



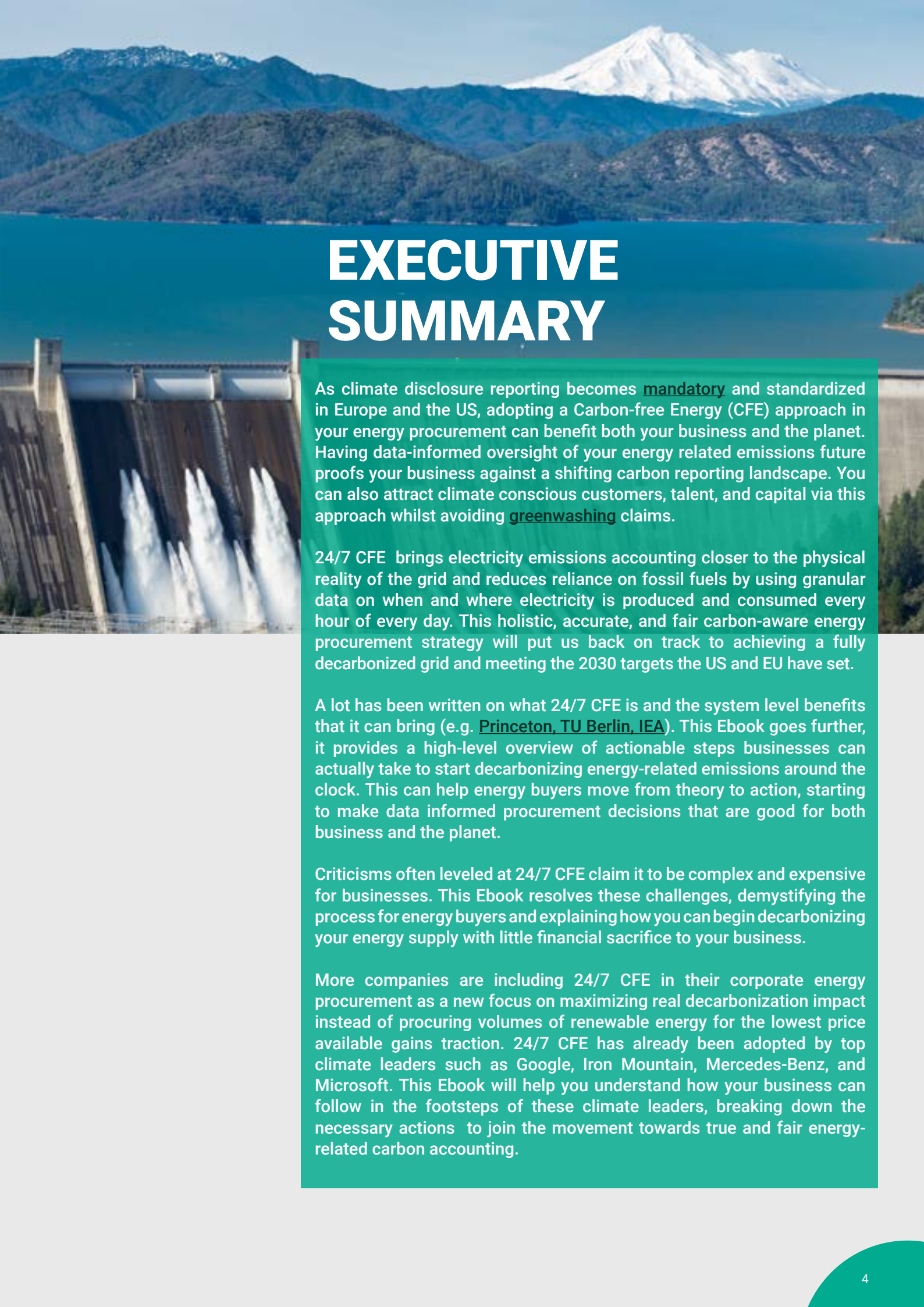
HOW TO PRACTICALLY START YOUR JOURNEY TOWARDS 24/7 CARBON-FREE ENERGY (CFE)

EBOOK



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EXECUTIVE SUMMARY

As climate disclosure reporting becomes mandatory and standardized in Europe and the US, adopting a Carbon-free Energy (CFE) approach in your energy procurement can benefit both your business and the planet. Having data-informed oversight of your energy related emissions future proofs your business against a shifting carbon reporting landscape. You can also attract climate conscious customers, talent, and capital via this approach whilst avoiding greenwashing claims.

24/7 CFE brings electricity emissions accounting closer to the physical reality of the grid and reduces reliance on fossil fuels by using granular data on when and where electricity is produced and consumed every hour of every day. This holistic, accurate, and fair carbon-aware energy procurement strategy will put us back on track to achieving a fully decarbonized grid and meeting the 2030 targets the US and EU have set.

A lot has been written on what 24/7 CFE is and the system level benefits that it can bring (e.g. Princeton, TU Berlin, IEA). This Ebook goes further, it provides a high-level overview of actionable steps businesses can actually take to start decarbonizing energy-related emissions around the clock. This can help energy buyers move from theory to action, starting to make data informed procurement decisions that are good for both business and the planet.

Criticisms often leveled at 24/7 CFE claim it to be complex and expensive for businesses. This Ebook resolves these challenges, demystifying the process for energy buyers and explaining how you can begin decarbonizing your energy supply with little financial sacrifice to your business.

More companies are including 24/7 CFE in their corporate energy procurement as a new focus on maximizing real decarbonization impact instead of procuring volumes of renewable energy for the lowest price available gains traction. 24/7 CFE has already been adopted by top climate leaders such as Google, Iron Mountain, Mercedes-Benz, and Microsoft. This Ebook will help you understand how your business can follow in the footsteps of these climate leaders, breaking down the necessary actions to join the movement towards true and fair energy-related carbon accounting.



