

MAY 2024

# High-Impact RECs:

## Applying Additionality for Renewable Energy Advancement



# Executive Summary

This paper introduces a methodology developed by Ever.green for defining and validating high-impact Renewable Energy Certificates (RECs) with additionality.

**Why it matters:** The global transition to renewable energy is not moving fast enough to address climate change and keep warming under 1.5°C.

Voluntary REC markets, though integral to the transition to renewable energy, have significant structural challenges that undermine their effectiveness in stimulating the development of new renewable energy projects.

**Driving this work:** More than 313,000 companies alone buy RECs in the U.S. voluntary market every year to support renewable energy projects.

- Most buyers are unable to buy RECs in a way that helps make new projects happen.
- Research has called into question the impact the market is having and its implications for climate action.
- Work is underway to reevaluate the standards and rules around accounting, reporting, and climate action to address these and other issues.

**Key components of our approach:** We emphasize the need for **long-term forward contracts** and **meaningful pricing** to ensure that RECs contribute materially to project financing and long-term viability.

**Who is this paper for:** professionals dedicated to sustainability, carbon accounting and standards, as well as anyone who cares deeply about the role corporations can play in the transition to renewable energy.

**The bottom line:** By enhancing the economic feasibility of new projects with more accessible long-term contracts, this methodology aims to shift much of the voluntary REC market towards a more impactful model, and thereby accelerate the transition to renewable energy.

## The urgent need for renewable energy development

As the world grapples with the escalating effects of climate change, the transition to renewable energy emerges as the most imperative solution. Over [77% of global emissions](#) come from energy. An increasing fraction of these emissions will come from generating electricity as society uses electricity for more things, including transportation, heating, manufacturing, AI, and even removing past emissions.

International negotiators at the 28th UN Climate Change Conference (COP28) stressed that **tripling** the installed capacity of renewable energy by 2030 is the [single most important lever](#) to reduce global emissions.

While [no country](#) is on a path to meet its targets, the United States bears outsized responsibility given it has created [more cumulative emissions](#) since the industrial revolution than any other country.

Analysis shows that, despite rapid growth in renewable energy, the United States lags well behind the necessary pace of decarbonization and is projected to emit [28% more emissions between 2020 and 2030](#) than a path aligned with its science-based targets. The cumulative excess emissions (over 5 billion metric tons of CO<sub>2</sub>) is equivalent to one thousand coal-fired power plants operating non-stop for an entire year.

We're going fast, but not fast enough.

## Challenges in renewable energy financing

In the last five years, renewable energy has doubled its slice of energy production in the United States [from 8% to 16%](#). This surge in development has been fueled by low interest rates, high energy prices, and a wide range of government incentives. While impressive, it still falls [well short](#) of the [needed pace](#) to keep below 2°C of global warming, much less 1.5°C.

This success comes despite [only 14%](#) of proposed projects that entered interconnection queues between 2000 to 2018 getting built by 2023. While projects face a number of hurdles, a significant number of the remaining 86% failed for financial reasons. And unfortunately, financing projects is getting harder, not easier with recent [macroeconomic headwinds](#).

As David-Wallace Wells [writes](#) in the *New York Times*, citing Brett Christophers' book *The Price is Wrong*, downward renewable energy price pressure is limiting returns for renewable energy developers (and thereby decreasing incentives for investment):

“In climate corners, we’ve giddily celebrated historic price declines that have cut the cost of renewable energy [dramatically](#) in recent years and made clean tech seem like the world’s obvious future. But ‘price is a misleading yardstick for assessing the current and future prospects of investment in renewable energy infrastructure,’ Christophers writes. ‘The better, more meaningful, yardstick is profit,’ and more specifically expected profit, he says, which guides and governs investment decisions far more than any calculation about price. And by that yardstick, renewable energy is not winning but losing the race, with an expected rate of return [much lower](#) than those enjoyed by the oil and gas business. Christophers cites a 2023 Bain [survey](#) that found that four out of five energy executives believed the main thing slowing the transition was an inability to generate ‘acceptable returns.’”

