

Uttar Pradesh is confidently marching towards the expansion of its horizons and foraying into new realms of development. Meaningful steps are being taken by the UP government in this direction. To support its development initiatives, it needs sustainable sources of energy, while preserving the environment, and this has been a priority for the UP government. Based on renewable energy sources, the government is enhancing the production of electricity and promoting it, to augment its progress. Through emphasis on simple initiatives like rooftop solar panels on buildings, on one hand, the state has been successful in decreasing the use of fuel-based electricity, while on the other, it has been able to reduce its carbon emissions.

Solar energy systems on government and semi-government buildings and offices in the state have become the new imperative. The state has introduced the Bioenergy Policy 2022, which includes agro wastes and products like pressmuds from sugar mills. Similarly, utilisation of organic waste and municipal solid waste is also being heavily promoted for generation of bioenergy. Likewise, biocoal, biodiesel and bioethanol unit installations are being encouraged by the UP government.



PHOTOS: UPNEDA

ILLUMINATING A NEW TOMORROW

UP is rapidly traversing the path of sustainable development. To steadily move forward on this trajectory, the state needs energy. To realise its growth target, the use of renewable energy is being heavily promoted by UP government, with emphasis on production of electricity based on solar energy

Information is also being disseminated among the masses about bioenergy and encouraging people to utilise it in their daily lives. UP, in order to achieve the target of 1 trillion-dollar economy vision, is making rapid strides in that direction and renewable energy has a key role to play in this new narrative. Reducing our dependence on fuel-based energy sources is crucial and new sources of sustainable and renewable energy are being explored to reduce this

dependence. The state is also actively exploring renewable energy sources through hydropower and biomass-based power plants.

To increase production capacity through solar and other renewable sources, the UP government is setting up new power plants and generating electricity. The state is utilising products like paddy husk, etc for this purpose. Further, biomass-based power generation projects are also being encouraged. Apart from this, in collaboration

with industrialists, hydro-power projects are being implemented by the state government. Solar energy production in rural pockets has vast possibilities and special schemes are being launched to encourage the same. Mini-grid solar power to meet electricity demand is being promoted in rural pockets.

Solar lights for street lighting are being set up and requisite facilities for renewable energy production are being expanded on priority.



Keeping in mind the immense possibilities of electricity generation from renewable energy sources in UP and giving importance to the current and potential impact of climate change, the state government is determined to promote clean energy sources. In this sequence, a total capacity of 22000 MW has been targeted by 2027 under the Solar Energy Policy 2022.

-Yogi Adityanath, Chief Minister

Ayodhya to shine bright as the 'First Model Solar City'

The pace of development work is moving rapidly in Ayodhya. There are a slew of projects and infrastructure developments that will lead to new opportunities for growth in the city. In order to meet the resulting energy demands, the state government is actively promoting renewable energy sources. The CM, in a meeting of the Council of Ministers, approved the establishment of 40 MW solar power plant.

The project will be established on 165 acres of land in Rampur-Halwada village on Ayodhya-Gosainjaj road near Saryu river. Envisioning Ayodhya as a model solar

city, under the state government's Solar Energy Policy 2022, MoU has been signed with NTPC Green Energy. The state government will lease out land and charge a nominal rent for the setting up of a solar power plant. This plant, with the production of 70 million units of electricity, will supply electricity to the city. So far, 800 solar streetlights, 70 smart solar streetlights, 150 solar high masts, 778kW ongrid solar power plant, 7 solar drinking and 3 water kiosks have been established. Meanwhile, the setting up of 40 solar trees is in progress in the city.

1 trillion-dollar vision supported by renewable energy

UP government is becoming self-reliant across various economic fronts and focusing on increasing renewable energy production sources, so that its progress is in sync with the environment and a sustainable development plan

PHOTO: UPNEDA



PM Narendra Modi and French President Emmanuel Macron at the launch of solar plant at Mirzapur

Presently emphasis on clean energy and green has been increasing and so has the focus of governments and private players in the energy sector. A balance is being sought between proper usage of resources and the environment. Keeping this objective in mind, the state government is adopting alternative solutions to meet its rising energy demands and building new generation points for renewable energy. Propagating the benefits of renewable energy sources, massive public campaigns are being drawn and executed for the public to educate them about its utility and meaningful long-term effects. Climate-friendly investments are being promoted, and use of technology and IT is also being encouraged, with the objective of preserve natural resources and the climate. CM Yogi Adityanath accepts the potential of solar energy today and acknowledges its pivotal role in achieving the 1 trillion-dollar economy vision.

To achieve the goal of the country's 5 trillion-dollar economy



The country's potential in renewable energy is no less than a 'gold mine.' India will play an important role in green energy, and I invite all stakeholders to invest in India.

-Narendra Modi, Prime Minister

projection, and to become a key partner in India's development story, Uttar Pradesh will consume 53 GW of electricity by the year 2028 and would need a steady reservoir of energy generation to meet the demand. Installation of renewable energy assets will consume less time as compared to traditional energy sources. These renewable energy projects will also play a key role in achieving goals of the central government of reducing carbon emissions. According to the UP Solar Policy 2022, out of approximately 53 GW, 22 GW of power will come through solar power. In this 22 GW of solar power, 14 GW will be through solar utility projects, 6 GW through solar rooftops and 2 GW through Kusum Yojana. Also, bioenergy (Biocoal, CBG, Bioethanol and Biodiesel), green hydrogen, etc are being considered as major sources of renewable energy.