This Ebook will help you:

1. Understand what 24/7 is, and how you can structure your business case.
2. Demystify the 24/7 CFE journey as much as possible with a simple, actionable framework and available tools on the market.
3. Explain the realistic challenges that can be overcome when adopting 24/7 CFE and the benefits businesses and society can gain with a climate-forward thinking energy procurement strategy.



INTRODUCTION

Advances in technology as well as general attitudes towards decarbonization and policy change, mean that the movement towards 24/7 Carbon-free Energy (CFE) is rapidly gaining momentum.

24/7 CFE matches a buyer's electricity demand, hour-by-hour, 24/7, with corresponding clean electricity generation from within the buyer's local electricity grid or bidding zone.

The matching of large business customers' electricity use with carbon free energy will matter more and more as we get closer to decarbonizing the grid and changing the energy mix to include more renewables.

International organizations, such as the [United Nations](#), have been promoting the adoption of 24/7 CFE to reach Sustainable Development Goals. [Google](#), [Microsoft](#), and [Bayer](#) have committed to 100% 24/7 CFE goals by 2030 and [Iron Mountain](#) by 2040. Also, [Daimler](#), [JP Morgan](#), and other major global organizations are looking into 24/7 CFE with individual projects. Policymakers like the [US Federal Administration](#) are working on 24/7 renewable matching alongside [hydrogen](#) deployment to

avoid a short-term increase in grid emissions. The EU Commission has mentioned 24/7 CFE in their latest [H2 Delegated Act](#), as part of the Renewable Energy Directive III, with requirements for stricter geographical limits for energy certificates, temporal correlation, 90% renewable penetration in the region, and mandatory granular certificates to import hydrogen into Europe by 2030. Also, cities like Paris, London, and Copenhagen have announced their 24/7 projects at the [C40 Summit](#). **With widespread adoption, it is only a matter of time before 24/7 CFE becomes an officially recognized standard for renewable energy procurement.**

This Ebook will serve as a practical guide for organizations, energy buyers and corporations worldwide. We will explain the what, why, and process of transitioning to the next generation of energy procurement so that you can be one step ahead on the path to 100% carbon-free energy.

WHAT IS 24/7 CFE?



The next frontier in clean energy procurement is here. 24/7 CFE is a strategy that involves matching an energy buyers' electricity demand every hour of every day, with corresponding carbon-free resources within their local electricity grid or bidding region. It has been defined by the **UN 24/7 Carbon-free Energy Compact** as **"the end state of a fully decarbonized electricity system and a transformative approach to energy procurement, supply, and policy design that is critical to accelerating its arrival."**

24/7 CFE is a movement towards true and fair accounting of carbon emissions from electricity usage. For businesses adopting a 24/7 carbon-free electricity procurement strategy, this means accurately calculating your CO₂ emissions by considering the time and location of energy usage and production.

The 24/7 CFE movement can:



-  Bring electricity and direct emissions accounting closer to the physical reality of the grid.
-  Help market-based carbon accounting preserve its credibility by more accurately and fairly representing the physical flow of electricity and its carbon footprint with high-resolution time and location matching requirements.
-  Claim true zero GHG Scope 2 emissions in sustainability reporting.
-  Minimize the carbon footprint to zero so carbon-free electricity can flow to the consumption site 24 hours a day, seven days a week.
-  Ultimately use procurement decisions to achieve a fully decarbonized electricity grid while engaging with local policymakers and regulators to overcome existing market and regulatory barriers.

A photograph of several white wind turbines with red-tipped blades standing on a green, hilly landscape under a clear blue sky. A large, semi-transparent teal circle is overlaid on the right side of the image, and a smaller teal circle is at the top center.

“Emissions First”: an alternative approach (otherwise known as “emissionality” or carbon-optimized energy)

The Emissions First approach is another carbon-aware energy strategy complementary to 24/7 CFE. This approach acknowledges that in today's economy, businesses have incredibly complex and global supply chains, franchised organizations, or operate in countries where policy and market instruments are not yet always suited for carbon-free energy procurement (e.g., many states in the US with regulated electricity markets). The Emissions First approach looks at making procurement decisions with the highest decarbonization impact to circumvent these issues while still having options to take action now.

What does this mean in practice? Well, under an Emissions First approach, it may be more favorable to build a solar farm in a dirty grid where you have no consumption than in a clean grid where you do have consumption, as the emissions impact on the dirty grid will be far larger. This is the case when a company operates on a grid where RE penetration is very high and the transmission infrastructure is sufficient due to a developed ecosystem. In this instance by contributing to the decarbonization of other grids the organization is aiming to maximize emissions avoidance per dollar invested, rather than prioritizing the physical delivery of clean electricity to its facilities

Together, 24/7 CFE and an Emissions First approach can enable much deeper reductions in CO₂ emissions from electricity consumption than 100% renewable annual matching. 24/7 CFE can provide a clear picture of the status of the grid in which the energy buyer's consumption has happened, and an Emissions First approach focuses on displaced CO₂ emissions. Knowing both values can help buyers to have a more comprehensive picture of their impact on the grid and the environment.

