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Promoting Energy Cooperation among South Asian Countries

Executive Statement

Energy security is critical for economic growth, human development and achievement of post-2015 development agenda in the South Asian countries, and the region as a whole. But domestic energy security is almost infeasible for countries without import dependency, and thus, exposing to geopolitical risks. However, these countries have complementarities in electricity demand and resource endowments that can be harnessed to achieve regional energy security. Working towards South Asian energy cooperation requires to take some immediate and priority measures:

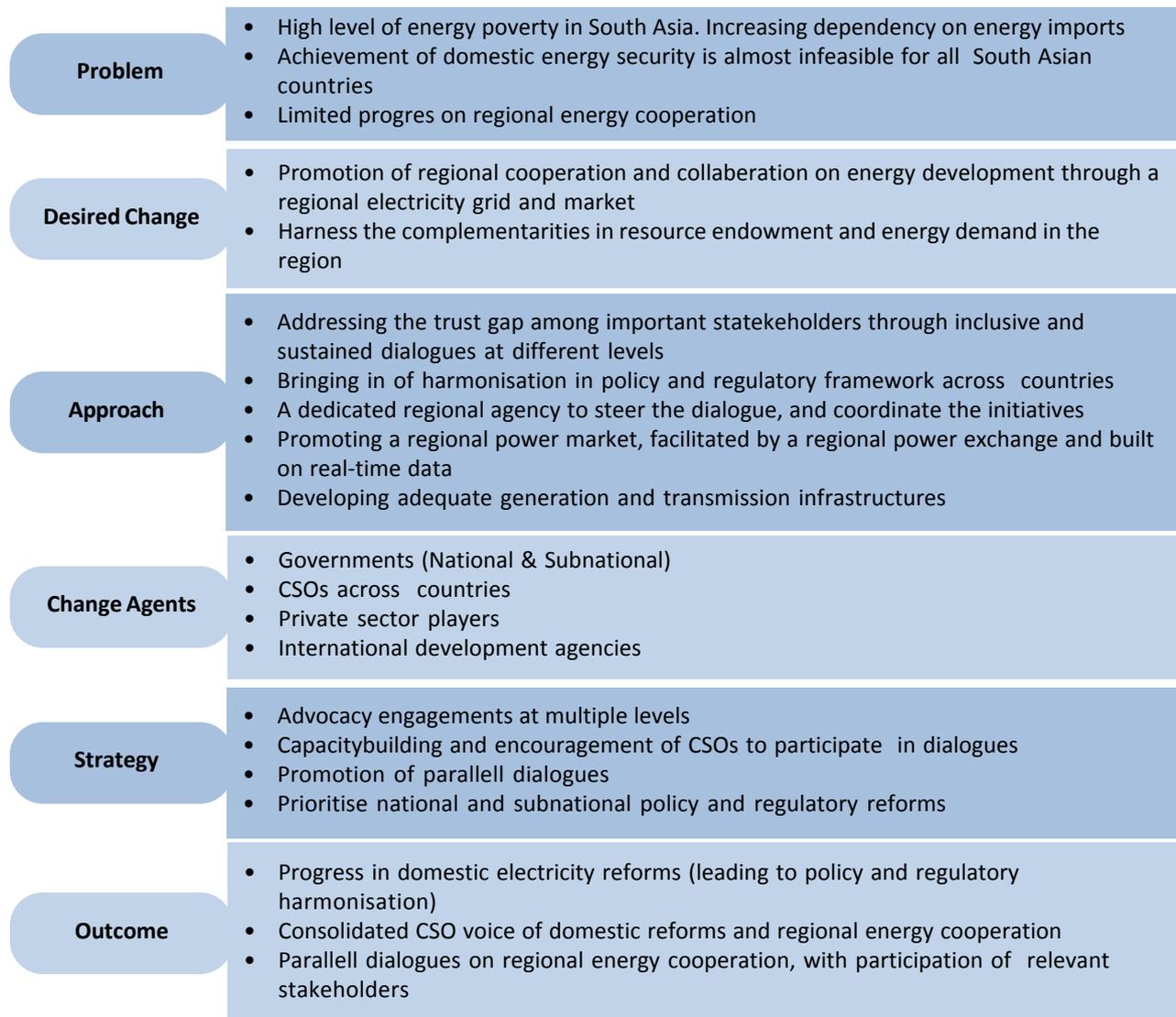
- Building trust among governments and other important stakeholders through inclusive and sustained dialogues at multiple levels;
- Some degree of harmonisation in policy and regulatory framework across countries so that domestic power markets can interact;
- A dedicated regional agency to steer the 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; and
- Development of adequate generation and transmission infrastructures, catalysing private sector investment capability.

