
POWER FOR ALL FACT SHEET

Powering Jobs Census 2022 : Focus on India

**POWER
FOR ALL**

89,000

WORKERS EXPECTED TO BE
EMPLOYED IN INDIAN DRE
SECTOR IN 2023

67HRS

ANNUAL INTERNAL
TRAINING RECEIVED BY DRE
WORKERS IN INDIA

21%

PARTICIPATION RATE OF
WOMEN IN THE DRE SECTOR IN
INDIA

The World Bank estimates that access to electricity in India went from 55 percent of the population in 2001 to 99 percent in 2020.¹ While India is considered a fully electrified country, most households in rural villages living under the grid endure an unreliable power supply, unscheduled power cuts, low or inconsistent voltages, or no electricity at all. The market potential for distributed renewable energy (DRE) technologies in India is significant due to its massive unelectrified population estimated at 6.6 million households.² Power for All's report "Powering Jobs Census 2022: Focus on India" envisages a strong DRE workforce significantly contributing to India's energy transition. DRE is in a unique position to deliver not only affordable, high-quality energy but also jobs as a result of the continuously increasing demand for electricity.

The Indian DRE sector is a large and resilient employer

- » The DRE sector in India is projected to employ nearly 89,000 workers in 2023
- » COVID-19 had a significant impact on the Indian overall renewable energy sector, reflected in a 48 percent drop in employment from 2019 to 2021.³
- » The Indian DRE sector proved to be more resilient: it experienced a milder job contraction than the rest of the economy (6 percent between 2019 and 2020) and is recovering faster. It is expected that by the end of 2022 employment will be already above pre-pandemic levels.

Employment trends in the DRE sector

- » The pico-solar/solar home systems (SHS) and Commercial & Industrial (C&I) sectors account for almost an equivalent proportion of DRE sector employment: It is anticipated that the Indian DRE market will move away from SHS and toward higher capacity C&I and mini-grid technologies—leading to a decrease in the overall units sold for SHS goods.
- » Market maturation will lead to decrease in direct employment and increase in indirect, induced jobs: Direct employment creation is likely to drop especially in sales and distribution jobs. On the other hand, indirect and induced jobs are expected to rise as the employment contribution of larger DRE systems comes largely through supporting commercial activities in local villages.
- » Employment in the DRE sector is dominated by large companies that on an average employ more than 100 workers: India has relatively high rates of informal employment, up to 88 percent, thus indirect and induced jobs are projected to increase. The informal sector's share of India's GDP fell from 53 percent in 2018 to 20 percent in 2021.

Women participation in the sector

- » Participation of women in the DRE sector in India currently stands at 21 percent: Women's engagement in the Indian DRE industry has decreased from the Powering Jobs 2019 Census estimate, which put the percentage of women in the sector at 23.⁴
- » India has one of the highest shares of female students in STEM fields (at 30 percent): However, few apply for technical positions in DRE companies, as most of the roles are in remote rural locations, which are less desired by women candidates.⁵
- » Women account for nearly 25 percent of the employees in the skilled C&I worker's segment: There is implicit bias based against women in the sector, deterring many from pursuing job opportunities, especially in technical roles. Skilled workers in SHS experienced the lowest rate followed by Mini Grids (20 percent).

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By the Numbers:

89,000

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Workers Skill Levels and Training

- » An Indian worker from the DRE sector receives, on average, 67 hours of internal training and 32 hours of external training.
- » 55 percent of the DRE companies in the Powering Jobs 2022 Census reported that they provide training (either internal or external) to their employees.
- » Skilled and semi-skilled jobs (including top management) received an average of 74 hours of internal training per year, in contrast unskilled jobs received only 46 hours.
- » Around 33 percent and 35 percent of the companies provided external training for management and skilled workers, respectively. On the other hand, only 25 percent and 20 percent provide external training for semi-skilled and unskilled workers, respectively.
- » The average level of retention for the Indian DRE sector is 21 months: Stability in jobs is a fundamental incentive to promote and encourage training.

Average annual wage for different roles in the DRE sector

- » The average annual wage for the Indian DRE sector ranges from US\$23,000 for a top management position in a SHS company to close to US\$1,300 for an unskilled worker in a C&I company: Average DRE wages in India are slightly higher than the national average. According to the Powering Jobs 2022 Census, women in the DRE sector earn only 22 percent less than their male counterparts.
- » The highest pay gap exists for unskilled workers at 67 percent, while skilled women workers in India have the lowest pay gap at 87 percent: India has one of the widest gender pay gaps in the world. For every US\$100 a male worker earns, a woman in a similar job earns only US\$63.⁶
- » The DRE sector has a better gender pay gap, but is still influenced by the same socio-economic and structural problems.

Share the Message

- » Power for All's "Powering Jobs Census 2022: The Energy Access Workforce Focus on India" research report provides a comprehensive overview of employment in the DRE sector, including skill levels, training opportunities, compensation, participation of women and youth, and job retention.
- » The report highlights the growth and resilience exhibited by DRE in India, bolstering the case for concerted efforts from government and development partners, to not only achieve universal energy access, but also tap into the job creation potential to accelerate rural development and uplift vulnerable communities with poverty reduction efforts.

Sources:

1. "World Bank Open Data." The World Bank, accessed Jun. 20, 2022.
2. State of Electricity Access in India: Insights from the India Residential Energy Survey (IRES) 2020. Report, New Delhi: Council on Energy, Environment and Water, Oct. 2020.
3. India's Expanding Clean Energy Workforce: Opportunities in the Solar and Wind Energy Sectors. (New Delhi: Council on Energy, Environment and Water, Natural Resources Defense Council, and Skill Council for Green Jobs, Jan. 2022).
4. Power for All, Powering Jobs Census 2019: The Energy Access Workforce. (San Francisco: Power for All, July 2019).
5. CEEM and IEA, "Women working in the rooftop solar sector: A look at India's transition to clean energy." (New Delhi: Council on Energy, Environment and Water, Paris: International Energy Agency, Feb 2019).
6. "World Economic Forum, Global Gender Gap Report 2021 (Geneva: World Economic Forum, Mar. 2021).