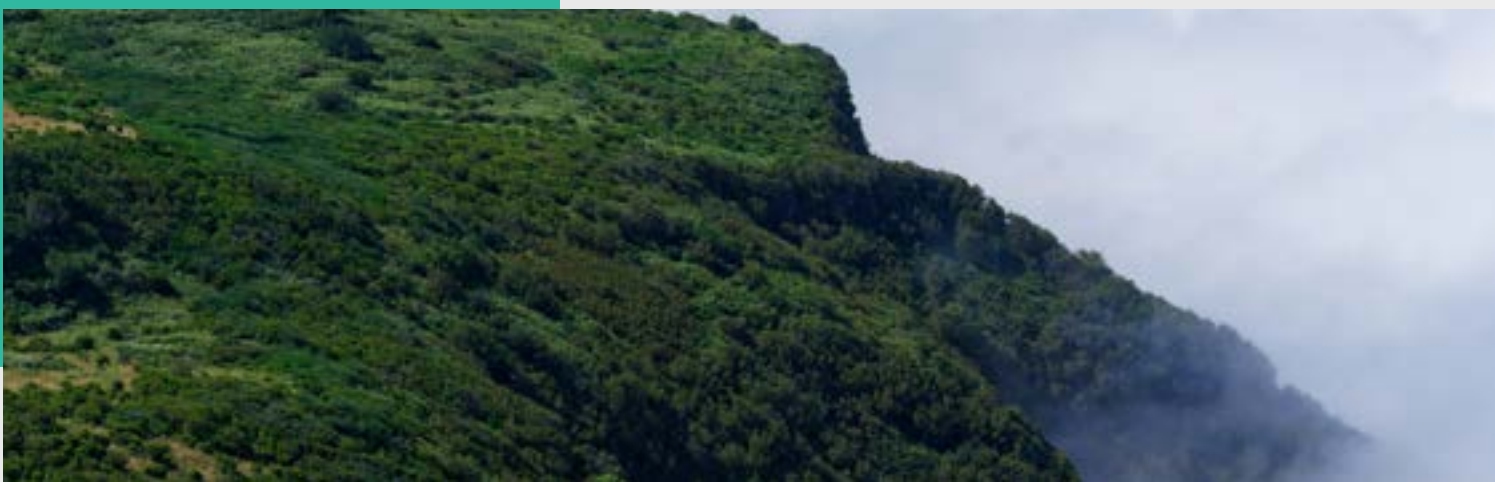
WHY EMBRACE 24/7 CFE?

There are clear signs that carbon reporting will become a mandatory practice for businesses. By adopting 24/7 CFE, you are futureproofing your business by protecting against stricter carbon reporting requirements that may occur in a shifting energy and sustainability landscape. Here are a few reasons why you should embrace it...

1. 100% renewable energy does not equate to 24/7 carbon-free energy

Buying 100% renewable energy does not equal zero emissions, according to scientific research from the [International Energy Agency \(IEA\)](#) and recognized universities such as [Stanford](#) and [Princeton](#). “100% Renewable Energy” claims rely on annual or volumetric compensation and do not consider the electricity grid’s geographical limitations in transmission. These limitations mean **100% renewable energy declarations can still leave you reliant on fossil fuels during times and in places where renewable electricity is not being generated**. A famous study from [Stanford](#) shows that by 2025, the use of yearly averages in California could overstate the greenhouse gas reductions associated with solar power by more than 50% when compared to hourly averages.

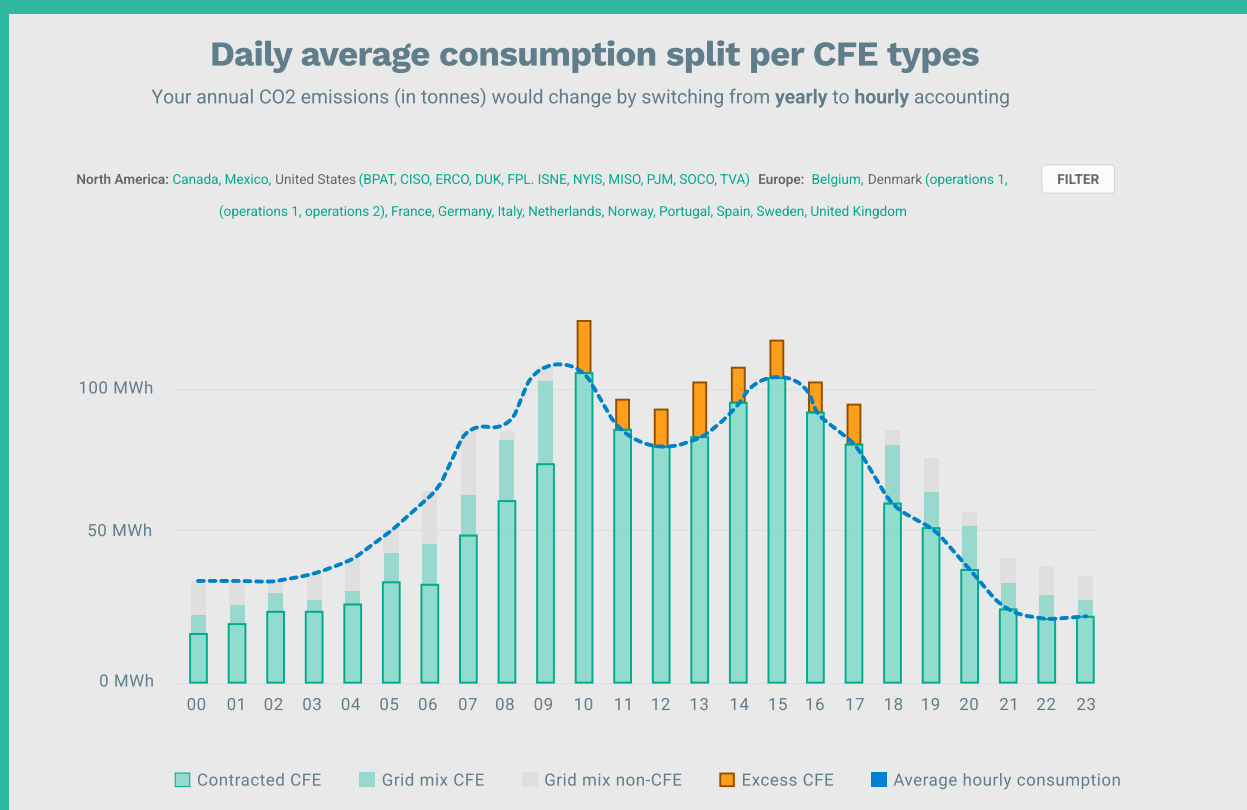
When companies claim to be “100% renewable energy,” this is typically through the purchase of Energy Attribute Certificates (EACs), which do not consider the location and time factors like 24/7 CFE does. For example, it would not be expected that an annual weather forecast across the whole of Europe would be accurate enough to represent the physical reality of what the skies are doing in one European city at this very moment. In the same way, annual accounting that has lax requirements regarding the time and place of electricity production does not represent the physical reality of the electricity grids in any one country right now.



