Power for Health: India Action Plan
Steps to achieving universal health care powered by distributed clean energy
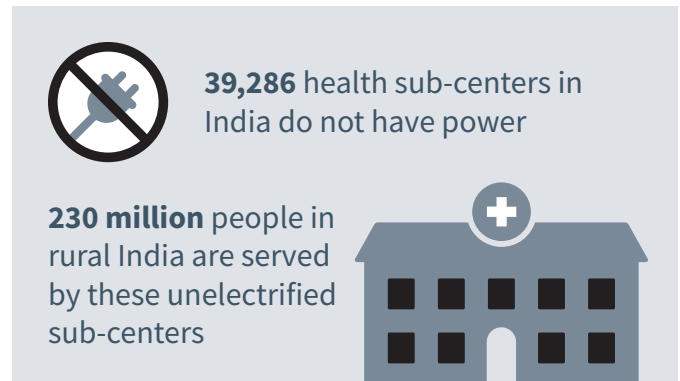
POWER FOR ALL

Executive Summary

The COVID-19 pandemic demands upgrading India's rural health care system, starting with access to reliable power. Seeing the unique opportunity for the decentralized renewable energy (DRE) sector to help India's health care system, Power for All organized a National Action Roundtable on Powering Rural Health Care with Clean Energy in August 2020 with 20 organizations from the energy and health care sectors in the country, focused on the goal of achieving better rural health outcomes powered by distributed clean energy. Together, the collaborative prioritized actions the Indian health care and energy sectors would both work on—and advocate for—in 2020–2021. These efforts will achieve the level of systemic change required to support the country through the COVID-19 crisis and ensure the power supply necessary for rural sub-centers in India to deliver quality health care in the long term[1]. The collaborative engaged stakeholders at various levels of the government, the private sector and the media, resulting in a comprehensive agreement to advance electrification of rural health centers with DRE. Working closely with local partners, the group will bring together state-level stakeholders to develop a roadmap for implementation, including assessing health center electrification and developing a roadmap for implementation that includes energy efficient equipment, identifying suitable financial mechanisms and operating models, and building local capacity.

The Context

Despite an increase in electrification under Saubhagya, many health facilities in rural India—home to 66 percent[2] of India's population—are forced to function without regular electricity supply, or no supply at all. According to the 2019 Rural Health Statistics,[3] nearly 40,000 sub-centers in rural India serving 230 million people—15 percent of the country's total population—lack electricity altogether, severely impacting the delivery of health care services in these regions. These sub-centers are the first point of contact for rural communities to the health care system. Reverse migration as a result of COVID-19 has compounded the stress on these centers.

39,286 health sub-centers in India do not have power

230 million people in rural India are served by these unelectrified sub-centers
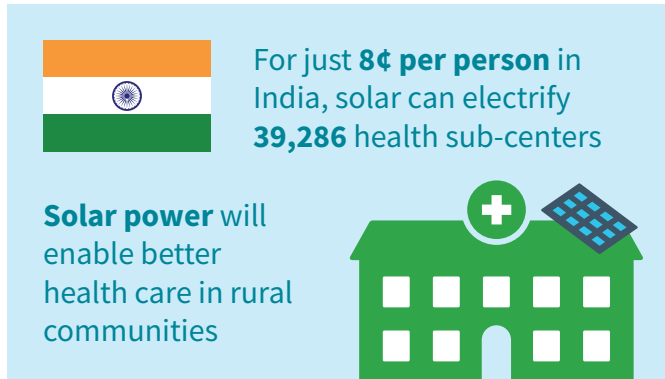
The Challenge

Reliable power supply is critical in order to improve rural community health. Without electricity, health facilities cannot run life-saving equipment, store blood, vaccines and other medicines, or conduct safe deliveries and improve maternal mortality rates. In the absence of grid power, many facilities use diesel generators, which are expensive to run and maintain and add to the financial burden of the health center. Diesel generators are also polluting to the local environment, increasing the risk for populations with existing respiratory ailments. Unfortunately, electrification of public facilities often falls between sectors and agencies, owned by neither the health or energy ministries. Lack of coordination is at the heart of this development failure. Health and energy ministries frequently lack any mechanism for collaboration, leaving potential solution partners (private sector, civil society and finance sources) isolated from both sectors.

The Opportunity

In India, Chhattisgarh, Karnataka, Maharashtra, and other states have proven that DRE can transform rural health care quickly and affordably. Combined with more efficient medical equipment, blended finance, and new and sustainable service delivery models, DRE can solve this problem for less than USD 0.40 (INR 30) per person in initial capital expenditure[4]. These interventions reduce expenditure on diesel and electricity, and improve access to timely and reliable health care services which contribute to lives saved

and reduced out-of-pocket expenses for rural populations. From the government's perspective, increased footfall at health facilities reduces the cost of health care per patient. Given the Ministry of New and Renewable Energy's benchmark cost of USD 1 per watt for solar PV systems with 3-hour storage, India can solarize all unelectrified sub-centers for as little as USD 81.7 million, which amounts to less than 1 percent of the 2020–2021 budgets for the country's health and power ministries combined.

