

Policy Note 2

An Economy Driven by Renewable Energy



Maldives
Partnership
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Investing in a Resilient & Sustainable Maldives

Transitioning into a competitive, low-carbon, climate-resilient and environmentally sustainable economy, in accordance with the 2030 Agenda for Sustainable Development, is a key priority of the Government of Maldives. Implementation of this policy will help to attract Foreign Direct Investments (FDI), enable healthier lifestyles, and provide greener credentials for the country's exports. It is with this rationale that the Government has identified the development of affordable, cleaner, and renewable energy solutions as a strategic investment priority.

The Maldives relies primarily on imported fossil fuels to meet its energy needs. Energy security is critical for the Maldives as it affects the country's social and economic development. The Maldives enjoys universal access to electricity and has the highest cost of electricity generation in the whole of South Asia. Maldives spends about 10% of its GDP on importing fossil fuel. Electricity generation and transport are the main sectors with the highest consumption of these imports.

The pristine natural landscape of the islands has made the country a top tourist destination. Tourism is the single biggest contributor to the country's GDP and also the single most energy intensive industry in the economy. Under the Nationally Determined Contributions (NDC) submitted as part of the Paris Agreement, Maldives commits to reducing its greenhouse gas emissions by 10% unconditionally and by 24% provided that Maldives receives adequate climate financing. As the tourism sector has the highest consumption of energy, it has a major share in the generation of national greenhouse gas emissions and power consumption. In order to achieve the national emissions reduction target and to reduce national expenditure on the purchase of diesel, Government needs to introduce policies and measures to reduce emissions in the tourism sector, and other energy intensive sectors such as construction and fisheries.

The Government of Maldives recognises the importance of adequate energy supplies to deliver essential services, food security, social protection to stimulate economic growth, and as such strives to diversify its energy supplies. The dependence on imported fossil fuels puts the country at risk to external factors such as natural disasters and geopolitical tensions. Fluctuations in international energy prices can be impediments to energy security.

This brief highlights the challenges faced in energy security, and the shift to renewable energy, as well as the required policy interventions in transitioning the Maldives to a low-carbon economy that mitigates the demand for fossil fuels.

Challenges

High Dependence on Fossil Fuel Imports:

The Maldives is almost exclusively dependent on fossil fuels to meet its energy demands. The lack of indigenous petroleum, diesel, coal and gas reserves has meant that the steady supply of fossil fuels has become strategically important for continued economic growth. However, this makes the country extremely vulnerable to fluctuations in international fossil fuel prices. Moreover, the Maldives is also highly

dependent on fossil fuels for inter-island transportation. Since solar energy is the most viable form of renewable energy in the Maldives, to reduce this fossil fuel dependence, it has to be commercially harnessed on a larger scale and integrated into the energy grid.

Dispersed Population:

Land is an extremely scarce resource in the Maldives. The country is made up of 26 natural atolls stretching 115,300 km² North to South across the equator and has only an approximate land area of 300 km². Of the total 1192 islands, 194 are inhabited. The Greater Male' region and Addu City account for a majority of the population while the rest is scattered across the country. The dispersed population results in a high cost of service delivery.

Space Constraints:

Limited spaces available for infrastructure tends to limit energy production especially in islands with dense populations. Deploying renewable energy technology such as Solar Photovoltaic (PV) requires significantly large spaces. While rooftops are now being used, efficient use of land and lagoons are needed.

Weak Regulatory Framework and Capacity Constraints:

Weak regulatory framework and capacity constraints has hindered progress of this sector and requires urgent attention. Without the necessary training and technical support, existing national institutions face significant challenges in achieving the transformation into a renewable energy driven economy. In addition to the lack of institutional capacity, the energy sector's regulatory framework needs to be strengthened and enforced in order to ensure energy security and safety.

Constraints in Financing:

Limited investments in the energy sector remains a key challenge in meeting the target for renewable energy generation and improving the efficiency of power systems. Cash flow generation within utilities remains an issue as changing input prices are not fully recovered through approved tariffs and surcharges. There is an urgent need for additional co-financing and increased private sector investments.

Low Energy Efficiency:

The lack of standards and measures for public buildings and equipment along with inadequate upgrades for generators has resulted in low levels of energy efficiency. While the dispersed population increases the cost of providing electrical services and achieving economies of scale, utilities fail to address the high variability in fuel conversion efficiency and distribution loss levels amongst islands.

Barriers to Renewable Energy Investment:

The dominance of fossil fuels in the Maldivian economy has meant that there are barriers to investment in renewable energy. These include (i) gaps in the legal framework such as adequate feeding tariff and net metering systems, (ii) ambiguous roles of different agencies in renewable energy development, (iii) absence of standardised instruments to support investments, and (iv) the lack of availability of

capital-linked to investment risk perceptions.

Lack of Knowledge and Awareness:

Knowledge and awareness on island-specific renewable energy resources remains low. Knowledge on renewable energy technology is confined to solar and wind energy, although the Maldives has not fully explored its potential on a broader scale. Electricity demand is projected to grow at approximately 10% per year while renewable energy in the Maldives only amounts up to approximately 2.7% of the country's energy supply.

Policy Interventions

Expand and develop the renewable energy sector:

Reducing the dependency on fossil fuels while simultaneously ensuring the energy security is a major challenge in the energy sector. The environmental vulnerabilities and the geography of the Maldives necessitate that sustainable energy policies and programmes be uniquely designed and customized to address specific needs and available resources.

Key initiatives under this goal include, promoting renewable energy technologies and establishing a mechanism by which renewable energy can be fed into the main power grid. This will help reduce wasteful expenditure on fuel and help enhance efficiency of utility services at island level.

Remove Barriers to Investment in Renewable Energy Sector:

As mentioned in the previous section, currently, there are multiple barriers to investment in the renewable energy sector.

However, the Government recognises the importance of creating a conducive environment for development of clean energy, which includes innovative approaches to financing renewable energy options and designating the right market signals to encourage investment in the renewable energy sector.

Strengthen institutional and regulatory framework:

As outlined, in order to expand and develop the renewable energy sector, the institutional and regulatory framework needs to be addressed.

Key initiatives under this goal include, developing human resources capacity of regulatory and service providers, and developing and updating the regulatory framework to reflect a transparent and fair environment that alleviates barriers and strikes a balance between service providers and consumers.

Promote Energy Conservation and Efficiency to Reduce Expenditure on Energy

Government aims to promote energy conservation and efficiency by increasing the operational performance of utility service providers and increasing the quality of energy services.

In line with this, Government aims to conduct energy efficiency audits for power houses in islands and take measures to reduce wastage of energy and enhance the operational performance to manage the electric power infrastructure. Additionally, Government also hopes to develop and enforce standards for transport sector to use clean energy and switch to low carbon resilient transportation options.