With no rules about temporal and geographical correlation, projects are being developed where convenient, not where needed. As electricity grids can only carry a finite amount of electricity at any given time, this uneven development of renewable projects has led to grid oversaturation and the **curtailment** of renewable electricity in some areas.

Low data granularity can also lead to false confidence in businesses' decarbonization progress. There is notable uncertainty and risk surrounding EACs **double counting** renewable energy credits (i.e., two or more parties claiming the same resource and emissions reductions), thus **overestimating** their climate benefits. For these reasons, **government agencies** are calling for a new approach to accounting standards with transparent and accurate 24/7 CFE for more granular Scope 2 reporting.

a) 24/7 CFE A practical example



To put 24/7 CFE in perspective, imagine a company with operations in multiple locations buying EACs to cover 100% of its annual consumption. It is considered 100% renewable (or carbon-free) based on current GHG Scope 2 market-based sustainability reporting standards. Even if the company procures EACs according to what is today considered the most impactful procurement option - PPA with a facility located in the same country of operation - there is still a mismatch in carbon-free energy.

The chart below shows how, although the company that procured the renewable energy is 100% volumetrically matched to their demand, from midnight until 8am they are not meeting their electricity demand with carbon free energy from their electricity contracts or from the grid. The company will consume carbon-intensive electricity from the grid during these hours regardless of its 100% annual volumetric match, thus not achieving zero emissions.

2. Protect against future carbon regulation with hourly CO2 emissions reporting

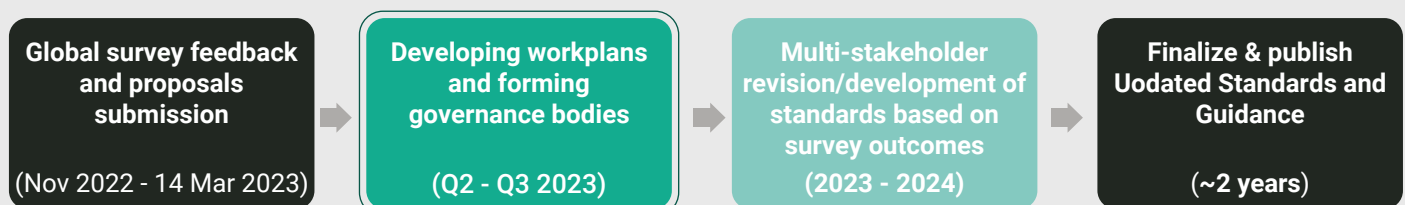
Revisions to the Greenhouse Gas Protocol

The [US Securities and Exchange Commission](#) (SEC), [EU Commission](#), and [International Sustainability Standards Board](#) (ISSB) have proposed new requirements for mandatory climate-related disclosures. Starting gradually in 2024, this could affect many businesses worldwide, as current voluntary reporting schemes are standardized and enforced. Interestingly, the common denominator in these proposals is that they build on the Greenhouse Gas Protocol (GHGP) guidance.

Since 2015, the GHGP [Scope 2 market-based reporting](#) guidelines have been driving the success of corporate clean electricity purchases. However, after almost a decade in place, some carbon accounting experts and the media have begun to scrutinize the approach. Critics highlight the discrepancy between the physical reality of the electrical grid, where carbon intensity fluctuates throughout the day due to the intermittent nature of renewables, and the “zero emissions” claims made by corporate buyers

using EACs, a market-based instrument. The current lifespan of EACs accepted by the GHGP market-based guidelines is one year between generation and consumption (vintage criteria). At the same time, the grid’s carbon intensity is usually reported on a 15-minute basis. Along the same lines, the guidelines accept transboundary EACs purchases from the same continent (market boundary criteria) without considering transmission constraints.

In this evolving landscape and incentivized by the digitalization of the electricity infrastructure, the World Business Council for Sustainable Development (WBCSD) and World Resources Institute (WRI) who jointly convened the GHGP launched a review of its guidelines in 2022. The Protocol is expected to deliver the first operational draft in early 2024 and the final version in early 2025.



Meanwhile, several prominent stakeholders of the energy and sustainability ecosystem sent strong signals to move toward increased accuracy of emissions reporting, following scientific evidence:

The EnergyTag initiative published the Standard and Guidelines for Granular Certificates (GC's). Through this publication, GCs are now an internationally recognized, robust, and tradable instrument, verifying the time and location of electricity consumption for the first time.

Global companies, energy suppliers, issuing bodies, and third-party platforms have begun to

perform the first GC transactions

The European Network of Transmission System Operators for Electricity (ENTSO-E) called for an evolution of the European renewable energy certification system (Guarantees of Origin), with the introduction of hourly certificates (GCs or T-EACs) and grid-level market boundaries.

Voluntary GCs were adopted in the European Parliament’s position for RED III, a huge step forward.

ISO Net-zero Guidelines specifically mention hourly-matched clean electricity procurement.

