

# Central Asian Energy Relations: Evaluating the Impact of Informal Dynamics on Formal Arrangements

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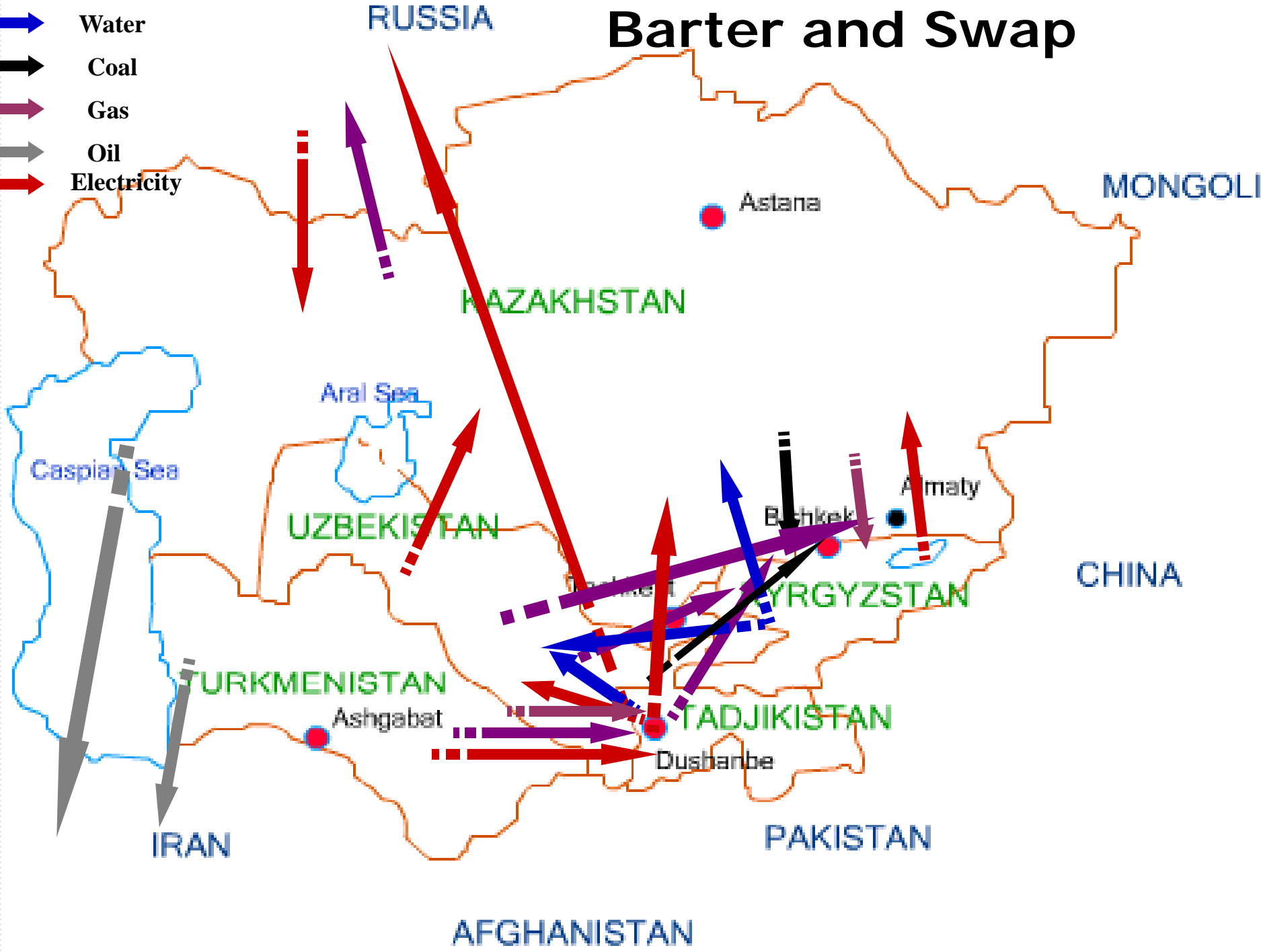
# Study Questions

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- ❑ How are informal networks operating in the Central Asian energy sector?
- ❑ To what extent are informal networks in Central Asia impacting on regionalism in Central Asia?

