Panel: Sustainable Energy for All (SE4ALL)

*'Energy is the golden thread that connects economic growth, increased social equity, and an environment that allows the world to thrive.'***–** UN Secretary General Ban Ki-moon

In today's age, where energy is the lifeblood of business and industry, growth and prosperity, the fact that, as of 2011, a staggering 21.8% of the world's population did not have access to electricity is appalling (World Bank 2011). The energy deficit and crippling power cuts are stifling growth in many countries. These have hurt production in factories and businesses, causing many enterprises, especially in South Asia to shut down all together (Khadka 2012). Moreover, 'energy poverty' has limited the attainment of the Millennium Development Goals (MDGs) in developing countries, as lack of access to electric power and efficient energy has a substantial impact on economic development, mortality rates, educational opportunities, and the standard of living (Practical Action 2009).

The developed world is also not indifferent to this crisis. Due to shrinking non-renewable energy resources coupled with increasing demand for energy worldwide, advanced economies are also grappling with how to upbeat power production to avert a potential energy crisis.In light of these problems, the United Nations has launched a global effort 'Sustainable Energy for All (SE4ALL)' with the following goals:

1. *'Ensure universal access to modern energy services.*
2. *Double the global rate of improvement in energy efficiency.*
3. *Double the share of renewable energy in the global energy mix'* (SE4ALL n.d.).

Energy Potential in South Asia

Being one of the regions strongly hit by 'energy poverty', SE4ALL can have significant relevance for South Asia where energy deficit has led to detrimental power cuts and load shedding. Moreover, current deficit makes the challenge for meeting increasing energy demands ever more difficult. Pakistan's energy challenges are rising with demand expected to grow to 50,000MW by 2030 (Khadka 2012). This is almost twice its total generation capacity which stood at 24,000 MW in 2013 (Khattak 2013).

One means through which South Asia can cater for this increasing demand is to develop its renewable energy resources as there is great potential. Nepal alone has a hydropower potential above 50,000 MW, whereas its actual electricity generation from hydropower (as of 2014) has been limited to only 800 MW (IFC WB n.d.). According to the Central Electricity Authority in India, there is immense potential for hydroelectric-power in India. In an assessment carried out during 1978-87, the hydro-electric economic potential stood at 84,044MW with 60% load factor (NIH n.d). Additionally, the potential for utilisation of wind energy for electricity generation is 102 GW, while the current (March 2014) installed capacity is a mere 21,141.36 MW (InWEA n.d.). The share of solar power in the energy mix was only 9MW in 2010 even though there is an estimated potential of 50,000 MW (Sargsyan et al. 2011). Bhutan and Myanmar also have a hydropower potential of 30,000 MW each (Khadka 2012). Pakistan also has much to contribute as it has a wind power potential of more than 50,000 MW in the provinces of Sindh and Balochistan alone.

Secondly, South Asia should reduce its dependence on fossil fuel imports and promote self-sufficiency in the region as a whole. 'Single fuel dominance' can be seen across many South Asian countries, such as Afghanistan (78%-Oil), Maldives (100%-Oil), Nepal (67%-Oil), Sri Lanka (79%-Oil), Bhutan (50%-Hydropower), and Bangladesh (74%-Natural Gas) (Iqbal and Tabish 2012, p. 7-8).

Given the potential for hydroelectric, wind and solar power, the energy mix needs to be diversified to increase the share of renewable sources. Furthermore, modern energy services and equipment is required to utilise and improve quality of the substantial coal resources available in India and Pakistan which have been widely untapped. The availability of unexploited resources, such as coal, is a prospective solution to match the growth in demand in South Asia in the years to come.

There are also significant losses due to inefficiencies. In Pakistan, transmission losses were as high as 17% of total output in 2011, 8.8% points higher than the world average for that year. In India, transmission losses were greater and stood at 21.1% in 2011 (World Bank n.d.). Given that the total installed capacity in South Asia falls short of demand, much needs to be done to improve efficiency with which energy is transmitted and dispatched.

SE4ALL: Road Map for the Future

With its vast renewable energy potential- hydro, solar, and wind power- and untapped coal reserves, regional trade and cooperation stand as a solution to meeting growing energy demand and reducing dependence on oil. Unfortunately, the idea of combining and sharing resources has not gained much support in the region. The struggles for such initiatives have been slow, mainly because of lack of developed infrastructure such as cross-border transmission lines, and also because of geopolitics. Furthermore, neighbouring countries often do not trust one another. The history of relations between India and Pakistan is a case in point.

Given the current dismal scenario, South Asia needs a nudge in the right direction. Championing SE4ALL can provide a road map for the region to work towards reducing rampant 'energy poverty', curbing transmission and production losses, and diversifying the energy mix. All these factors will help supply meet demand, and reduce energy shortfall in the future.

Bearing this in mind, the Sustainable Development Policy Institute (SDPI) is conducting further research on potential solutions for the electric-power crisis and how SE4ALL can achieve its goals in South Asia. The think-tank's report, which will be presented before a panel, will explore the feasibility of backing the cause of SE4ALL at the regional level.

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