

BAPA-BEN Annual Conference 2022
Energy, Climate Change, and Sustainable Development
11-12 February, 2022
Mode: Hybrid
(Virtual and In-person)

Background and Goal

Use of energy is fundamental to the economic development of a country. The per capita energy use is an important indicator of the material standard of living of a country. However, the choice of energy mix has important consequences. Whereas fossil fuels, such as coal, are both non-renewable and generate high volumes of GHG and other pollutants, the use of renewable energy sources such as solar, wind, and biogas generate much less GHG and create less pollution. Hence, availability of energy sources cannot be the only criterion in choosing the energy mix. Important considerations have to be given to other impacts, including those on climate change, climate migration, and other goals of sustainable development. These considerations have become more important, in view of the global climate goals and the 2030 Agenda for sustainable development, especially for Goal 7: Affordable and Clean Energy and Goal 13: Climate Action.

The energy sector of Bangladesh has witnessed significant growth in recent decades. The electricity generation capacity of the country has increased markedly. The old problem of electricity deficit has been overcome. However, many new problems have arisen, which need to be addressed to move forward. The 2022 annual BAPA-BEN conference -- to be held in cooperation with other pro-environment universities, organizations, and institutions -- will address challenges and opportunities of the new phase of energy development that Bangladesh has now entered.

New Phase of Energy Development in Bangladesh-Key Issues

As the energy scene in Bangladesh evolves, the following issues demand our attention:

1) *Energy-mix*: The energy Master Plan that the government prepared in the late 1990s put emphasis on the use of coal. In the course of several revisions of this plan in the subsequent years, the coal-dependence has been reduced. Meanwhile, the role of imported gas (in the form of liquefied natural gas – LNG) is increasing rapidly. In addition, construction of the country's first nuclear power plant at Ruppoor is moving ahead, and the government has announced the goal of setting up another nuclear power plant, to be constructed along the coast. The role of renewables needs to be carefully examined. Whether the energy-mix that Bangladesh is heading towards is the optimal one is an important issue for discussion.

2) *Matching energy supply with demand*: According to recent studies, it appears that about one-third of the country's electricity generation capacity now remains unutilized due to the lack of demand. Much of this excess capacity is in the public sector. Even the excess capacity in the private sector enjoys purchase guarantee from the government, so that the nation is incurring large amounts of financial loss due to excess capacity. The conference will discuss how this situation can be resolved and a better match between supply and demand of electricity can be ensured.

3) *Foreign vs. domestic*: The relative role of foreign vs. domestic sources of energy is an important issue. There are allegations that there is more enthusiasm in importing gas from abroad than on conducting exploration and production of gas from domestic sources – either on-shore or offshore. Similarly, there are questions about the role of foreign vs. domestic companies in the generation of electricity, and on the role of foreign entities/experts preparing the country's energy strategies and recommending solutions and policies, and related conflict of interest aspects. These issues deserve to be examined.

4) *Private vs. public*: There are issues concerning the relative roles of public and private sectors in the overall energy sector. Over time the role of the private sector has increased. However, there are allegations that the purchase guarantees -- under which the private companies are expanding their role -- are allowing them to earn huge profits without assuming any risk and often without producing any electricity (because of the lack of demand). How a more efficient division of role of the public and private sectors can be achieved in the energy sector is therefore an important issue.

5) *Issue of scale and size*: Energy supply and electricity generation can be carried out in very different sizes and scales. The capacity of electricity generation plants is ranging from several thousand MW to several hundred and down to a few MW (as in case of individual solar farms and wind turbines). Each of these have their respective merits and demerits. Whether Bangladesh is achieving the right mix of size is a question that requires investigation.

6) *Issue of location*: The location of energy extraction and electricity production facilities is another important issue. In particular, the electricity plants may be located in the coastal areas and they may also be located deep inside the country. Each type of location has its merits and demerits. Whether Bangladesh is achieving the right mix in terms of location is another issue to be examined.

7) *Optimal mode of distribution and delivery*: Energy can be delivered to consumers through alternative means. There are pros and cons with each of them. Whether or not Bangladesh is proceeding towards an optimal mix of the modes of delivery is an important question to be investigated.

