TIME 4 ACTION

CORPORATE SOURCING

Global Renewables Alliance

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Corporate interest in procuring renewable energy has grown substantially in recent years, with large purchasers having noticeable impact on renewable energy development in Europe, Asia, and North America (IRENA, BNEF). Their combined buying power can unlock significant new renewable energy development, benefiting the environment and local communities. Local & hourly matching maximises grid stability, reduces reliance on fossil fuels, and boosts local economies. Policy certainty and policy interaction is essential to allow governments to benefit from corporate sourcing of renewables, driving economic growth and meeting climate goals.

Urgent Recommendations for Policymakers

- Increase renewable energy investment in terms of speed, scale, and distribution. Tackle bottlenecks in supply chains, grids, permits and focusing on scaling up investment flows, by mobilising both public and private finance to deliver the $10 Trillion required to triple renewables by 2030.

- Empower energy consumers (corporations) to be an important factor in the energy transition by designing regulatory structures that permit the direct purchasing of renewable energy.

- Support the decarbonisation of the electricity grids by any one or a combination of the following actions: enabling the deployment of commercialised renewable generation and demand optimisation technologies; enabling the commercialisation of next-generation renewable generation, storage and demand optimisation technologies; developing or enabling supporting electricity grid infrastructure or technology that integrates renewable energy; developing or adopting software solutions that advance decarbonisation of the electricity sector.

- Reform and expand electricity and capacity markets to incentivise corporate investment in the technologies that most cost-effectively decarbonise the grid, drive and scale innovative solutions for storage, and unlock the full economic potential of the renewable energy transition.

- Rapidly develop and commercialize next gen storage and renewable energy technologies and infrastructures by significantly increasing spending on energy research, development, and demonstration (RD&D) and orienting deployment incentives toward cutting-edge technologies.

- Provide offerings that enable increasing access to renewable energy, including by developing contractual arrangements, market products, or other innovations that enable the delivery of additional renewable energy, ideally from round-the-clock renewable electricity.

- Incentivise the deployment of more renewables and more storage by setting ambitious renewables targets.

- Foster a predictable and supportive environment that can unlock the full potential of corporate procurement via policies enabling the deployment of electricity standards, while removing and replacing carbon-emitting resources.

Urgent Recommendations for Energy Buyers

- Commit to taking a step toward renewable energy supply or procurement methods. Examples include signing the company's first PPA or even the first hourly matched PPA if available, setting an initial local and hourly matched carbon-free target (does not need to be fully 100% 24/7), exploring the role and benefits of company-owned renewable generation, or assessing how hourly matched approaches may fit into your company's energy transition plan.

Challenges to Corporate Sourcing, Hourly Matching and Grid Decarbonisation

Global investment in clean energy transition technologies, including energy efficiency, soared to a record high of USD 1.3 trillion in 2022. Investment in renewable energy alone also reached a record high in 2022 – at close to USD 0.5 trillion. 75% of global investment in renewables from 2013 to 2020 came from the private sector (IRENA, 2023) and 20% came from market-based corporate sourcing (IEA, 2024). To accelerate the transition to a cost-effective, inclusive, and carbon-free electricity system, addressing the technological, market and consumer empowerment challenges is fundamental. It is critical to advance policies in each of these areas simultaneously, as they reinforce each other to drive the renewable energy transition.

Corporate clean energy procurement is an untapped driver of the renewable energy transition and electricity decarbonisation in emerging markets. However, energy buyers worldwide are faced with many barriers to direct procurement of clean electricity. Examples of these barriers are: infrastructure-based barriers, a lack of metering, monitoring and baseline practices needed to enable more ambitious corporate procurement options; business model barriers, a lack of appropriate contractual arrangements or lack of experience in the local utilities; and constitutional or legal barriers to the participation of private actors in electricity generation (IEA, 2022).

The electricity markets, especially in EMDEs are also facing barriers that prevent them and their users to cost-effectively decarbonise; such as insufficient cross-border transmission capacity, uncoordinated national capacity and balancing markets, and prices that often do not reflect structural congestion on the grid. The percentage of market operating under full wholesale competition is only 25% in Central and South America, 18% in Asia, and 0% in both Africa and the Middle East (IEA,2020). Many countries in these regions could benefit from greater regional coordination and integration of electricity markets.

Unfortunately, developing new renewable and storage technologies are solutions that can be difficult to scale economically and it is often difficult to attract and secure funding or investment for

R&D, product development, and commercialisation at scale. This poses a dual challenge: first, how to scale existing investment flows in countries and technologies in the context of tripling renewables, and second, how to ensure these investments reach emerging markets and developing economies (EMDEs).

