The Nature Conservancy

Beyond Price

How incorporating social and environmental standards in renewable energy procurement can show the full value renewables bring to climate, people, nature and economies.



©Colin Watts/TNC Photo Contest 2022

Table of Contents

Executive Summary 5

Introduction 6

Barriers to Europe's 2030 Renewables Ambition 7

EU Policy Signals for Accelerating Renewable Deployment 9

From Corporate Renewable Demand to Durable Environmental and Community Benefits 10

Rising Corporate Adoption of 3C Attributes 12

Embedding 3Cs in Corporate Renewable Energy Procurement 13

Why the 3C gap persists in Europe 14

Bridging the Gap – From High Level Principles to Practical PPAs 16

Contact Us 17

Appendix I 18

Case Study: Alhendín Agri-PV project BayWA r.e. and VELUX PPA 19
Case Study: Strathy South Wind Farm, SSE Renewables 21
Case Study: Low Carbon and Lloyds Banking Group Solar PPA 23
Case Study: Aragón (Zaragoza) Solar Project Zelestra and Microsoft PPA 25
Case Study: Handest Hede Energy Parks, Eurowind Energy 27
Case Study: Procuring renewable energy from community-centric distributed generation solar projects, Microsoft 29

Executive Summary



Corporate Power Purchase Agreements (PPAs) are a central mechanism to mobilising private capital for Europe's renewable energy transition.

To meet 2030 targets and secure a rapid, responsible scale up of solar and wind, PPAs must evolve from a price-first contract into a procurement tool that rewards projects delivering measurable environmental and social outcomes.

Currently renewable energy deployment in Europe is constrained by supply chain issues, grid bottlenecks, financing gaps, supply-induced price depression and lengthy permitting timelines.

Uptake of impact-led procurement is further limited by opaque bilateral PPA negotiations, fragmented data, divergent regulatory regimes and weak incentives that fail to reward high-impact projects.

Embedding biodiversity and social impact criteria into PPA decision-making strengthens deliverability, reduces permitting and reputational risk and builds public trust, unlocking higher-quality, resilient renewables at scale, without necessarily adding a prohibitive price premium.

Now is a timely opportunity to mainstream impact-led procurement across corporate renewable energy buyers and developers as global market standards develop, and as European market signals and EU policy reforms are increasingly recognising non-price criteria.

Quality-led PPAs, backed by harmonised standards and clear policy signals, can turn corporate demand into a durable driver of nature-positive, community-centred renewable energy deployment and help Europe meet its 2030 ambitions more quickly and responsibly.

Continued engagement of stakeholders across Europe will be key to understanding perceived challenges, barriers, and enablers.

Through multi-stakeholder forums, these insights can inform the development of practical guidance that translates high-level principles into actionable PPA terms and market practices.



©Ciril Jazbec

Introduction

Corporate Power Purchase Agreements (PPAs) are now established as a powerful lever in Europe's energy transition – unlocking private capital, stabilising energy costs and accelerating the shift from fossil fuels to renewable energy. To realise their full potential, PPAs must evolve beyond price-driven transactions to reward best-value projects that deliver environmental and social co-benefits necessary for a rapid and responsible energy transition.



©Ciril Jazbec

This paper focuses specifically on solar and wind, the dominant technologies in Europe's corporate PPA market and the backbone of responsible renewable energy deployment.

Integrating biodiversity and social impact criteria into corporate procurement decision-making can transform PPAs into tools for corporate responsibility. These criteria not only enhance outcomes for nature and communities, but also reduce project risks, improve deliverability, and build public trust, ultimately strengthening the long-term impact the transaction seeks.

By valuing factors beyond price, corporate buyers can foster a "race to the top" for the impact attributes all renewable energy procurements aim to deliver.

Aligning procurement with Environmental, Social and Governance (ESG) objectives, for example, Scope 2 Greenhouse Gas emissions or renewable energy procurement goals, can guide the market to ensure there is a rich supply of high-value, high-impact projects available for procurement.

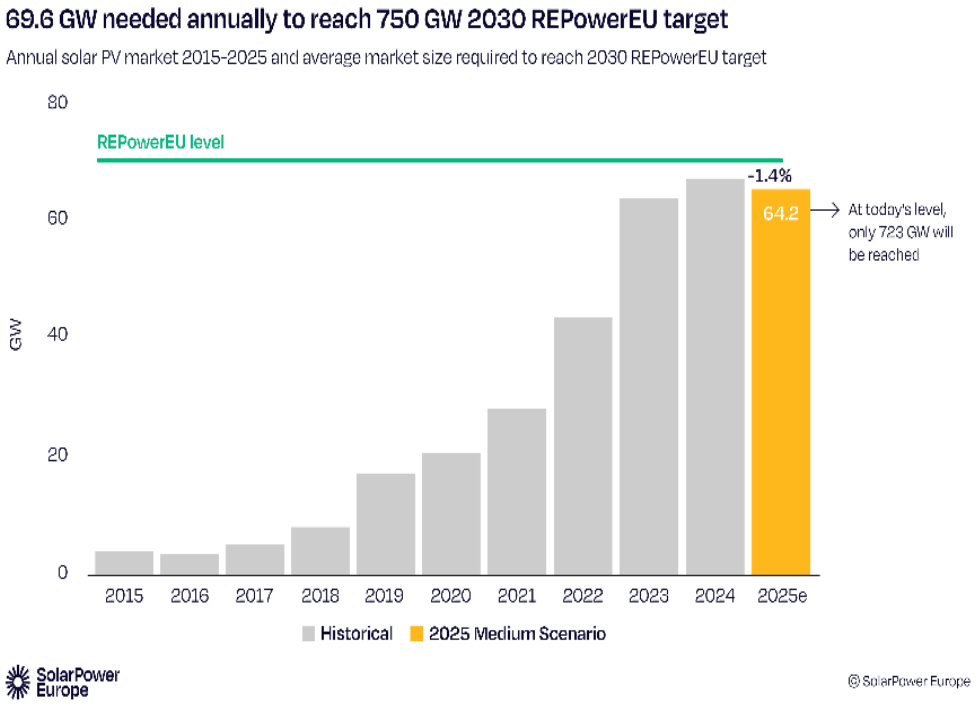
This short paper aims to support corporate buyers, developers and policymakers by highlighting challenges, identifying potential enablers and showcasing emerging best practices in responsible renewable procurement across Europe.