Companies can play a meaningful role in bringing more projects online each year by committing to long-term forward contracts for the Renewable Energy Certificates (RECs)<sup>1</sup> from projects. The role of companies becomes more important as the profitability of renewables gets squeezed further.

## The role of RECs in renewable energy market

RECs have been critical in getting us to where we are today. Because of physics and the engineering realities of the electric grid, clean electricity generated in one location cannot be easily tracked or guaranteed to be delivered to specific customers in a different location.

RECs were developed as a way to virtually connect clean electricity supply and demand, allowing utilities and companies to “book” the zero-carbon attribute of power generated somewhere else, and formally “claim” the clean energy generation for a utility’s regulatory requirements or a company’s carbon inventory related to electricity.

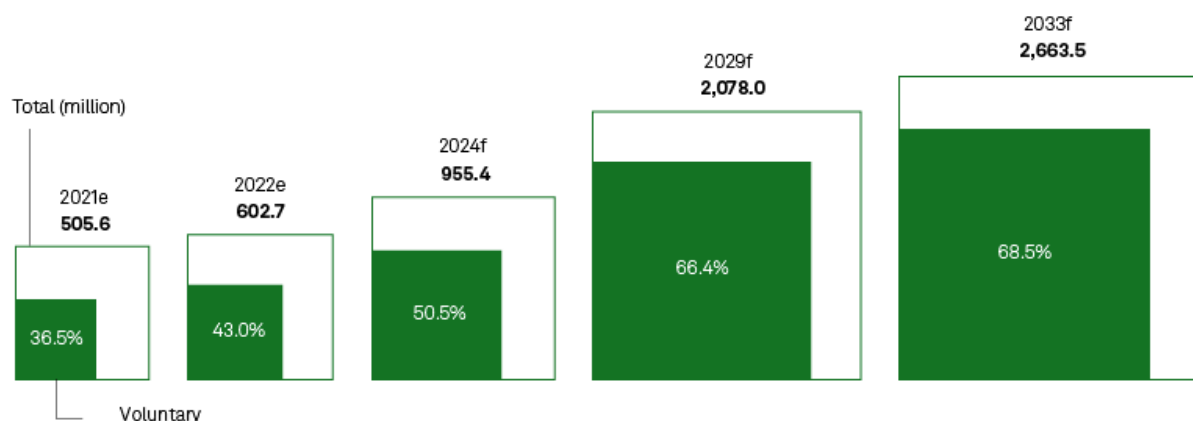
In the United States, compliance markets exist in states that have regulatory requirements for clean energy (called Renewable Portfolio Standards or RPS), and RECs are used to track progress towards those goals. When goals are met and there is surplus supply, or in regions

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<sup>1</sup> Throughout this paper, we use the term RECs which is the name for Energy Attribute Certificates (EACs) from renewable energy projects in the United States. This work equally applies to Guarantees of Origin (GOs) in Europe and International RECs (I-RECs) in Africa, Asia, and Latin America.

where there are no goals, RECs are sold in a nationwide voluntary market, which is the focus of this paper. Voluntary markets are expected to [surpass](#) compliance markets in total volume in 2024.

### Estimated and forecast US RECs, 2021–33



As of Jan. 29, 2024.

e = estimated; f = forecast; REC = renewable energy certificate/credit.

Sources: S&P Global Market Intelligence Power Forecast data as of Dec. 31, 2023; S&P Global Commodity Insights estimates; public data.