# Barter and Swap

- Water
- Coal
- Gas
- Oil
- Electricity



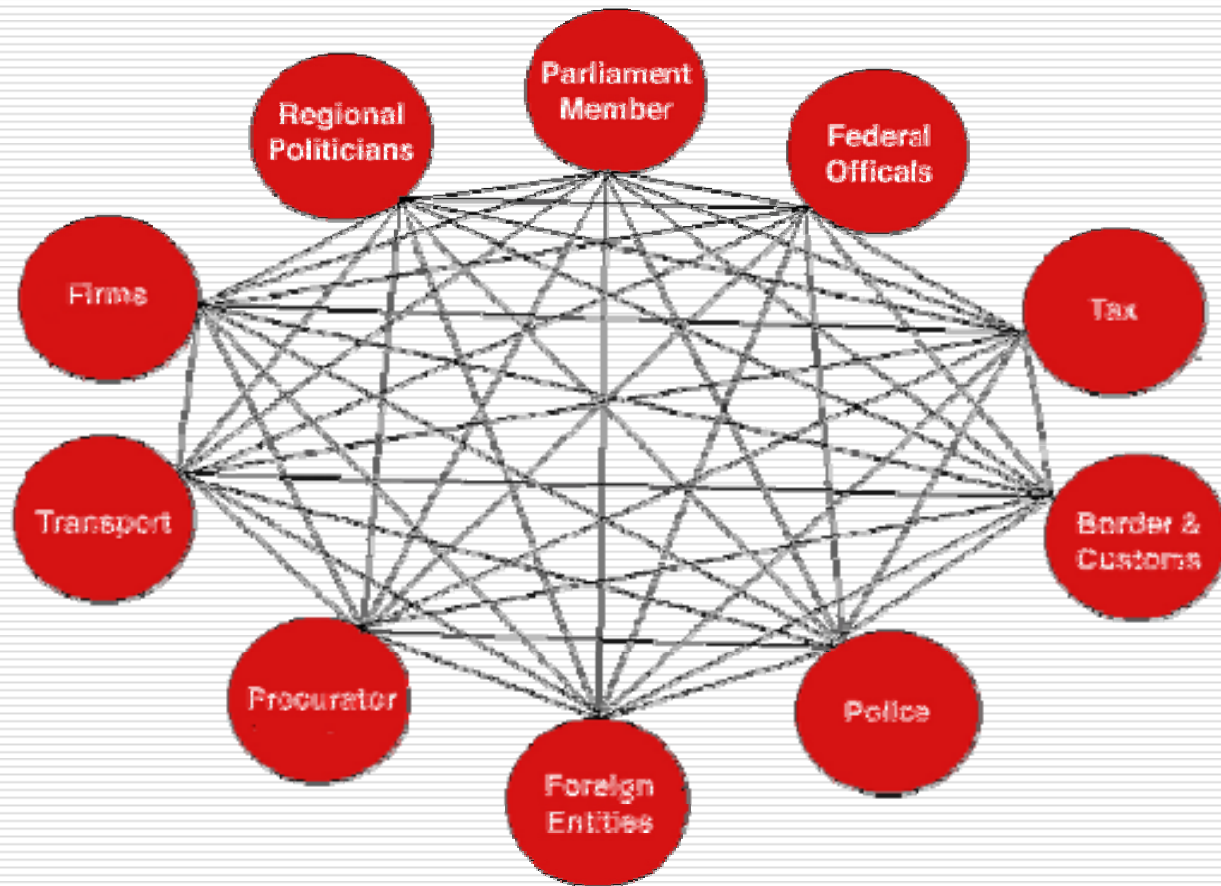
# Outline of Study

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- ❑ Informal Networks
- ❑ Central Asian States' Energy Concerns
- ❑ Notions of Regionalism in Central Asia
- ❑ Case Studies of Informal Dynamics
- ❑ Future of Energy Regionalism in Central Asia