Barriers to Europe's 2030 Renewables Ambition

Europe's energy transition has advanced substantially to shift power systems from fossil fuels to renewables – with an ambitious 2030 target that aims for 45% of renewable energy. With the adoption of a legally binding 90% net greenhouse gas emissions reduction target by 2040, renewable energy transition will need to keep the pace going towards climate neutrality by mid-century.

However, deployment is not yet on pace to meet this target. WindEurope has cut its 2030 wind capacity forecast to 344 GW, well below the 425 GW target. And with solar installations poised to dip in 2025 for the first time in a decade, SolarPower Europe forecasts that Europe will miss its 2030 solar target if current deployment rates persist (see Figure 1).

Figure 1: *Europe solar market growth (SolarPower Europe 2025)*



Renewable energy deployment today is hampered by several challenges. Supply chain bottlenecks delay equipment delivery and project timelines, negative prices and low capture rates erode revenue certainty, grid connection constraints leave many projects queued for years, and financing gaps push developers toward higher-cost capital or stalled investment. Additionally, permitting delays, which this report focuses on, presents another critical barrier - further slowing capacity roll-out, driving up costs, and making schedules ever more uncertain.

Another concern is that scaling up renewable energy projects without proper ecological safeguards and community engagement threatens biodiversity, undermines community trust, and can lead to even further delays. In markets where renewables already make up a large share of power generation, social license is showing signs of weakening. Building social licence is integral to smooth permitting.

Community opposition now rivals grid connection constraints as a leading cause of project delays or cancellations. For example, onshore wind schemes in about one in five Dutch municipalities have been paused or scrapped amid local protests. When host communities' concerns, whether visual impact, noise, or uncertain local benefit, go unaddressed, developers face reputational damage, higher risk, and financial setbacks.

Figure 2: *Average permitting delays for renewable energies in Europe (edited from WEF,2024)*



Figure 2 shows the average impact of permitting delays on onshore wind and rooftop solar projects. These lengthy timelines come at a cost for renewable projects developers, reaching up to 10% of the total project value. Additionally, permitting timelines for ground mounted solar PV in Europe exceed two years, stretching up to four years. Cutting through these bottlenecks with timely, responsible deployment will avoid the real financial and climate costs of permitting delays.

EXPLORE CASE STUDY: *Alhendín Agri-PV Project: BayWA r.e. and VELUX PPA*

"Solar Plant Symbiosis, which seeks to integrate solar parks with nature and community for mutual benefits"

EU Policy Signals for Accelerating Renewable Deployment

The EU is unlocking new opportunities to bolster energy security by turning PPAs into powerful catalysts for renewable energy transition and bridging the financing gap. The reformed Electricity Market Design requires Member States to remove barriers to PPA signing, streamlining procedures, ensuring fair access, and offering guarantee schemes backed by public funds or the European Investment Bank (EIB) to reduce offtaker risk.

PPAs remain central to EU policy, with initiatives like the Clean Industrial Deal and Affordable Energy Action Plan aiming to stabilise energy prices and expand long-term contracts. By 2026, the Commission will issue guidance on combining PPAs with contracts for difference, alongside a €500 million EIB-backed pilot programme to support corporate PPAs, especially for Small and Medium-sized Enterprises and energy-intensive sectors.

EXPLORE CASE STUDY: Powering Communities through Spain's First Purpose-Driven Corporate PPA Microsoft & Zelestra, ECODES as Community Fund Manager

Renewable energy auctions are increasingly using non-price criteria (NPCs) to deliver co-benefits like biodiversity and community impact. Under the Net-Zero Industry Act, Member States must apply NPCs to at least 30% of annual auctions, with biodiversity encouraged as a criterion. The EU is shifting from mitigation to net gain, embedding nature-positive infrastructure and local engagement into its energy agenda. The growing use of NPCs in renewable auctions can offer valuable lessons for negotiating PPAs. Just as governments are beginning to reward projects that deliver real benefits for nature and local communities, with an objective to derisk projects and increase competitiveness, similar NPC-based provisions can be integrated into PPA terms.



© Ciril Jazbec

From Corporate Renewable Demand to Durable Environmental and Community Benefits

Voluntary corporate renewable energy buyers have become a major driver of decarbonisation and through PPAs, a vital source of finance for newbuild renewables. In Europe alone, ~19GW of PPAs enabling new renewable capacity were signed in 2024, with 70% of this volume signed by corporates.