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In 2022, [more than 313,000 companies](#) purchased RECs in the U.S. voluntary market to address indirect emissions from electricity usage (primarily scope 2 emissions). The impact of RECs in voluntary markets on helping stand up new projects depends on their price and which of the following procurement methods is used:

1. **RECs purchased annually in the spot market from existing projects are *not* shown to help sustain projects or spur the development of new projects.** For all spot market purchases, the revenue is not contracted<sup>2</sup> and is therefore uncertain at the time of project financing. While compliance RECs can trade at a meaningful price (tens to hundreds of dollars each) in regions with an RPS, voluntary spot market RECs sell for only [\\$1-3 each](#), which in total generate as little as 2% of a [project's typical revenue](#).

Nearly all REC buyers procure RECs this way, and their purchases represent ~60% of the volume in the US voluntary market. Since prices are low and the revenue is not contracted, the value of future RECs on a proposed project is both minimal and

<sup>2</sup> Spot purchases can be made through intermediaries who do sign a multi-year contract or sometimes even prepay for the RECs before the project is financed. But those contracts can be short and more importantly, the price remains low.

unknown, reducing their contribution to making the project a good investment to little, if anything.

2. **RECs purchased through long-term forward contracts can help enable and sustain new projects.** RECs can be bundled with the energy in Power Purchase Agreements (PPAs) or unbundled<sup>3</sup> from the energy in Virtual PPAs. Companies like Google started signing PPAs in the early 2010's to have a [greater direct impact](#), and [analysis](#) has confirmed their impact in standing up new projects. [Further research](#) has even found a positive spillover effect leading to more development in regions where PPA's and VPPA's have been executed.

However, fewer than 1% of REC buyers (representing ~40% of REC volume) use long-term contracts because these contracts are inaccessible to all but the largest companies due to typical contract length (15-20 years), size (100,000+ MWh / year), risk (companies assume energy price risk in a Virtual PPA), [credit requirements](#), and complexity to negotiate and execute. And even if a buyer can clear all of these hurdles, [PPAs and VPPAs can not be used everywhere](#). PPAs can only be used by companies in deregulated energy markets and VPPAs can only be applied to projects in wholesale energy markets, leaving large areas inaccessible to buyers and/or project developers.

While RECs can also be procured via a green tariff where the utility uses one of these procurement methods (spot market RECs or PPAs), these products vary widely in design and availability. To ensure impact, the buyer must delve deeply into the product description to ensure they understand which method was used.

Buyers participating in the spot market outnumber PPA buyers by 440:1, and despite [over one hundred million RECs](#) bought in the spot market each year by hundreds of thousands of companies, [studies](#) show they are not helping more projects get built than would have happened otherwise.

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<sup>3</sup> Unbundled RECs are separated from the clean energy and [sold to different parties](#). "Unbundled" is frequently used to describe RECs purchased in the spot market. As you do not take title nor delivery of power when buying RECs through a Virtual PPA, we see this as another way to buy unbundled RECs. And as VPPAs are [proven impactful](#) in helping stand up new projects, we don't think "unbundled RECs" is a good catch-all term for low-impact RECs.



## Are RECs supposed to enable new projects?

The idea that RECs purchased in a voluntary market should enable new renewable energy projects was not the original intent of RECs.

Unlike carbon offsets that allow companies to fund and claim a project's emission reductions to offset their own carbon inventory, RECs are instead a way of theoretically erasing the emissions to begin with. A company buys the exclusive right to the zero-emissions attribute of a project's energy and applies that emissions factor to the volume of energy the company gets from the grid. Some efforts to improve RECs focus purely on the accuracy of this transfer.

But due to increased scrutiny from employees, investors, and customers of their climate actions, companies are seeking to make investments they can stand behind with confidence, including REC purchases that make an impact. Unfortunately, most companies simply do not have the means to make the desired impact under the PPA/VPPA structure.

Here lies the need and the opportunity. We can improve our trajectory toward meeting global climate goals if we reevaluate our expectations for the impact of voluntary REC markets and build mechanisms that improve both participation and impact in building more renewable energy projects.

