

Media Release

Adani Green Energy operationalizes 1,000 MW (1 GW) of the 30,000 MW Khavda renewable energy park

Annexure

About the world's largest renewable energy park

AGEL, with the support of its strategic ecosystem of vendors, is developing the world's largest renewable energy project on barren land at Khavda in Kutch, Gujarat. Built across 538 sq km, it is five times the size of Paris and almost as large as Mumbai city. Once complete, it will be the planet's largest power plant regardless of the energy source.

Ideal location to harness wind and solar resources

The region witnesses ~2,060 kWh/m² of high solar irradiation and one of the best wind resources in India, with speeds of ~8 meters per second.

Preparing the turf

Over the last 5 years, Adani Green conducted geotechnical investigations, seismic studies, a centrifuge study by Cambridge, resource assessment and land studies, Environment and Social Impact Assessment (ESIA), Environmental and Social Due Diligence (ESDD), and a detailed feasibility study, amongst several others, before embarking on the development of this site.

Desert oasis

The comprehensive infrastructure development effort included the construction of ~100 km roads, 50 km of drainage, establishment of desalination and 3 reverse osmosis (RO) plants with a total capacity of 70 cubic meter per hour to meet the drinking water requirements of the project staff, laying optical fiber cables for 180 km for connectivity, and concrete batching plants. In addition, a township has been created to accommodate over 8,000 staff and workers, equipped with medical facilities, a shopping complex for daily necessities, banking services and leisure activities.

Marching ahead with speed: De-risked growth and development

The development of such a giga-scale project at an accelerated pace necessitates combining the collective strength and expertise of specialized partners within the Adani portfolio and outside. It is a testament to the full-scale contribution by Adani portfolio companies such as:

- Supply of largest onshore wind turbine manufactured by Adani New Industries
- Transmission network developed by Adani Energy Solutions
- Solar trackers from Jash Energy

Expected annual green footprint of 30 GW RE plant

- ~81 billion units of clean electricity to be generated
- 16.1 million households to be powered with clean energy
- 15,200+ green job creation
- 58 million tons of CO₂ emissions will be avoided
- Emission avoided is equivalent to:
 - o carbon sequestered by 2,761 million trees
 - o 60,300 tonnes of coal avoided and
 - o 12.6 million cars off the roads

- Cement and concrete from ACC and Ambuja Cements
- Logistic solutions from Adani Ports and SEZ
- Project execution, assurance, and management by Adani Infra
- Digitally enabled operations by Adani Infrastructure Management Solutions Limited (AIMSL)
- Adani utility portfolio's globally recognized Energy Network Operation Centre (ENOC)

Our indigenous supply chains and strong vendor networks are also helping to bring the world's largest RE plant to fruition.

Leveraging technology

The plant will be equipped with cutting-edge technology: India's largest onshore wind turbine generator of 5.2 MW capacity, bifacial solar PV modules (which generate energy from both sides of the module), and horizontal single-axis tracker systems (which track the sun to collect more energy). Further, it will leverage Adani's state-of-the-art Energy Network Operation Centre (ENOC) platform with Artificial Intelligence and Machine Learning integration to enable real-time automated operation and monitoring of the plant.

Innovations to address terrain challenges

AGEL's execution partner Adani Infra is developing several innovative solutions that are being piloted at Khavda. For example: to address the unique soil strata, Adani Infra deployed underground stone columns to enhance the soil strength that was developed with global collaboration with involvement both domestic & international institutions of higher learning. Specialised corrosion resistant coatings are being used for solar module mounting structures and switchyard equipment for long-term protection of the plant and equipment in the highly corrosive environment.

Focus on sustainable development

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

India is shaping the global dialogue on sustainable energy future. AGEL and its specialized partners within Adani Portfolio are at the forefront of delivering the global energy transition and paving the way for enhancing & protecting our environment.

Background: Adani Portfolio companies enabling the development of the Khavda RE plant

Adani Infra India Limited (AIIIL):

AIIIL is at the forefront of enabling transformative mega-scale infrastructure development through innovative solutions, data-driven insights, and engineering excellence. The company offers Project Management Consultancy (PMC) services for infrastructure projects across varied sectors- Airports, Data Center, Defense, Manufacturing, Ports, Renewables, Roads, Thermal, Transmission and Water. AIIIL is a trusted partner with specialized expertise in Engineering, Procurement and Construction (EPC), through best-in-class design & engineering, procurement of materials & services and construction. AIIIL's offers services in design and engineering, technical data development, logistics management, quality, safety, health management and overall supervision and monitoring of the project. With a holistic integration of traditional wisdom, cutting-edge methodologies, advanced analytics, predictive modeling, AIIIL converges strategic planning and meticulous execution to deliver projects. AIIIL is committed to build smarter, resilient, and sustainable solutions for infrastructure development.