How corporates invest is as important as *how much* they invest. Corporate sustainability commitments must go further than purchasing green energy certificates, with procurement decisions reflecting broader ESG goals. Harnessing this demand to accelerate high-quality deployment requires shifting procurement beyond lowest-price logic, and synergising sustainability and procurement corporate policies.

Figure 3 *3C's (Climate, Conservation, Communities) TNC*



Following the lead of NPCs in renewable energy auctions, embedding biodiversity and social impact criteria that reflect the 3Cs (Climate, Conservation and Communities) attributes into PPAs, and other long-term contracts, can create market incentives for projects that protect biodiversity, engage and benefit host communities, strengthen social licence and future-proof contracts against evolving regulation. This shift not only rewards developers for robust environmental measures and proactive community outreach but also accelerates permitting, PPA signings, and overall deployment quality while bolstering brand reputation and stakeholder trust. See Figure 4 for further benefits of embedding 3C criteria into PPAs.

In 2023, The Nature Conservancy (TNC) and Rivian Automotive partnered to develop created an open-source toolkit designed to share learnings and help other buyers integrate 3C criteria into power purchase agreement. A subsequent study from the partnership showed how Rivian identified project options across procurement cycles that balanced risk and cost while embedding key 3C values. Notably, project pricing was only somewhat correlated with 3C impact scores: while some projects included a premium for specific co-benefits, many project offers had a breadth of 3C values incorporated at competitive market prices.

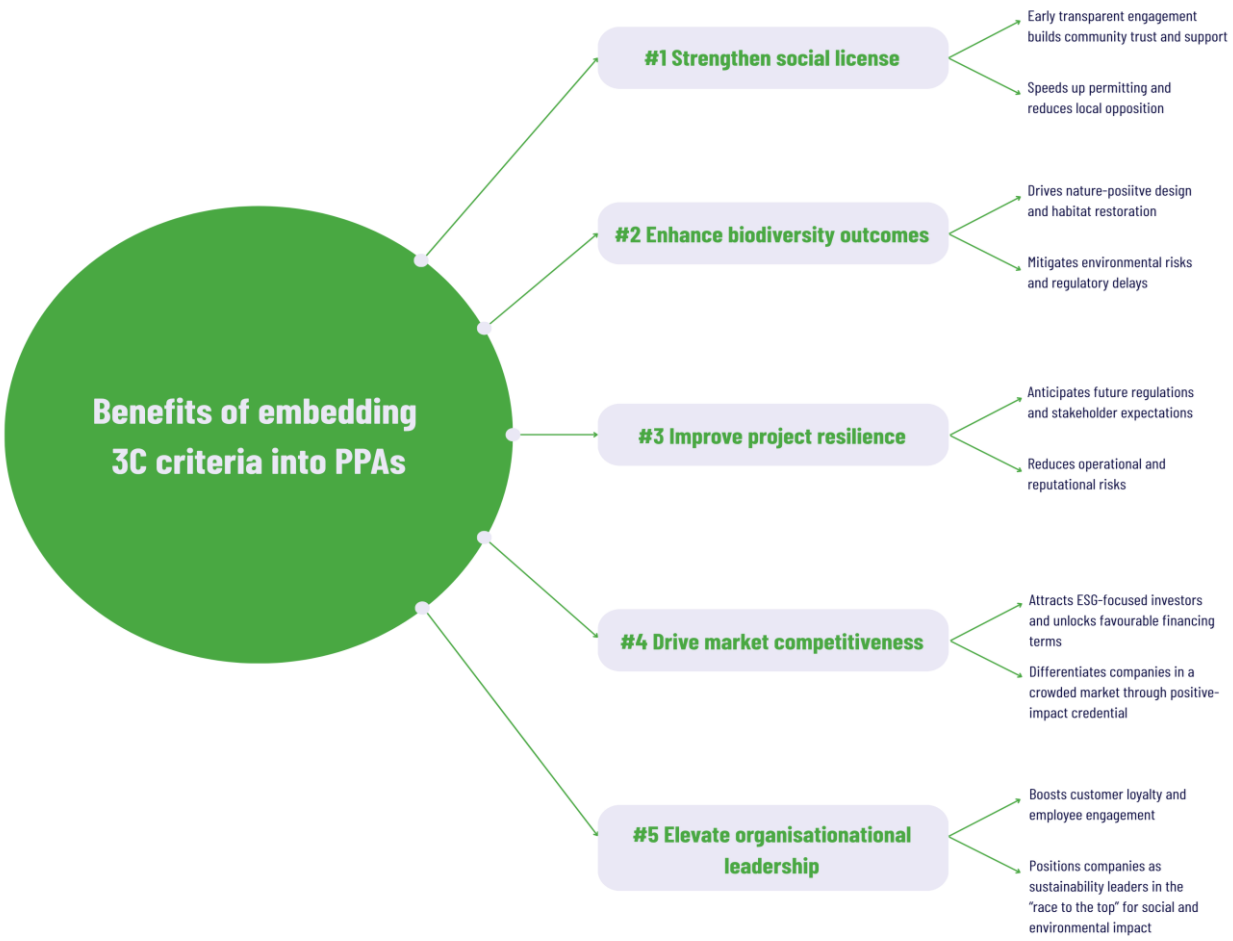
EXPLORE CASE STUDY: *Low Carbon and Lloyds Banking Group Solar PPA*

"The collaboration also created an opportunity to partner on biodiversity enhancements, helping to reinforce their shared aspirations on climate change mitigation"

Over the last year, concerns around the increased frequency of negative prices coupled with low capture rates for solar and wind in some markets, have delayed demand for renewable procurement (particularly for very price sensitive buyers) turning most European countries into "buyer's markets". This puts developers in a competitive situation where price alone is not enough to differentiate their projects and additional impact criteria are a powerful means of standing out among the competition. Additionally, procurement focused solely on price risks a race to the bottom on environmental and social standards, increases the likelihood of public opposition and biodiversity harm, and ultimately slows the energy transition.