UP's focus on development of renewable energy will create more employment, boosting the state towards the 1 trillion-dollar target

Unlimited possibilities in the power sector in the state. Nearly Rs 7.46 lakh crore worth of MoUs in the renewable energy sector signed in UPGIS

Target \$1 Trillion

DECARBONISING THE AGRICULTURE SECTOR

The Uttar Pradesh New and Renewable Energy Development Agency (UPNEDA) has plans to decarbonise the agri sector and issued a tender for solarising 1,000 agricultural pumps under the Component C of 'Pradhan Mantri Kisan Urja Suraksha evam Uthhan Mahabhayan (PM-KUSUM) Scheme'.

The state nodal agency for clean energy projects has asked bidders to bid for the project under which they would be obligated to design, supply, survey, install, test, and commission the projects within four months.

As per the mandate of Component C of the PM-KUSUM scheme, the government is working towards the solarisation of agricultural pumps, feeders, and others to boost the penetration of solar energy in rural India and decarbonise UP's agricultural sector.



SOLAR CITIES: UP'S NEW LANDSCAPE

Uttar Pradesh government is developing 17 cities comprising 10 lakh households as 'Solar Cities' over the next five years. The targets are ambitious, but all efforts are being made by the state government to achieve it because the Solar Energy Policy seeks to remove all bottlenecks that hindered setting up of solar plants and parks in Uttar Pradesh.

The objective will be achieved by introducing a new mechanism that supports consumers, businesses and developers in the sector. The plan also includes at least 21,000 un electrified primary schools across the state, totaling a capacity of 40MW, which will be covered with solar rooftop installations while secondary schools, government colleges, technical institutions and universities will also be equipped with solar rooftops in a phased manner.

Bioenergy Policy helping UP government double profits

The Bioenergy Policy is not just helping the state reduce pollution and mitigate waste problem, but is also helping farmers through increased income and generating new jobs

To tackle the issue of pollution and explore alternative sources of energy, the UP government last year launched the Uttar Pradesh Bioenergy Policy. UPNEDA is the designated nodal agency for operations under the purview of bioenergy policy. The policy now is helping farmers utilise agricultural waste, earlier being burnt in the fields, as fuel for bioenergy production. Burning of agricultural waste had been negatively impacting the fertility of land. To solve this problem, this agricultural residue is effectively becoming a crucial player in promoting bio-enterprises by the state government. This, in turn, has led to additional income for farmers and created new employment opportunities. Government is encouraging bioenergy-based enterprises. Agriculture waste,

mandis, livestock waste, sugar mills, distilleries, urban and other organic wastes are being targeted as fuel for large-scale production of bioenergy.

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There is already an abundance of use for these wastes, and its conversion into green products has been the focus area of the state government in the recent past. Various techniques are being used to serve this purpose and upcoming start-ups are being encouraged commercially to augment state's efforts in bioenergy production.

Compressed Biogas plants: Targeted capacity during the policy period - 1000 tonnes of CBG per day. Financial subsidy - Rs 75 lakh to a maximum of Rs 20 crore

Biocoal plants: In this, subsidy ranges from Rs 75,000 per tonne to a maximum of Rs 20 crore

Bioethanol and Biodiesel plants: Subsidy from Rs 3 lakh per kiloliter up to a maximum of Rs 20 crore

Storage of Biomass: For this, additional subsidy of 30% for raker, baler, trawler can be up to a maximum of Rs 20 lakhs. Meanwhile, 50% subsidy is already being given under the central government's Agricultural Mechanisation Scheme

For projects worth more than Rs 50 crores, the state will construct an approach road, which can be of a maximum distance of 5 kilometers from the plant to the main road

Solar Energy Policy 2022 powering Uttar Pradesh

With pacing development, the demand for energy has been steadily increasing in Uttar Pradesh. To meet these energy needs, the UP government has placed special importance on power generation. For this, in November 2022 CM Yogi Adityanath approved the Uttar Pradesh Solar Energy Policy 2022. Through this policy, many important provisions have been made to promote solar energy and the policy has been implemented for five years. With this,

UTTAR PRADESH SOLAR ENERGY: POLICY HIGHLIGHTS

Uttar Pradesh New and Renewable Energy Development Agency (UPNEDA) has been designated as the nodal agency for the implementation of the policy

The state government has set a target of producing 22,000 MW of electricity from solar energy in the next five years. Under this, a target has been set to generate 14,000 MW from solar parks, 4500 MW from residential solar rooftops, 1500 MW from non-residential solar rooftops and 2000 MW under PM Kusum Yojana

Net metering will be provided to private residences. There is also a provision of central financial assistance for the installation of grid-connected solar rooftop in domestic sector. Grant of Rs 15,000 per kilowatt and a maximum of Rs 30,000 per consumer has been approved by government

30,000 youth called 'Surya Mitras' will be trained in the maintenance of solar power plants, generating employment



PHOTO: DIPR, UTTAR PRADESH GOVT

Rooftop solar panels at KGMU, Lucknow

SPECIAL PROVISION FOR BUNDELKHAND AND PURVANCHAL

Special provisions have been made for Bundelkhand and Purvanchal region in the UP Solar Policy. Bundelkhand Expressway is being developed as solar power expressway. Lease rent will be charged at the rate of Rs 1 per acre, per year from solar parks set up in public sectors and at the rate of Rs 15,000 per acre, per year, from solar parks set up in private sector. Gram Sabha land will be given on lease for a maximum period of 30 years for the establishment of these solar parks. Investors will be provided with 100% exemption in stamp duty and electricity duty for 10 years.

capacity with storage system. This way, the demand for power supply can be met at the time of peak load by storing solar energy. Investors setting up solar parks will also be given the option to sell power through open access to existing commercial and industrial consumers of UPPCL. Also, 100% exemptions will be given in transmission charges payable on the use of intrastate transmission system on purchasing power from outside the state (interstate) through open access.



PHOTO: UPNEDA



CBG Plant, Varanasi

CBG Plant, Gorakhpur