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Challenges of Regional Electricity Trade in Central Asia

11th Meeting of the task force on Regional
energy cooperation in Central and South
Asia (RECA)

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Energy Links

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BRIEF OVERVIEW OF ENERGY LINKS PROJECT OBJECTIVES



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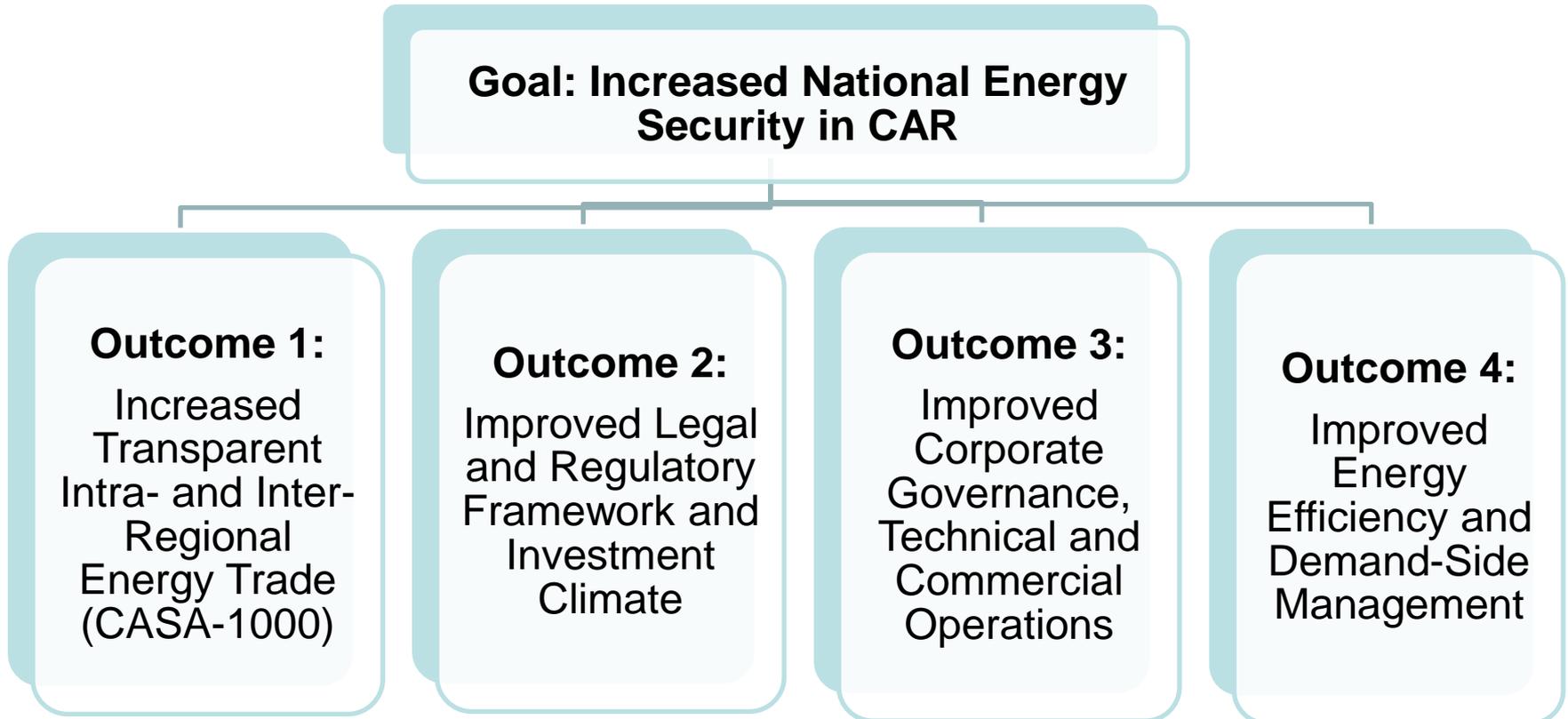
Energy Links Goal:

To increase national energy security in the Central Asian Republics, thereby:

- Increasing the sustainability of their energy sectors, and
- Increasing their ability to provide year-round, reliable power to citizens.



