

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

Stacy Closson, PhD

*Trans-Atlantic Post-Doctoral
Research Fellow*

*German Institute for International
and Security Affairs, Berlin*

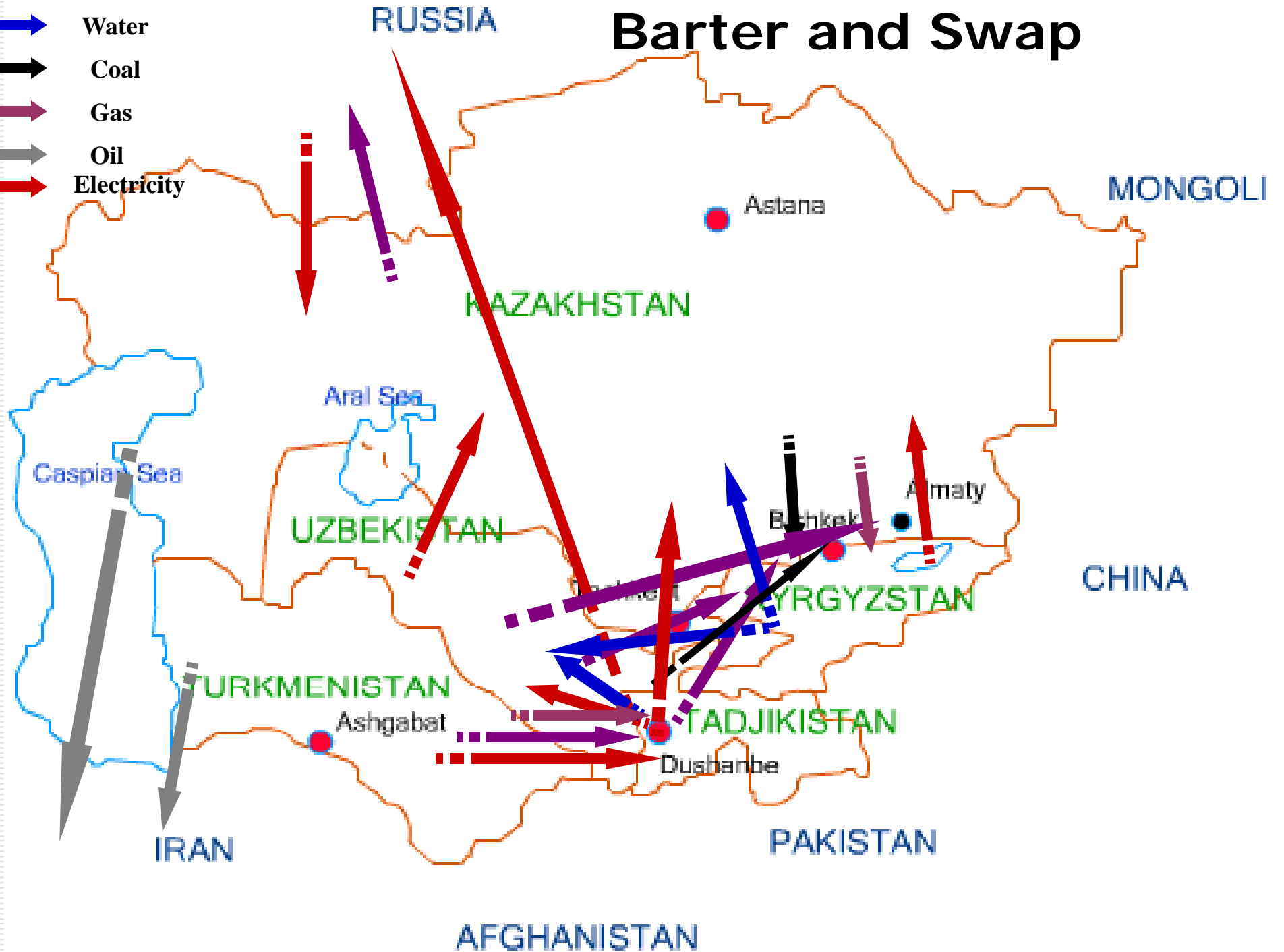
stacy.closson@swp-berlin.org

Study Questions

- ❑ 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

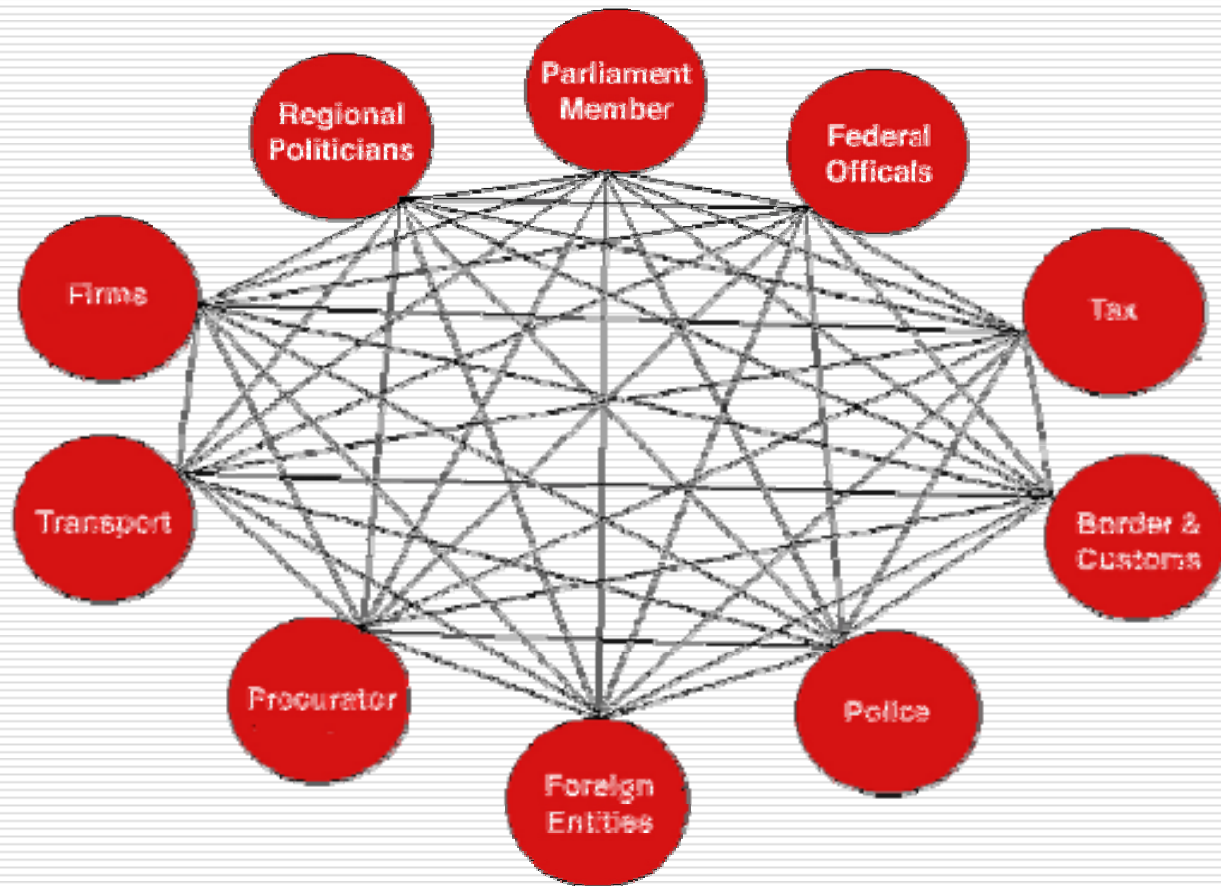
- Water
- Coal
- Gas
- Oil
- Electricity



