

Solution for Energy Shortage by B.Tech. Integrated Mechanical Engineering students

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It's a known fact that fossil fuels are a finite source of energy. Alternatively, renewable resources are the need of the hour, especially with the onslaught of climate change.

In a country like India, this is a valuable opportunity to implement the use of sustainable sources of energy on a large scale. The Ministry of New and Renewable Energy (MNRE) has also introduced "National Wind-Solar Hybrid Policy" in 2018 to encourage the development and utilization of renewable sources of energy. MNRE has also taken some steps to set up new hubs for developing renewable energy equipment in the country.

In the same vein, SVKM's NMIMS-Mukesh Patel School of Technology Management and Engineering has realized the importance of such a requirement. The institute's B.Tech. Integrated Mechanical Engineering students, Mr. Aysh Sudhir, Mr. Aditya Gala and Mr. Jay Karia came forward with a solution to meet India's energy shortage.

They have proposed solar-wind hybrid technology to generate electricity and provide alternative solutions for household consumption as well as commercial utilization. With my guidance, the duo has successfully developed a project on solar wind hybrid systems which harnesses the use of vertical axis wind turbines (VAWT) and solar photovoltaic's array.



Figure 1 Hybrid solar-wind power (Source: <https://www.indiamart.com>)

The use of this system ensures the optimum utilization of resources and hence improves the efficiency as compared with their individual mode of generation. It increases reliability, accuracy and reduces the dependence on a single source of energy. This hybrid solar-wind power generating system has the potential to become a mass-produced large-scale solution for the generation of electricity.

Hybrid solar-wind power generating system are, ergo, the future source of energy which will cater to the needs of consumers globally.