Focus Domains of Change

This part of our advocacy will aim to contribute to following domains of change:

- facilitative (SAARC) dialogue on the need for cross-border cooperation on energy/ collaboration (regional and intra-country) on energy options;
- civil society voice for change, reform and standards in energy access; and
- investment climate and enabling (national and subnational) policy and regulatory environment for energy access.

Theory of Change



Context

Housing about a quarter of the global population, South Asia is a hub of energy poverty. 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. The subcontinent consumes only four per cent of the total commercial energy produced in the world, which is extremely low per capita energy consumption. Yet, there is an increasing imbalance between energy demand and its supply from indigenous sources resulting in increased import dependence.

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. In addition to that, these countries are trying to meet ambitious poverty reduction goals while their growing industrial, commercial, and transport sectors and urban and middle-income consumers are using energy at unprecedented rates. To meet the growing demand all the South Asian countries are under immense social and political pressure to secure reliable, sustainable and affordable priced energy supply. Therefore, energy security is a vital socio-economic development issue throughout the region.

The countries in the region are independently pursuing policy options to mitigate energy security risks. However, much more needs to be done to sustainably meet the growing demand for energy to

fuel their economies. 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 in the high Himalayas, wind energy along coasts, natural gas and other hydrocarbons. There are complementarities in electricity demand and resource endowments among these countries due to diversity of primary energy resources and differences in seasonal patterns of supply and demand. Moreover, regional cooperation is expected to bring in economies of scale in investments, consolidate financial situation, enhance competition and efficiency, and enable cost-effective penetration of advanced energy technologies.

At the ground level, there is greater realisation of the energy poverty in the region and the vitality of energy for growth and development. Across the region, energy availability and access seem to have improved in recent two decades, but not at a desired pace to match with the growing demand. At different levels of leadership, as observed by us, there is a growing consensus that regional cooperation would be the economic solution to the energy poverty. There is greater hope on the hydro power potentials in Nepal and Bhutan. Yet, political feasibility of developing these potentials remains a major constraint.

Given its geographic position in the region, India would have a significant role in development of a regional power grid and market. While Bangladesh and Pakistan seek to purchase power directly from Bhutan and Nepal, India has been demanding a greater intermediary role in the process. Subsequently, it has contributed to a trust gap in the process. Even after one and half decades of dialogues, the progress has been minimal, limited to bi-lateral initiatives between India and the neighbours. This may be a building block towards a regional power grid and market, but it is far from the desired level of engagement and cooperation, as yet.

Moreover, pursuing regional energy cooperation in South Asia would require addressing several barriers. While some of these barriers emanate from regional political climate, others arise due to limited scope and extent of national electricity policies and governance. The major barriers to regional energy cooperation, as observed by us, exist mostly at the domestic level. Addressing the following barriers is critical to pursue regional energy security in South Asia, building on the complementarities and cooperation.

- *Insufficient Installation of Generation Capacity:* The pace of growth in generation capacity across the subcontinent has been slow and failed to match the growing demand. As a result, there is a persistent demand-supply gap that resulted in rolling power outages and sluggish grid extension. Even those countries endowed with adequate resources (primary energy sources) have failed to add generation capacity to match their demand.
- *Poor Operational Efficiency:* While performance of generation plants has been low (poor plant load factor), transmission and distribution losses in the region is estimated to be as high as 25 per cent. Subsequently, more than half of the installed capacity is lost to operational inefficiencies.
- *Weak Financial Performance of Utilities:* Owing to the technical and non-technical losses and politically distorted tariffs, most of the electricity utilities in the region are running on a financial loss.
- *Hesitant Private Sector Participation:* Over the last two and half decades, there has been greater emphasis on private sector participation in the sector to maximise investment. However, owing to low financial incentives and political uncertainties, private sector participation has been limited across the region.
- *Limited Power Sector Reforms:* Domestic power sector reforms have an important bearing on the prospects for success in cooperation, cross-border and ultimately regionally. While all the countries in South Asia have restructured their power sector with the objective to improve efficiency and

effectiveness in service delivery, the reforms have been incomplete in most cases and stalled at different levels.

