



**Intra SAARC Energy Grid and Intra SAARC Trading in  
Energy**

**Project in South Asia**

**A**

**Under the Infrastructure Window of SAARC  
Development Fund**

**Thematic Concept Note**

## **I. Title of the theme**

**Intra SAARC Energy Grid and Intra SAARC Trading in Energy:** Co-financing of cross border energy projects in SAARC Member states thereby facilitating development of intra SAARC Energy Grid and facilitating intra SAARC trade in energy sector.

## **II. Overview of the theme**

The theme shall predominantly capture the overview of the energy sector in South Asia and bring out potential opportunities of co-financing cross border energy projects in the region. The theme is intended to highlight the opportunities to facilitate intra SAARC trading in energy sector.

## **III. Rationale of the theme**

The SAARC region is home to 23% of the total world population, and a large proportion of the population is living below the poverty line. There is a wide variation in the energy resource endowments among the SAARC Member States, particularly Energy Trade in South Asia in relation to hydropower, natural gas, and coal resources. The SAARC region is well endowed in other renewable energy sources such as biomass, wind, and solar with biomass meeting a large portion of household energy demand across the region. The energy demand in the region is expected to grow at an annual rate of 5%, with the household and industry sectors as main contributors. Key challenges faced by the energy sector include increasing energy deficits, single fuel dominance in the energy mix, rising import dependence, and lack of requisite energy infrastructure. Augmenting the energy supply and diversifying the fuel basket requires inter- and intra-regional energy trade.

## **IV. Background Information**

South Asian Association for Regional Cooperation (SAARC) was formed in 1985. The agreement for a South Asian Free Trade Area (SAFTA) was signed in 2004. The South Asia Regional Energy Coalition (SAREC) was formed in 2006 to promote advocacy initiatives by leading policy-oriented business associations in South Asia. The SAARC Energy Centre (SEC) was established in 2006 as a Special Purpose Vehicle (SPV) with its base in Islamabad, Pakistan to work on regional energy sector cooperation in South Asia. SAARC Development Fund was established in 2010 as an umbrella financial institution to finance projects and programs in South Asia.

In 2014, a Framework Agreement for regional cooperation in electricity was formed amongst the SAARC Member States. The agreement contains broad provisions for the establishment of a regional electricity market, nondiscriminatory access to transmission, market driven pricing of electricity and establishment of a body for coordinating regional power integration and trade.

#### **V. Current Intra-Regional Energy Trade**

The existing intra-regional energy trade among SAARC Member States is limited to electricity trade between India and Bhutan, and India and Nepal, and trade in petroleum products between India and Bangladesh, Bhutan, Nepal, and Sri Lanka. While the electricity traded is based on indigenous hydropower resources, the petroleum trade is based on India importing and refining crude oil and exporting petroleum products to Bhutan, Nepal, and Sri Lanka. India is also exporting diesel to Bangladesh.

#### **VI. Current Scenario under Energy Cooperation in South Asia**

Bilateral arrangements for power transmission and trade currently exist in the region. Bilateral generation and transmission arrangements between Nepal-India, India-Bhutan and recently India-Bangladesh are examples of regional electricity cooperation in South Asia.

#### **VII. Power Consumption Scenario in South Asia**

Power consumption varies significantly across South Asia with the region as a whole having per capita power consumption of 707 kWh in comparison to the world average of 3125 kWh. Further South Asia has 706 million people without electricity out of 1.6 billion people globally.

#### **VIII. Access to Electricity – Instrumental in Regional Integration and Cooperation**

Electricity is critical to the socioeconomic development of any country. The availability of reliable and quality power at competitive rates is imperative for a competitive industry. It is also a critical input to development and sustenance of various infrastructure and its services. Regional trade in electricity will boost the economic connectivity in the region and would be instrumental in meeting the objectives of regional integration and cooperation in the region.