We need to go smart to go fast: quality-led procurement, backed by clearer policy signals and harmonised standards, will be essential to delivering renewables at the speed and quality Europe needs.

Figure 4 *Benefits of 3C implementation in corporate PPAs*



Rising Corporate Adoption of 3C Attributes

As the demand stands out above the generic ESG objectives, corporate renewable energy buyers are increasingly placing greater emphasis on responsible renewables.

Buyers and developers in the United States market are increasingly engaged with 3C values, where we are already seeing over 1.5GW worth of projects screened and transacted on in the last fiscal year using LevelTen Energy's Impact+ Platform, including a comprehensive measurement of a renewable projects' 3C impacts.

Meanwhile in Europe, the traction in impact+ projects is more limited. At the same time, volatile price dynamics in European markets are eroding capture rates and threatening market stability. These headwinds, however, are fuelling a shift: 3C attributes are beginning to move from optional extras to a more mainstreamed expectation in renewable procurement.

EXPLORE CASE STUDY: *Handest Hede Energy Parks, Eurowind Energy*

"The focus on biodiversity and nature conservation has enabled the creation of lasting, positive impacts on local ecosystems, which is deeply valued by both the project team and the community"

Currently, a market standard, Renewable Energy for People and Planet Standard (REPPS) is being developed by a coalition of renewable energy stakeholders, aiming to ensure that renewable energy projects deliver meaningful social, environmental, and economic benefits for all stakeholders.

More than 30 organisations including buyers, developer, investor, NGOs, academic, trade, and environmental justice are actively engaged in evaluating, testing, and refining the standard. The aim is to produce clear, concise, market-informed, and community-aligned guidance for release in the market in 2026.

Supporting this shift, a 2023 US-based study conducted by Bain, TNC and CEBI, found that more than half of energy buyers already consider some non-commercial (3C) attributes, and over 60% expect 3C attributes to become a standard way of procuring clean energy 5 years from now. This shift reflects growing momentum towards a more inclusive procurement strategy.

The study identifies the main value drivers of 3C attributes for buyers, ranked by importance:

1. 3C attributes are in line with their broader corporate aspirations;
2. 3C attributes provide a good impact story;
3. Demand from customers, employees or the public;
4. Investor requirement;
5. Potential for tax benefits/other financial incentives;
6. Employee acquisition/retention;
7. Regulatory requirement

Incorporating impact criteria into PPAs empowers buyers to use procurement as a powerful lever for integrating biodiversity protections and fostering community engagement.

Embedding 3Cs in Corporate Renewable Energy Procurement

In practice, corporate buyers typically secure PPAs and green energy certificates to validate their sustainability commitments and satisfy accounting and verification standards, often aligned with frameworks like RE100. On top of these mandatory requirements, they layer voluntary impact criterion, to select projects beyond lowest-price logic. Developers respond by embedding nature-inclusive designs, benefit-sharing frameworks and robust social-licence strategies, beyond mandatory requirements within Environmental Impact Assessment and Appropriate Assessment under the Habitats directive.

Voluntary impact criteria span a vast range of metrics. Table 1 illustrates a non-exhaustive set that buyers can tailor to their specific strategies, noting that these are not specific to the European context.

When assessing energy buyers and developers interests, the 2023 Bain, TNC and CEBI study found the attributes most commonly evaluated are:

- Wildlife and habitat impact
- Environmental impact of upstream supply chain
- Carbon footprint
- Operational resiliency
- Long-term viability of new projects
- Supply chain risks
- Workforce standards
- Local/diverse labour
- Local community impact

Table 1: *3C attributes (edited from Bain, CEBI, TNC) 2023]*

Climate, Conservation & Sustainability	Community Engagement & Social Equity
Wildlife & habitat impact	Ongoing talent development
Impact on local agriculture	Impact on tribal lands or other culturally sensitive areas
Environmental impact of the upstream supply chain	Impact on historically disadvantaged communities
Project site carbon footprint impact	Impact on local community
End-of-life recycling and disposal	Utilizing local and/or diverse suppliers
Return land to its original or alternative use at end of life	Workforce standards & usage of local, diverse labour
Carbon intensity of backup generation	Humanitarian impact of the upstream supply chain

Why the 3C gap persists in Europe

Rapid policy and market debates across Europe have produced high-level principles but limited practical guidance specifically for the renewable energy industry, resulting in a 3C implementation gap in Europe.

These frameworks aim to guide and accelerate responsible climate action across different contexts and for renewable energy markets fall into three primary buckets. Carbon accounting standards, like the Greenhouse Gas Protocol, help ensure transparency and credibility in emissions reduction claims. ESG principles, such as the IFC Performance Standards and Free, Prior, and Informed Consent, focus on safeguarding communities and ecosystems during project development, particularly in emerging markets.

EXPLORE CASE STUDY: *Strathy South Wind Farm, SSE Renewables*

"Built on principles of sharing value; co-development; flexibility; good governance; lasting legacy; and measurable social impact."

