

Renewable Energy; Securing the Present and the Future of Sri Lanka

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Today, Sri Lanka is in the face of a burning economic crisis. This major crack in the economy has led to serious national security concerns including the energy sector. With the disruption of day-to-day lives of people, the energy insecurity has imposed threats to other sectors such as education, health, transportation, food etc. With these issues, Sri Lanka needs to understand the importance of the renewable energy transition and the capacity building.

Sri Lankan energy supply is dominated by three major components; 41% by petrol, 46% by biomass and 13% by electricity. Although the energy produced by electricity is low, it is counted as the most impactful component, since it is strongly intertwined with the daily lives of the people. In Sri Lanka, electricity is generated using three primary sources: thermal power (which includes coal and fuel oil), hydropower, and other non-conventional renewable energy sources (solar power and wind power). The usage of coal and oil in thermal power generation has faced a huge crisis, because the economic crisis has disrupted the import of these components. The significance of renewable energy for the present and future of Sri Lanka has been unveiled with these developments.

Entwining of Energy Security and National Security

Energy becomes a national security issue when energy insecurity affects a country's governing policies and the security of the people. Current energy crisis has directly affected the day-to-day lives of the citizens. Revealing the seriousness of the situation, the country is facing electricity cuts, and long petrol and diesel queues in gas stations have become a common sight. Gas shortage has closed down a large number of restaurants thus far. The tourism sector had a mini-boom in the beginning of February 2022, but yet again severely affected due to the power outages. Hospitals are facing a critical situation and online education has been hampered. It is obvious that the security threat posed by the energy insecurity has spilled over to transportation, health, food, education and many other sectors creating a detrimental effect.

The international factors like, the dependency of oil from the international market imposes national security threats on Sri Lanka. The reliance on the production and transportation of fossil fuels creates national vulnerabilities since the importing country can be influenced by the regulations made by the exporting countries. Not to mention, burning fossil fuels contributes to climate change; yet another aspect of national security. These factors have revealed the importance of moving towards renewable energy, rather than surviving on coal & oil for energy production.

Sri Lanka and Renewable Energy Policies

The government has given prominence to the renewable energy sector through the current policies. The plan is to increase the power generation capacity of the country from the existing 4,043 megawatts (MW) to 6,900 MW by 2025 with a significant increase in renewable energy. The government is striving to increase the contribution of renewable energy to 70% to the national grid by the year 2030, which is a

very effective target. Sri Lanka has already achieved a grid connectivity of 98 percent, which is relatively high by South Asian standards.

Hydropower in the country has almost reached its capacity and produces a fluctuating amount of energy due to less predictable weather patterns. As a result, the authorities have plans to add additional renewable and non-renewable power plants over the next 10 years. The construction of a liquefied natural gas (LNG) plant was initiated in 2021 in Kerawalapitiya, identifying the increasing energy need.

Among the renewable energy projects, 'Soorya Bala Sangramaya' is one of the most efficient one that take solar power into the public domain. Making awareness on solar energy, empowering houses, religious places, factories, tourist hotels and other infrastructure, providing relevant technology is done under this program. On a different note, Sri Lanka's first large scale Wind Farm in Mannar which is expected to generate 400 GWh of electricity annually is a huge achievement by the authorities, motivating the renewable power generation.

Way Forward

In the near future, gradual depletion of oil and coal will disable the thermal power generation. Also, depending on fossil fuels make Sri Lanka's foreign expenditure increase, impacting on the economic security. Therein, development of other energy sources must be improved and the capacity of renewable power sectors must be increased. Since the establishment of the Norochcholai power plant in 2013, there were no other power plants established which could generate a considerable amount of electricity to the national grid. Currently Sri Lanka is experiencing the repercussions of it. Hence, it is vital to invest in advanced renewable energy power plants to safeguard the energy security of the country.

Contribution of people equally matters in this transformation to renewable energy. The government must educate the people on the advantages and the benefits of the transformation. Encouraging people to individually move on to renewable sources like solar energy must be done and in doing so the government must give the proper assistance, guidance and concessions. Further, diversifying our energy sources on a national level will be a good move to counter future threats and will help in insulating from supply shocks. Sri Lanka being an island nation, the potential of tidal power generation must be taken into consideration. More research and development must take place to identify the potential of it. On a concluding remark the current developments clearly denote that the future of power generation lies in the context of renewable energy. Therefore, it is crucial to address energy security in the context of renewable energy to ensure national security in the country.