

The Greenhouse Gas (GHG) Protocol is the most commonly used global framework for accounting and reporting of GHG emissions by companies today. In Vattenfall, it is the basis for our accounting of GHG emissions reporting in CSRD and towards the Carbon Disclosure Project (CDP) and how we measure the progress towards our corporate climate targets validated by the Science Based Targets initiative (SBTi). Vattenfall is fully committed to both nearterm (2030) and long-term (2040) targets across the different scopes, with the ultimate goal of reaching net-zero emissions by 2040 - in line with our purpose and mission to enable fossil freedom that drives society forward¹. The GHG Protocol framework is currently subject to a major overhaul and in this paper Vattenfall offers its views on the proposed reforms with regards to Scope 2, from the perspective of a company that is fully adhering to the GHG Protocol and has very high ambitions in terms of both decarbonisation and transparency.

## Key messages:

- Vattenfall supports the overarching aim of the GHG Protocol review: increasing scientific integrity and thereby the transparency and credibility of the system.
- However, we see a significant risk that some of the proposed changes with regards to Scope 2 emissions accounting could risk slowing down the energy transition and penalising frontrunners.
- Too far-reaching requirements on locational and hourly matching of European contractual instruments, GoOs, with the electricity consumption will result in significant market disruption, administrative burden and add more complexity into the framework, thereby increasing the costs for companies and disincentivising participation and investments.
- The focus should instead be put on ensuring credibility and transparency by addressing problematic edge cases (e.g. double counting) by targeted solutions, not system-wide changes that would negatively impact the wider GoO markets.
- The definition of SSS classification and method of allocation should be clear, and limited to assets with active subsidies over a certain threshold. Established, paid off assets under ownership of publicly owned companies should not be included in this definition.
- It is important that any changes to GHGP are introduced in a gradual manner, so that companies have sufficient time to adapt and adjustments can be done based on the experiences gained.
- Above all, the GHGP reforms under consideration must be balanced and should not impose a
  disproportional administrative burden in relation to the potential benefits.

## Hourly matching of GoOs can be a useful instrument but the complexity outweighs the benefits when making it a compulsory element in the reporting

According to the proposed updates to the Scope 2 criteria, hourly matching would apply whenever an organisation uses contractual instruments under the market-based method. It does not apply to residual-mix reporting, which can be hourly, monthly, or remain annual. Within the GHGP proposal, to make hourly matching practical and accessible,

1 https://group.vattenfall.com/sustainability/climate-transition-plan/climate-targets





organizations may use load profiles, which are simple hourly curves that show how electricity use or generation rises and falls throughout the year. In addition, a feasibility exemption is proposed for companies with demand below a certain threshold, for example 10 GWh per year.

We recognise that the proposal for hourly matching aims to strengthen the credibility of Scope 2 reporting by increasing temporal alignment between consumption and fossil free generation. Vattenfall is already providing this services to customers who currently request it. While the ambition to expand hourly matching is sound, making it a compulsory requirement at this point would risk undermining the current system, risk disincentivising investments in fossil free assets and risk delaying decarbonization of the energy system.

Introducing an hourly matching obligation would dramatically increase operational complexity for all market participants, including reporting companies, suppliers and producers. It would result in the need to manage large volumes of granular data and adapt systems and trading operations that were never designed for such temporal precision. This would raise compliance costs materially and create substantial administrative barriers, particularly for mid-sized and smaller companies that currently participate in the voluntary market-based system.

The introduction of additional complexity also stands in conflict with the EU's ongoing simplification agenda (e.g. CSRD Omnibus initiative) aimed at reducing the reporting requirements on companies.

Hourly matching would break today's liquid GoO market into thousands of separate hourly products. While the number of market participants would stay the same, their ability to find trading partners for the specific hours they need would fall sharply due to the often manual handling of trades in the GoO market currently. This fragmentation makes it harder to match buyers and sellers, reduces price transparency and increases the risk that prices move unpredictably from one hour to the next. Such volatility could even influence operational decisions by fossil free generators and distort normal wholesale market signals.

The key concern is the impact on voluntary procurement. The ease of access to GoOs, supported by a simple, liquid and low-friction OTC wholesale market, has been a key factor in enabling companies of all sizes to participate, not only the largest actors. If participation becomes contingent on navigating a highly complex hourly matching regime, many consumers may withdraw from voluntary procurement altogether.

For these reasons, we believe any movement towards finer temporal granularity should be gradual and optional. If it is made mandatory, then hourly matching should also be applied to the residual mix, leading to full disclosure of electricity used by reporting companies. Hourly matching is a worthwhile long term ambition, but it should remain a voluntary enhancement rather than a baseline obligation.

