

5th JUNE 2024

ANNUAL REPORT (23-24)

Hoshang Patel Tech Centre



Hoshang Patel

TECH CENTER

Submitted to



Introduction

As we embark on the journey of recounting our achievements over the past operational year, it fills us with immense pride to present the annual report of Hoshang Patel Tech Centre. In the course of three years, our center has emerged as a beacon of innovation, sustainability, and community engagement. Notably, the successful installation of a 240-kilowatt on-grid solar system stands as a testament to our commitment to renewable energy and effective project management. Through internship programs, we provided invaluable hands-on learning experiences to students, while our solar training initiatives reached various educational and industrial institutes across the spectrum. Our outreach efforts extended to East India, illuminating villages with solar street lights and enhancing safety in schools and temples. Engaging with neighboring educational institutions and hosting visits from industry leaders have enriched our academic and professional milieu. The development of a solar car underscores our ethos of innovation, while collaborations with universities and institutions further our commitment to talent development and the Skill India program. As we reflect on the past year's accomplishments, we express our gratitude to the trustees for their unwavering support and look forward to continued collaboration in advancing our shared mission.

1.Solar System Installation and Renewable Energy Initiatives.



- **Successful installation of a 240-kilowatt on-grid solar system.**

The efforts Hoshang patel tech center has put in installation are proving to be so impressive , in this immense world of power consumption our solar system is capable of generating 100% to its ability ... which is more than expected. As our energy provider company has increased its way of charging us under the name of duties and demands, our solar system withstands all the charges and generates surplus energy. We proudly announce to generate more than 1200 units per day . After commencement of the plant in May 2023 we have generated more than 229.4 Megawatt hour upto current month . Our solar system encourages the youth to experience the power of solar.



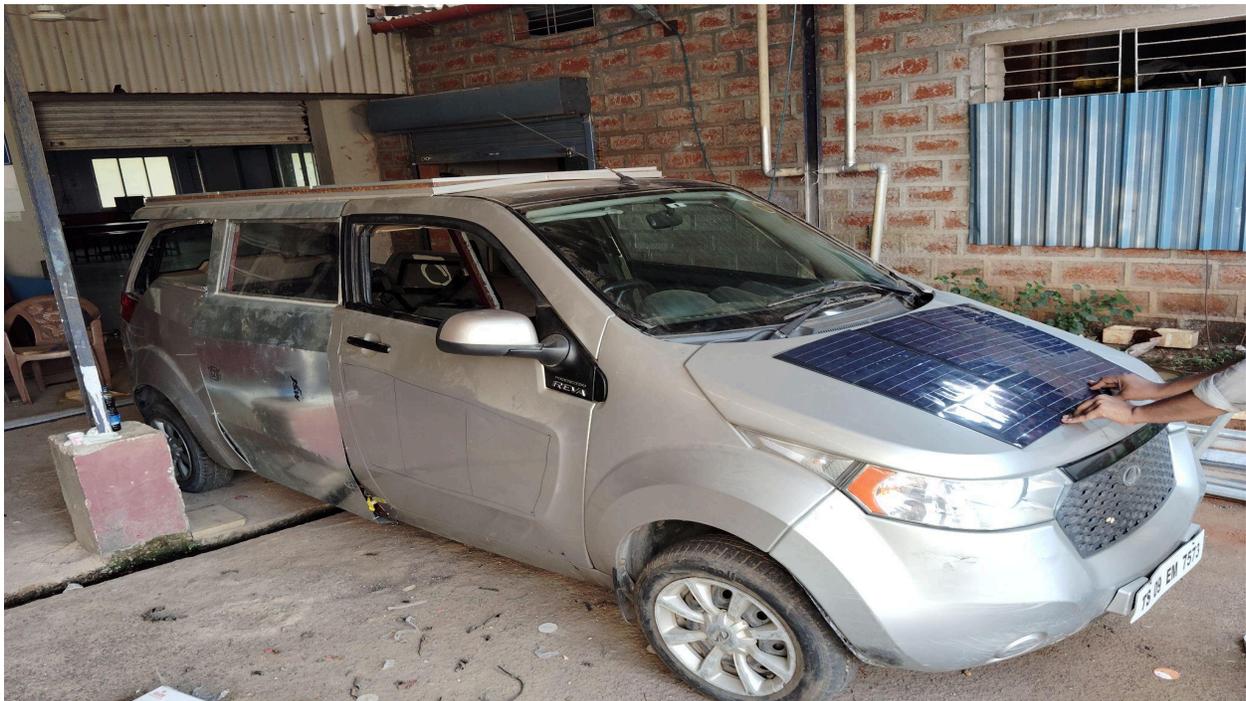
Above Data Represents Gharda Institute of technology.

		
65634.2kg	65634.2kg	9025
CO ₂ reduced	Coal saved	Deforestation reduced

Above Data represents Bai Ratnabai Gharda hospital .

- **The Development of a Solar-Powered Car.**

We undertook an abandoned electric car of the Mahindra company called Mahindra e2o which had numerous problems in its electrical , mechanical , and structural systems. By putting so much effort and engineering skills we are successful in making India's first fully solar electric car with a seating capacity of 8 adults including driver which covers a distance of 130 kms on single charge, consisting of all the needed luxury to the ecosystem of automobile environment . Ultimate safety is always kept as our first priority .



- **Other Renewable Energy Initiatives:**

Besides solar system installation and solar car there are various initiatives taken by hoshang patel tech center which includes:

1. Educating the solar youth .
2. Educate industries with solar potential & Advice.
3. Implementation of solar pumps.
4. Use of solar weather stations.
5. Solarisation of various indication boards .
6. Implement AI into streetlights.
7. Solar refrigeration.
8. Solar cart

2.Education and Training Programs:

During the ongoing solarization initiative, we engaged with educational institutions at various levels including junior colleges and high schools. Last year, we conducted a Solar Youth Training Program, open to students from any field, aimed at equipping them with solar knowledge and encouraging its practical application. As part of our solar installations, we established internship programs for students from our college and other nearby institutions, enabling them to gain on-the-job training.