About Adani Ports & Special Economic Zone Ltd

Adani Ports and Special Economic Zone Ltd (APSEZ), a part of the globally diversified Adani Group, has evolved from a port company to an Integrated Transport Utility providing an end-to-end solution from its port gate to customer gate. It is the largest port developer and operator in India with 7 strategically located ports and terminals on the west coast (Mundra, Tuna, Dahej, and Hazira in Gujarat, Mormugao in Goa, Dighi in Maharashtra and Vizhinjam in Kerala) and 7 ports and terminals on the East coast of India (Haldia in West Bengal, Dhamra in Odisha, Gangavaram and Krishnapatnam in Andhra Pradesh, Kattupalli and Ennore in Tamil Nadu and Karaikal in Puducherry, representing 27% of the country's total port volumes, thus providing capabilities to handle vast amounts of cargo from both coastal areas and the hinterland. The company is also developing a transshipment port at Colombo, Sri Lanka and operates the Haifa Port in Israel. Our Ports to Logistics Platform comprising port facilities, integrated logistics capabilities including multimodal logistics parks, Grade A warehouses, and industrial economic zones, puts us in an advantageous position as India stands to benefit from an impending overhaul in global supply chains. Our vision is to be the largest ports and logistics platform in the world in the next decade. With a vision to turn carbon neutral by 2025, APSEZ was the first Indian port and third in the world to sign up for the Science-Based Targets Initiative (SBTi) committing to emission reduction targets to control global warming at 1.5°C above pre-industrial levels.

About Adani Energy Solutions Limited (AESL)

AESL, part of the Adani portfolio, is a multidimensional organization with presence in various facets of the energy domain, namely power transmission, distribution, smart metering, and cooling solutions. AESL is the country's largest private transmission company, with a presence across 17 states of India and a cumulative transmission network of 20,422 ckm and 54,661 MVA transformation capacity. In its distribution business, AESL serves more than 12 million consumers in metropolitan Mumbai and the industrial hub of Mundra SEZ. AESL is ramping up its smart metering business and is on course to become India's leading smart metering integrator with an order book of over 20 million meters. AESL, with its integrated offering through the expansion of its distribution network through parallel licenses and competitive and tailored retail solutions, including a significant share of green power, is revolutionizing the way energy is delivered to the end consumer. AESL is a catalyst for transforming the energy landscape in the most reliable, affordable, and sustainable way.

About Ambuja Cements Limited

Ambuja Cements Limited, is one of India's leading cement companies and a member of the diversified Adani Group – the largest and fastest growing portfolio of diversified sustainable businesses. Ambuja, with its subsidiaries ACC Ltd. and Sanghi Industries Ltd has taken the Adani Group's cement capacity to 77.4 million tonnes with 18 integrated cement manufacturing plants and 18 cement grinding units across the country. Ambuja has been recognized as India's Most Trusted Cement Brand by TRA Research in its Brand Trust Report, 2023. Ambuja has provided hassle-free, home-building solutions with its unique sustainable development projects and environment-friendly practices since it started operations. The company has many firsts to its credit – a captive port with six terminals that has facilitated timely, cost-effective, and cleaner shipments of bulk cement to its customers. To further add value to customers, the company has launched innovative products like Ambuja Plus, Ambuja Cool Walls, Ambuja Compocem and Ambuja Kawach under the umbrella of Ambuja Certified Technology. These products not only fulfil important customer needs but also help in significantly reducing their carbon footprints.

About Anil New Industries Limited

Adani New Industries Ltd. (ANIL), a wholly owned subsidiary of Adani Enterprises Limited (AEL) is at the forefront of enabling the energy transition initiatives of the group, across sustainable fuels and green molecules. It is dedicated to bolstering India's energy security and decarbonization goals globally. ANIL, as part of its strategy to develop a fully integrated value chain, is building one of India's most comprehensive and state-of-the-art renewable energy manufacturing ecosystem

across wind, solar, electrolyzer and allied equipment at Mundra, Gujarat. ANIL is developing end-to-end solutions to produce globally competitive green hydrogen and its associated sustainable derivatives at scale. The company is adapting and nurturing future technologies in pursuit of providing affordable and sustainable energy for all.

Adani Infrastructure Management Services Ltd. (AIMSL):

Adani Infrastructure Management Services Ltd. (AIMSL) is an end-to-end solutions provider of Operations & maintenance (O&M) for the energy sector across renewable power plants (Solar & Wind), transmission system & thermal Power Plants. The company operates and maintains one of the largest fleets in the Indian power sector including transmission networks spanning about 16,700+ ckt. kms & 29,000+ MVA of power transformation capacity, 10+ GW of renewable power capacity and 16+ GW of thermal power generation capacity pan-India. AIMSL's adopts the latest digital and advanced-analytics technologies, machine-learning solutions to deliver high reliability & machine availability of the assets. As a strategic business partner, AIMSL combines the expertise of best-in-class O&M talent, state-of-the-art technologies, and digitalization to deliver operational excellence and reduced O&M costs.

About Jash Energy:

Jash Energy is a leading manufacturer of solar trackers, a device installed in a solar panel which moves in direction of the sun to capture maximum solar energy for electricity generation. The manufacturing unit located at Mundra in Gujarat has an annual capacity of +5 GW. The factory has achieved self-sufficiency by locally sourcing steel and all major components for manufacturing Arctech's solar trackers. Strategically located at Mundra, the largest private port in India, Jash Energy has easy access to Western, Middle East, and African markets.

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