of DR potentiials but barriers still persist

	Activities	Actors				
		TSO	Regulator	Aggre-gators	Large Consumers	Energy utilities
1	Studies	X	X			X
2	Pilots	X				X
3	Tenders for negawatts	X	X	X	X	
4	DR aggregation	X		X	X	X
5	Balancing market formally open to DR	X				
6	Roll out of smart meters	X	[X]			X

- 
- Numerous potential DR advocates
 - State-controlled actors such as the TSO and energy utilities have shown interest in DR
 - No joint road map for DR uptake
 - Major regulatory barriers still exist => only a fraction of the potential has been tapped

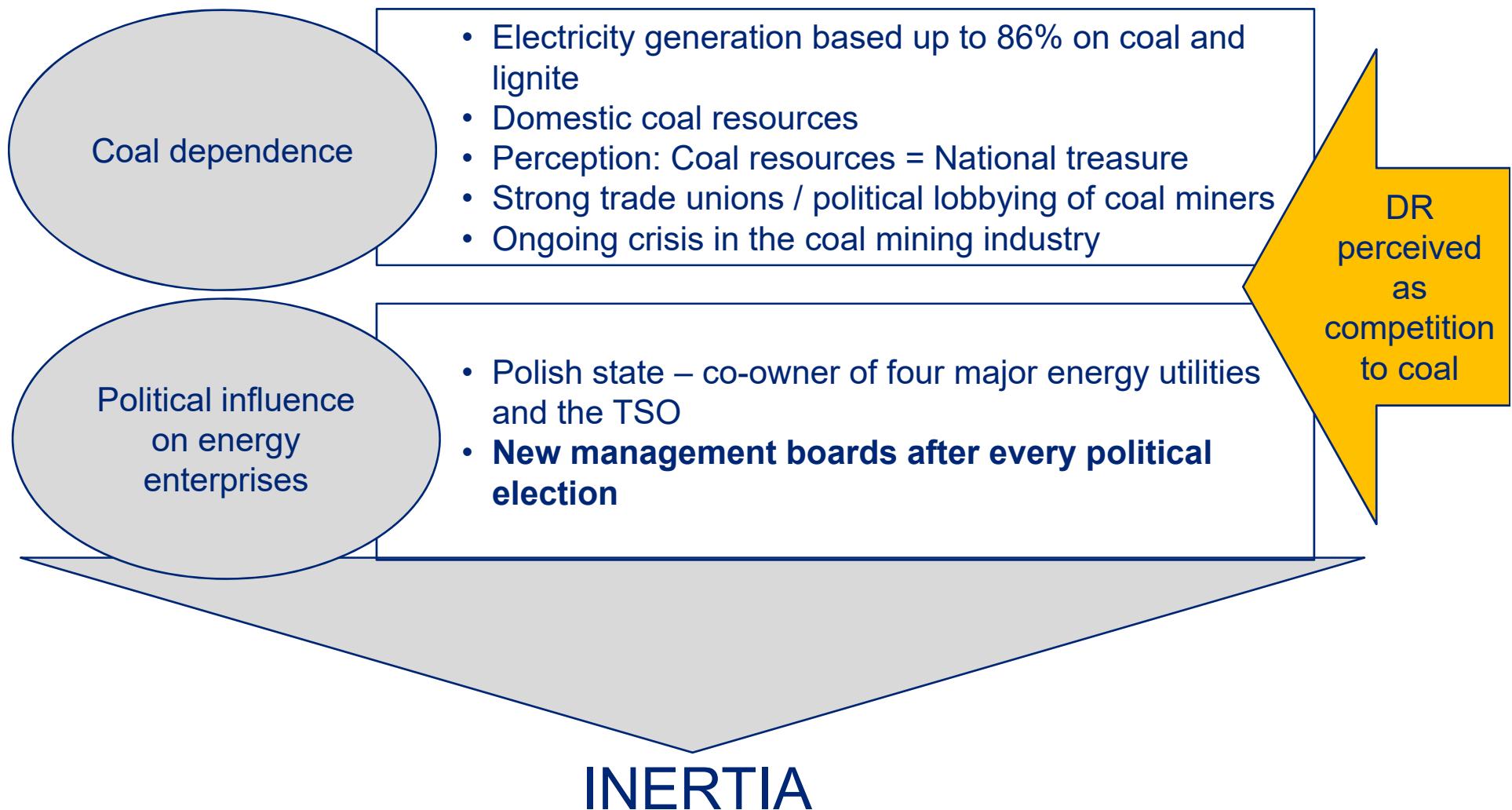
3. Results

Key drivers of DR in Poland: The worse, the better...