As a technological center we have announced a list of 28 student projects on which students are currently working which are aimed and designed to be self utilized in the College ecosystem .



Working in collaboration with the Additional Incharge Officer of the Industrial Training Institute, we organized online meetings to extend this opportunity to all industrial training institutions in the Ratnagiri district. Notably, students from Government ITI Chiplun and a private training institute, Shree Rameshwar Shaikshan Sanstha, received training to the best of their abilities. We also ensured the inclusion of expert guest lecturers from the industry experts in the students' training curriculum, enriching their learning experience. Notably, in support of solar installations for lighting in Manipur's terrains, we conducted specialized training sessions for a team comprising eight representatives from different villages in the Manipur district, covering assembly, installation, and maintenance aspects.

Presenting past year student involvement :

- Total of 106 trainees were trained in various aspects .

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1. Students from our institution : 46 .
 2. Students from other institutions :42.
 3. Non educational trannies :29.



Apart from Training we have happily Guided 40 + projects in finding their way out and have also lend them some electronics components available at our center to fulfill the expected outcome of the project.

3. Community Outreach.

In an initiative aimed at enhancing safety and accessibility while promoting sustainable energy solutions, our community outreach program has focused on the distribution of solar street lights across various regions in India. Through this endeavor, we've illuminated villages, schools, and temples, ensuring that essential areas are well-lit, even in remote locations. This effort has had a profound impact on the safety and accessibility of these communities, providing well-lit pathways and gathering spaces, thereby reducing the risk of accidents and enhancing the overall quality of life for residents. Additionally, the

deployment of solar street lights underscores our commitment to environmental sustainability by harnessing renewable energy sources to meet local needs.

Last year 24+ villages were consulted for energy conservation and water conservation , explaining the solar potential.



- A total number of **600** lights were installed around the past time for the society.
 1. Lights installed for the NGOs and trust are **388** which includes SEAT(Socir economic trust), sunbird trust , pragati preerna foundation , Devrai foundation, dong foundation etc.
 2. Lights installed in local villages last year were 177 which involved at most an area of 50 kms radius .
 3. Lights installed in schools and institutions are 25.
 4. Lights installed in mandir and devotional places are 23.



Apart from solar street lights we have supported some needy people with assendo light and mini pocket lights. Also supported a pre primary GOV school with a used computer set from GCL to the students of Kolatvli Village. and a GOV school in the village called "WADENGE , Kolhapur "is supported by used solar panels of 250 watt rest installation was done by the school itself.

It has been a huge impact on the villagers in terms of accessibility and safety from the wild , as we have a maximum of industry working society which is truly benefited by the advanced lights installed .

We have encouraged 40+ villages to propagate PM-Suryagarh Scheme to avail the benefit and reduce carbon footprint.

4. Academic and Professional Engagement .

Our academic and professional engagement initiatives have been bolstered through collaborative efforts with neighboring schools and colleges, fostering a dynamic exchange of ideas and resources. We've welcomed visits from industry leaders, enriching both academic curriculum and professional development opportunities for students and faculty alike.



By positioning our center as a hub for experiential learning and industry interaction, we've created a conducive environment for hands-on experience and real-world application of knowledge. Notably, we've recently signed MOU's and initiated collaborations with New

Polytechnic Kolhapur, Government College Gargoti, and Dr. Baba Saheb Ambedkar University, Lorere, + 3 more further expanding our network and enhancing educational opportunities for our stakeholders.



Professional engagement initiatives for Advocacy with Excel industries , Dhaka industries , Ken Chemicals for enhancement of solar power to them.

5. Innovation and Future Initiatives.

- Agrivoltaics (An innovative combination of greenhouse and energy generation which will provide us multiple productive outcomes).
- Various electronics diy projects which results in better hands-on learning experiences.
- Energy conservation .(A plan which makes our college net zero power consumption).
- Smart Classrooms .(Apply various learning strategies like VR and AR).
- Solar pest trap (passive way to attract harmful pests).
- Light sensitive lumination in the classroom for a better learning environment.
- Billboard implementation in street light.
- Low powered solar lights for blackouts in several spots of a building.

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- Procure Milling machine for GIT workshop.
 - Procure Pick and place machine .
 - Procure Plastic erection machine from waste cup .

NOTE : Procurement of the listed machine will be done at lowest cost but at best of its working Quality and efficiency.

6. Assets/ Machinery's Acquired :

1. UHD Digital Advance Microscope .
2. 5 axis Table top CNC milling machine.
3. Flight Simulator Setup fully Functional.
4. Advanced Solar labs Software for solar simulation.
5. Numerous Electronics modulus , sensors, Microcontrollers projects, compilers etc.
6. Full Flesh Fabrication workshop.

7. Conclusion

Reflecting on the past year, we take immense pride in our achievements at the Hoshang Patel Tech Centre. Our successful 240-kilowatt on-grid solar system installation and the development of a fully solar-powered car highlight our commitment to renewable energy and innovation.

Our education and training programs empowered over a hundred students and community members, while our community outreach illuminated villages, schools, and temples, enhancing safety and quality of life. Collaborations with academic institutions and industry leaders enriched our environment, fostering real-world learning and professional growth.

With ongoing projects like Agrivoltaics and energy conservation, we continue to push boundaries for a sustainable future.

We thank our trustees and partners for their unwavering support and look forward to advancing our mission of innovation and community development together.