Meanwhile, sector-specific goal-setting frameworks like the Science-Based Targets Initiative and Climate-related Nature Financial Disclosures steer companies to shift global financial flows towards nature-positive outcomes. However, none of these standards provide companies with straightforward, actionable pathways to translate those principles into contract terms, project design, and operational practices that can deliver 3C projects. PPAs are inherently opaque, confidential bilateral agreements whose bespoke negotiation and complex contracting processes make it challenging to establish a 3C market-wide standard.

Additionally, a common misconception that complying with EU and national regulations is enough to ensure meaningful impact. While these frameworks are essential for guiding responsible development, achieving meaningful outcomes often requires going beyond compliance.

With 3C-aligned projects still nascent in Europe, the perceived challenges are beginning to emerge; insights from the TNC and RE-Source workshop at the RE-Source 2024 annual conference surfaced several additional ones (see Table 2).



©Stuart Palley

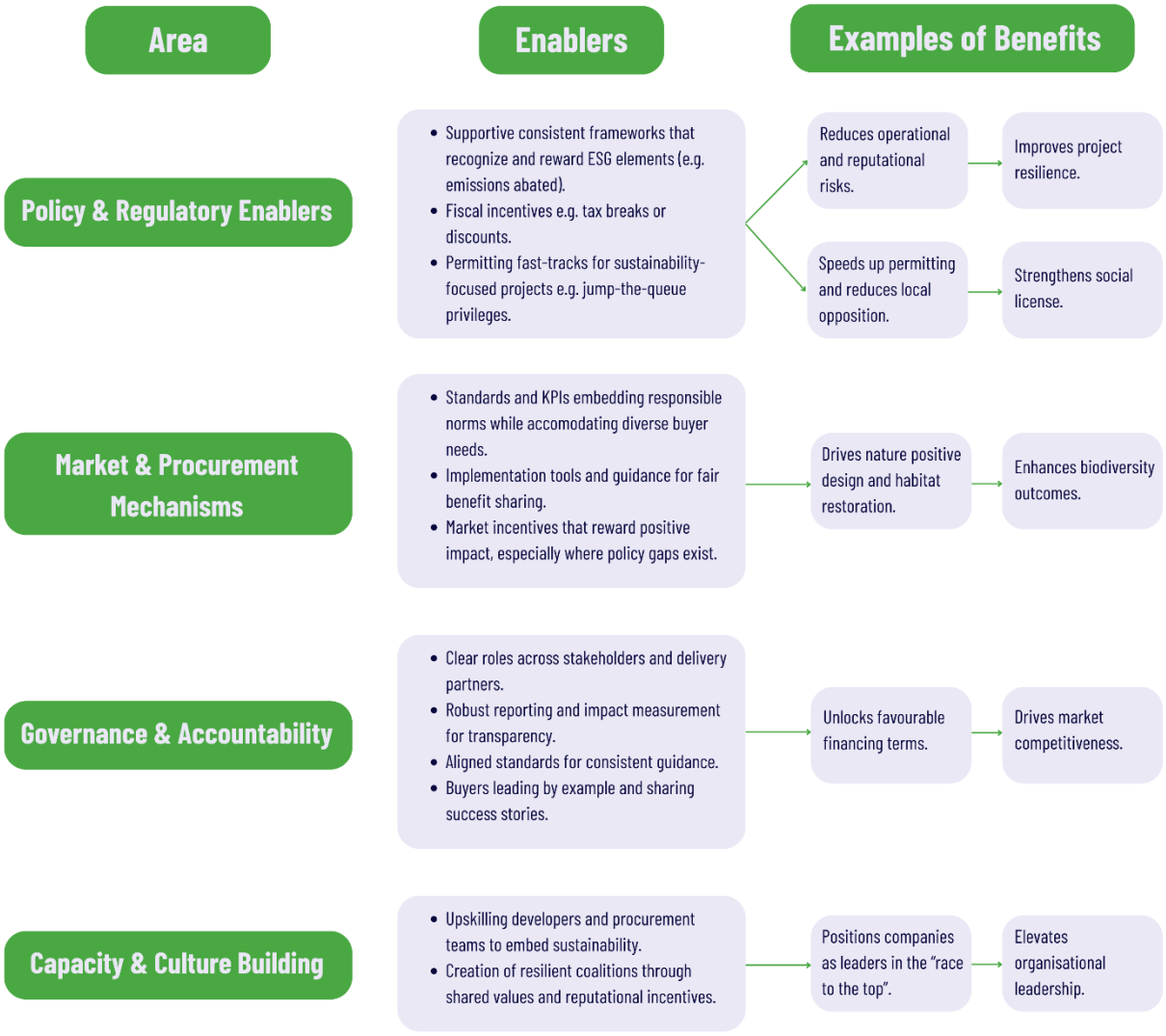
Table 2 *Perceived challenges with embedding 3Cs into PPAs*