Thankfully, increased granularity in clean energy procurement can advance decarbonisation quickly. Studies by Princeton University, TU Berlin have shown that renewable targets with high levels of hourly matching mean that consumers have to contract more renewables and more storage than targets without high levels of hourly matching.

Nonetheless, granular procurement is faced with other barriers that need to be addressed to advance hourly matched procurement. Lack of granular certificates and knowledge gaps in organisations often limit informed decision-making and connectivity. Data is decentralised and often private. As a result, there is limited publicly available evidence to strengthen the business case for transitioning towards hourly-matched renewable energy. The lack of transparent data about the composition of grid power in a given hour is a barrier to achieving effective hourly procurement strategies. The timing of procured generation and the state of grid emissions need to be tracked and made transparent to buyers to allow accounting for hourly procurement and maximise its potential benefits.

In order to promote a wider adoption of hourly matching, clear communication is crucial. While acknowledging the economic and technical challenges is important, efforts should focus on highlighting the long-term benefits of a more dynamic and environmentally friendly grid. A greater understanding of the business case for hourly matching would allow to increase demand, bridge the economic gap (e.g., more efficient storage solutions) and incentivise consumer participation.

Best Practices and Solutions Ahead

It has taken a long time for corporate buyers to shift from unbundled renewable energy credits to renewable projects with additionality; changing procurement norms is time-sensitive. Research across Princeton University, TU Berlin, IEA and more has determined how employing hourly matched clean energy procurement can accelerate electricity decarbonisation, as well as the implementation of advanced clean technologies needed to create a reliable and fully decarbonised electricity system. Larger companies can demonstrate demand and help create platforms for hourly procurement that enable both near-term emissions reductions and pave the way for long-term grid decarbonisation.

Transitioning to hourly matching offers a dynamic challenge, requiring **solutions for technical hurdles by matching energy use with renewable energy purchases**. Over 140 companies, (including companies, governments, International organisations, NGOs and academic institutions), in a variety of sectors, have signed the 24/7 CFE UN Compact and are committed to collaborating to design and scale solutions that enable 24/7 Carbon-Free Energy (**24/7 Go Carbon Free**). It is important to note that committing to hourly matching CFE does not mean being 100% carbon-free immediately. **24/7 CFE is a journey** that takes time and will already be beneficial even if not 100%.

Hourly matching can help eliminate carbon emissions, increase the accuracy of carbon accounting, and incentivise additionality, storage and flexibility whilst providing better price hedging for corporates **(GRA: Towards a 24/7 Carbon-Free Energy Future)**.

Pan Sectoral Benefits of Hourly Matching and 24/7 Carbon-Free Energy

1. **Transparency and confidence in corporate reporting.** By being able to track and trace the energy consumed by corporates every hour, end consumers and stakeholders can better trust CO2 accounting, significantly reducing the risk or perception of greenwashing.

2. **Deploying a greater diversity and quantity of clean renewable electricity generation capacity and supply options.** Hourly matched renewable procurement incentivises and drives demand for the addition of new RES installations. Additionally, hourly matched renewables procurement incentivises deployments of diverse RES technologies portfolios all together on the same system. Allowing buyers fulfill their hourly matching demand with more renewables and not rely on a single technology. This would reduce the buyer's dependency on carbon-intensive generation during unmatched hours. The provision of simple, renewable only, hourly matched purchase options by supply companies would significantly help drive market uptake and decarbonisation. This is especially relevant for SMEs and less sophisticated energy consumers.

3. **Incentivising technological innovations.** Reaching up to 90% hourly matching can be achieved at cost comparison to 100% annual matching (whilst delivering increased CO2 reductions) – see this recent report from TU Berlin. Reaching 100% hourly matching comes at a premium today, but it also encourages the deployment of advanced technologies (such as short and long duration storage, and clean dispatchable technologies) which reduces the premium and supports broader grid decarbonisation. Demand side response will help to reduce the cost of hourly matching.

4. **Decarbonising electricity grids.** Reducing carbon intensity of the power grid is the end result of more large consumers demanding electricity originating from local renewable energy sources matched on an hourly basis. More renewable energy capacity can be developed and connected to the grid, and advanced technologies are then further developed and deployed to supplement variable renewables. 24/7 energy procurement is currently a niche market, but it is attracting interest from different industries. For instance, thanks to its versatility and storability, green hydrogen has the potential to become a key resource for 24/7 energy procurement; its recent growth in popularity has put it at the centre of energy policymaker's discussions in both the US and the EU.

DOUBLE DOWN, TRIPLE UP.

TIME 4 ACTION

The 'Time 4 Action' campaign brings together stakeholders across the globe, across sectors, and across generations to collectively drive action to achieve the global 3xRenewables target by 2030.

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