



24/7 Carbon-Free Coalition: Frequently Asked Questions

What is the 24/7 Carbon-Free Coalition?

The [24/7 Carbon-Free Coalition](#) is Climate Group's campaign to support businesses to start their journey towards 24/7 carbon-free electricity – to match their electricity use with carbon-free power every hour, every day, sourced from the same grid.

What is the 24/7 CFE Technical Criteria?

The 24/7 Carbon-Free Coalition's technical criteria is a new global framework for corporates to measure and report progress towards 24/7 carbon-free electricity. This exciting milestone for the Coalition will support corporates on their journey to procure 100% carbon-free electricity (CFE), every hour of every day.

Developed in collaboration with world-leading experts, the technical criteria outline key aspects of 24/7 CFE. It includes definitions of carbon-free energy, geographic market boundaries, and time matching guidance. Eligible technologies include electricity generated by wind, solar, zero-emissions geothermal, marine (wave and tidal), sustainable hydropower, nuclear (fission and fusion), and sustainable biomass.

The technical criteria will support corporates to prepare for future changes in standards and regulations, which are expected to require them to disclose granular-level data in the future. Following work with leading international corporate partners during the pilot phase, Climate Group is preparing to launch the full 24/7 Carbon-Free Coalition later this year.

How regularly will the technical criteria be reviewed?

The technical criteria will be regularly reviewed and updated to reflect insights from real-world data. A formal review process will occur every 6 months within the first two years of the 24/7 Carbon-Free Coalition, in consultation with a Technical Advisory Group.

What is the impact of 24/7 CFE?

Academic research from organisations like [Princeton University](#), [TU Berlin](#), and [the International Energy Agency](#) find that local and hourly matched procurement can drive decarbonisation benefits. This includes:

- Greater decarbonisation of the electricity grid
- The roll out of a diverse mix of clean energy technologies
- Reduced reliance on fossil fuel electricity sources
- Accelerated deployment of innovative technologies as well as storage



Why should corporates join?

Our Coalition supports and guides businesses to adopt 24/7 CFE practices, leading the way in the decarbonisation of electricity grids across the world. Innovative business leaders joining will help eliminate reliance on fossil fuels, activating a ripple effect for a sustainable energy future.

Direct benefits to your business include:

- Improved energy reliability – protect against volatile fossil fuel pricing & availability ([insights here](#))
- Ensured regulatory compliance – get ahead of regulatory changes at your own pace
- Enhanced brand trust & credibility – offer greater transparency to consumers & investors
- Boosted competitiveness – be an early-adopter and ultimately drive down cost

Broader global benefits include:

- Innovative decarbonisation methods – scaling new tech to remove fossil fuel reliance
- More RE on the grid – generate more renewable energy, where it's needed
- Prioritised local communities – green job creation and cleaner air within communities
- Unified collective action – business, government & society working in tandem

Our Coalition is about making progress at a pace that matches each company's own capabilities, recognising that every step towards 24/7 CFE is important.

How can my organisation join?

Please send an email to 247team@climategroup.org and our Partnerships team can set up an exploratory call with you.

What if it isn't currently possible to measure hourly data in a market?

Businesses interested in joining the 24/7 Carbon-Free Coalition can decide to select a few markets where it is currently possible for them to measure hourly as a first step, building on the level of their commitment once ready. The Coalition's aim is to drive demand across the globe, ultimately accelerating progress towards a future powered by carbon-free electricity.

What are the main differences between RE100's and 24/7's technical criteria?

The 24/7 Carbon-Free Coalition puts detailed emphasis on sourcing and consuming carbon-free electricity in the same region, matched to the hour when electricity is consumed. This approach helps to ensure granular measurement at hourly intervals and drive carbon-free resource deployment where and when it is needed most.

By moving to hourly-matched energy procurement, you will not only know exactly what you're buying but also learn more about your own usage leading to potential efficiency gains and its associated reduced costs. Being an early adopter, it will help to boost corporates' competitiveness, drive down cost and get ready for incoming changes requiring more granular data.



To summarise:

1. Hourly matched carbon-free electricity, delivered to the same grid as consumption
2. Inclusion of wider generation technologies: electricity generated by wind, solar, zero-emissions geothermal, marine (wave and tidal), sustainable hydropower, nuclear (fission and fusion), and sustainable biomass.
3. Inclusion of CFE from battery storage

For a detailed breakdown, please refer to the comparison table and additional notes on the next page.