#### **IX. Current and Proposed Interregional Energy Trade**

The current interregional energy trade between South Asia and other regions includes petroleum, coal, and limited electricity. The interregional electricity trade is limited to Afghanistan importing power from central Asian republics (CARs) and Pakistan from Iran. But the volume of this trade is insignificant in comparison to its potential and is constrained by the infrastructure available. In the meantime work on the Central Asia–South Asia (CASA) 1000 power link, the Iran–Pakistan–India (IPI) natural gas pipeline and the Turkmenistan–Afghanistan–Pakistan–India (TAPI) natural gas pipeline have also progressed significantly.

#### **X. SAARC Development Goals in line with Sustainable Development Goals**

SAARC Development Goals are in harmony with UN Sustainable Development Goals. Development of Cross Border Regional Infrastructure in SAARC region will ultimately

achieve the larger mandate of Livelihood, Health, Education and Environment Sustainable Development Goals.

## XI. Additional Energy Trade Options

**Regional Power Market:** An option available for the region to reduce electricity shortages is to promote enhanced electricity trade in any surpluses. The current initiatives and existing and proposed bilateral trading arrangements provide an ideal environment for a regional power market. The present bilateral trade arrangements can graduate to multilateral trade arrangements. The interconnections necessary to expand the regional power market would need to be established in a phased manner.

**Regional Refinery:** Although there would be an increase in the demand for petroleum products, opportunities for refinery capacity expansion in the region are limited. Given this background, interested SAARC Member States could consider cooperating to set up a state-of-the-art large scale regional refinery, with adequate flexibility to accommodate a range of crude oils, to meet the petroleum products demand of the region. This will allow SMSs to benefit from economies of scale in refinery operations as well as in crude oil procurement.

**Regional Liquefied Natural Gas Terminal:** In the context of energy security concerns and the need to use cleaner forms of energy, there has been an increased focus on natural gas to augment energy supplies. Given that India is already a liquefied natural gas (LNG) importing country, and that Bangladesh and Pakistan are also considering LNG imports, the region could benefit from embarking on a bulk regional LNG terminal to capture the benefits of economies of scale from terminal size and bulk LNG procurement. Development of the incremental natural gas distribution infrastructure needed would be a parallel requirement. The ownership and financing of the LNG terminal can be appropriately structured as a joint venture of the interested SAARC Member States and the private sector.

**Regional Power Plant:** Part of this LNG-based power generation presently being considered by India could be in the form of a bulk regional power plant invested in by interested SMSs, with adequate power interconnections. This would bring the benefits of economies of scale in power plant operations and in natural gas procurement, preferably through the proposed regional LNG terminal. Imported coal-based mega power generating plants of the order of 4000 MW can also yield similar economies of scale, and one or more could be considered for development as a regional power plant.

**Nonconventional Renewable Energy:** The SAARC Member States are in the process of strengthening institutional arrangements, including tariff setting and technological innovations, to vigorously pursue nonconventional renewable energy (NCRE) utilization. These best practices of NCRE deployment can be shared among the SMSs and cross-border private sector investment in NCRE can be encouraged.

## XII. Way Forward

SAARC Development Fund proposes to form a **Project Development and Working Group (PDWG)** among all the potential Multilateral Development Banks, Regional Financial Institutions, Infrastructure Financing Agencies and various Commercial Banks to work together with Governments of SAARC Member States and Private sector to develop cooperation in intra SAARC energy trade in SAARC Member States.

## XIII. Contact

Chief Executive Officer at [ceo@sdfsec.org](mailto:ceo@sdfsec.org)

Director, Economic and Infrastructure Windows at [rajeev@sdfsec.org](mailto:rajeev@sdfsec.org)

Assistant Director, Economic and Infrastructure Windows at [zeeshan@sdfsec.org](mailto:zeeshan@sdfsec.org)

**SAARC Development Fund, III Floor, BDBL Building, Norzin Lam, Post Box No 928,  
Thimphu, Bhutan, Ph No: +975-2-321152/53**