Outline of Study

- ❑ **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

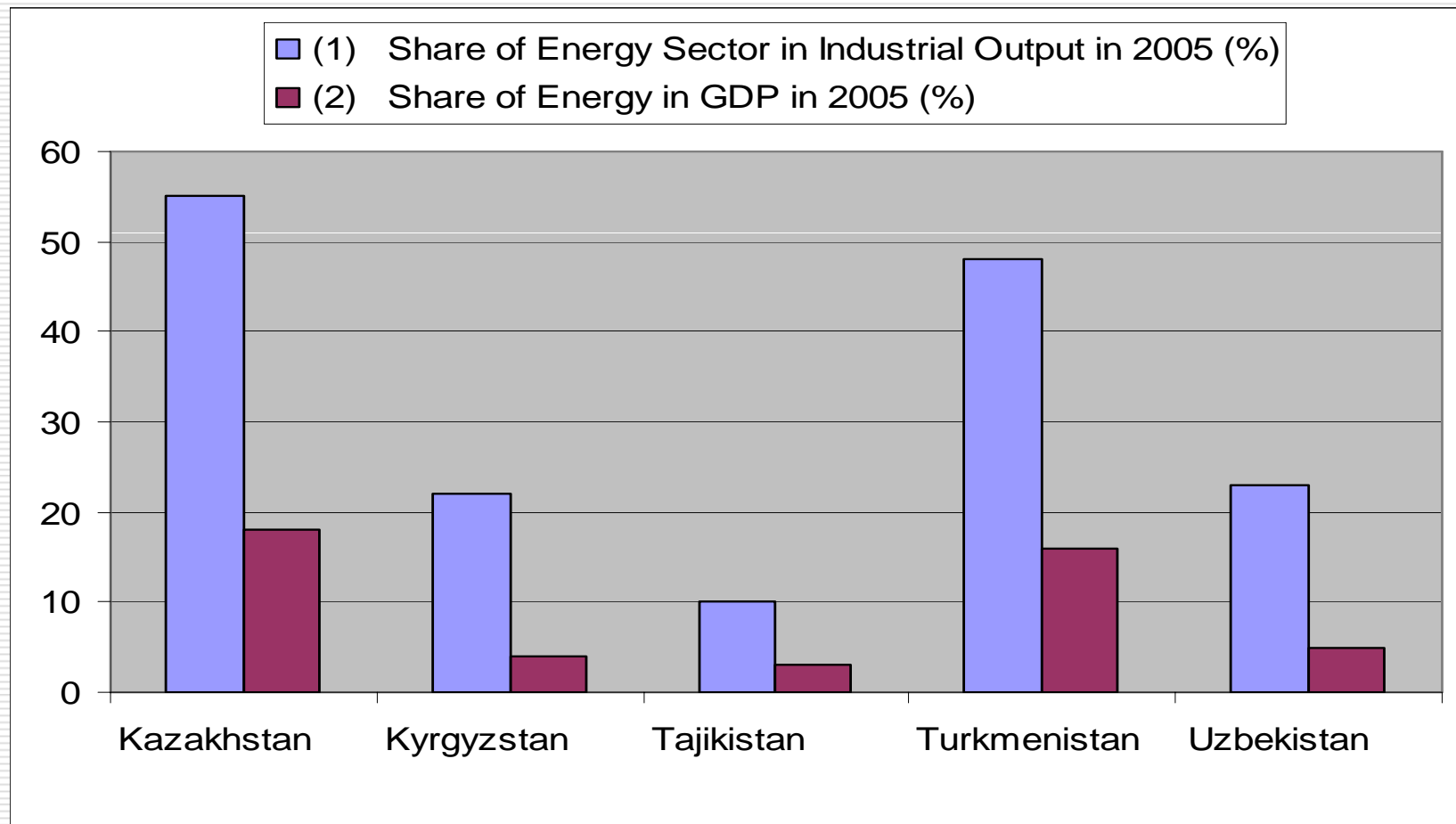


Part II: Central Asian States' Energy Concerns

| Country | GDP (US billion) | GDP per capita (USD at PPP) | Total Primary Energy Supply (Mtoe) | Crude Oil production (Mtoe) | Gas production (Mtoe) |
|----------------|-----------------------------|--|---|--|--------------------------------------|
| 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