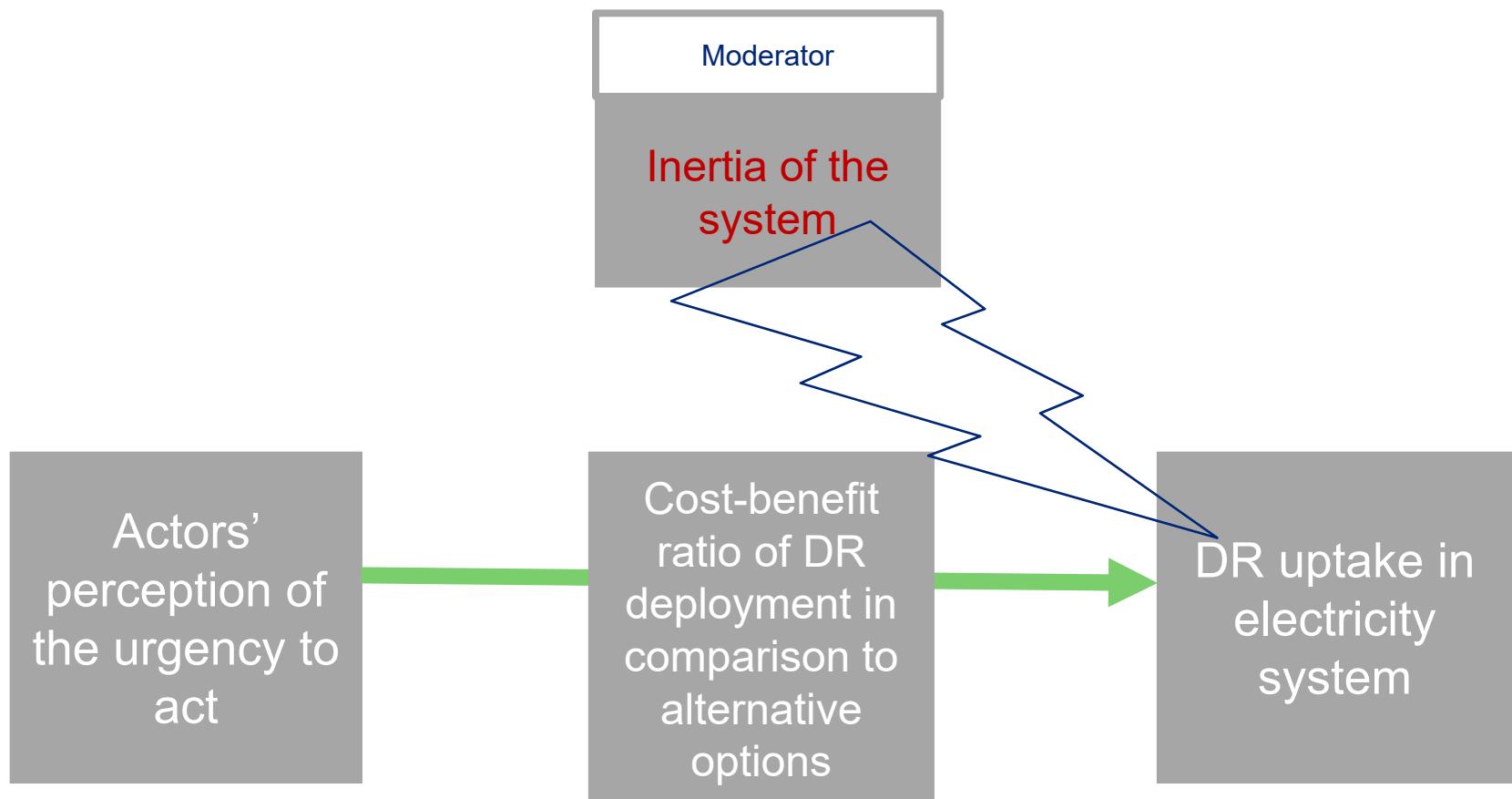
3. Results

Underlying barriers to DR in Poland: Coal dependence maintained by the state



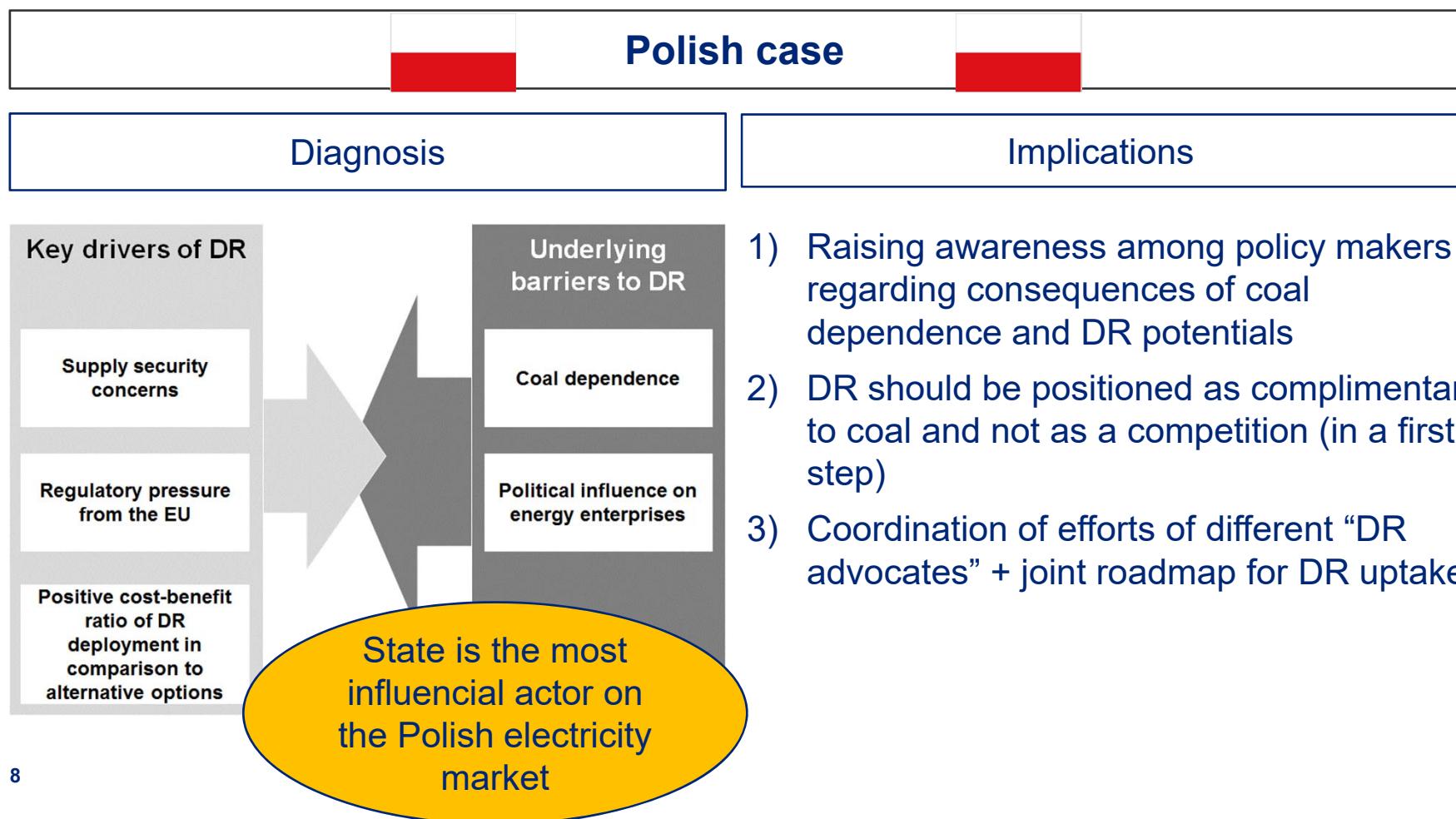
5. Results

Conceptual model of DR uptake: DR uptake => pressure to act + positive cost-benefit ratio in comparison to alternative flexibility sources



6. Conclusions

- Discriminatory regulation is merely a symptom of underlying barriers to DR
- Need for further research on DR uptake in other countries where DR became a viable system resource (e.g. UK, France)





Thank you for your attention!

Katarzyna Ewa Rollert
kasi.rollert@web.de
+49 15158002129