## Reevaluating the role of RECs

Reevaluations of RECs are currently underway from programs like the Science Based Targets initiative (SBTi), which is [asking for evidence of effectiveness](#) of RECs, to the Greenhouse Gas Protocol (GHG Protocol), which is [reviewing its current standards](#) with a goal to publish updates in 2026.

The mission of the GHG Protocol is to develop internationally accepted GHG accounting and reporting standards and tools, and to promote their adoption in order to achieve a low emissions economy worldwide. To carry out this mission, GHG Protocol has to balance multiple objectives including the **accuracy**, **participation** (or adoption), and **impact** of carbon accounting standards on our collective work to decarbonize our world. Changes to standards that lead to more accuracy but reduce participation and/or slow progress to address climate change would be counter to its mission.

If we can make RECs more impactful, many more companies can join in enabling new projects and accelerating the transition to renewable energy.

## The challenge: Making more RECs impactful

The three biggest reasons spot market RECs have so little impact on project viability are:

1. Revenue based on current and historical REC prices is immaterial (at \$1-3 each, RECs represent as little as 2% of a project's total revenue).
2. Future REC prices are not expected to increase without intervention.
3. Most importantly, REC revenues are not guaranteed, meaning there is both a low expected value and high uncertainty for future REC revenue at the time a project is being financed.

Low prices are primarily caused by a single nationwide market where REC supply continues to outpace demand. Herein lies the catch-22 of renewable energy and RECs: **we're not building enough renewable energy projects to meet climate goals, but we are building more than enough projects to satisfy spot market REC demand.**

There are indirect methods of making RECs more impactful by trying to address this imbalance:

- **If demand grew faster than supply**, there would be upward pressure on prices and RECs could be more impactful. This could happen if all companies above a certain size were required to buy RECs or if all states had a strong RPS and utilities lead the charge.
- **If instead, available supply was constrained**, there would be upward pressure on prices and again, RECs could be more impactful. This could happen by further restricting which RECs companies can buy, for example by time and location.

But both of these approaches are incremental and likely to take a long time. There is additional uncertainty that demand will outpace supply in either case as prices rise. And given that the revenue from RECs would remain uncontracted, there is a lot of risk to those investing in projects which dampens the impact RECs have in project financing.

Our approach is instead a direct method where we expand how many companies can opt in to making a greater impact (just as many companies do today with PPAs), independent of how the market evolves. But let's first look at two strategies that attempt to constrain supply.



## Does 24/7 Carbon Free Energy or Emissionality fix all of this?

Two of the most popular strategies for narrowing available supply for buyers are 24/7 carbon free energy (CFE) and emissionality. Both involve strategically buying RECs based on where and/or when the clean energy behind each REC is delivered to the grid. But neither of these approaches make spot market RECs more impactful, unless they are combined with long-term contracts that help projects get financed and built.

### 24/7 Carbon Free Energy (CFE) or Time-matched RECs

With 24/7 CFE, companies commit to only buy RECs in the same region and time where they use energy. The goal is to match electricity usage with procured RECs for every hour of every day. [Research](#) suggests that 24/7 CFE could hypothetically improve the impact of RECs in the spot market based on the assumption that demand will be greater than supply for some hours and locations, which should result in higher prices for those RECs.

The goal is to both improve carbon accounting accuracy and incentivize investment in the technologies and systems needed (especially storage, transmission, and sources of firm renewable energy like geothermal) to make clean energy available 24 hours a day, 365 days a year. These investments will be important to get us all the way to 100% renewable energy, but we are a long way away from that goal, with [less than 16% of US electricity generated by wind or solar](#) in 2023. And to accelerate the transition to renewable energy, we need to do more than incentivize projects—we need to ensure we are enabling them.

