

Pathways to Change in Energy

Background

Energy security is critical for economic growth, human development, and achieving the post-2015 Sustainable Development Goals in South Asian countries. More than one-third of the population are yet to be connected to the electric grid, while many of those connected bear with poor and intermittent supply. In the past couple of decades, energy production and consumption in South Asia has grown and it is set to grow further due to faster rate of population growth, economic growth, urbanisation, industrialisation as well as rural electrification. All South Asian countries, barring Bhutan, depend heavily on conventional sources of energy for electrification. Bangladesh and Nepal fail to fully meet power demands and a considerable share of their demands are met by import of power.

What we found

The subcontinent consumes only four per cent of the total commercial energy produced in the world, which is extremely low for per capita energy consumption. Yet, there is an increasing imbalance between energy demand and supply from indigenous sources resulting in increased import dependence. While South Asian countries pursue their energy policies independently, there has been limited progress on regional energy cooperation. It is expected that the energy deficiency situation can be overcome with regional energy cooperation and through the exploitation of available resources optimally such as river waters from the Indus, Ganges and Brahmaputra, wind energy along coasts, natural gas and other hydrocarbons. The massive potential of hydroelectricity in Nepal and Bhutan can

Instruments of Observation¹

*(Nine locations, Five countries,
Three river basins)*

- Issue specific discussion papers
- Policy specific mapping activity and report
- Policy briefs
- Diagnostic study and report
- Perception survey and report
- Presence in media through articles

serve as a boon to the energy starved population provided there is a policy framework for basin-wide water management and energy cooperation at regional and national levels. Though India has announced an ambitious target of 175 GW installed capacity to be achieved by

1 Details of the instruments of observations can be accessed at: <http://www.cuts-citee.org/SDIP/Outputs.htm>

2022 from the various renewable energy (RE) sources, little has been achieved so far. Despite fossil fuels being a dominant source of energy for agriculture related purposes, successful cases of renewable energy, such as solar and hydro grids, have been recorded for non-farming purposes. Private companies are key suppliers of renewable energy equipment in the Indus basin, and government and non-governmental sources

in the Ganges and Brahmaputra basins. CUTS data shows that community based approaches to promote renewable energy was quite successful across the three basins. Regional forums, preferably an institutional initiative, are required to develop and share renewable energy technology as well as harmonise policy and regulations on technology and trade to meet the energy needs of all South Asian countries.

What we achieved

Since the energy scenario in the five countries presented immense potential in multi-modal energy sources, CUTS work was narrowed down to two main advocacy messages. These messages were formulated keeping the cross-border and within country potential for the energy consumption and use.

| Regional Energy Cooperation | Promoting Renewable Energy |
|--|--|
| <ul style="list-style-type: none"> • Building trust among governments and other important stakeholders through inclusive and sustained dialogues at multiple levels • Some degree of harmonisation in policy and regulatory framework across countries so that domestic power markets can interact; • A dedicated regional agency to steer the dialogue, coordinate the initiatives and thus, maintain an institutional memory of engagements and outcomes • Develop a regional power market, facilitated by a regional power exchange and built on real-time data • Development of adequate generation and transmission infrastructures, catalysing private sector investment capability | <ul style="list-style-type: none"> • Harnessing the RE market in South Asia and facilitating RE technology transfer and trade • Sharing knowledge and experience on various business models for RE deployment • Enabling a discourse on synergising and streamlining of RE policies and regulations, to facilitate private investment in RE in Eastern South Asia |

In South Asia, promoting renewable energy technology transfer, trade and knowledge sharing was a noticeable advocacy message. In addition to these creating avenues for energy cooperation among South Asian countries was also highlighted as a concern. Keeping these advocacy messages in mind, CUTS actively engaged on relevant platforms for promoting the relevant methods.²

² Details of the discussions at the engagement platform can be accessed at: <http://www.cuts-citee.org/SDIP/Advocacy.htm>

| Engagement Platforms | | |
|----------------------|----------------|--|
| Country | Platform Level | Platform Type |
| Bangladesh | Sub-national | 1. Advocacy workshop on energy at Chappainawabganj (Ganges) and Kurigram (Brahmaputra) |
| Bhutan | National | 2. Advocacy workshop on renewable energy at Thimphu |
| | National | 3. Advocacy workshop on Valuing vital resources: a reform approach for pricing of water, energy and food in India at Delhi |
| | Sub-regional | 4. Policy dialogue on renewable energy in North East India at Guwahati |
| | Sub-national | 5. Advocacy event on bankability and scalability of access to clean energy models in off grid and remote villages/hamlets invisible to government at Bodh Gaya |
| | Sub-national | 6. Advocacy meeting on successful business models in solar energy at Guwahati |
| Nepal | National | 7. Media workshop to sensitize media on regional energy cooperation at Kathmandu |
| South Asia | Regional | 8. Regional dialogue on exploring trans-boundary cooperation in agriculture, water and energy |

Insights from engagement platforms

Our field studies have shown that for domestic purposes respondents mostly relied on grid connected electricity whereas for agricultural purposes, use of fossil fuels dominated in South Asia. Insufficient generation, inefficiencies in transmission and distribution, limited private participation and lack of regional cooperation have led to the energy crisis in South Asia. Though grid connection exists between India-Nepal, India-Bangladesh and India-Bhutan, Pakistan is out of the frame. There is a consensus among South Asian countries in the need for energy cooperation, but political will is lacking. Hence it is critical to bring private players, non-state actors, civil society organisations and media on board with policy makers, possibly through different tiers of dialogues to enable trust building. An enabling regulatory environment can attract private investment for developing a regional power grid and market.

