

DELIVERING CLEAN, AFFORDABLE ENERGY FOR ALL

Derived from a [series of expert panel sessions](#) on clean and affordable energy (SDG 7), convened by Springer Nature and the United Nations Sustainable Development Solutions Network.

2023 marks the halfway point towards achieving the Sustainable Development Goals (SDGs). Despite the fact that progress is lagging, with concerted effort in the next 7 years SDG 7 is achievable.

Key Policy Recommendations

- There is an urgent need for clear, compelling communication to better educate the public about climate change, encourage behavior change, and drive interconnected solutions. Policymakers need to work with academics and trusted voices in local communities alike to spread the message.
- Holistic approaches that combine technological pathways with adaptive, equitable government policies are needed for the world to reach net-zero targets by 2050.
- Marginalized voices in all communities need to be heard to allow for an equitable transition. This can help mitigate the genuine risk that energy policies worsen inequality. Policymakers and enforcers need to work with stakeholders to identify equitable policy instruments.
- Stakeholders need to work together at the global level to develop enabling environments and frameworks to foster coordination, balanced with tailored, locally-adapted (rather than one-size-fits-all) solutions.



Communication & Education

There is an urgent need for clearer, compelling communication to better educate the population about climate change, encourage sustainable behavior change, and drive interconnected solutions.

Recommendations:

- Partner with great communicators and empower trusted voices in the community.
- Tailor your message, whether it's acknowledging the constraints of your audience (time, money, political capital) or making complex issues relevant to day-to-day life. Everyone wants to continue living on our planet healthily and happily.
For example, biking reduces carbon emissions, is fun, good for fitness, and affordable.
- Think of emotion: knowledge is necessary but insufficient for behavioral change. People make decisions based on beliefs, their sense of self, and what others are doing. Be patient: change takes time.
- Work with researchers: the academic community is always willing to engage. Find scientific experts and good communicators and work together to educate the public.