24/7 CFE presents three challenges to accelerating the transition:

1. **24/7 CFE increases the cost and complexity** of procuring clean energy, as the buyer must track not only RECs but also energy usage by hour and location. A great deal of infrastructure for tracking, verifying, and consuming 24/7 RECs will be needed.
2. **RECs would still be traded in the spot market** meaning the revenue remains uncontracted and uncertain to the project, which dampens their impact once we move from research and models to actual project financing.
3. **Long-term contracts will be even less accessible.** Buying clean energy in each region will make it even harder for some buyers to use long-term contracts, as their demand can not be pooled across the entire market. This is a bigger problem for companies with distributed usage (e.g., many stores or offices). Standards bodies could

lessen the pain and make the regions larger, but this reduces the optics of deliverability and negates the improvements to carbon accounting accuracy.

Finally, we question 24/7 CFE being the right solution for the entire market at this time. If companies must invest only in projects where they are located to achieve their climate goals, they are disincentivized from investing in underserved regions or dirtier grids where a greater impact on emissions can be had. At this early stage of climate progress, isn't it better to add renewable energy capacity in places where costs are lower and the grid is dirtier?

## Emissionality

Emissionality is the practice of building projects on the dirtiest grid possible to maximize the climate impact of new projects. An early example of this strategy is Boston University signing a PPA for a wind farm in South Dakota and therefore [avoiding two to three times more emissions](#) than if they had supported a local project.

The EPA [recognized Boston University](#) with a Green Power Leadership Award for its “exemplary use of green power, including project placement to optimize emission reductions.” While this PPA had an outsized impact and helped Boston University make progress towards achieving its climate goals, the PPA would have no effect on Boston University's climate accounting under a 24/7 CFE framework as the project is far away in another region. Emissionality seems like a better strategy to help accelerate the transition at this stage, seeking the most efficient means to maximize avoided emissions.

But emissionality alone is [not shown](#) to be impactful in the spot market because revenue remains uncontracted and inconsequential. The PPA (the long-term contract BU signed with the project) was critical to Boston University having the impact they had. Forward-thinking proponents of emissionality argue that the strategy [must be paired with additionality](#) (a test for impact on the project). We agree and think that evaluations of emissionality by itself misrepresent the potential impact.

## Making 24/7 CFE and emissionality impactful

To support frameworks like 24/7 CFE and emissionality, we need to tag RECs with additional information. There is still work required to standardize how this is done but rather than wait for this and broad support, Ever.green has built a registry where it associates every one of our RECs, issued and retired on the official [REC Tracking System](#), with the hour, date, location, emissionality of the grid, and details on impact and additionality. In the future, we plan to allow

buyers to opt in to sharing more information on our registry like their name and contract length for great transparency.

But 24/7 CFE and emissionality are far more valuable when paired with meaningful long-term contracts that help new projects get funded and built. To enable a greater percentage of voluntary REC buyers to directly contribute to grid decarbonization, we need to apply additionality standards to RECs in a way that increases confidence in their impact and maintains broad access.

## Ever.green's answer: High-impact RECs with additionality

Ever.green has developed a method for procuring RECs that offers financial guarantees to new and repowered projects, ensures REC dollars make a material financial impact on new projects, and is far more accessible than today's PPAs.

Additionality is a concept designed to address the heart of challenges in the spot market by testing credits to see if they play a meaningful role in making a project happen and ensuring new clean MWhs of energy get delivered to the grid. While essential for carbon offsets, additionality has [not traditionally been applied to RECs](#), although both instruments involve companies paying for the right to reduce their carbon inventory via an external project's decarbonization efforts.

By focusing on additionality, Ever.green ensures that each REC sold contributes directly to the financeability and long-term viability of new renewable energy projects.

Ever.green also looks at the [project's impact on the planet](#). We worked with numerous experts to build on the [More Than a Megawatt](#) framework originally created by Salesforce to create our [Impact Scorecard](#). We use this framework to test each project's impact on the climate, land, wildlife, and community.

## Defining additionality for RECs: New is not enough

Additionality can be a hard concept to test for, as it is inherently complex and involves assessing change relative to a baseline, which is usually an unobservable alternate reality. If we can define additionality for RECs and establish how to test for it in a way that scales and is not subjective, we can unlock immense corporate support to accelerate the transition to renewable energy.

