

A blueprint for policymakers



What 24/7 carbon-free electricity means

The benefits

How policymakers can act

What if we could decarbonise the grid even faster and in a way which facilitates investment, reduces costs, increases energy security and drives the uptake of innovative technologies and creates new jobs in communities?

24/7 carbon-free electricity (CFE) is the next frontier in renewable electricity procurement. It means moving towards operating on 100% carbon-free electricity, 24 hours a day, 7 days a week, sourced locally.

24/7 CFE isn't just about phasing out fossil fuels. It aligns electricity markets with real grid needs to strengthen domestic energy security, cut import costs, and deliver reliable zero-carbon power every hour—not just on paper.

The benefits of 24/7 carbon-free electricity



Aligns Policy Goals with Practical Action

- ▶ **Clearer compliance:** Hourly matching bridges the gap between targets and actual emissions reductions, supporting robust policy frameworks and net-zero pathways.
- ▶ **Plugging the gaps:** More transparent energy markets and clearer demand signals will help identify opportunities to target investments on the areas where there are opportunities for generation and storage assets.



Expands Energy Intelligence

- ▶ **Better data, better policy:** Widespread adoption improves the generation of high-resolution data across regions – empowering more informed planning, creating markets for green hourly tariffs, capacity building, and energy forecasting.
- ▶ **Smarter energy use:** Visibility into the balance of carbon-free electricity production and energy use enables smarter procurement and demand flexibility, potentially reducing the need for costly new infrastructure.



Drives Local Economic Growth

- ▶ **Community impact:** Regional matching keeps investment and jobs local – encouraging deployment of renewables and storage solution in the areas where they're needed and used.



Meets Stakeholder Expectations

- ▶ **Credibility with the public and investors:** Transparent, verifiable tracking reduces greenwashing risks and strengthens trust.

Why it's time to start moving to **24/7 carbon-free electricity**

Low cost and rapid deployment meant that renewable energy and storage accounted for over 90% of the new electricity generation capacity added to global energy networks in 2024.¹ But even with this incredible growth, we are not on track to hit the targets agreed at COP28 to triple renewables and double energy efficiency by 2030.²

Repeated price shocks and supply concerns in global fossil fuel markets since 2020 have highlighted the risks of dependence on volatile fuels. Renewable energy offers policymakers a way to reduce consumers' exposure to these risks – but we can and must move faster.

Annual matching campaigns like RE100 have played a central role in the development and deployment of renewable electricity around the world by creating certainty for investors, reducing the costs of capital and

demonstrating the opportunities that moving to renewables offers. We need to move faster.

As we enter an era where access to affordable, reliable and rapidly deployable renewable electricity is poised to become the bedrock of economic prosperity, policymakers can act now to speed up the next stage of the energy transition and effectively harness the financial and environmental benefits of 24/7 CFE.

¹ IRENA Renewable Capacity Statistics 2025

² IRENA Delivering on the UAE Consensus: Tracking progress toward tripling renewable energy capacity and doubling energy efficiency by 2030



Changemakers – The policy journey to 24/7 carbon-free electricity

24/7 CFE connects electricity demand with carbon-free generation, where and when consumption occurs. This requires a policy environment that gives greater visibility of supply, demand and electricity supply mix that enables the procurement of time- and location-matched clean electricity.



1. Smart Metering and Data Systems

- ▶ Consumers and suppliers need systems capable of tracking and verifying electricity use and generation hour by hour. Unlocking the ability to track energy consumption at a site and aggregate level through hourly tariffs gives consumers transparency and enables them to make informed decisions.



2. Reform Tracking System

- ▶ Updating the energy attribute tracking system to include hourly and locational data is critical for credible matching.



3. Market and Regulatory Design

- ▶ Regulations and market design should support green tariffs and hourly matching products.
- ▶ Policy choices that incentivise battery storage and demand side flexibility will allow consumers to more rapidly contract carbon-free power that aligns with their supply region.



4. Support for Advanced CFE Technologies

- ▶ Policy support is needed to de-risk and accelerate the commercialisation and widespread deployment of advanced clean electricity technologies, including dispatchable clean energy technologies and advanced energy storage systems.
- ▶ Advanced CFE technologies can complement variable renewables to drive faster grid decarbonisation, avoid the need to prolong the use of fossil fuels through unreliable and expensive stopgap solutions such as Carbon Capture and Storage.



5. Piloting and pathfinders

- ▶ Climate Group's [24/7 Carbon-Free Coalition](#) and our partners are taking steps towards powering their operations with hourly matched CFE in line with our world-first [Technical Criteria](#), and are sharing their own journeys.
- ▶ Work with us to turn real-world pilot insights into practical policy pathways for reliable, carbon-free electricity – every hour of every day.

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Coalition Partners:

