# Adani Green Begins Generation from The World's Largest Renewable Energy Park 

## Operationalizes the first 551 MW solar capacity at Khavda, starts supply to national grid


#### Abstract

Ahmedabad, 14 February 2024: Adani Green Energy Limited (AGEL), India's largest renewable energy (RE) company and the second largest solar PV developer in the world, has operationalized 551 MW solar capacity in Khavda, Gujarat, by supplying power to the national grid.


AGEL achieved this milestone within 12 months of commencing work on the Khavda RE park, starting with the development of basic infrastructure, including roads and connectivity, and creating a self-sustaining social ecosystem. AGEL also transformed the challenging and barren terrain of the Rann of Kutch into a habitable environment for its 8,000-strong workforce.

AGEL plans to develop 30 GW of renewable energy capacity at this RE park. The planned capacity is expected to be operationalized in the next five years. When completed, the Khavda RE park will be the largest renewable energy installation in the world.

Energy from the Khavda RE park can power 16.1 million homes each year. With proven expertise in developing largescale renewable projects, a robust supply chain network and technological prowess, AGEL is best positioned to build this record-setting giga-scale plant with no parallel in the world's clean energy sector.

The region is endowed with one of the best wind and solar resources in the country, which makes it ideal for giga-scale RE development. AGEL conducted extensive studies and deployed multiple innovative solutions to accelerate the development of the plant. (For more information, refer to Annexure-1). In the process, it is supporting the development of an indigenous and sustainable supply chain.

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Expected annual contribution of 30 GW
                    RE plant
- ~81 billion units of clean electricity to be
generated
- }16.1\mathrm{ million households to be powered
- 15,200+ green job creation
- }58\mathrm{ million tons of }\mp@subsup{\textrm{CO}}{2}{}\mathrm{ emissions will be
avoided
- Emissions avoided is equivalent to:
    - carbon sequestrated by 2,761
        million trees
- 60,300 tonnes of coal avoided
- }12.6\mathrm{ million cars off the roads
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"Adani Green Energy is creating one of the world's most extensive renewable energy ecosystems for solar and wind," said Mr Gautam Adani, Chairman, Adani Group. "Through bold and innovative projects like the Khavda RE plant, AGEL continues to set higher global benchmarks and rewrite the world's planning and execution standards for giga-scale renewable energy projects. This milestone is a validation of the Adani Group's commitment and leading role in accelerating India's equitable clean energy transition journey towards its ambitious goals of 500 GW of renewable energy capacity by 2030 and carbon neutrality."

India is shaping the global dialogue on a sustainable energy future. Aligned to this, AGEL is committed to delivering the transition to affordable and reliable clean energy.

## ANNEXURE-1

## Ideal location

Khavda, located in the Kutch district of Gujarat, is a promising location for wind and solar energy projects. The region witnesses $\sim 2,060 \mathrm{kWh} / \mathrm{m}^{2}$ of high solar irradiation, making it ideal for solar energy generation. It is also blessed with one of the best wind resources availability in India, with speeds of $\sim 8$ meters per second.

## Preparing the turf

Over the last 5 years, Adani Green conducted multiple studies, such as geotechnical investigation, seismic study, centrifuge tests, resource assessment studies, land studies, Environment and Social Impact Assessment, Environmental and Social Due Diligence, and detailed feasibility studies, amongst others, before embarking on the development of this site. AGEL deployed innovative solutions at

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Khavda, which will provide a scalable blueprint for giga-scale RE parks across the globe. For example, to address the unique soil strata, AGEL deployed underground stone columns to enhance soil strength.

The company is deploying India's largest onshore wind turbine generator of 5.2 MW capacity, bifacial solar PV modules, and horizontal single-axis tracker systems. It will be leveraging its state-of-the-art Energy Network Operation Centre (ENOC) platform with AI/ ML integration to enable real-time automated monitoring.

## Focus on indigenization, sustainable development

In line with the 'Atmanirbhar Bharat' vision, AGEL is not only focusing on clean energy production but also on developing indigenous and resilient supply chains with significantly increased share of localized procurement, such as WTGs and trackers.

The project utilizes waterless robotic cleaning to address dust accumulation on solar panels, which will contribute to the United Nations Sustainable Development Goal 6 by conserving water in the arid Kutch region and maximize electricity generation.

AGEL is actively engaged in community development initiatives across several villages in the region, focusing on education, health, women empowerment, water conservation, and enhancing community infrastructure as part of its ESG efforts. This demonstrates its holistic commitment to enhancing social and natural capital in the region.