- *Policy, Institutional and Political Barriers:* Lack of confidence and trust across the countries, trade-restrictive policies and challenges in establishing effective regional agencies are other barriers to regional energy cooperation.

Policy Implications & Recommendations

Energy availability and access being a key driver for growth, energy security is an important issue for South Asian countries. Moreover, access to certain amount of modern energy at individual level is crucial for human development and well-being. Effectiveness of other critical services, such as healthcare and education, are also dependent on availability of electricity service. Realising the need and importance, Sustainable Development Goals (SDGs) recognises ‘access to affordable and clean energy’ as a one of the 17 main goals. Domestic energy security in South Asian countries as well as regional energy security will be critical for overall development of the region and for pursuing post-2015 development agenda.

Given the resource scarcity, investment constraints and policy uncertainties in South Asia, individual countries may not achieve domestic energy security on their own. The business as usual model of electrical development will lead to greater dependency on imports and exposure to geo-political risks. The challenges of such an arrangement are already being felt across the region in terms of shortage of primary fuel and price volatility. While overcoming these challenges, effective electricity cooperation in South Asia can play an important role in long-term economic development of the region. To achieve effective regional energy cooperation, we propose following five steps:

- *Building Trust among the Countries and Important Players:* After two decades of efforts to promote regional energy cooperation, there has been some momentum with bilateral initiatives between India and its neighbours. Yet, it is far from germination of a regional power market and trade. While infrastructure and investment issues remain critical, political instability, uncertainties and resulting trust gap remains a major barrier to such a regional power market. So far, the dialogue has been between the policymakers, which has resulted in a consensus on the need for regional cooperation, if not a corresponding political will. For the next phase of engagement, it is critical to bring the other stakeholders on board, possibly through different tiers of dialogues. There is need to bring private players on board and build their confidence that their investment is not at risk. Similar, civil society actors can play an important role in bridging the trust gap, changing the public perception and creating a bottom-up demand for regional energy cooperation. Simultaneously, engaging the non-state actors (NSAs) in the process would help to evade any social resistance to infrastructure development.
- *Harmonisation of Policy & Regulatory Framework:* Partial domestic power sector reforms have stalled electricity policies and regulatory frameworks at different stages in the South Asian countries. Working towards regional energy cooperation, therefore, would require some degree of harmonisation in policy and regulatory framework. Given the momentum with recent developments, it is critical to initiate a new wave of reforms to bring the policy and regulatory framework in harmony, so that the domestic electricity markets can interact. There is a need to promote national and subnational electricity reforms to achieve global standards.
- *A Dedicated Regional Agency:* Uncoordinated engagement between parties tend to be time-taking, and in this case, has failed to achieve a sustained to engagement. While different stakeholders join and work towards to broader goal, there is a need for a dedicated agency to steer the dialogues and initiatives. It is not necessary that a new institution need to be created; existing agencies, like South Asia Forum for Infrastructure Regulation (SAFIR) or South Asian Association for Regional Cooperation (SAARC) Energy Centre, could be assigned with new mandates, additional resources and influence to coordinate and steer the dialogue on regional energy cooperation. Strengthening one of these

agencies to take up the role will facilitate the initiatives being taken by the governments. It is critical to coordinate and sustain the engagement and initiatives, and create an institutional memory that does not erode with political changes.

- **Development of a Regional Power Market:** There is a need to develop a regional power market, facilitated by a regional power exchange and linked to the existing Indian power exchanges. Such a power market needs to be built on and operate on the basis of real-time data than mere assumptions. That will require a review of power generation scheduling and dispatch procedures, energy accounting systems, and financial settlement systems for electricity transactions in the individual countries; and detailing of measures for their harmonisation to allow feasible cross-border power trade. On the other hand, the market need not expand all-at-once and at all levels. Rather it can develop in a somewhat stepped fashion, with greater opportunities for integrating countries with better market reforms and harnessing the existing bilateral relations and energy initiatives. In that context, it appears to prioritise the linkage of Bhutan-Bangladesh-India-Nepal given the political relations, resource availability and power demand, and existing bilateral initiatives.
- **Setting up Energy Trade Infrastructures:** The final step in the direction is putting up adequate infrastructure for power trade. There is a need to identify possible cross-border power transmission interconnection scenarios and development of a regional database required to carry out power system studies capturing economic prices to the extent possible; assess the technical and economic viability of candidate interconnections looking at the power system performance from a 'with and without' interconnection perspective; and formulate interconnector financing options considering the extent to which public sector financing can be deployed and the level and modality of multilateral financing required to catalyse private sector investment.