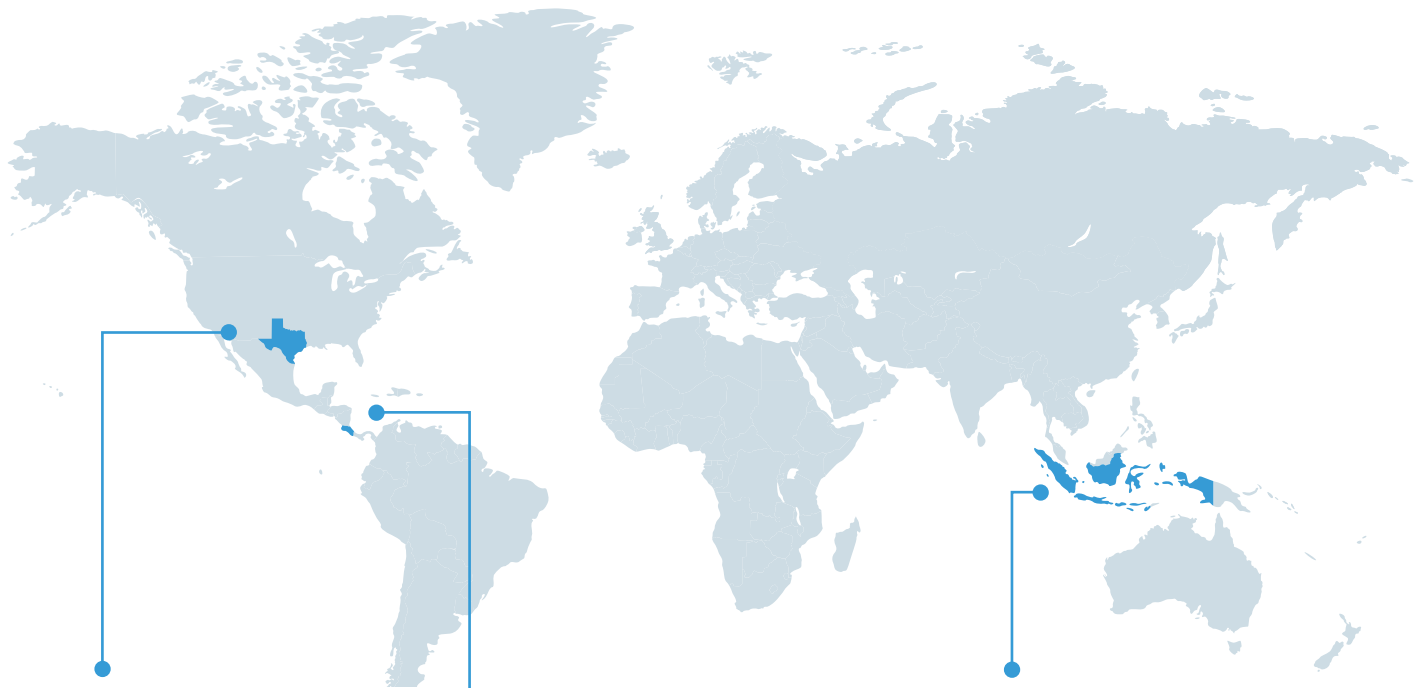


Reaching Net Zero

The tools to reduce global emissions exist: they include clean energy technologies and their associated cost savings. But investment must be effectively allocated to meet the required scale of the transition.



Recommendations:



Consider human behavior and encourage cooperation.

Some utilities in Texas, USA, use dynamic scheduling, demand response, and optimal dispatching of resources to drive behavior change and balance supply and demand.

Leverage integrated resource planning to address challenges such as intermittency.

Costa Rica uses a combination of wind, hydro, geothermal, and solar power to reduce risks like intermittency and vulnerability of hydro power in the dry season.

Promote artificial intelligence, technology, and digitalization to improve energy efficiency and reduce consumption.

In Indonesia, the national power utility is working with General Electric to develop remote monitoring systems to reduce breakdown and unplanned maintenance downtime.

Include stakeholders when tackling hard-to-abate sectors.

Costa Rica is tackling emissions from the transport sector. Personal preferences to use cars are compounded by poor public transport, while restrictions on imports of inefficient fuels and vehicles can affect affordability. Stakeholder inclusion is key to ensuring a fair transition.



Invest in battery energy storage research and infrastructure, which can also create jobs.

Improving Equity

Every person on the planet deserves and requires access to clean energy to thrive. The energy transition, if achieved in the right way, can greatly advance global equity; however, so far it has been greatly unequal. In addition, energy provision is often tied to cultural and social norms, from cooking to the role of women, and cannot be considered in isolation.



Recommendations:

- Renewables must be deployed in emerging economies as well as developed ones, with financial help for the poorest and most vulnerable countries. Taxation is particularly powerful, for example pausing VAT on some fuels to help people to afford it, as happened in Kenya.
- Gender, race, age, ability, and other identity factors matter when making policy decisions and must be taken into account when interacting with communities facing energy issues. Policymakers need to work with stakeholders to identify equitable policy instruments.

For example, millions of people around the world rely on fire, charcoal, coal, and kerosene for energy, putting them at risk to be among the 3.2 million people who die each year due to indoor air pollution.¹ Placing a tax on items like kerosene can have significant, adverse effects on the poorest people; yet, including these communities in policy decisions can result in instruments that improve their access to energy and quality of life.

Financing the Transition

Despite the declining cost of renewables and rapidly growing investment, current levels of investment are USD 16.7 billion short of the United Nations Framework Convention on Climate Change goal.²



Recommendations:

- Governments must meet international commitments for climate finance and reduce fossil fuel subsidies. They should also incentivize renewables, invest in infrastructure (e.g. digital, transmission, charging stations, etc.), and foster an enabling environment for renewables. Public-private partnerships can be a strong tool to achieve these objectives.
- Market incentives are needed to reward companies that respect human rights, labor standards, and environmental protection. Such incentives have been successful at reducing tobacco use, for example.
- The international community needs to develop frameworks to offer reliable carbon credits in exchange for financing, and must ensure this financing reaches communities who are the end users and protectors of forests, such as Indigenous peoples who have protected the forest for millennia and are now under threat.

1. World Health Organization. [Household Air Pollution](#) (web resource, accessed May 22, 2023).

2. OECD. 2022. [Aggregate Trends of Climate Finance Provided and Mobilised by Developed Countries in 2013-2020](#). Paris, France.