For just **8¢ per person** in India, solar can electrify **39,286** health sub-centers

Solar power will enable better health care in rural communities

The Actors

The energy and health sectors, if aligned, can facilitate electrification of rural health centers and support India's vision of universal health care for all. With the diverse set of stakeholders—inside and outside of governments—required to achieve universal access for rural health centers, common agendas are in short supply. However, COVID-19 has created a unique moment in time, and a common enemy to focus efforts. In India, there is an opportunity to move towards health center electrification via inter-ministerial collaboration by combining health-related policies and energy-related policies.

Three key entities—the National Health Mission (responsible for improving standards of public health care), the Ministry of New and Renewable Energy (tasked with increasing the uptake of renewable energy) and NITI Aayog (responsible for designing strategic, long-term policies and programs)—are the key actors who can catalyze electrification of rural health centers with DRE. By collaborating on policy, finance, operations, technology, and capacity-building at the national and state levels, 10 critical actions outlined below can be taken to bring decentralized renewable power to rural health centers across India.

10 Critical Actions

1. Create a national policy framework that combines the priorities of the National Health Mission and the Ministry of New and Renewable Energy that would support the goals of both ministries.
2. Establish policies that foster and reward collaboration between the state level health and renewable energy ministries that results in the adoption of distributed renewables towards achieving universal health care for all.
3. Dedicate funding within India's existing health and energy budgets for powering public health centers with DRE, tying central government funding for health facilities to achievement of performance indicators (KPIs).
4. Aggregate financial support to include available funding sources at the national and state levels with external funds from CSR budgets, development agencies, and private foundations to facilitate access to finance.
5. Disincentivize the use of backup diesel generators for health centers in favor of solar PV systems via the climate change and human health focus of the State Action Plans[5] (while also incentivizing the use of energy efficiency standards and green building codes).
6. Mandate health center audits map solar PV system sizing to medical equipment needed at a given location, based on population density and the prevailing disease burden of the area (also as part of State Action Plans).[6]
7. Update existing Indian Public Health Standards[7] to require a level of energy provision that enables a higher standard of care in keeping with the National Health Mission's goals.
8. Establish standardized KPIs based on the National Health Mission's checklist for each facility, including comprehensive technical requirements (e.g., equipment for maternal and child health, immunization and cold storage, running water, adequate lighting, and internet connectivity for telemedicine services).
9. Establish terms of service contracts between DRE providers, the state health mission, the state renewable energy agency, and other relevant players that ensures maintenance of solar PV systems and other equipment is done by trained technicians (to ensure efficient, long-term functioning).
10. Train health center staff on basic PV system maintenance to ensure system efficiency and on-site troubleshooting, as well as enhance and build the overall capacity of the rural health system to enable it to effectively handle increased allocations and improve levels of service accordingly.

About

This action plan is the result of the solutions presented at the National Action Roundtable on Powering Rural Health Care with Clean Energy, held virtually on 5 August 2020. The roundtable was focused on the goal of achieving better rural health outcomes powered by distributed clean energy, and was organized by a consortium of Indian organizations from the health care and energy sectors in India. The coalition included Aravind Eye Care System, Association of Healthcare Providers India (AHPI), Council for Energy, Environment and Water (CEEW), Centre for Chronic Disease Control (CCDC), Centre for Environmental Health, Catholic Health Association of India (CHAI), cKinetics, CLEAN, Chhattisgarh Renewable Energy Development Agency (CREDA), Doctors for You, Health Energy Initiative (India), Karuna Trust, Lung Care Foundation, PSG Institute of Medical Sciences, Public Health Foundation of India (PHFI), Quality Accreditation Institute, SELCO Foundation, and Shakti Sustainable Energy Foundation, supported by Power for All.

Power for All

Power for All is a multi-stakeholder coalition working to rapidly scale decentralized renewable energy in order to achieve universal electricity access before 2030. Decentralized renewables—including green mini-grids and solar systems designed for households, businesses and productive use appliances—offer the fastest, most affordable and cleanest path to electricity access for all. Power for All brings together over 300 business, finance, research, and civil society organizations. Learn more at **powerforall.org**.

Notes

1. Power for All press release **https://www.powerforall.org/news-media/press-releases/indian-leaders-call-improvement-rural-healthcare-solarization-of-clinics**
2. World Bank estimates based on the United Nations Population Division's World Urbanization Prospects: 2018 Revision. **https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS?locations=IN**
3. Rural Health Statistics 2018-2019, Ministry of Health and Family Welfare Statistics Division, Government of India **https://main.mohfw.gov.in/sites/default/files/Final%20RHS%202018-19_0.pdf**
4. DIPTI Sustainability Outlook, Analysis: Enabling effective health care provision through resilient energy systems, **http://dipti.sustainabilityoutlook.in/perspectivenew/58**
5. In 2009 the Government of India directed all state governments and union territories to prepare State Action Plans on Climate Change (SAPCC), which would serve as the primary policy document at the sub-national level to address vulnerabilities and increase resilience, and includes pilots and demonstration projects with funding from designated agencies and by the national government under the National Adaptation Fund on Climate Change.
6. On average, Primary Health Centers (PHCs) and sub-centers require system sizes of 5kW and 2kW solar PV respectively, with 3-hour storage.
7. National Rural Health Mission, Indian Public Health Standards, **https://nhm.gov.in/index1.php?lang=1&level=2&sublinkid=971&lid=154**