With respect to solar based energy solutions, India has comparative advantages in the region and there is great scope for regional cooperation in terms of technology and trade. It was also noticed that there is a widespread dissent towards large hydro projects in North-East India owing to environmental concerns, however people welcome small and mini hydro projects. There is potential synergy between the countries, where India is a manufacturer of the technology and other countries offer a potential market. Moreover, countries, especially India, Nepal and Bangladesh, have significant experience in RE business models, which makes a case for cross-country learning for better and faster deployment of RE. There is a demand for state specific and sector specific policies for RE. Often, after delivery of solar products services are not available. Creating a technically competent workforce and developing a value chain is essential to sustain RE models. Engagement events also highlighted the requirement of a platform for periodic exchange of dialogue amongst the various stakeholders involved in this sector.

What needs to be done

In the context of trans-boundary energy cooperation, the engagement platforms of CUTS discovered clear cut initiatives. For creating effective pathways for change in the energy scenario of South Asia, CUTS has mapped specific outlines.

| Locations | Prospective Pathways | Targeted Change makers |
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| Bangladesh, Bhutan, India, Nepal, Pakistan | 1. Build trust among the governments and relevant stakeholders for regional cooperation <ul style="list-style-type: none"> Organise inclusive and sustained dialogues at multiple levels Capacity building and encourage CSO participation in dialogues Bring the private players on board and build their confidence that their investment is not at risk Engaging media in the process of trust building | CSOs, Ministry of Power |
| Bangladesh, Bhutan, India, Nepal, Pakistan | 2. Promote harmonisation in policy and regulatory framework across the countries <ul style="list-style-type: none"> Prioritise national and sub-national policy and regulatory reforms so that domestic market can interact | Ministry of Power, Ministry of Commerce |
| Bangladesh, Bhutan, India, Nepal, Pakistan | 3. Facilitate setting up a dedicated regional agency to steer the dialogue, coordinate initiatives and maintain an institutional memory of engagements and outcomes <ul style="list-style-type: none"> Conduct coordinated and sustained engagement and initiatives with regional bodies in building a strong and effective regional agency to facilitate regional energy cooperation | SAFIR, SAARC Energy Centre |
| Bangladesh, Bhutan, India, Nepal, Pakistan | 4. Develop a regional power market <ul style="list-style-type: none"> Facilitate regional power exchange built on real-time data Review power generation scheduling and dispatch procedures, energy accounting systems, and financial settlement systems for electricity transactions in individual countries Prioritise the linkage of Bhutan-Bangladesh-India-Nepal given the political relations, resource availability and power demand, and existing bi-lateral initiatives | National Government, CSO, Power Distribution Companies (DISCOMS) |

| Locations | Prospective Pathways | Targeted Change makers |
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| Bangladesh, Bhutan, India, Nepal, Pakistan | 5. Development of adequate generation and transmission infrastructures for private sector investment <ul style="list-style-type: none"> Identify possible cross-border power transmission interconnection scenarios and develop a regional database Assess the technical and economic viability of candidate interconnections Formulate interconnector financing options considering the extent to which public sector financing and multilateral finance can be deployed | Ministry of Power |
| Bangladesh, Bhutan, India, Nepal, Pakistan | 6. Facilitate renewable energy technology transfer and trade <ul style="list-style-type: none"> Organise bilateral meeting with the nodal agencies to test the viability and interest on renewable energy technology transfer and trade | Ministry for Renewable Energy, Solar Energy Corporation of India Limited (SECI) |
| Bangladesh, Bhutan, India, Nepal, Pakistan | 7. Share knowledge and experience on business models for renewable energy deployment <ul style="list-style-type: none"> Produce and disseminate Briefing Papers and case studies on successful business models Organise workshops to bring government representatives and private businesses together to share knowledge on technologies and discuss business models | Ministry for Renewable Energy |
| Bangladesh, Bhutan, India, Nepal, Pakistan | 8. Facilitate a discourse on synergy of renewable energy policies and regulations to facilitate cross-border renewable energy trade <ul style="list-style-type: none"> Organise sub-regional policy dialogues to deliberate on various policies, regulations in North Eastern states of India, Bhutan and Bangladesh, and the need and scope for synergy amongst them Strengthen existing value chain for renewable energy trade and improve linkages between service providers, market players, regulators and consumers | Ministry for Renewable Energy, National Government |

Pathways to Change