# Part I: Network Configurations

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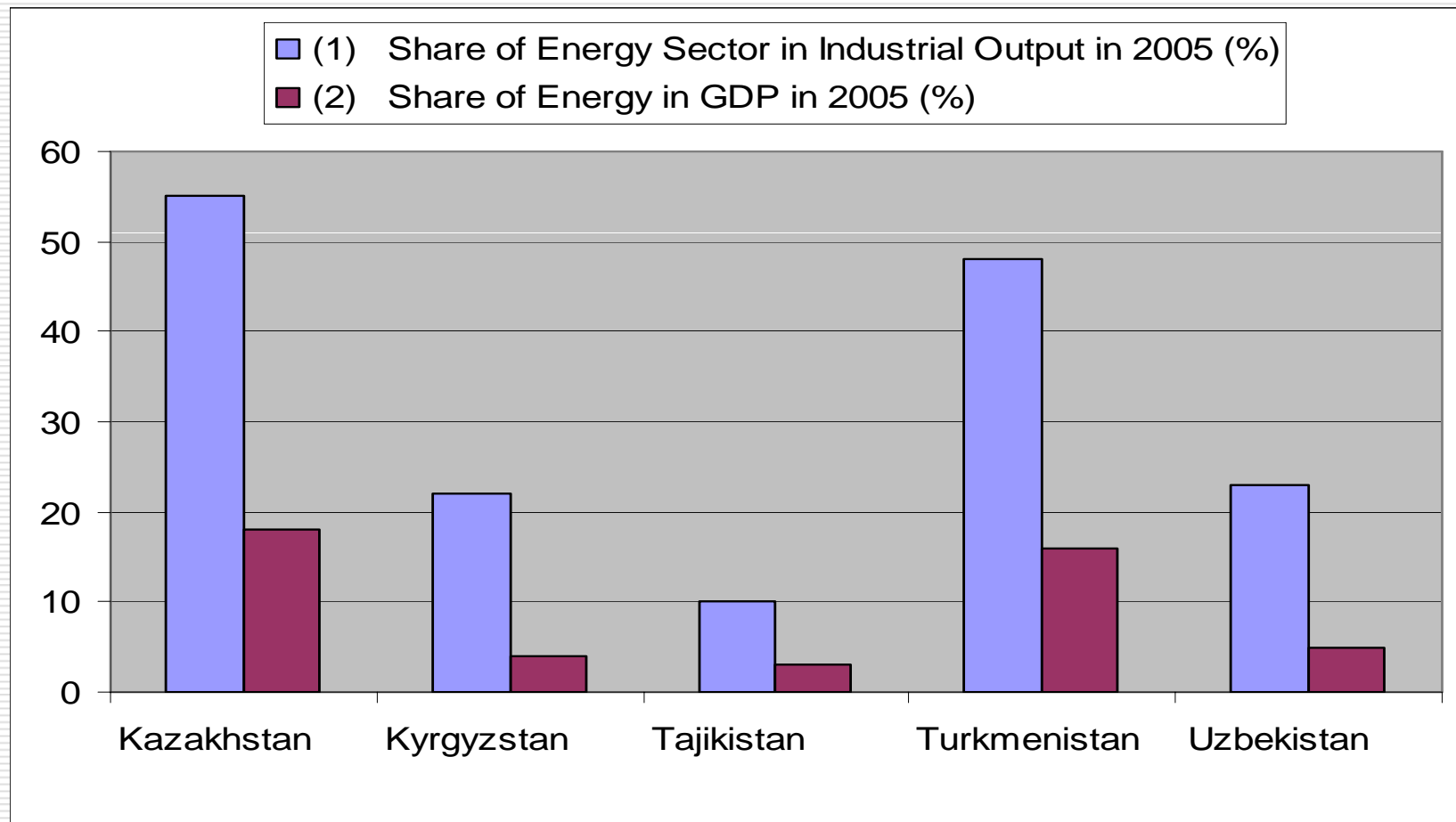