H2 Delegated Acts

What's more, the latest rules for renewable hydrogen, passed by the European Commission on the 13th of Feb 2023, are backed by two delegated acts that will ensure that hydrogen can fulfill its potential as a genuinely low-carbon fuel, contributing to the successful decarbonization of Europe and beyond.

These rules will have a clear impact on the H2 markets and can also play a crucial role in influencing the ongoing Scope 2 amendment discussions for the GHG protocol. They clearly indicate of **what** the EU Commission considers critical requirements for procuring carbon-free electricity for large electricity loads in hard-to-abate industries:



The Commission revised the ["copper plate model"](#) (boundary-less procurement of power and energy certificates), imposing stricter geographical limits.



Temporal correlation is required, and it can be a future requirement to let stakeholders adjust. This still has a big impact on today's decision-making.



Granular certificates must become a reality in Europe before 2030 and in any country that wants to import H2 into Europe.



Additionality is key to ensuring that electrification doesn't cannibalize existing renewable production unless renewable penetration in the region is >90%. This means that electrolysis plants for hydrogen production must be connected to new plants for producing electricity from renewable energy sources.

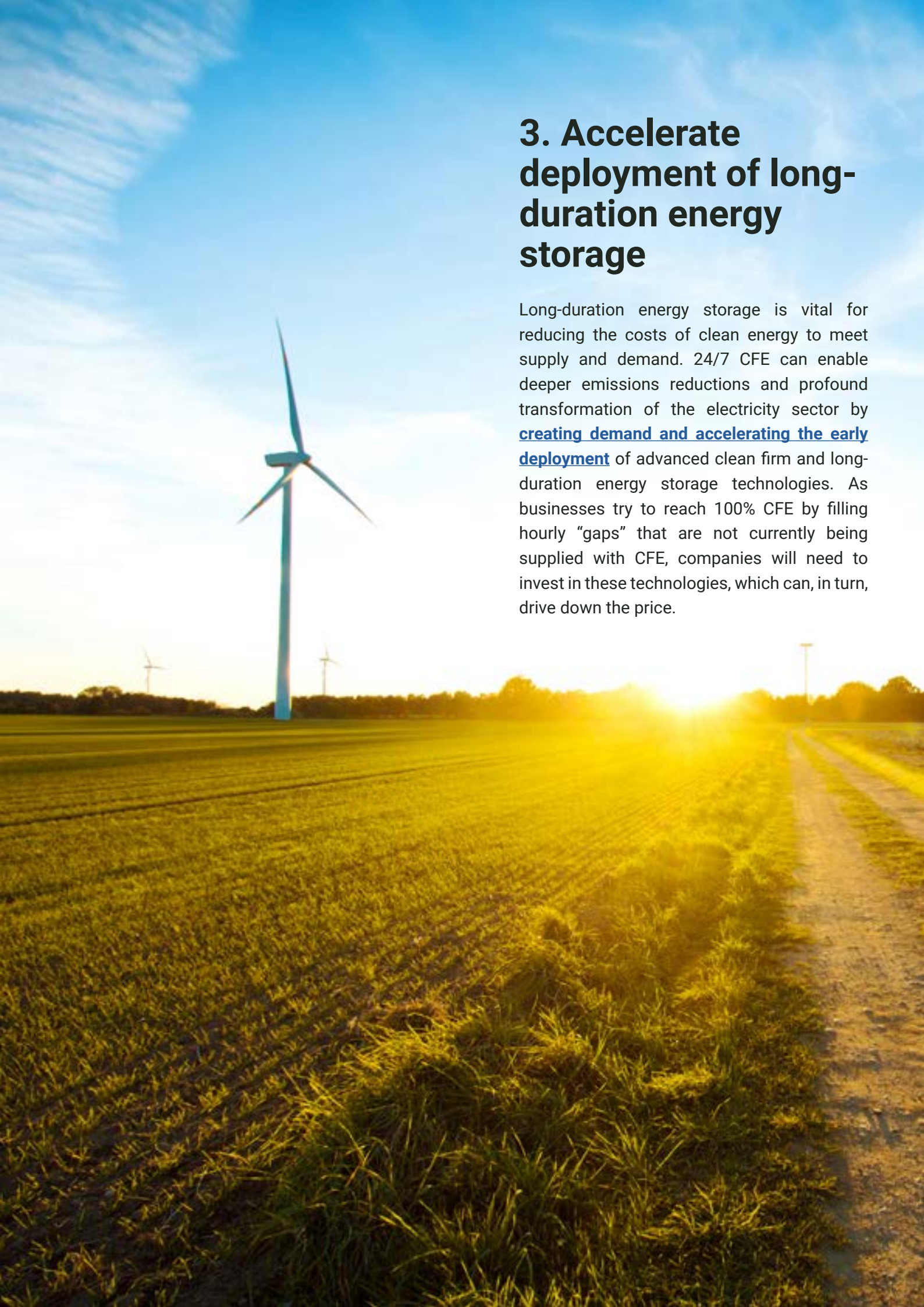


Additionality criteria are removed for low-emissions grid (which includes and favors nuclear), not only for high penetration of RE.



Grace periods and grandfathering will be introduced to ensure just and fair implementation, including different market barriers and conditions.



A large wind turbine stands in a field of tall grass under a bright, hazy sky at sunset. The sun is low on the horizon, creating a strong golden glow and long shadows. A dirt road runs parallel to the field on the right side of the image. Other smaller wind turbines are visible in the distance.

3. Accelerate deployment of long-duration energy storage

Long-duration energy storage is vital for reducing the costs of clean energy to meet supply and demand. 24/7 CFE can enable deeper emissions reductions and profound transformation of the electricity sector by creating demand and accelerating the early deployment of advanced clean firm and long-duration energy storage technologies. As businesses try to reach 100% CFE by filling hourly “gaps” that are not currently being supplied with CFE, companies will need to invest in these technologies, which can, in turn, drive down the price.