8) *Financial sustainability*: The excess capacity is already causing a considerable drain on the government budget (see issue 2 above). There are questions regarding the potential cost of many power plants, in particular the Ruppoor nuclear power plant. These plants, financed by foreign commercial loans, are creating large financial obligations for the country. A second nuclear powerplant, with a similar inflated budget, and other large power plants will only add to the financial burden, particularly if large part of the capacity remains unutilized. Thus, there is a serious question of financial sustainability of the energy and power production strategy that needs to be addressed.

9) *Environmental sustainability*: Whether or not the current energy strategy is environmentally sustainable is an important issue. This is in view of the fact that fossil fuels, in particular, coal continue to hold an important place in this strategy and some of the coal plants are located in environmentally critical areas, such as the Rampal plant near the Sundarbans. The issue of environmental sustainability has acquired added significance in view of the COP-26.

10) *Level of risk*: Whether the level of risk that the current energy strategy is imposing on the people of Bangladesh is exceeding the safe level is another important issue. Following the Fukushima disaster, the safety of nuclear power plants had been called into new questions. In this background, the emphasis on nuclear power generation in such a highly densely populated country as Bangladesh is a question that deserves more discussion.

11) *Future of traditional fuels*: Traditional fuels still play an important role in Bangladesh, particularly in the villages. There are efforts underway toward introduction of new stoves to reduce indoor air pollution that result from use of traditional fuels in traditional stoves. Whether to encourage these efforts or to strive to end the use of traditional fuels soon is another issue that requires consideration.

Call for Papers

Papers are called for presentation at the 2022 BAPA-BEN conference on “Energy, Climate Change, and Sustainable Development.” Based on the issues noted in the section above, the topics on which papers are listed below:

Topics of paper

- i. Energy mix including renewables
- ii. Matching energy supply with demand
- iii. Relative role of foreign vs. domestic sources, and of actors in energy supply

- and electricity production, technology and policy recommendations.
- iv. Relative role of public and private sectors in supply of energy and generation of electricity generation
 - v. Optimal size of energy supply and electricity generation plants
 - vi. Optimal spatial distribution of energy supply and electricity generation
 - vii. Optimal delivery of energy
 - viii. Financial sustainability of the energy strategy including investment in engineering, procurement, and construction (EPC) with transparency
 - ix. Environmental sustainability and social justice aspects of the energy strategy
 - x. Risk levels of energy options-safety, security, environment- and regulatory regimes
 - xi. Future of traditional fuels
 - xii. Other related issues: climate change; sustainable development; Water-energy-food-climate nexus

Paper Submission Timeline and Specification:

January 20 : Full paper (maximum 7,000 words with an abstract of 300 words) in MS WORD: See BAPA-BEN Conference-2022 Paper Guideline

Paper Submission Addresses:

BAPA Vice-President Prof. Feroze Ahmed and BEN Energy Panel Chair Dr. Ahmed Badruzzaman have agreed to serve as the co-chairs of the Expert Sessions Sub-committee of this conference.

Authors **living in Bangladesh** are requested to send their papers via email to Prof. Feroze Ahmed at ferozeahmed45@gmail.com with copy to M S Siddiqui, Member Secretary of the Expert Sessions Sub-committee, at mssiddiqui2035@gmail.com

Authors **living abroad** are requested to send their papers via email to Dr. Ahmed Badruzzaman at ahmed.badruzzaman@berkeley.edu with copy to M S Siddiqui, Member Secretary of the Expert Sessions Sub-committee, at mssiddiqui2035@gmail.com

The Committee expects papers with substantiated data, verifiable claims and appropriate citations. All authors are requested to adhere to the format specified in BAPA-BEN Annual Conference-2022 Paper Guideline.



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Conference Organizing Committee

Chairperson Sultana Kamal	Co-Chairperson Nazrul Islam	Member Secretary Sharif Jamil
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Make the Conference a Success!


Correct energy policies have a crucial role in the development and protection of environment of the country. Join the BAPA-BEN conference on energy to help Bangladesh adopt and implement a pro-people and pro-environment energy policy!


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