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 |

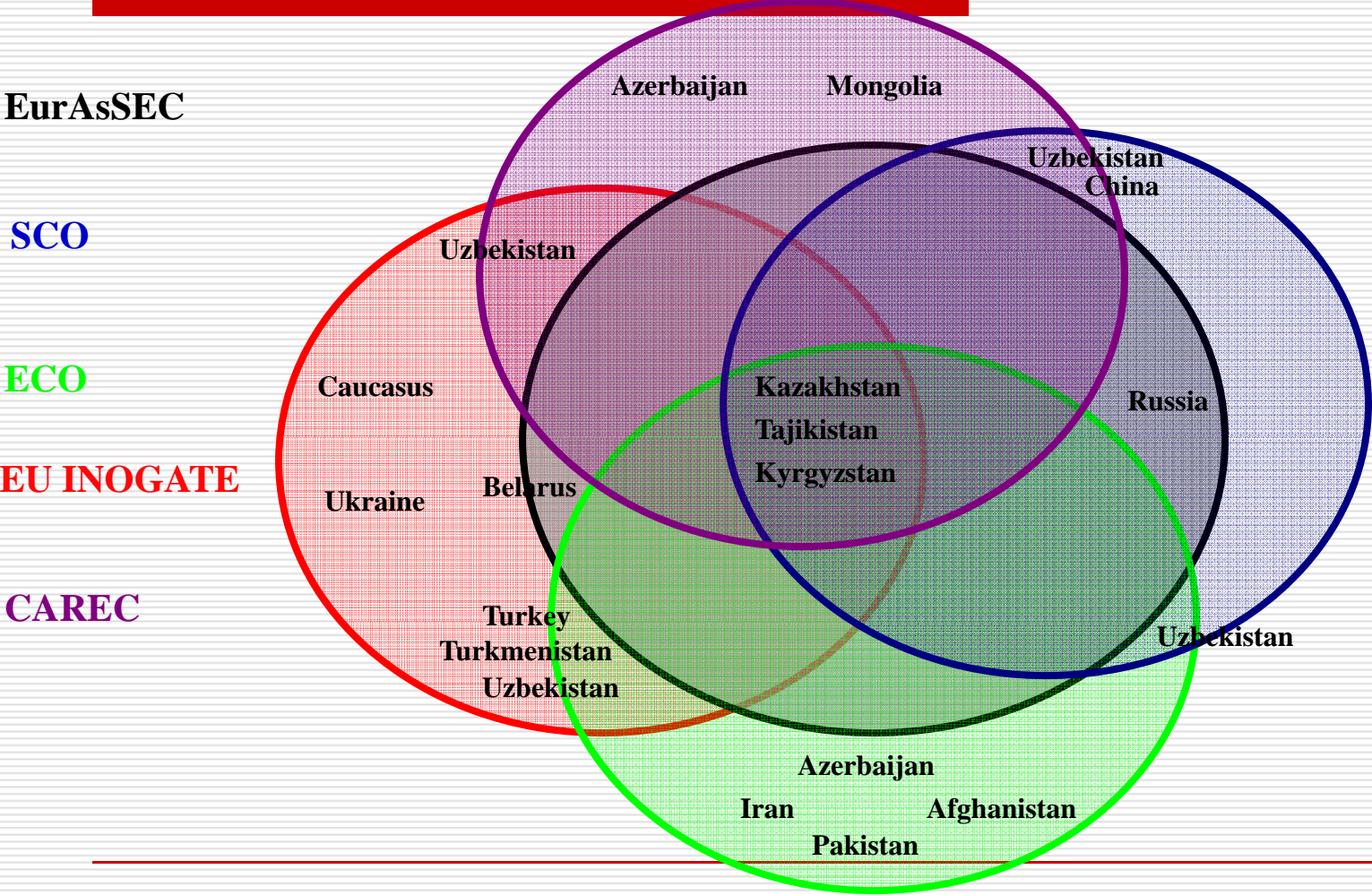
Source: IEA Energy Statistics. Available at: <http://data.iea.org>;* Kazakhstan and Kyrgyzstan 0.1% renewables.

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

| Informal Dynamics | Stakeholders | Mechanisms Employed |
|----------------------------------|--------------------------------------|---|
| 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

❑ 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

- **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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