Perceived Challenge	Suggested Barriers
Cost and complexity	PPA negotiations are already lengthy and uncertain with fewer than half of deals that begin negotiations reaching signature each year. Layering on impact criteria without a harmonised framework can heighten transaction risk and upfront expenses (e.g. for restoration, offsets, compliance) and exposes the disconnect between financial returns and environmental benefits.
Divergent regulatory constraints	Developers operate under varied permitting rules, impact assessment requirements, and other obligations, reducing flexibility to adopt common 3C approaches.
Regulatory risk and reporting burdens	Evolving regulatory expectations and added reporting requirements increase perceived regulatory risk and administrative burden for buyers and developers.
No common market definition for 3C quality	Beyond legal and standards minimums, there is no widely accepted market or policy instrument that defines what a high-quality 3C project looks like in Europe.
Lack of consistent rewards for extra effort	There are few market or policy mechanisms that reliably compensate developers for the additional work required to meet corporate procurement standards for the 3Cs; existing EU requirements are not consistently incentivised across Member States.
Data and scientific gaps for impact measurement	Fragmented biodiversity data and the lack of a central repository leave companies without the consolidated evidence needed to assess environmental outcomes or trace impacts across complex supply chains.
Strategic and organisational inertia	Lack of clear KPIs and sustainability frameworks, limited in-house expertise and leadership commitment and the perception that 3C-aligned procurement is only possible for advanced buyers.

Bridging the Gap – From High Level Principles to Practical PPAs

Recent market conversations have begun to identify a set of emerging enablers, which are grouped into thematic areas in Figure 5. While not exhaustive or prescriptive, these enablers are mapped against the benefits outlined earlier in the report, illustrating what embedding the 3Cs into PPAs can unlock. When strengthened, these elements can become strategic drivers of Europe's equitable, resilient, and nature-positive energy transition. Realising their potential in practice will require continued constructive dialogue between buyers, sellers, and NGOs to shape a shared, actionable agenda for the European market.

Figure 5 *Key enablers and example benefits for embedding 3Cs into PPAs*



Contact Us



Elif Gündüzyeli
Director, Europe Renewable Energy Programme
elif.gunduzyeli@tnc.org

Appendix I

Contents

Appendix I 18

Case Study: Alhendín Agri-PV project BayWA r.e. and VELUX PPA 19

Case Study: Strathy South Wind Farm, SSE Renewables 21

Case Study: Low Carbon and Lloyds Banking Group Solar PPA 23

Case Study: Aragón (Zaragoza) Solar Project Zelestra and Microsoft PPA 25

Case Study: Handest Hede Energy Parks, Eurowind Energy 27

Case Study: Procuring renewable energy from community-centric distributed generation solar projects, Microsoft 29

This paper presents a selection of renewable energy case studies drawn from both developers and corporate buyers. The case studies explore how the 3Cs (Climate, Community, and Conservation) considerations have been incorporated into renewable energy projects and PPA negotiations in different European contexts. The cases focus on the practical ways in which 3C considerations have been reflected in project design, contractual arrangements, and procurement decisions, as well as the challenges encountered in doing so. They also highlight the potential value that can emerge from integrating 3C's objectives alongside commercial and delivery considerations. Together, the case studies are intended to support market learning by illustrating a range of approaches, tradeoffs, and decision points that may arise when seeking to embed the 3Cs within renewable energy procurement.

Case Study: Alhendín Agri-PV project BayWA r.e. and VELUX PPA



©Bay Wa

Description:

Alhendín Agri-PV is a solar project in Andalucía, Spain, developed by BayWa r.e. in partnership with VELUX.

The project is part of the Solar Plant Symbiosis initiative, which seeks to integrate solar energy generation with benefits for nature and local communities.

How does this project/initiative fit into the 3C framework?

Conservation:

The project includes a range of habitat creation and enhancement measures designed to support biodiversity at an ecosystem level. These include the improvement of steppe habitat over an area of 35.24 hectares, increasing the extent of natural vegetation and associated ecosystem services as an additional compensation measure. The revegetated areas of the improved steppe habitat are maintained and monitored. In addition, ponds are constructed to improve habitat conditions for amphibians, and wildlife refuges are established in various locations to provide shelter for amphibians, reptiles and small rodents.

To further support wildlife across the site, several measures are implemented to ensure the availability of water and suitable structures. Drinking tanks and water troughs are installed for birdlife on the outskirts of the facility, next to areas of scrubland, with the following characteristics and management measures:

- A tank with a capacity of 220 litres is connected to a concrete basin so that water is permanently available.
- Periodic refilling of the tank, especially during the summer months, using water of proven quality.
- Annual inspection of the drinking trough to ensure proper functioning and disinfection.
- Additional structural measures are also implemented to support birds, including the placement of perches on the perimeter of the plant to facilitate access to prey for birds of prey, particularly raptors.

Targeted conservation actions are undertaken specifically to support nesting bird species. These include:

- Installation of nest boxes and posts for the nesting of owls, barn owls, kestrels or European kestrels.
- Construction of nesting towers for the lesser kestrel (Falco naumanni), which is classified as vulnerable in the Red Book of the birds of Spain. These towers include a hacking area designed to promote nesting and support the successful growth of young birds.

Community:

A social action plan was developed to increase the acceptance of the project and contribute to local Sustainable Development Goals through a multi-faceted approach which included the following:

- Participatory workshops for different interested stakeholders.
- Reconnaissance tours of the environment, mainly for school children.
- Voluntary workdays for interested members of the public.
- Preparation of field notebooks and informative notebooks.
- Partnership with Universidad Autónoma de Madrid and Universidad de Córdoba – to form an interdisciplinary research group whose findings will ultimately inform a comprehensive and bespoke site strategy.

Climate:

The project is an Agri-PV installation, combining renewable energy generation and agriculture, with approximately 10% of the park designed to allow farming machinery to pass between solar panels.