Energy Links Project Outcomes

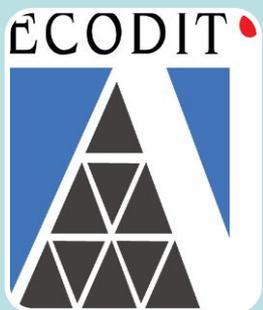




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Energy Links Prime and Sub-Contractors, and Roles



ECODIT (Prime)

- Overall project management and resource mobilization
- Management of Secretariat
- Technical Leadership for Outcome 3 (Improved Corporate Governance)



Deloitte - Technical Leadership for Outcome 1 (Regional Energy Trade)



Pierce Atwood - Technical Leadership for Outcome 2 (Legal and Regulatory Framework)



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What did we find in Central Asia in terms of regional trade

- Situation didn't principally change since 2010
- Central Asia United Power System (CAPS) continue to operate in coordinated mode with only three national power systems – Kazakhstan, Kyrgyzstan and Uzbekistan
- There is a trend of reducing volumes of cross-border trading transactions within traditional CAPS borders
- Increase in volume of transactions related to power supply to Afghanistan



Positive developments

- There are improvements in the physical infrastructure
- Among them new transmission and generation facilities already built and planned to be built
- The interconnection between South and the North of Kazakhstan is much stronger than before and there is no obvious reasons why only South Kazakhstan and not entire Kazakhstan should be regarded as part of CAPS
- Expected surplus of generation capacity in Kazakhstan in combination with increased transferring capability of North-South interface creates more opportunities for cross-border electricity trading
- There is an untapped potential to utilize Kazakhstan's centralized trading platform KOREM for cross-border trading



Potential for the fuel savings opportunities

- Numerous studies conducted in recent years by consulting firms (Mercados, Fichtner) indicated that there is a large potential for fuel and energy savings
- For various reasons measures needed for realization of this potential are not diligently pursued
- Significant part of potential savings lays in improved coordinated operation (central dispatch), however there are significant obstacles to introduce it now
- New study is initiated under World Bank sponsorship to yet again develop recommendations on expansion of regional power trading



The main challenge to realizing full saving potential

- As was indicated on previous slide just entering into bilateral trading transactions is not sufficient to realize full savings potential, utilizing of power pooling concepts along with introduction of the centralized economic dispatch is needed
- And here the so called “low hanging fruit” effect comes into play: how to divide these benefits, if realized, among cooperating parties, in other words “what’s here for me?”



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Interregional Trading – CASA – 1000 project

- CASA-1000 is a transmission system of 1300 MW transferring capability, consisting of AC and DC transmission facilities (AC and DC 500kV lines, AC/DC converter stations) that would allow selling of power from Kyrgyzstan and Tajikistan to Afghanistan and Pakistan
- AC transmission facilities are to be built in Kyrgyzstan and Tajikistan, DC line to be built from Tajikistan to Pakistan through Afghanistan and three converter terminals are to be installed in Sangtuda, Tajikistan; Kabul, Afghanistan and Peshavar, Pakistan
- Development stage of the project is completed, Master and Power Purchase Agreements are signed
- Project is currently entering into implementation phase
- The estimated commercial operating is 2019 - 2020



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Interregional Trading – CASA – 1000 project - 2

- Under CASA-1000 agreements the electric energy from Kyrgyzstan and Tajikistan will be sold to Pakistan and Afghanistan during the “supply period” of May – September for 15 years, the DC line transferring capacity for this period is allocated between Kyrgyzstan and Tajikistan
- During the rest of the year the system will be available to other parties to sell energy under an “Open Access” provisions
- CASA-1000 creates a good opportunity for expansion of cross-border trading



Summary

In order to significantly improve power trading within and beyond Central Asia and to realize potential economic benefits the following challenges would need to be addressed:

- Efforts should be pursued to bring CAPS composition to include Tajikistan, Turkmenistan, North Kazakhstan and eventually Afghanistan
- Opportunities of selling energy to Pakistan and Afghanistan under CASA-1000 Open Access provisions shouldn't be missed
- Efforts to develop and approve new mechanisms for transit of power should continue
- CDC Energia should be given more operational authority if efforts to address “low hanging fruit” effect are to be pursued
- Opportunity of trading on Kazakhstan's centralized trading platform KOREM needs to be utilized



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- Thank you for your attention
- Questions

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