POWER FOR ALL FACT SHEET

Decentralized Renewables: Supporting Sanitation and Access to Clean Water

POWER FOR ALL

663 million

NUMBER OF PEOPLE WHO LACK ACCESS TO CLEAN WATER

2.4 billion

NUMBER OF PEOPLE WHO LACK ACCES TO IMPROVED SANITAITON

30,000

LITRES PER DAY: CLEAN WATER PROVIDED BY A SINGLE SOLAR PUMP IN KENYA

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DRE solutions can provide access to clean water and power critical sanitation systems, reducing the risk of diseases and illness.

DRE solutions can supply clean water to communities in need:

» Globally, 663 million people lack access to clean water, leading to water borne diseases and diarrhea[1]

» 43% of healthcare facilities in Latin America and the Caribbean, 42% of facilities in Southeast Asia, and 16% of facilities in Sub-Saharan Africa lack access to improved sanitation facilities.[2]

» In Chhattisgarh state, India, 17% of Primary Healthcare Centers (PHCs) reported not having access to adequate supply of water; 37% reported the inadequate supply of electricity as adversely affecting their water supply.[3]

» In Turkana, Kenya, a single solar powered water pump provides 30,000 liters of clean water a day, saving villagers a 10 kilometer walk to source water from dried-up, contaminated river beds. [4]

» More than 330,000 wind-powered water pumps, including 300,000 in South Africa, are used to provide clean water for household use, irrigation, and livestock[5]

» New decentralized solar desalination technology in India has the potential to improve water quality for 250 million people currently drinking salty groundwater.[6] Latest case study shows that a system costing around USD 23,000 supplied enough water to Chelluru village in Andhra Pradesh state, India. The study also noted that further modifications could bring down the price to around USD 12,000.[7]

DRE solutions support new and productive ways to deal with waste, providing economic value to waste that may be otherwise left untreated and pollute nearby water sources:

» 2.4 billion people lack access to improved sanitation facilities and nearly a billion people practice open defecation, leading to water borne diseases and diarrhea.[8]

» A startup in Kenya uses human waste to produce 8 tons of fuel briquettes per month, providing sanitation and clean cooking fuel that can reduce deforestation and indoor air pollution.[9] At around USD 0.30

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per kg, briquettes are extremely cost competitive compared to conventional charcoal fuel.[10]

- 57 bio centers in Nairobi use the methane from human waste to provide clean bio-fuel, providing sanitation and power in the city's slum areas.[11]
- Sistema Bio is a decentralized biofuel generator that creates biofuel from organic farm waste. More than 3,900 systems installed in Mexico and Kenya are providing power for 23,000 customers.[12]

Share the Message

Lack of clean water, poor sanitation, and untreated waste pose serious health threats to communities around the world. DRE offers solutions to these problems.

- DRE can provide clean water to communities by powering water pumps and filtration systems.
- DRE Waste-to-Energy systems attach economic value to organic waste, encouraging the collection and treatment of waste and preventing water pollution.
- Distributed solutions can be deployed quickly, cleanly and cost effectively to reach individual households and communities in need.

Sources:

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