

**“Transforming Tamil Nadu to a Green Energy State”**

Energy is the lifeblood of economy as it has an immense implication not only on business but also promotes socio-economic development. **Tamil Nadu is a pioneer in supply 24x7 power to all sectors.** The **State’s average power demand is about 14,500 MW to 15,500 MW** and is met by diversified electricity generation portfolio with an installed capacity of 31894 MW including renewable energy. Though conventional sources of energy are necessary to meet out the rising demand, they have an intimidating shadow on our **future energy security, environment, health and society.** Understanding this, the **Government of Tamil Nadu has taken various steps to promote renewable energy on a larger scale as Tamil Nadu** is also a pioneer State in renewable energy generation in India with an installed capacity of 15,779 MW.

Renewable energy sources are essential in view of the depleting nature of conventional energy resources. In this context, a workshop on **“Enhancing Renewable Energy and Adoption of Clean Energy Technology”** was held under the Chairmanship of **Thiru C. Ponnaiyan, Hon’ble Vice Chairman, State Development Policy Council (SDPC)** (erstwhile State Planning Commission), Tamil Nadu on 12<sup>th</sup> November 2020 with stakeholder departments and domain experts at the HDV Conference Hall, Ezhilagam, Chennai -5.

**Fast Emerging Renewable Hybrid**

Thiru C. Ponnaiyan stated that Tamil Nadu, being a State rich in solar and wind energy potential, policies have been formulated to harness more renewable energy. **Tamil Nadu Solar Policy 2019** launched by Hon’ble Chief Minister has immense growth prospects including reduction of fossil fuel dependence and greenhouse gas emission and **aims to achieve the target of 9,000 MW** of installed solar capacity by 2023. As on August 2020 installed capacity of Solar Energy is 4194 MW. In respect of **wind energy, Tamil Nadu continues to stand first across the country** with highest installed capacity of 8507 MW.

To harness both solar and wind energy, wind-solar hybrid is a viable renewable system due to the high potential of both wind and solar resources in Tamil Nadu. As both solar radiation and wind speed vary throughout the year, wind-solar hybrid power system can overcome the intermittent power supply. The solar wind hybrid systems work best in industrial-commercial situations and could be used for charging batteries and with the use of inverter and AC appliances.

It is suggested that a **new Wind-Solar Hybrid Policy or a Comprehensive Renewable Energy Policy** need to be introduced with various waivers and incentives to support developers and build renewable energy farms to cater to the consumer's demand in the long run.

**Floating Solar Plants:** As the State has large number of water bodies like reservoirs, lakes, ponds etc., initiatives may be taken up to **encourage Floating Solar Projects to tap Solar Energy.**

**Off Shore Wind Energy:** In addition to the on shore wind projects, establishment of off shore wind projects are to be explored **to harness more wind energy for power generation.**

### **Solution to Greenhouse Gas Emission**

The State and Central Governments are investing lot of funds in fossil fuel which is very costly and also the **coal is in depleted stage and causes** pollution to the environment. In view of this **tapping of renewable energy is the ultimate solution** which will help to minimise fossil fuel to reduce greenhouse emissions and also help to meet the energy demand as well as reduce huge loss met by State Electricity Board. To overcome air pollution and safeguard the environment, **Thiru C. Ponnaiyan highlighted "Tamil Nadu Electric Vehicle Policy 2019"** released by the Hon'ble Chief Minister of Tamil Nadu with the objective **to promote electric mobility in a big way** which would contribute to the growth of non-fossil fuel energy. Efforts are persistently being put into harness solar energy for energy storage and infrastructure with the use of clean energy technologies.

## **Cost-effective Technology**

**Cost effective technology has to be evolved** for Tamil Nadu to tap solar energy as done in western countries. As the initial cost for renewable energy is very high, **more incentives should be given to solar and wind energy** producers so as to motivate new producers for renewable as well as encourage domestic consumers for **adoption to green and clean energy**.

The Hon'ble Vice Chairman emphasized latest high-tech to be introduced in wind energy generation and the latest ribbon technology based Photovoltaic cells from U.S. to bring down the cost of the solar panels. The Government of Tamil Nadu would take necessary steps in this regard.

Thus, adoption of clean energy specific sustainable development policies is a milestone in moving the State towards renewable capacity generation & reduce greenhouse gas emissions to take **forward Tamil Nadu as a Green Energy State**.

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