Some simply define additionality as *any* new project, suggesting that “new” automatically means “additionality.” But this broad definition includes projects that already have the necessary

funding and are likely to happen without additional support from RECs—meaning the RECs won't have an impact.

Others define additionality as a strict “but for,” where you must have absolute certainty that a project would not have happened but for the purchase of the project's credits. However, project development involves many parties and moving parts (supply chain costs, interest rates, power price forecasts, etc.) and no single factor makes a project happen by itself. Furthermore, exactly what would happen to a proposed project without support from the RECs is often hypothetical and therefore not observable. Achieving absolute certainty can mean an overly burdensome diligence process that is cost prohibitive and/or has many false negatives.

To consider the many approaches to defining and testing for additionality and ensure that the REC contracts are material to the project, we established three guardrails:

1. **Must work within the current REC system** where a buyer gets full credit for 1 MWh of clean energy for each REC, procurement stays in terms of MWh and not tCO<sub>2</sub>, and issuance and retirement of certificates is on the appropriate nationally recognized REC tracking system. To accomplish this, we need a binary yes/no test and to avoid "partial additionality" schemes.
2. **Must be meaningful** - the test must demonstrate that RECs are an important piece of the puzzle, such that the project's financing and/or long-term viability would be at risk without them.
3. **Must be workable** - the ultimate goal is to drive significantly more new renewable construction. A good test limits false negatives and is practical for developers to apply so that it scales. And to broaden access compared to PPAs and VPPAs, we need to reduce risk, simplify the process, and reduce costs for buyers (length of contract negotiations, outside counsel costs, modeling and settlement costs, etc.).

## Principles for enabling additionality

With guardrails in place, we crafted three foundational pillars that embody everything we know about additionality and what makes RECs material to a project's financial viability:

1. **New or renewed projects:** We work exclusively with future projects that need the contracted revenue—both new projects and projects that need to be repowered or refurbished to extend their life, leveraging the use of existing materials and infrastructure. Timing is also important: Ever.green engages with projects either

pre-financing (to help close financing) or pre-completion in cases where financing was secured on the condition of the sale of high-impact RECs (as defined and tested by our framework).

2. **Long-term contracts:** Ever.green champions long-term forward contracts (5-10 year terms), providing a predictable revenue stream that can significantly influence project financing decisions. Shortening contracts to as little as five years broadens access to more companies but requires higher REC prices to still be material to the financial viability of new projects.
3. **Meaningful pricing:** RECs bought in the spot market usually cost \$1-3 each, generating a tiny percentage of the project's revenue. At these prices, even when bought via a long-term forward contract, RECs do not help make more projects possible. While every project is different, Ever.green's high-impact RECs generally sell at prices that are an order of magnitude higher – high enough that we can see a material improvement to the project's economics for investors and lenders.

These principles are the levers we can pull to make RECs impactful in enabling more new projects and accessible to most companies looking to make a difference. They echo several of the guidelines the GHG Protocol shared in its [Scope 2 Guidance](#) for “strengthening the role of RECs as a standalone product,” including long-term contracts directly with project developers at a meaningful price.

But how do we know if the term and price in a long-term contract are adequate to have the intended impact? And how do we avoid supporting future projects that don't need additional support?

## Testing for additionality

Ever.green's methodology for testing REC contracts for additionality involves an assessment of each project's financials, market dynamics, and the specific role that REC purchases play in making the project feasible.

