

## Renewable Energy:

# POWERING UP THE SUSTAINABLE DEVELOPMENT GOALS FOR CHILDREN

Collaboration with Harvard Consulting on Business and the Environment

## The Challenge



We are not on track to achieve the **Sustainable Development Goal 7** — ensuring access to affordable, reliable, sustainable and modern energy for all.



**Energy poverty** perpetuates the cycle of social and economic disadvantage.



Nearly **a million stillbirths a year** can be attributed to fossil fuel pollution.

## Key Takeaways

After reading this brief, you will know more about

- Renewable energy innovations offer numerous opportunities to advance energy equity, improve human development and well-being, and address the impact of climate change.
- Renewable energy technologies power up multiple SDG results for children and young people, from quality education to clean water and sanitation.
- We need to invest in a portfolio of renewable energy innovations across multiple time horizons because better solutions may be available, and what works in the near term may not be effective in the longer term (10 years and beyond) when the conditions for implementation have changed.

## Context

We are facing an energy trilemma. Energy is critical for human development but 1 in 10 people in the world are without electricity.<sup>1</sup> Energy consumption, mainly fossil fuel, is driving environmental and climate crises globally but energy demand is increasing. Global energy use is predicted to increase by nearly 50 percent compared with 2020, mostly due to economic growth and population in non-OECD countries.<sup>2</sup>

Times of crisis put the spotlight on alternatives, possibilities, and opportunities. The current energy security concerns and the environmental and climate crises are driving great interest in renewable energy. Renewable energy technologies support the achievement of SDG7 and power up multiple SDG results for children.

# Findings

## Renewable energy technologies power up multiple SDG results for children

### No poverty

- Access to clean, reliable energy can strengthen the delivery of social services for children, reduce multidimensional poverty, build resilience, and sustain development gains - especially in areas subject to shocks and chronic stress.<sup>3</sup>

### Good health and wellbeing

- Decentralized and reliable energy at healthcare facilities can power vital life-saving medical equipment 24/7 (e.g., vaccine refrigerators, diagnostic equipment, ventilators, emergency and operating rooms), ensure access to maternity treatments, safe births any time of day, postnatal care and reproductive health, and improve facility operations and staff retention.
- Electricity provides lighting, heating, cooling, digital connectivity and clean water.
- The cooking electrification reduces indoor air pollution and can improve nutrition of children.<sup>4</sup>

### Quality education

- Modern, reliable and affordable electricity at schools, learning centres and homes increase school attendance; allow for longer operating hours; improve educational outcomes and students' quality of learning; and support remote learning and studying outside of daylight hours.
- Electricity is also associated with teacher retention.<sup>5</sup>

### Gender equality

- Sustainable energy solutions can empower girls and young women by increasing school attendance and the ability for home study.
- It can also save them time and effort from having to travel far to collect water and fuelwood, provide safety at night, and boost technical skills-building and livelihood opportunities.<sup>6</sup>

- The renewable energy economy opens opportunities for women to become energy entrepreneurs.

### Clean water and sanitation

- Accessible and affordable energy is needed for reliable water supply and purification.
- Consistent, climate-resilient water supply systems in communities powered by solar or other renewable energy sources help ensure access to sustainable, affordable, equitable and safe water services.
- Solar-powered water pumps can contribute to improving agriculture productivity and food security.
- Keeping water safe and accessible can lessen children's exposure to deadly waterborne diseases.<sup>7</sup>

### Affordable and clean energy

- Sustainable energy solutions can help achieve better health, education, safe water and sanitation, and social policy outcomes in development and humanitarian situations for the most vulnerable children and young people.<sup>8</sup>

### Decent work and economic growth

- Sustainable energy solutions can increase opportunities for full and productive employment and decent work for young people, especially in technical skills training as the renewable energy market grows.<sup>9</sup>

### Climate action

- Sustainable energy solutions in child-centric social sectors can contribute to reducing greenhouse gas emissions and air pollution, promote climate-resilient development and disaster recovery, and increase green job opportunities.<sup>10</sup>

See **Insight Report No. 2** for more information, including the potential applications of novel renewable energy innovations for the humanitarian and development sector.

## Insights Briefs

**Innovation Nodes Insights Briefs** serve as resource for practitioners and decision makers to quickly get up-to-speed on new and unknown areas of potential innovation for children.

Publication produced by the Innovation Nodes aim to facilitate the exchange of knowledge and stimulate discussion. The findings, interpretations and conclusions expressed are those of the researchers and authors, and do not necessarily reflect UNICEF policies or approaches.

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## Notes

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### Suggested citation: