***Press Release***

**Lighting up lives through a smart solution**

09 Sep 2020: India has made significant strides in its electrification journey, but to enable 100% electrification for its people, it is important to reach the remotest parts of the country, where thousands of people continue to live in the dark. Solar-based mini-grids are emerging as a key player in resolving this tricky problem, as seen in Kudagaon, Odisha, an island village located in the middle of the Mahanadi river.

On Wednesday, the Center for Study of Science, Technology and Policy (CSTEP), a not-for-profit public-policy think tank based out of Bengaluru, conducted a webinar to share how the solar mini-grid had helped electrify the village. The quality of life of the 80-odd households in the village has improved and new opportunities for livelihood have emerged, thanks to the joint efforts of CSTEP and SunMokshaPower, supported by Good Energies Foundation.

In this project, which has immense implications for India’s rural electrification story, CSTEP conceptualised a technology solution to power a village using smart nanogrid. The technology, developed by SunMoksha Power, was conceptualised by CSTEP as a sustainable and long-term solution that can be implemented across India. CSTEP also developed a tool – CSTEP’s Solar Techno-Economic Model for Photovoltaics (CSTEM PV) – to help identify locations where such mini-grids or utility-scale power plants can be set up. The tool can also provide a technical and economic assessment for setting up such plants.

Interestingly, CSTEP—employing the CSTEM PV too—did an analysis to estimate India’s solar potential using only wasteland. The tool estimated that India’s actual solar potential, on using up all wasteland, would be around 649 GW. This number is about 142 GW more than the current estimates by the Central Electricity Regulatory Commission (CERC) and National Institute of Solar Energy (NISE).

Speaking at the event, Dr Jai Asundi, Executive Director, CSTEP said, “This project in Kudagaon has given important insights into how we can provide good-quality electricity access to the remotest parts of India 24/7, using mini-grids.”

Stephanie Jones, Programme Manager (Energy), Good Energies Foundation, said that in recent years, India’s focus has shifted towards providing good-quality electricity at an individual level. “We see mini-grids and other decentralised energy systems playing a crucial role in enabling this access and improving the citizens’ quality of life, even in remote areas. The tool developed by CSTEP can help facilitate this by identifying suitable sites for locating plants.”

Dr Ashok Das, Founder-CEO of SunMoksha Power, said that the smart nanogrid was remotely managed with on-ground support from the villagers, which has helped to sustain the solution. “We did a post-implementation assessment and found that besides improving the quality of life of the villagers, the solution has opened up many other opportunities. Many villagers returned to Kudagaon from cities in the reverse migration that occurred during the lockdown. With electricity in the village, these migrant workers are now looking at micro-enterprises that can help them earn a livelihood in the village, and are also empowering the women of the village.”

The technology solution recently won the India Smart Grid Forum Diamond Award for ‘Best Smart Grid Project in India by Technology Company’.

A detailed report on the project conceptualisation and implementation can be found at this [link](https://cstep.in/publications-details.php?id=1259).

Here is a [video](https://youtu.be/3ayCjF-ACo8) that captures the impact of the solution on the lives of the people in Kudagaon.

For more details, please write to CSTEP at [cpe@cstep.in](mailto:cpe@cstep.in).

**About CSTEP:**

The Center for Study of Science, Technology and Policy (CSTEP) is one of India’s leading think tanks. Our work is in the areas of climate, environment & sustainability, energy & power, AI for social impact, materials & strategic studies, and computational tools for policymaking. Our research leverages innovative technology-based ideas to solve developmental challenges. We provide policy advice to Central and State Governments and are a part of various Government Committees. We also collaborate with national and international research institutions to build a coherent narrative on policy challenges and solutions for India’s sustainable development. CSTEP currently has over 140 employees working out of three offices in India. Our vision is to be the foremost institution for policy analysis in India. To learn more, visit <https://www.cstep.in/>

**About SunMoksha Power:**

SunMoksha develops and field-deploys clean and sustainable technology solutions, and provides consulting services for rural development and urban sustainability. To learn more, visit <https://sunmoksha.com/>

**Good Energies Foundation:**

Good Energies Foundation is a Swiss-based private foundation. It was established in 2007 as an integral part of Good Energies Inc., a private equity company specialised in investing in the renewable energy and energy-efficiency industries. To learn more, visit <https://www.goodenergies.org/>