THE BENEFITS OF 24/7 CFE

By proactively being ahead of the curve with 24/7 CFE, your company can reap numerous benefits.

Benefits for corporate energy buyers

Businesses can experience numerous benefits from switching to 24/7 CFE. We will discuss a number of economic benefits businesses can reap from climate leadership in the next section, but here are a few others:

 **Increasing transparency of corporate sustainability claims and ESG scores:** 24/7 CFE enables corporate consumers to report their sustainability commitments and progress to net-zero goals with the highest credibility and accuracy possible. This allows you to increase transparency and confidence in your sustainability communication, which can boost the confidence of ESG investors, employees, and customers in your business. Higher ESG scores can also provide access to cheaper capital in a financial market eager to greenify investment portfolios.

 **Demonstrate commitment to local communities:** Having both the private sector and the public authorities working closely towards the same decarbonization goal may speed up the much-needed policy reforms that will facilitate investments in clean generation, therefore playing an immense role in local grid decarbonization.

Benefits for the greater society

By committing to reducing the carbon impact of your company's electricity supply, you will support the decarbonization and diversification of your local electricity grid and foster many positive effects on the surrounding society and local stakeholders, including:

 **Decarbonization of global economies:** Companies that adopt a 24/7 Carbon-Free Energy strategy will help to proactively eliminate carbon emissions in the grid where they operate, accelerating the decarbonization of the electricity grid and progress toward SDG7.

 **Facilitate new business models and innovative technologies:** 24/7 CFE will lead to innovations and open the door to opportunities to rethink market design through the lens of emerging technologies, decentralization, and interoperability.

 **Aligning markets with the physics and economics of the grid:** Energy market players will be better positioned to understand how the electrical grid works, offering transparency in where the energy flows and building trust between energy stakeholders.

 **Market-driven signals for the optimal deployment of carbon-free resources:** 24/7 CFE ensures incentives for market participants to evenly spread the deployment of carbon-free projects according to supply and demand within certain geographical constraints. It also incentivizes the growth of critical and complementary carbon-free generation technologies and solutions that the industry wants and needs to decarbonize its operations, such as long-duration energy storage, fully.

HOW TO EMBARK ON A 24/7 CFE JOURNEY

Nobody expects you to reach 100% 24/7 CFE today. A 24/7 CFE strategy is meant to be an incremental approach. It involves constant improvement without setting unrealistic decarbonization goals. (For reference, the global hourly matching benchmark is between 60% and 70%.)

The 24/7 CFE journey involves using the incredible power of data to make smarter procurement decisions in the future and to begin reducing the carbon intensity of your contracted electricity every hour of the day. **It's important to remember that all companies purchasing renewable energy are already on the path to consuming 24/7 carbon-free electricity.** Regardless of your current progress, all businesses can start applying this methodology today to benefit from better oversight of the carbon content of their energy supply.

Here, we outline the five actionable steps you may take to execute a 24/7 CFE strategy within your organization successfully.

STEP 1 - Education and unlocking resources

Education

The first action is to learn more about 24/7 CFE. You will need to understand the benefits of 24/7 CFE for your business and why adopting a CFE strategy in the current market context is crucial. By already working towards the complete decarbonization of your energy procurement strategy, you are futureproofing your business against stricter carbon reporting requirements that may occur in this shifting energy and sustainability reporting landscape. [FLEXIDAO Academy](#) is a great resource to start your CFE journey.

Unlocking resources

You may also need to build a business case for 24/7 CFE to pitch to your leadership team and unlock the necessary resources. Your business case can include external case studies of other businesses on their journey towards 100% 24/7 CFE (like [Google](#)), a cost-benefit analysis, and a proof of concept, which can focus on one country you operate in. This proof of concept will help visually illustrate to your leadership team why **"100% renewable energy" does not equate to "24/7 Carbon-free Energy"**. You can trial our [CFE Diagnostic](#) tool in one country to develop this Proof of Concept.

In terms of a cost-benefit analysis, switching to a 24/7 Carbon-Free Electricity (CFE) strategy offers several economic benefits for your organization. This is because 24/7 CFE positions your company as a climate leader, going beyond regulations to eliminate electricity emissions consistently. A recent study by The Boston Consulting Group and the World Economic Forum found that climate leaders can:

-  Attract investors - Strong climate leadership increases total shareholder return by 3%.
-  Attract customers - You can communicate low carbon emissions associated with your products, appealing to customers seeking sustainability. Sustainability champions witness sales growth between 4-25%.
-  Exceed targets - Companies leading on climate action are more than twice as likely to exceed financial targets.

-  Attract talent - Climate leadership makes hiring and retention of talent easier. 70% of prospective employees seek sustainability when looking for new employment.
-  Reduce costs associated with regulation risk - Being a climate leader reduces exposure to risks associated with emissions. Environmental companies could increase their EBIT margin between 2-12% after EU carbon border taxes were implemented.



And 24/7 CFE also does not need to be costly if you follow these recommendations:

1 You can understand your hourly baseline at no extra energy cost to your business by running a diagnostic (step 2).

If you already have renewable energy contracts in place on your local grid, you will already be covering a proportion of your electricity consumption with carbon-free energy. Measuring your carbon-free electricity is a simple step to give yourself much better oversight and confidence in your renewable energy progress, allowing you to confidently communicate this progress without financially compromising your business.