Change Agents

While the governments need to take the final decision and reach at a consensus to materialise the dream of a regional power grid in South Asia, other change agents are critical to the process and its success. Limited inclusion of these stakeholders can be blamed for this sluggish outcome from two decades of efforts.

Given the limitations of state capacity to meet huge investment needs for development of adequate generation and transmission infrastructure, private sector participation will be critical to development of a regional power grid and market. Their participation, however, will depend on existence of an enabling regulatory framework and confidence that their investments are secure, which, in turn, can only be assured by governments. To build that trust among private sector agents, it is important to make them part of the dialogue.

Regional and multilateral agencies can facilitate harmonisation of policy and regulatory framework across the South Asian countries by bringing in their technical expertise and international experiences on board. At the same time, they are critical to catalyse international private capital required for the physical infrastructure developments.

Civil society agencies can contribute to bridge the trust gap at different levels, while changing the apathetic public perception and also create a bottom up demand and support for regional energy cooperation. This will eventually make it a mass political issue where the public can participate and contribute. Moreover, at a later stage, civil society organisations (CSOs) would play a critical role in mitigating the social oppositions to infrastructure development, while upholding public interest and welfare.

Action Agenda

With the objective to facilitate regional energy cooperation and promote a regional power grid and market in South Asia region, CUTS' action agenda includes:

- Promoting power sector reforms at national and subnational levels, to achieve harmonisation of policy and regulatory framework in the region;
- Sensitising relevant stakeholders and building their trust in the feasibility and significance of regional energy cooperation;
- Sensitising CSOs to have a voice on the matter and thus, create a bottom up pressure and support for the initiative;
- Promoting a parallel dialogue among the NSAs to create a wider support base; and
- Facilitate strengthening of a regional agency to take up the role of steering regional energy cooperation dialogues and initiatives.

Operational Strategy

The first step in pursuance of the above action agenda has already taken by selecting CSOs as strategic partners in eight different locations across the three river basins. All our partners have a network of partners (other CSOs) in their locality. Thus, we are in the process of establishing an informal network of CSOs, which in long run would take up the action agenda.

CUTS has been engaging with domestic agencies (utilities, regulatory commissions, public agencies and governments) in India to pursue power sector reforms. Simultaneously, we have also sensitised our partners and handholding them in pursuing similar advocacy in their locality. In medium run, this is expected to create a bottom up CSO voice and demand for faster power sector reforms and will contribute to harmonisation of policy and regulatory framework in the power sector of South Asia region.

Policy dialogues planned over the next six months, at subnational, national and regional level will bring in the relevant stakeholders in a single forum to deliberate on potentials and constraints of regional energy cooperation, and thus, will lead to a parallel inclusive dialogue. These dialogues will have a greater presence of the NSAs, who are important to create a wider support base for regional power cooperation.

Following the policy dialogues, we aim to hold bilateral meetings with relevant government actors to pursue action on some of the mutually agreed agendas, as decided in the workshops. In each location, these bilateral engagements will be carried out along with our strategic partners, and thus, building their capacity to have a stronger voice and presence in the policy domain.

Finally, CUTS is also actively engaged with the regional agencies. We have been actively participating in SAARC dialogues and represented CSO voice in such meetings. At the same time, CUTS Institute for Regulation & Competition is a member of the steering committee of SAFIR, which is a statutory regional body of predominantly electricity regulators in the region. In the last meeting of SAFIR held in New Delhi in January 2016, we made a presentation on usefulness of Regulatory Impact Assessment for better regulation and are organising a training programme for regulators later in the year. Our engagement with SAFIR is aimed at building a strong and effective regional agency to facilitate regional energy cooperation and we see the potential in the SAFIR.



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