# Part II: Central Asian States' Energy Concerns

<b>Country</b>	<b>GDP (US billion)</b>	<b>GDP per capita (USD at PPP)</b>	<b>Total Primary Energy Supply (Mtoe)</b>	<b>Crude Oil production (Mtoe)</b>	<b>Gas production (Mtoe)</b>
Kazakhstan	103.8	11086	52.4	61.8	21.1
Kyrgyzstan	37	1999	2.8	0.1	0.0
Tajikistan	3.7	1841	3.5	0.0	0.0
Turkmenistan	26.9	5154	16.3	9.8	51.3
Uzbekistan	22.3	2344	47.0	6.0	49.0

Source: European Commission Center for Social and Economic Research, Economic Papers 327, June 2008, available at: [http://ec.europa.eu/economy\\_finance/publications](http://ec.europa.eu/economy_finance/publications)

# Share of Energy Sector in Industry and GDP



# Share of Total Primary Energy Supply, 2006.

Country	Coal/peat (%)	Oil (%)	Gas (%)	Hydro(%)
Kazakhstan*	49.4	18.8	30.6	1.1
Kyrgyzstan*	17.0	19.4	21.3	42.2
Turkmenistan	0.0	29.2	70.8	0.0
Tajikistan	1.3	45.4	13.6	39.7
Uzbekistan	49.4	18.8	30.6	1.1

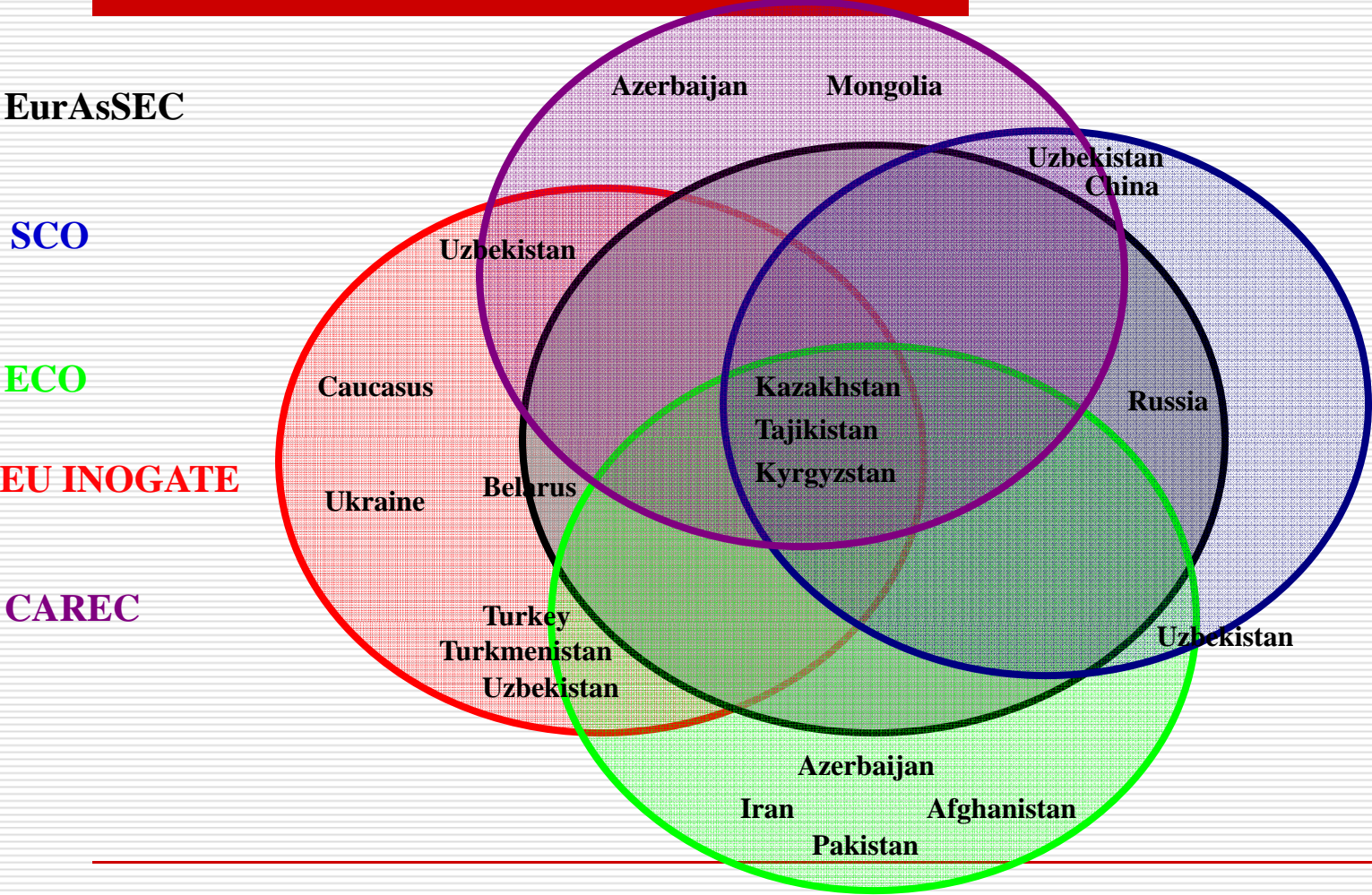
Source: IEA Energy Statistics. Available at: <http://data.iea.org>;\* Kazakhstan and Kyrgyzstan 0.1% renewables.