## Reducing Scope 2 emissions should require GoOs from fossil free generation assets in the connected electricity grid, though it cannot be limited to any national borders or bidding zones

According to the proposal in the GHGP revision, the compensation of Scope 2 emissions should reflect generation physically delivered at the times and locations where the consumption occurs. The revision would still retain contractual instruments (e.g. GoOs in the EU) as the basis for allocation, while specifying temporal and deliverability requirements for matching the underlying electricity supply with the consumption. Underpinning the proposal is the belief that the most appropriate spatial boundaries for consumption-based emissions factors are the most granular boundaries for which accurate data is available. In case the reporter operates in an electricity market that uses bidding zones, as is the case in the European internal electricity market, then they are expected to use that bidding zone as the market boundary.

We acknowledge the intention behind introducing a "deliverability" requirement for Scope 2 reporting, particularly its aim to address issues such as double counting. However, these objectives can be achieved through alternative measures that do not risk undermining liquidity in existing Environmental Attribute Certificates (EAC) markets such as the European GoO market. In regions where a well-functioning EAC market already exists, reporting companies should instead be encouraged to apply the market-based method alongside robust full-disclosure frameworks.

Introducing a deliverability requirement based on ENTSO-E bidding zones risks fragmenting the European GoO market, running counter to the principle of free internal trade within the EU/EEA. More importantly, it would shift the GoO system away from its core purpose. The fundamental value of GoOs lies in their ability to separate fossil free attributes from the physical electricity system, allowing them to be traded freely across borders. This unbundling enables efficient allocation of capital to the most cost-effective fossil free investments, independent of short-term grid constraints or administrative bidding-zone borders.

Making GoO transfers dependent on bidding-zone boundaries that are partly shaped by historical political decisions

would introduce limitations that undermine the efficiency of the GoO market. It would reduce flexibility, make procurement more complex and weaken the system's ability to channel investment to the best fossil free resources across Europe.

Allowing unrestricted cross-border trade of GoOs is essential for ensuring efficient procurement and for directing investment in new fossil free generation to where it delivers the greatest system-wide benefit. Europe's power system should be viewed as an integrated region with the shared objective of minimising greenhouse-gas emissions from the electricity sector as a whole. Because natural conditions for fossil free generation vary significantly between countries, the GoO system should enable resources and capital to flow to the locations where new production can be developed most efficiently and at the lowest cost. Fragmenting the market would undermine this optimal allocation of resources and weaken Europe's collective decarbonisation efforts. Additionally, the EU's Net Zero targets apply across EU-level and market boundaries for contractual instruments should also reflect that.

If a deliverability requirement is mandatory, it should be set according to existing connected market boundaries that allow for free trade and optimization within the existing electricity system. Alternately, applying a "may" rather than a "shall" approach to deliverability would preserve the option for reporting companies to voluntarily prioritise local production. Thus allowing regional preferences to be reflected through market-based price premiums, as already demonstrated in the Netherlands, without jeopardising the functioning or liquidity of the existing GoO system.

## The Standard Supply Service (SSS) concept can be a useful tool to ensure a fair allocation and address current market flaws, but which assets that are included and the allocation model need to be clear

The GHG Protocol proposes rules for how to account for electricity from publicly funded, mandated, or shared resources such as those delivered through default utility service or government clean energy programmes. By introducing the Standard Supply Service (SSS) concept, it seeks to ensure that each reporting unit who has contributed financially only claims its fair share, proportionally to its electricity use. The principle is that SSS assets' GoOs should be allocated to the customers on a pro-rata load share basis.

Vattenfall believes that it's important that all companies who are producing fossil-free electricity can receive an economic stimulus from the GoO market. If a legislation or a monopoly situation implies that customers cannot account for that electricity, then it's useful to have SSS in place.

However, not all assets that were publicly funded or are taxpayer owned should be considered to be SSS. The definition of SSS classification should be clear, and limited to assets with active subsidies over a certain threshold. For example, established hydro and nuclear assets under ownership of publicly owned companies should not be included in this definition, since these assets have since been repaid. Such assets are furthermore subject to reinvestments for upgrades and lifetime extensions. The allocation model also needs to be clearly defined, including how to claim SSS, how the producers are to be compensated, and how non-claimed SSS shares are included in the energy mix.

List of abbreviations			
CDP	Carbon Disclosure Project	GHGP	Greenhouse Gas Protocol
CSRD	Corporate Sustainability Reporting Directive	ENTSO-E	European Network of Transmission System Operators for Electricity
GoO	Guarantees of Origin	SBTi	Science Based Target initiative
EAC	Environmental Attribute Certificates	SSS	Standard Supply Service
EEA	European Economic Area	ОТС	Over-the-counter [trading]

Vattenfall is a European energy company with approximately 21,000 employees. For more than 100 years we have electrified industries, supplied energy to people's homes and modernised our way of living through innovation and cooperation. We are committed to building a future where everyone can choose fossil-free ways to move, make and live. Everything we do and the decisions we take shall lead to this goal. This is the basis of Vattenfall's strategy, and we advocate for a regulatory environment that makes this transition possible – in the energy sector and beyond in transport, industry etc.

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