The installation has more than 85,000 solar panels and produces 96.8 GWh of electricity annually, equivalent to the electricity consumption of 24,700 households.

What measurable positive impacts are expected from this project/initiative, and what specific terms or strategies were used to achieve them?

The project is expected to deliver measurable positive impacts through improved biodiversity and enhanced local habitat conditions in the area where the project is built. These outcomes are achieved through the monitoring of implemented measures and the use of adaptive management strategies to ensure their ongoing effectiveness.

What was the most rewarding aspect of this project/initiative?

Getting the buy-in from the local farmer for Agri-PV / Local school visits.

What were the most challenging aspects of the project/ initiative?

The most challenging aspects of the project involved implementing environmental measures that were appropriately tailored to the specific needs of the region, while also working closely with local authorities to reach consensus on these measures. In addition, improving local acceptance of this type of project presented a challenge, requiring efforts to raise awareness of the environmental measures implemented and to communicate the positive impact of this technology on the region.

How do you think these challenges can be overcome in the European framework? What are potential solutions?

Maintaining ongoing social dialogue with all stakeholders from the earliest stages of project development, enabling their participation in local decision-making and ensuring that companies become integrated members of the municipalities in which they are located.

Case Study: Strathy South Wind Farm, SSE Renewables



©SSE Renewables

Description:

Strathy South Wind Farm is a 35-turbine wind farm being developed by SSE Renewables in Scotland. Construction began in 2025.

The project incorporates environmental enhancement measures alongside renewable energy generation, helping to deliver wider benefits for nature and surrounding communities.

How does this project/initiative fit into the 3C framework

Conservation:

Conservation efforts at Strathy South are focused on restoring 1600 hectares of degraded peatland to improve the conservation value of the site and create a larger, connected restoration landscape. By linking peatland restoration in the Flow Country UNESCO World Heritage Site with extensive areas of peatland restoration to the north of the site, these efforts will enhance the Outstanding Universal Value of the World Heritage Site and improve the condition of degraded peatlands across the Flow Country Special Area of Conservation.

In partnership with Peatland ACTION and NatureScot, SSE is delivering training courses for contractors in forest-to-bog peatland restoration. The training is provided cost-free for participants at Strathy South. This joint community/conservation initiative also addresses a national shortage in trained peatland restoration contractors.

Community:

SSE's approach to community investment is built on principles of sharing value; co-development; flexibility; good governance; lasting legacy; and measurable social impact. SSE has worked with the Strathy communities for 12 years and has awarded over £2 million to date for the adjacent Strathy North Community Fund to over 186 community projects including projects focused on building new community assets including a community hub, establishing a transport solution for rural areas, and establishing an apprenticeship programme for local employers. The Strathy South investment will focus on community capacity building and the Scottish priority of empowered community wealth building. The initial focus of

the funds will be a five-year investment of over £400,000 per year to two anchor organisations to ensure the community achieves ambitious local development plans.

Climate:

Strathy South wind farm will generate low-carbon electricity from its 35 turbines, each with a capacity of 6.2 megawatts. It will be capable of powering around 200,000 homes.

Carbon emissions arising from long-distance road haulage of timber have been reduced by transporting via sea from Scrabster Harbour, <40km from Strathy South. Forestry brash removal from site, although uncommon, is being carried out to reduce nutrient input and accelerate peatland restoration. The removed brash is being repurposed by a wood-pellet manufacturer to generate steam for its production process via a biomass boiler.

What measurable positive impacts are expected from this project/initiative, and what specific terms or strategies were used to achieve them?

Measurable positive impacts are expected across the 3C framework through funding to the Strathy community, production of low-carbon electricity, and significant peatland habitat restoration.

The Habitat Management Plan for Strathy South includes restoration of 1,132 hectares of forested / formerly forested areas to priority habitats including peatland, maintaining and improving peatland habitats across 308 hectares of moorland affected by forestry operations, and enabling 160 hectares of peatland restoration works on Armadale Farm. Habitat restoration will be achieved through management of hydrology and micro-topography using techniques such as smoothing of previously forested ground and drain zippering. Peatland restoration will benefit a range of species, including invertebrates, amphibians, breeding and foraging birds, and meso-predators.

What was the most rewarding aspect of this project/initiative?

Working with local landowners and contractors, in particular the work with Armadale Farm to support the restoration of peatland habitat and the provision of free training to contractors in restoration techniques.

What were the most challenging aspects of the project/ initiative?

The remoteness of the site has created significant logistical challenges, particularly for transporting timber from forestry removal areas which was overcome through the agreement with Scrabster Harbour. The remoteness also complicates long-term hydrological monitoring of the restored peatland. To support this, a trial of innovative remote monitoring technology is underway. A further challenge is the limited availability of suitable plant and operators, as few contractors possess the specialised machinery required for forest-to-bog restoration due to high capital costs. The peatland restoration training aims to partly address this.

How do you think these challenges can be overcome in the European framework? What are potential solutions?

These challenges could be addressed within a European framework by strengthening regional infrastructure, digital monitoring, and specialised restoration capacity.

Low-carbon logistics corridors and port-linked transport solutions can help overcome remote and/or long-distance timber haulage challenges. Long-term wetland monitoring can be made more efficient through use of remote sensing technology, reducing the need for frequent on-site visits.

Capacity constraints can be mitigated through contractor training frameworks, shared machinery pools, and targeted funding to support the acquisition or adaptation of specialised plant.