Since additionality had not been previously applied to RECs, we needed to devise a test for additionality. Ever.green looked to the GHG Protocol, which provides not only accounting and reporting standards but also guidelines on project accounting, which include a [framework for different types of additionality tests](#):

**TABLE 3.1 Examples of possible “tests” for additionality**

TEST	GENERAL DESCRIPTION OF THE TEST AS IT IS COMMONLY FORMULATED
<b>Legal, Regulatory, or Institutional Test</b>	The GHG project must reduce GHG emissions below the level required (or effectively required) by any official policies, regulations, guidance, or industry standards. If these reductions are not achieved, the assumption is that the only real reason for doing the project is to comply with regulations, and any claimed GHG reductions are not additional.
<b>Technology Test</b>	The GHG project and its associated GHG reductions are considered additional if the GHG project involves a technology that is not likely to be employed for reasons other than reducing GHG emissions. The default assumption is that for these technologies, GHG reductions are a decisive reason (if not the only reason) for implementing them. GHG projects involving other technologies could still be considered additional, but must demonstrate additionality through some other means.
<b>Investment Test</b>	Under the most common version of this test, a GHG project is assumed to be additional if it can be demonstrated (e.g., through the divulgence of project financial data) that it would have a low rate of return without revenue from GHG reductions. The underlying assumption is that GHG reductions must be a decisive reason for implementing a project that is not an attractive investment in the absence of any revenue associated with its GHG reductions. A GHG project with a high or competitive rate of return could still be additional, but must demonstrate additionality through some other means.
<b>Common Practice Test</b>	The GHG project must reduce GHG emissions below levels produced by “common practice” technologies that produce the same products and services as the GHG project. If it does not, the assumption is that GHG reductions are not a decisive reason for pursuing the project (or conversely, that the only real reason is to conform to common practice for the same reasons as other actors in the same market). Therefore, the GHG project is not considered to be additional.
<b>Timing Test</b>	The GHG project must have been initiated after a certain date to be considered additional. The implicit assumption is that any project started before the required date (e.g., before the start of a GHG program) could not have been motivated by GHG reductions. Under most versions of this test, though, GHG projects started after the required date must still further establish additionality through some other test.

Given that renewable energy is not a new technology (Technology Test) or an uncommon practice (Common Practice Test), Ever.green focuses on all the remaining tests:

1. **Regulatory tests:** Ever.green goes beyond what’s required by transacting primarily in regions without Renewable Portfolio Standards, because those regions already have a robust compliance market in which RECs typically sell at a meaningful price.
2. **Timing tests:** We seek to be involved early enough to affect the decision whether to approve funding of a project.
3. **Investment tests:** We seek to evaluate and understand whether there is a material impact on the economics of a project.



While the first two tests are relatively straightforward, the investment test is not. What do we mean by a “material impact,” and how can we test for that? Defining this in concrete terms is at the core of building something meaningful that scales and can be validated. Only then can we ensure our RECs are high-impact, meeting a standard for additionality and contributing to developing new renewable projects.

## Investment test: Defining a material impact

For a project to pass our additionality test, we seek assurance that the viability of an individual project *materially* depends on our high-impact RECs. We require:

- **Material impact** - The long-term forward contract for RECs must impact the project’s economics. For reasons we explain in the next section, we set a floor of at least a 10% relative factor on one of several key metrics. While we expect these tests to continue to evolve, we currently look for:
  - a. At least a 10% *increase* in the project’s revenue, [internal rate of return](#) (IRR)<sup>4</sup>, or [financial leverage](#) (e.g., debt as a share of the project’s overall long-term capital structure), or
  - b. At least a 10% *decrease* in the [debt-service coverage ratio](#) (DSCR), [cost of capital](#) (weighted average for all equity and debt to build the project), or cost of energy (weighted average price paid by the power purchaser under any energy-only PPAs<sup>5</sup>)
- **Contractual representations** - To pass our Impact Scorecard and be sold via our platform, renewable energy developers must represent the above-described material impact and the impact of the REC contract on the financial viability of the project in an enforceable contract, subjecting themselves to liability in the event of a breach.
- **External Analysis:** Where possible, we also conduct external analysis assessing the impact of the RECs. In the case of merchant projects where the energy is not contracted but instead sold at a floating price in a wholesale market, we have looked at historical prices and forward price curves to not only validate that RECs improve the project’s economics but also test for a potential reduction in curtailment (shutting down a project when prices are very soft, or even negative, to avoid losses).

