

FILATEX INDIA's FOCUS ON ADOPTION OF RENEWABLE ENERGY





What Are Wind Solar Hybrid Systems?

The combination of two renewable energy sources viz. wind turbines and solar panels to generate power is referred to as a Wind Solar Hybrid system. These systems help in maximising electricity generated from renewables – as solar panels are more efficient during the daytime, and wind energy can be harnessed post sunset when the speeds are higher.

These systems are ideal for businesses looking to maximise their energy consumption from clean renewable sources.

Filatex India's Manufacturing Footprint

Filatex India Limited is today among the country's leading manufacturers of Polyester Filament Yarn. With a foray into manufacturing in 1994 with monofilament yarn, today the company fulfils emerging garment needs of millions contributing to India's developing textile industry.

Initially, Filatex started with a small capacity of 500 TPA in 1994 which today has increased to over 4,00,000 TPA.

Along with meeting domestic needs, Filatex also exports a wide array of yarns to over 43 countries across 5 continents.

Filatex's plants are located at various locations pan-India including Dadra & Nagar Haveli and Dahej.

Prioritising Sustainable Best Practices At Filatex

Filatex has always operated with sustainable development at its core: right from developing a framework for sustainable sourcing across its portfolio, to prioritising recycling, tree plantation drives and empowering communities. In 2022, the company setup a 1500 kg pilot plant for conducting trials for chemical recycling of PET.

On the clean energy front, Filatex has deployed 1 MW Rooftop solar plants at both Dahej and Dadra facilities. **On 31st March 2023, Filatex India teamed up with Fourth Partner Energy to advance its Green Energy objectives. As a result an agreement was signed for Filatex to procure 10.8 MWp of hybrid clean energy from FPEL's Gondal project.**



“Reducing the Carbon footprint at our Dahej & Dadra facilities has always been top priority for Filatex. Through this collaboration with Fourth Partner, we will look to procure nearly 50 mn units of green power annually, at cost-savings of nearly ₹10 Cr per year. 4PEL’s execution expertise alongside delivering the project in a timely manner despite various challenges, sets them apart as market leaders. We look forward to a long-term partnership with their robust team”

Madhu Sudhan Bhageria
CMD, Filatex

Key Highlights Of The PPA Between Filatex & FPEL



10.8 MWp
PPA Capacity



70 MWp
WSH Park Capacity



Gondal, Gujarat
Project Location



4,52,60,000 kWh
Annual Generation



₹10 Cr
Annual Cost Savings

Environmental Impact of the 10.8 MWp PPA between Filatex and FPEL

8,00,109 Tons
of reduced Carbon Offset

20,553 Tons
of reduction in Coal

10 Cr Litres
of Water Conservation

Equivalent to
Planting 19 Lakhs Trees



Fourth Partner Energy Projects Showcase: 70 MWp WSHPark In Gondal, Gujarat

The Gondal project marks FPEL’s foray into Hybrid Renewable Energy solutions and supplies clean energy to Gujarat’s businesses including Filatex, Linde, Nexus Malls (a Blackstone Group Co.), Deccan Chemicals and others.

Executed in under **10 months**, this **70 MWp plant** will generate over 163 mn units of clean energy annually, while cutting carbon emissions by over 1.5 Lk tons. The Gondal project comprises of 14 Wind turbines supplied and erected by GE.

The project finance for this hybrid plant has been funded by Aseem Infrastructure Finance, which is backed by NIIF (National Investment and Infrastructure Fund). Aseem Infra has provided a customized debt solution of up to Rs 300 Cr to meet the specific needs of the project.



Marquee Clients Procuring Solar Power FPEL’s Gujarat WSH Park



“ This is the first of many hybrid projects in the pipeline for 4PEL as it helps us deliver maximum green power to our clients at highest cost-savings per unit. Our Nippani WSH project in Karnataka is already under execution and in the coming year, we will execute similar projects across Tamil Nadu and Maharashtra as well. The C&I renewables market in India is set to grow by over 45 GW in the next 5 years – and 4PEL is committed to meeting that demand by offering the entire suite of integrated RE solutions.”

Karan Chadha
Head – Business Development, FPEL

Challenges Faced And FPEL's Remedial Action During Project Execution At Gondal

Regulatory Compliance: The 2018 Gujarat WSH policy was due for extension and revision during the execution phase of Gondal. Procuring permits and timely approvals for prompt phase-wise, planned execution was challenging and kudos to the on-ground projects and liasoning teams that reiterated FPEL's commitment to compliance – thereby ensuring the project's legality and success.

Local Land Acquisition Expertise: Obtaining extensive barren land for our Wind-Solar park required a multifaceted approach – including proficiency in property rights, legal matters, valuation, negotiation, community engagement and local networking, all vital for project success.

Electrical Infrastructure: The establishment of secure and efficient electrical infrastructure, connecting solar panels and wind turbines to the grid, presented complex technical challenges. FPEL developed an in-house team of technical experts to not just successfully implement our maiden WSH project, but also replicate this efficiency in forthcoming such parks pan-India.

Ad-hoc Issue of Over-Voltage: On 12th August 2023, the 66 kV Grid voltage rose high to 73 kV due to tap changing process at GETCO. At FPEL we immediately got into remedial mode: conversations, site visits and submission of letters for acknowledging the generation loss of plant due to over voltage were our action items. We also implemented reactive power control through solar inverters through HPPC, thereby controlling the plant end voltage level.



Why Are Wind Solar Hybrid Systems A Good Choice For Consumers As Well As Project Developers?

Cost-competitive Solutions: In Hybrid systems, often solar panels and wind turbines share the same evacuation infrastructure – which in turn brings down the fixed costs and transmission charges.

Continuous Generation: These systems generate electricity in a continuous pattern, with much less variability than standalone solar plants that generate power during the day or solo wind plants that generate mainly during evening and night hours. This also means the power generated is less susceptible to curtailment.

Increased PLFs: Hybridization of renewables has delivered impressive results in States like Gujarat, Maharashtra and Karnataka, where PLFs of up to 50% have been clocked; in comparison to 17-25% for Wind and Solar standalone projects. When combined with Battery Storage, these systems can potentially deliver PLFs of up to 80%.

Lower Project Costs: Sharing of pooling infrastructure & EHV lines optimises the economics of the projects when compared to standalones. Better and more efficient use of land and transmission infra is the reason why WSH systems are gaining popularity with Discoms, corporate clients and developers as well.

Financial Waivers and Incentives for developers of Wind Solar Hybrid projects are being extended by the government.

Wind Solar Hybrid: India and FPEL Outlook

India's WSH project capacity is poised to grow to 9.5 GW by 2025. Meanwhile, the Ministry of New and Renewable Energy (MNRE) has also announced a scheme for developing 2500 MW of inter-State WSH projects. Fourth Partner Energy is currently developing Wind and Solar parks across Tamil Nadu, Karnataka and Maharashtra. To know more about how our clean energy solutions can benefit your business, reach out to team FPEL.

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