



Conference on Regional Cooperation and Integration

Experiences in Asia and the Pacific

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Papers and Presentations

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Session 3: Regional Cooperation Initiatives in Energy and Climate Change

A. Executive Summary of Key Points & Ways of Looking Forward

Key Messages	Looking Forward
1. The impetus for energy cooperation lies in the diversity and abundance of energy resources that are unevenly distributed across Asia	1. Greater investments and cooperation in energy generation and transmission
2. While there are significant benefits from energy trade, it has been taken up largely on a bilateral basis	2. Development of regional energy markets and interconnectivity of grids
3. Shortages in energy supply due to limited public sector fiscal capacity indicates clear need for greater private sector engagement	3. Innovative ways to increase private sectors' participation and energy financing
4. Increased coordination is needed to enhance environmental sustainability and climate resilience	4. Increased investments in adaptation, mitigation, and disaster risk management

B. Key Lessons/Experiences Learned

- The impetus for energy cooperation in Asia lies in the diversity and abundance of energy resources that are unevenly distributed within and across subregions.** Asia is enriched with large and diverse sources of energy that are unevenly distributed. For eg, hydropower potential is vast in some Central Asian countries (Kyrgyz Republic, Pakistan, Tajikistan), in South Asia (Bhutan, Nepal); and in GMS countries (Laos, Myanmar). Fossil fuel sources are also spread across Central Asia (Azerbaijan, Kazakhstan, Uzbekistan, Turkmenistan), South Asia (coal in India, Sri Lanka; natural gas in Bangladesh); and the GMS countries (coal in Vietnam, natural gas in Laos). Diversified sources of energy are largely beneficial because firstly it allows improved sharing of low-cost energy resources. This further helps markets expand and enjoy scale economies in production. Secondly, it increases opportunity for identifying and expanding cleaner and thereby more sustainable sources of energy.
- While there are significant benefits from energy trade, it has been taken up largely on a bilateral basis.** At the present time trade in energy takes place mostly on a bilateral basis across Asia. There is existing energy trade through cross-border electrical grid interconnection, oil and gas pipelines, etc. Trade on a subregional/regional basis is yet to be developed, but there is tremendous potential to expand opportunities. For instances, trade in South Asia has been largely bilateral, where there are existing or proposed energy connectivity between Bhutan- India, Nepal-India, and Bangladesh-India.

However, there is no trade on a trilateral basis between Bangladesh-India-Bhutan, or Nepal-India-Bhutan. Such subregional trade will be largely beneficial to critical address power shortages in Nepal and Bangladesh, and expand export opportunities for Bhutan.

3. **Shortages in energy supply due to limited public sector fiscal capacity indicates clear need for greater private sector engagement.** Today many countries in Asia are facing significant energy shortages and crippling power cuts which is a limiting factor to economic growth and poverty reduction. Despite of having large supply potential, countries are operating far below the national capacity of economically-viable energy. Bhutan and Nepal stands as classic example for this. Hence as was highlighted during the presentations, countries will needs to increase both public and private sector investments in the power sector. Bhutan's experience in green power development through PPP modality has been a big success story. Given this it will be worthwhile to look into possible engage of the private sectors.
4. **Increased coordination is needed to enhance environmental sustainability and climate resilience.** Climate change impacts are increasingly visible in Asia and the Pacific through changes in temperature and season cycles, greater variability of the monsoon, melting of glaciers, increased frequency of tropical cyclone, and sea level rises. Countries in Asia that host a large share of the world's population is highly vulnerable to climate change. Pacific Island countries highlighted the severe impacts that climate change may bring to these countries including sea-level rise and the need for a coordinated effort to deal with the challenges ahead; similarly, SASEC highlighted the climate change impacts of melting glaciers and rising flood levels. With rapid changes, countries are in a critical stage and there is a strong need to enhance preparedness, strengthen disaster management, and increase resilience to climate volatility. Both climate mitigation and adaptation issues were highlighted several times during the discussions, and it was mentioned that there is need for a coordinated approach to address these.

C. Looking Forward

5. **Greater investments and cooperation in energy generation and transmission.** As we know countries in Asia are operating below existing potentials for energy generation and transmissions. There is strong need to strengthen generation capacity, modernize national power systems, and expand bilateral trade. Countries are already taking this forward at different levels. For example, as highlighted yesterday, trade in electricity in Central Asia between Uzbekistan-Afghanistan have increased access to energy for city-dwellers in Kabul. In South Asia, Bhutan and India have ongoing projects that will expand capacity significantly by 2020. These initiatives need to be further scaled-up to reap maximum benefits from diverse and abundant energy sources. The concept of “Energy Rings” can be pursued to promote dialogue and cooperation across sub-regions.
6. **Development of regional energy markets and interconnectivity of grids.** As discussed earlier, while bilateral trade is quite common across Asia, regional trade markets are yet to become fully-functional. In addition to the hard-aspects of grid connectivity, significant challenges are posed by the soft aspects, including policy and regulatory issues. Experience of the regional programs illustrates the immense complexity of cooperation in the softer aspects that act as barriers to enable the effective formation of regional power grids and energy markets. It is time-consuming and challenging due to the need for institutional reforms, legal changes, and effective

negotiations that will lead to acceptable benefits for all participants. For this reason, initiatives on the softer-aspects should be initiated and pursued without delay, even though the hard infrastructure is not yet in place. Greater coordination to enhance regional policy and planning to strengthen then the institutional mechanism and creating the enabling environment will be valuable. In parallel, constraints that prevented effective functioning of regional grids in the past need to be systematically dismantled through intra-regional cooperation.

7. **Innovative ways to increase private sector participation and energy financing:**
There is a critical need to increase momentum to fast track private sector engagement, and develop innovative ways for energy financing in Asia. Creating the enabling environment for investment opportunities, capacity building to undertake develop new financing opportunities, and increasing dialogue and knowledge sharing with private sectors may open doors for alternative options. Efficient risk sharing arrangements between public and private sector are also critical, given the massive scale of investments. Further, innovative solutions such as integration of clean development mechanism (CDM) in sub-regional projects can be pursued. An example is the Dagacchu hydropower that was financed by ADB that enhanced capacity building in the Department of Energy (DoE), Bhutan with necessary skills and know-hows to utilize its CDM potential for further projects
8. **Increased investments in adaptation, mitigation, and disaster risk management.**
Regional cooperation is seen to pay more attention to the energy- environment-sustainable growth nexus and their requirements in terms of resource management and environmental planning. GMS shared their experiences in biodiversity conservation corridors, capacity development particularly for climate change mitigation and adaptation, and environmentally-sustainable sectoral development strategies in transport, energy, telecom, tourism, and agriculture for sustainable growth. Strengthened regional cooperation would be crucial towards development of more focused energy policies, harmonizing energy planning with water resource planning, promoting other renewable energy resources and clean development mechanism projects, stronger energy conservation programs, and mainstreaming climate change adaptation policies.