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<sup>4</sup> We also require a minimum 1% absolute increase in the project’s IRR.

<sup>5</sup> In reducing the cost of energy, we seek to understand who benefits from these savings and prefer to do so for nonprofits, public schools, or consumers via community solar projects.

## Investment test: Why a 10% threshold?

Since this is an investment test, we used precedents established in financial markets and accounting standards to determine if something is material. Materiality is a key concept in the federal securities laws and in the reporting requirements established by the Securities and Exchange Commission (SEC). A reasonable investor standard is applied in this context, stating that material information is information a reasonable investor would want to know before making an investment decision. We think this aligns well with the goal of our test: each REC contract should be something an investor in a project would want to know is in place before investing, and it should be a positive and relevant factor in their decision.

The SEC Staff opted not to create a numerical test for “materiality” mainly out of concern that impacts below a given threshold may still be material (a fear of false negatives). Fortunately other accounting and legal professionals have shared our desire to define material impact in terms of a range of percentage impacts relative to baseline. A 10% impact frequently appears at or near the ceiling of ranges from these efforts<sup>6</sup>.

In the interest of taking a conservative position for our buyers, we have used this 10% value to construct our investment test. We carefully in how we apply the threshold to different metrics and only test in situations where the REC contract could have an impact: where the financing decision has yet to be made or, if it has been made but the project has not been completed, where the assumptions of the model included a REC contract similar to the one offered by Ever.green.

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<sup>6</sup> The SEC surveyed ranges as part of its effort to define “materiality” in [Staff Accounting Bulletin 99](#), which to this day remains authoritative. The Staff noted that when the SEC and other authoritative bodies have issued quantitative materiality guidance, it has ranged from 1-10% concerning various disclosures. For example, the [SEC's Form 8-K](#) uses 10% twice in Item 2.01 when determining whether a transaction is “significant enough” to report. The Staff also noted another study suggesting widespread use of a rule of thumb of 5-10% of net income among auditors. Literature from auditors themselves supports this assertion. For example, [KPMG notes](#), in a discussion of materiality, that materiality thresholds are often set between 3-10% of PBT (profit before tax) in auditing. The 10% threshold also appears in other contexts besides accounting determinations where the significance or materiality is questioned. For example, 10% of equity ownership is often how lawyers define presumptive affiliate status (e.g. when stock ownership is “material” enough to create a presumption an investor influences management).

# The Transformative Potential of High-Impact RECs

This white paper underscores the critical need for a shift in the renewable energy landscape and highlights the role of high-impact RECs in driving this transformation.

Ever.green's approach to high-impact RECs offers a pathway to overcoming the challenges faced by the traditional REC market:

- By considering additionality, we can ensure REC purchases have a tangible impact on the financial viability of specific new projects and raise the credibility of all voluntary RECs as a contribution to the growth of renewable energy capacity.
- By keeping the approach and associated contracts simple, we can fractionalize contracts and make high-impact RECs accessible to hundreds of thousands of companies.

Ever.green aims to significantly raise the bar for RECs and sets a new standard for how renewable energy support can be structured and implemented that prioritizes additionality, ensures the meaningful impact of REC purchases, and allows broad participation.

The wide adoption of high-impact RECs has the potential to boost the trajectory of renewable energy development and give us a better chance of keeping warming under 1.5°C.

# Acknowledgments

We'd like to thank the many members of the renewable energy and sustainability community who took the time to read and give feedback on this paper. Their critiques helped us to sharpen our thinking and clarify our arguments. Beyond the context of this specific piece, our discussions and debates over the years – with this group of people and many more – have fueled our commitment to the work. We hope that together, we can make a difference.

Reviewers included:

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