Solarization of health sub-centres in Meghalaya to reduce energy costs and avail financial and environmental benefits

GGHH Agenda Goals

- Energy

Hospital Goals

- Reduce energy costs
- Promote clean energy
- Uninterrupted delivery of health services

Progress achieved

Savings of up to Rs 7,380/USD 95 annually, with approximately 25 tonnes of carbon dioxide emissions mitigated.

The issue

The state of Meghalaya faces frequent power cuts which has affected the delivery of healthcare services. These disruptions in power can last as long as eight hours per day and can be worse during the monsoon period as the power supply lines go through the forest. Sub-centres are the first point of contact in the public health system of India, and they assume even more importance in states like Meghalaya, where 80% of the population lives in rural and remote areas that do not have access to state of the art health facilities, given its hilly terrain.

Sustainability strategy implemented

The government of Meghalaya, in partnership with SELCO Foundation, under National Health Mission has installed solar panels on 100 sub-centres in eleven districts, along with energy efficient equipment. The list of equipment that runs on solar energy includes – tube lights, fans, charging points, radiant warmer, suction apparatus, spotlight, and vaccine refrigerator.

The solar power system provided in sub-centres is off grid, i.e., there is no dependency on the grid. The battery that accompanies this system provides a backup of up to three days, in case of unavailability of sun due to weather conditions. For sub centres, they have segregated the solar power system for luminaries, equipment, and staff quarters.

Luminaries (DC system)	0.2 kW
Labour room medical equipment (radiant warmer, spotlight, suction apparatus)	0.75 kW
Luminaries in staff quarter (DC system)	0.1 kW
Standalone solar streetlight	0.04 kW

Before the installation of solar panels, the delivery of health services used to be affected due to power cuts. Since the installation, the Auxiliary Nurse Midwives have experienced significant

improvement in the functioning of sub-centres, especially in the way there is no interruption during the delivery of pregnant women. The sub-centres run entirely on solar energy. SELCO Foundation has trained the staff at sub-centres on how to maintain the solar panels which includes cleaning it and refilling the distilled water in batteries.

Demographic information

The state of Meghalaya has a population of 29.67 lakhs. It has 11 districts with a total of 463 sub centres. According to the National Family Health Survey 5, the infant mortality rate is 32.3 deaths per 1000 live births and as per the Sample Registration Survey 2016-18, maternal mortality rate is alarmingly high at 197 deaths per 1,00,000 deliveries. With 80% of population residing in rural areas, the public health system assumes greater importance.

Next steps

The government of Meghalaya, along with SELCO Foundation, intends to solarise the remaining 342 sub centres and 122 primary health centres across the state. The site assessment is in progress.

Links

To learn more about Health and Environment Leadership Platform and its members:

https://www.ceh.org.in/activities/help/about/

To gain access to HELP's information, education, and communication materials and other case studies:

https://www.ceh.org.in/resources/

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References

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