Comparison Table

Technology	RE100	24/7 CFE	Climate Group reasoning for change
Natural gas with CCS	Not mentioned, immaterial	Not allowed due to upstream emissions	<p>Fossil-fired electricity resources with carbon capture and sequestration (CCS) are not considered carbon-free because even with 100% capture efficiency, methane leakage from fossil fuel supply chains leads to nonnegligible fuel-cycle emissions.</p> <p>The IEA estimates that upstream emissions from fossil-fired electricity are equivalent to 16-20% of direct combustion emissions globally, depending on fuel type.</p>
Biomass – Dedicated	Allowed with sustainability assurance from any sources	Allowed with sustainability assurance from waste/residue sources	<p>Electricity generated from sustainably sourced biomass is considered renewable under the RE100 technical criteria but cannot be unconditionally classified as carbon-free because of the high potential for nonzero net emissions resulting from fuel harvesting, processing, transportation, disposal, and land use changes.</p> <p>There is currently no widely accepted international standard for calculation and verification of the lifecycle emissions impacts of biomass-based electricity generation.</p> <p>In recognition of these complexities, the 24/7 Coalition adopts a simplified and conservative approach to the crediting of biomass-based electricity generation as carbon-free. Due to the significant potential impacts from direct and indirect land use changes, the 24/7 Coalition only recognises the generation of electricity from waste and residue biomass as carbon-free.</p> <p>This decision was determined by CG and expert discussions with our Technical Advisory Group. Biomass is an area we will be watching very closely as we consider future revisions to the technical criteria. More here.</p>
Solar PV – Utility scale	Allowed	Allowed	Renewable resource, same reasoning applies
Geo-thermal	Allowed	Allowed if zero emissions & reinjected	All forms of geothermal power are classified as renewable, but only those that recirculate 100% of produced geofluid back to the subsurface are considered carbon-free, due to GHG emissions associated with venting of condensed gases.
Hydro-power	Allowed with sustainability assurance	Allowed with sustainability assurance	Hydropower can play a role in decarbonisation provided it is generated sustainably. The 24/7 Carbon-Free Coalition only counts procurement of CFE generated from hydropower towards a 24/7 CFE target when the corporate buyer has obtained some form of assurance that the CFE was generated sustainably.



Nuclear	Not allowed	Allowed	<p>In some markets, it will be difficult and perhaps impossible to achieve 24/7 supply using just renewables, at least in the medium term. We have therefore made a pragmatic decision to allow use of nuclear in the 24/7 Coalition. We will not be changing RE100 to include nuclear because it is already proven that it is possible to achieve 100% annual matching using renewables.</p> <p>For those who wish to utilize CFE sources outside the RE100 criteria scope, the 24/7 Technical Advisory Group has set out suitable provisions and exemptions within the 24/7 technical criteria to ensure procurement within a chosen market remains impactful.</p> <p>Please note it is not a requirement that 24/7 Coalition partners use nuclear, only an option. Each company is free to make an individual choice for their business's needs and position regarding the technology mix they pursue.</p>
Wind	Allowed	Allowed	Renewable resource, same reasoning applies
Marine (Tidal and wave)	Allowed	Allowed	Renewable resource, same reasoning applies
Storage	Not allowed as not an energy resource	Allowed if energy used to charge it was carbon-free	Energy storage is recognised as playing a useful role in addressing the intermittency of renewable generation. CFE used to charge storage is subject to the same principles for credible claims to use as CFE that is directly consumed by the participant.

Please note:

Carbon-free status was determined on the basis of *fuel-cycle* emissions, so basically everything except the construction/disposal of the facilities themselves. Nothing would be carbon-free if we used full life-cycle. The only technologies where fuel-cycle emissions are not obviously zero are geothermal (where steam plants have minor carbon emissions and are excluded), nuclear (where we determined that fuel-cycle emissions are low enough to be negligible, as explained in a footnote in the technical criteria), and biomass (where we used a more complicated grading system)."

Decisions regarding source inclusion and suitable provisions involved extensive expert discussions between our Technical Advisory Group and Strategic Advisory Group. As we run through our 6-monthly governance review of the technical criteria, the Technical Advisory Group will remain involved to provide their expert opinions.



The 24/7 Carbon-Free Coalition also holds that corporate buyers can play a central role in supporting the commercialisation of emerging CFE generation and storage technologies, in addition to continuing the deployment of mature CFE technologies like wind and solar. Procurements targeting technologies that lack current policy support or market uptake can have catalytic long-term impacts beyond the direct benefits of the projects themselves, including via business model and regulatory innovations.

Market Boundaries

RE100 largely recognises individual countries as distinct markets, with the exception of the single market in US and Canada, and the single market in Europe (see [page 28/29](#) for full details).

Rather than follow the RE100 boundaries, the 24/7 Coalition's technical advisory group decided to focus on interconnected transmission grids to drive the local aspect of the campaign. For US, the market boundaries are aligned with the 45V regions which work well with current administrative boundaries (we think the final greenhouse gas protocol proposal may end up requiring AC grids so have left room to update later) and have stipulated that cross-geographies can only be claimed if they're physically interconnected via some transmission pathway (where RE100 allows transmission between islands without them necessarily being connected, for example).

We realise this isn't perfect, but we will continually reevaluate definitions in response to new analysis, emerging global standards and best practices, and ongoing changes to the physical and regulatory structure of electricity systems.

For more information, refer to the [Technical Criteria here](#).