Case Study

How a global manufacturer stress-tested its Scope 2 strategy for hourly renewable electricity matching



Executive Summary

A global manufacturer identified a risk in its Scope 2 strategy. Their "100% renewable" claim for specific countries worked under annual accounting. However, emerging Green House Gas Protocol (GHG-P) changes could require hourly matching, which would undermine those renewable claims and lead to disadvantageous procurement decisions if left untested. The company partnered with STRIVE by STX, the advisory arm of STX Group, to assess portfolio performance on an hour-by-hour basis and compare the implications of different procurement pathways. The analysis showed that a broader technology mix improved the matching score more efficiently, reducing the need for excessive over-procurement. It also estimated the cost, complexity, and risk of each procurement pathway to enable comparison. Ultimately, this analysis gave the company a clear basis for deciding where higher ambition created value and where it did not, supporting better trade-off decisions around cost, impact, market readiness and regulatory uncertainty.



Context

A global manufacturer implemented a diversified Scope 2 procurement strategy that enabled it to meet its 100% renewable electricity target in Spain on an annual basis through a mix of green tariffs and Energy Attribute Certificates **(EACs)**. The company was also expanding its global renewable energy procurement by exploring PPAs in Europe as part of its broader goal of reaching 100% renewable electricity worldwide.

However, evolving GHG Protocol Scope 2 guidance, including stricter temporal requirements, created uncertainty around whether existing renewable claims would remain robust and how to approach future procurement.

Why "100% renewable" needed to be tested

The company recognized that future GHG Protocol reporting guidance is likely to move beyond annual matching, placing greater emphasis on when and where electricity is generated relative to consumption.

Because the company already procured within market boundaries, the proposed regional deliverability criteria was not a concern. The bigger uncertainty was how hourly matching requirements might affect its existing Scope 2 targets and claims, which were assessed primarily on an annual basis and could mask temporal mismatches.

Before committing to further long-term procurement, the company wanted to understand its current baseline and identify practical and cost-effective pathways to improve its hourly matching score, while balancing the ambition for high additionality.

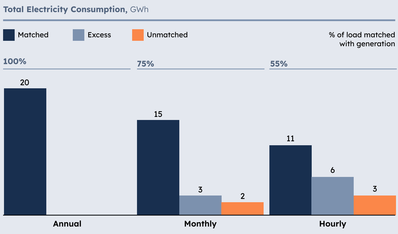
The company's focus was twofold:

Short term	Understand the implications of the proposed GHG-P Scope 2 guidance on current renewable electricity procurement
Forward looking	Anticipate future procurement solutions under evolving Scope 2 guidance, particularly considering hourly matching

The approach: turning accounting concepts into decisions

To address this, STRIVE by STX conducted a targeted GHG-P granularity diagnostic for one target country, to assess how the company's existing Scope 2 solutions performed across annual, monthly and hourly matching., focused on translating emerging accounting principles into practical insight.

The work started by establishing a transparent baseline. Electricity consumption profiles were mapped against the generation profiles of existing renewable instruments to identify temporal overlap and misalignment. It showed that the company's renewable energy claims would drop from 100% annually to ~55% under hourly matching. Monthly matching reduced the matching score as oversupply in certain months cannot be redistributed to under-supplied months. Hourly matching reduced the matching score even further given misalignment between generation (e.g. during the day) and consumption (e.g. at night).



Then the portfolio was further stress-tested. This showed that choice- and diversification in technology mostly influenced the hourly matching score. The analysis also highlighted cost implications: a broader technology mix improved hourly alignment more efficiently, reducing the need for excessive over-procurement.

The outcome of the granularity diagnostic answered the following questions:

01	Which technology combinations (e.g., wind and solar) and/or number of assets materially improved hourly matching?
02	How should the company balance procurement pathways (PPAs versus EACs) considering costs, complexity, risk and the company's ambition for high additionality?

The outcome: clarity and confidence in decision making

Instead of anchoring decisions to a single solution, the team evaluated multiple procurement scenarios side-by-side and compared their performance under hourly matching.

This made clear how different choices in technology (solar and wind vs. solely wind), number of assets (single or multiple) and procurement instruments (only EACs vs. EACs and PPAs) behaved and what the implications were on costs, complexity and risk. Strategic decisions could now be made based on explicit and quantified trade-offs between scenarios. An optimal forward looking portfolio was defined with two technologies and moderate over-procurement.

Additionally, the analysis shifted the conversation from "should we comply?" to "what does reasonably ambitious mean for us in terms of compliance, considering the company's values, budget and risk appetite?". This enabled informed discussions about cost-versus-impact trade-offs, market readiness and regulatory uncertainty. It also helped define the optimal portfolio and establish clear guardrails based on regulatory and market signals.



In the end, the client opted to pursue a PPA, but shaped it to hedge risk. To close any residual gaps and achieve the target percentage, they supplemented this with forward purchases of unbundled EACs. The resulting portfolio combined two technologies with moderate over-procurement, balancing cost, complexity, risk and the company's ambition for high additionality.

The diagnostic did not prescribe a single "right" answer, but it replaced assumptions with evidence and defined guardrails, enabling informed Scope 2 decisions as accounting principles evolve.

Interested in learning more?

As Scope 2 accounting expectations evolve, companies need more than annual renewable electricity claims. They need a clear view of how their procurement strategy performs under more granular requirements, what trade-offs different pathways create and where ambition can be translated into practical, risk-aware decisions.

STRIVE by STX helps corporates assess their renewable electricity portfolios, stress-test future procurement options and define strategies that balance cost, complexity, risk and impact as market and reporting expectations continue to change.

Contact us to learn how we can help you assess your Scope 2 strategy and prepare for evolving renewable electricity accounting requirements.