# Key Challenges for Central Asian States

	Kazakhstan	Kyrgyzstan	Turkmenistan	Tajikistan	Uzbekistan
Imbalance in power generation vs. water requirements	X	X		X	X
High dependence imported oil/ gas		X		X	
Severe electricity shortages in winter		X	X	X	X
Limited domestic co-financing resources		X		X	X
Low FDI in energy Sector relative to size of sector		X*	X		X
Limited export routes/transit dependent	X		X		
Decaying or Lack of Infrastructure/High Losses	X	X	X	X	X

Source: Author's compilation based on numerous reports, studies, and news sources on the region; \*this will change if Russia invests promised \$1.7 billion in hydropower sector.

# Part III: Notions of Regionalism in Central Asia's Energy Sector



# Part IV: Studies of Informal Regional Networks

<b>Informal Dynamics</b>	<b>Stakeholders</b>	<b>Mechanisms Employed</b>
Crony Capitalism	Elites, Business Groups	Subcontract to Members of Elite; Limit market access; Charge Higher Tariffs.
Intermediary Companies	Elites, Business Groups	Create off-shore company; Monopolize export routes; Secure long-term Contracts; Enact price Arbitrage.
Barters and Swaps	Elites, Business Groups, Bureaucracy	Non-transparent agreements; emergency arrangements
Diversion of Electricity and Gas	Elites, Bureaucracy, Business Groups	Stolen, Un-metered or Redirected supplies sold to third party; False accounting; Licensing of independent supplies;
Hostile Takeovers	Elites, Business Groups	Financial and Legal Penalties; Restricting Outputs/Exports Tax Regimes; Environmental Codes; Fixed Tenders; Withholding Permits

# Part V: Future for Central Asian Energy Relations

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## ❑ Cooperation – Critical but Unlikely in Near-Term

- Russia and Chinese Investment Factor
- Financial Crisis Factor

## ❑ Collision – Most Likely in Near-Term

- Role of Organizations Limited; Bilateral Relations Strained
- Integrated Power System Breaking Down

## ❑ Collusion – Decreasing over Time

- Will Economies of Trade Replace Non-Transparent Transactions?
- Will Societal Discontent from Shortages Erupt?

# Conclusion – Policy Considerations

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- **Create Regional Technology Development and Training Centers**
- **Increase Regional Gas Storage Facilities**
- **Direct Foreign Assistance/Investment to Internal Markets of States**
- **Encourage Political Will for a Functioning Regional Market**
- **EU Coordinate with US and Turkey on Regional Energy Goals**

# Questions?

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