2 You can then start off by matching your load to low-cost CFE options.

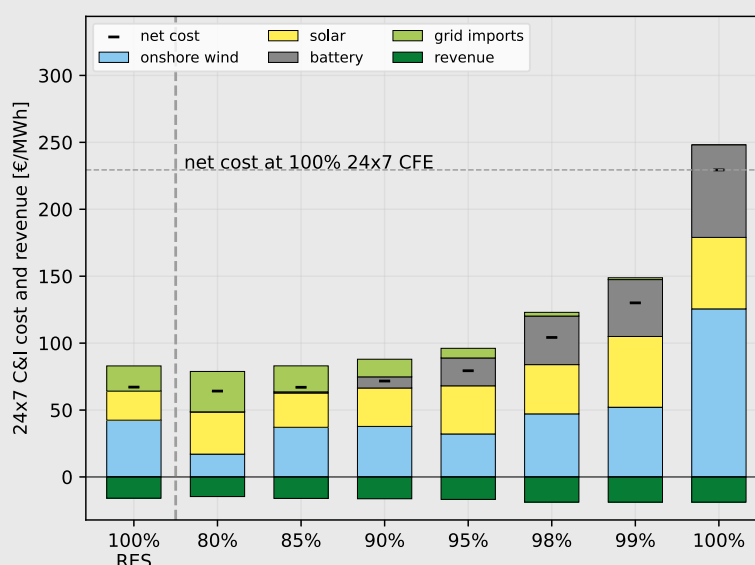
A 24/7 CFE strategy isn't about throwing more money at renewable energy at a loss to your business. It's about rethinking and evolving your current procurement strategy with new insights - making smarter decisions that balance costs and reduce emissions. The cost of energy depends on various factors like the type of technology, location, and contract model. Generally, renewable energy sources like baseload power, hydro, and nuclear tend to be cheaper, and multi-technology power purchase agreements (PPAs),

combining wind and solar, are also cost-effective. By prioritizing cheaper renewable technologies based on your hourly load, you can achieve significant decarbonization without significant financial sacrifice.

3 Prioritize reaching 100% CFE as costs of new technologies decrease.

The last mile towards achieving 100% hourly matched renewable energy (CFE) often requires costly and emerging technologies like energy storage. It is recommended for companies willing to pay higher prices to accelerate the energy transition. By doing so, they support the widespread adoption of these expensive technologies, driving down costs in the future.

However, achieving an 80-90% hourly match already results in a significant reduction in emissions compared to a 100% annual match, and you can reach these levels with little financial sacrifice. As the price modeling from [TU Berlin](#) below shows, up to 95% carbon-free energy matching using multi technologies can be achieved with only a slight cost increase. Only at the last mile, where expensive technology like Lithium Ion batteries is relied on, the costs hike up.



Nobody is expecting you to be at 100% CFE immediately, even the most advanced businesses have not yet reached this goal. You should only look into going the last mile if it makes financial sense to your business, and in the meantime you can have a significant impact by merely improving your score.

STEP 2 - Run a CFE Diagnostic

In order to have a greater decarbonization impact, you will need to start by assessing where you are on the journey to 100% 24/7 CFE right now. Your company should already have the required data on your consumption and your energy contracts readily available to make this assessment (e.g. in your ERP system).

Having a general overview of your global carbon profile is extremely helpful so you can:

-  Calculate your current CFE score overall, indicating your progress towards 100% hourly CFE. You'll be able to use this KPI for internal purposes or external reporting.
-  Understand how the renewable energy you procure matches your energy consumption over a period of 24 hours.
-  Understand which of your energy contracts currently meet 24/7 CFE requirements.
-  Identify the hourly gaps your business has right now with no CFE coverage so that you can understand your risk exposure and prioritize procurement decisions that can close those gaps.
-  Begin identifying which countries you should implement a CFE strategy first and where the "quick wins" are.

Tools like FlexiDAO's [CFE Diagnostic](#) can provide a snapshot of your current hourly carbon-free electricity score, so you know which areas to target for improvement. With this data-driven tool you will be able to run your own diagnostics online, or alternatively rely on our advisory service for custom load profiling and analytics reporting.



STEP 3 CFE Optimization

CFE Optimization aims to include the “24/7 mindset” in your current procurement strategy, enabling you to assess new supply contracts depending on price and real decarbonization impact. Based on regional feasibility reports, you may adopt an optional public or internal 24/7 CFE target in the countries where you can have the highest impact for the least amount of effort. By assessing and comparing various scenarios, you will be able to find the optimal solution for improving your performance score. Be sure to consider how prepared the local energy market is for 24/7 CFE products and what hourly renewable energy products and technology are already available in that market while planning your CFE procurement strategy and roadmap.

STEP 4A CFE Inventory

You should monitor your carbon-free energy journey on an ongoing basis to understand how you are performing so you can improve on your progress. This kind of monitoring is not just beneficial for helping you advance towards 100% CFE, but it can also help you:

Optimize procurement & keep energy costs stable:

Having a more streamlined digital system in place can help your procurement manager have better oversight and control over your energy contracts and consumption patterns, allowing them to make better informed procurement decisions which can also help keep energy costs stable.

Save admin time on data collection & cleaning:

Automating and digitizing your metering and CO2 data collection will help with your internal processes.

Report renewable origin and CO2 with credibility:

You can gain an online inventory of all your energy certificates for compliance. This will provide you with hourly and annual CO2 footprint calculations for Scope 2 reporting.

Necessary data streams for monitoring your CFE journey include:

- Hourly consumption data for all sites under the company’s control, including the hourly fuel mix of grid electricity used.
- Hourly energy production data from various

sources, depending on the electricity product your company currently purchases (e.g., PPA’s, bundled or unbundled EACs).

- Hourly CO2 factors from the grid mix - key for accurate location-based emission calculations.

Some utilities track renewables monthly, not hourly, so obtaining the necessary data to create an accurate load profile (not modeled profile) can sometimes be challenging. There are, however, contracted third parties that collect this granular data. FlexiDAO has deep expertise in data collection and can help with this step by automating the sourcing of all your energy-related data for visualization, analysis, and relevant insights for procurement and sustainability teams. Tools like FlexiDAO’s CFE Inventory can provide energy monitoring and inventory management efficiently and easily, whether you use annual metrics or evolve to next-generation approaches.



STEP 4B CFE Procurement

With the detailed knowledge you now have of your starting point along the CFE journey and the target you want to hit, your team can work towards finding the best renewable energy products to improve your CFE coverage. Renewable energy procurement decisions can be tailored to better match your hourly consumption patterns.

There are currently three main energy products you should consider.



Hourly matched PPAs: You can procure PPAs with bundled EACs from an asset within the same grid region (or bidding zone) that provides access to hourly production data, so this can be matched to your consumption. By prioritizing PPAs with large origination sites and multi-locations with different weather conditions, these contracts can significantly increase the success rate of matching your consumption to carbon-free energy on an hourly basis. The cost associated with switching from annual matched PPAs to 24/7 PPAs depends mainly on the mix of the local grid and the available technologies used in the agreement, but recent price modeling by TU Berlin found a cost premium of close to zero until reaching CFEScores of 80 - 95%.



Supply contract with hourly matched EACs: With this product, the energy buyer leverages the supplier's access to a comprehensive energy portfolio to increase their CFE score. The carbon-free coverage of an hourly green supply contract will depend mainly on the types of assets selected in the contract, but if the supplier is willing to choose different technology types and assets on your behalf from different areas of the grid region, this will increase your chance of achieving a high CFE score. The energy supplier might charge you a premium for allocating EACs from a specific asset and providing access to hourly generation data because it adds an extra layer of complexity for them compared to an annual contract.



Unbundled Granular Certificates: With this option, you procure forward or historically unbundled EAC contracts from specific origination asset(s) to be able to perform hourly matching (no power included). Your EAC broker must be able to assign Granular Certificates from a specific renewable asset, and energy producers might not be willing to share hourly production data given the novelty of the product. You can cover the hourly gaps where you are currently supplied with non-carbon-free energy much more quickly and flexibly compared to PPAs or supply contracts with this tool. In the future, it is expected that the prices of GCs will differ for every hour of the day. This will send price signals to the market to invest in hours of the day that tend to be more fossil-fuel intensive.

Our [FlexiDAO Academy](#) will go into more detail about each one, exploring their various benefits and challenges.

STEP 5 - Certified disclosure

As the market for 24/7 CFE evolves, granular certificates (GCs) may become a necessary future requirement in sustainability reports to verify how your renewable energy usage is time-matched with renewable generation hourly. In the same way that EACs are required to make credible claims on renewable energy consumption, GCs are essential to ensure there is no double counting of the origin of energy on an hourly basis. GCs include location, granular time stamps, granular CO2 emissions, and type of technology so buyers can simultaneously match the energy they consume hourly with electricity produced on the same grid.

Companies worldwide are already trialing GCs as a new instrument for exchanging energy. Issuing bodies have been involved in these pilots, [including our project with Microsoft, Eneco, and CertiQ](#), highlighting a growing interest from within the energy sector in GCs as a new market mechanism. Moreover, after the public endorsement from the European Association for the cooperation of transmission system operators for electricity (ENTSO-E), voluntary GCs have been adopted in the European Parliament's position for RED III. This represents a monumental step forward in policy favoring GCs and enabling corporate energy buyers to adopt even more ambitious decarbonization strategies.



CONCLUSION

By embracing 24/7 CFE, you have the opportunity to be a trailblazer in the energy industry and position your business as a visionary leader committed to sustainability and innovation. You can set yourself apart from competitors who are merely following regulations and trends, and send a powerful marketing message that resonates with customers and stakeholders alike.

Not only that, but by leveraging cutting-edge tools and expertise, you can identify and capitalize on low-hanging fruit that will significantly reduce your carbon footprint and stabilize your energy costs. Our advanced [CFE Diagnostic](#) makes it easy to pinpoint inefficiencies in your energy procurement strategy and suggest actionable steps to transition to zero-carbon products.



The time has come for the energy industry to evolve, and 24/7 CFE is the next generation of carbon accounting. Don't miss your chance to be a part of this revolutionary shift in the energy landscape, join us now and become a driving force for change in the fight against climate change.



ABOUT FlexiDAO

FlexiDAO is a global climate tech company based in the Netherlands and Spain. We work closely with other critical stakeholders to co-create the international standard around energy-related emission compliance. Thanks to our end-to-end Carbon-free Energy platform, companies can quantify and confidently showcase their contribution to society's decarbonization.

FlexiDAO operates in 14 countries, can deploy its solutions globally, and counts with clients such as Google, Microsoft, Iron Mountain Data Centers, Vodafone ES, and many more.

Visit www.flexidao.com for more information.

FLEXIDAO Academy

A large-scale switch to 24/7 Carbon-Free Energy will be a complex challenge. Luckily, FlexiDAO and our partners have solutions and expertise to help guide you through each step of the 24/7 CFE journey.

Our [FlexiDAO Academy](#) is designed to help **energy and sustainability professionals** learn how a 24/7 CFE strategy can work for their organization. This Academy is the first practical guide for companies to understand how to execute such a strategy, created by our first-hand expertise from working on real 24/7 CFE projects with our customers Google, Microsoft, and Acciona.

Your journey towards sustainable leadership and a deeper decarbonization impact starts today. Enroll in our 24/7 CFE Academy to deepen your knowledge about this topic and hear from other leading organizations already adopting a 24/7 CFE strategy.