Case Study: Low Carbon and Lloyds Banking Group Solar PPA



©Low Carbon

Description:

Renewable energy company Low Carbon entered a 10-year corporate PPA with long-term partner Lloyds Banking Group at two of its UK solar sites.

The collaboration also created an opportunity to partner on biodiversity enhancements, helping to reinforce their shared aspirations on climate change mitigation.

How does this project/initiative support community, conservation and climate?

Conservation and Community:

The project supports conservation and community through the planting of a large wildflower meadow, which is due to begin shortly and is intended to support biodiversity enhancement. A new Permissive Right of Way will follow the wildflower meadow and lead to a newly created seating area with views of the solar farm. Interpretive signage is to be installed and will include information on the habitats created, planting, the amount of energy the solar farm creates, where it goes, and how Lloyds Banking Group is harnessing the energy.

Climate:

The project supports climate objectives through a 10-year agreement under which Lloyds Banking Group will purchase 50 GWh of clean electricity annually from Low Carbon, equivalent to powering more than 14,000 homes. The energy will be generated from two of Low Carbon's UK sites, Meadow Solar Farm and Pepperhill Solar Farm. The solar farms will help power Lloyds Banking Group's UK estate, avoiding 21,000 tonnes of CO_2 emissions each year compared with fossil fuel-powered equivalents.

What measurable positive impacts are expected from this project/initiative, and what specific terms or strategies were used to achieve them?

Collaboration between the two organisations on this project means that the solar farms will deliver vital enhancements to support nature, biodiversity and local wildlife, over and above the UK government's 10% Biodiversity Net Gain requirements. These enhancements include species-rich wildflower grassland and

hedgerows to support pollinators, new UK native woodland planting, and the provision of vital foraging and sheltering opportunities for local wildlife.

What was the most rewarding aspect of this project/initiative?

Rather than being purely transaction-focused, Low Carbon and Lloyds' long-term collaboration ensured biodiversity and protecting nature have been embedded into the broader PPA.

What were the most challenging aspects of the project/ initiative?

Some challenges arose around delivery which required flexibility and adaptation:

- Ground nesting birds, such as skylarks and curlews required that operations focused on other areas of installation until fledging.
- A discovery of some historical artefacts changed the way in which the solar panels could be installed.

How do you think these challenges can be overcome in the European framework? What are potential solutions?

These challenges can be addressed within the European framework by adopting a holistic approach to sustainability practices, which is essential for the future of the European PPA market as renewable energy capacity continues to expand while also protecting the natural environment. This approach requires collaboration between developers, planners, ecologists and other stakeholders to ensure that conservation objectives are effectively integrated into the development and finance plans of these types of projects.

Case Study: Aragón (Zaragoza) Solar Project Zelestra and Microsoft PPA



©Zelestra

Description:

Escatrón II and Fuendetodos II are solar projects in Aragón, Spain, developed by Zelestra and supported through a renewable Power Purchase Agreement with Microsoft.

The projects include a dedicated Community Benefit Fund, demonstrating how renewable energy development can support climate action, environmental stewardship and community empowerment.

How does this project/initiative fit into the 3C framework

Over the duration of the agreement, the initiative is expected to deliver measurable outcomes across multiple dimensions. These include renewable electricity generation from 83.50 MWac of new solar capacity and the associated emissions reductions, as well as sustained investment in community-led sustainability initiatives. The partnership is designed to strengthen local capacity, empower civil society organizations, and deliver long-term positive impact for communities in the region. All partners involved share a strong commitment to impact measurement and long-term evaluation, recognizing the importance of accountability and continuous improvement throughout the life of the agreement.

Climate:

Under this long-term agreement, Microsoft purchases renewable electricity from two solar photovoltaic projects totaling 83.50 MWac of capacity, while also supporting a structured program designed to deliver measurable environmental and social impact at the local level, implemented in partnership with the nonprofit organization ECODES.

From a climate perspective, the agreement enables the deployment of new solar capacity that contributes to the decarbonization of the electricity system and supports Microsoft's ambitious carbon reduction commitments. By providing long-term revenue certainty, the PPA enables additional renewable capacity to be built and operated, accelerating the transition away from fossil fuels and strengthening the resilience of the clean energy system.

Community:

The agreement incorporates a dedicated Community Benefit Fund designed to ensure that the benefits of the energy transition extend beyond clean electricity to the territories hosting renewable infrastructure. Managed by ECODES, the fund aims to foster a fair ecological transition supporting

community-driven initiatives aligned with local needs and priorities, including improving access to sustainable resources (affordable and clean energy, water, sustainable mobility, etc. and healthier environments, supporting vulnerable populations, strengthening local civil society organizations, and fostering inclusive and green economic development. This approach contributes to strengthening inclusive social cohesion and ensures that the energy transition delivers tangible, long-term benefits for local communities.

Conservation:

Environmental stewardship is embedded both through the deployment of renewable energy and through locally grounded sustainability initiatives supported by the fund. By integrating environmental and social impact considerations directly into the structure of the PPA, the project demonstrates how renewable energy development can simultaneously advance decarbonization goals while contributing to broader environmental and societal resilience.

What was the most rewarding aspect of this project/initiative?

One of the most rewarding aspects of this initiative has been the strong alignment among all partners around a shared vision of ensuring that the clean energy transition delivers meaningful and lasting positive impact leaving no one behind. From the outset, the collaboration was grounded in openness, mutual listening, and a shared commitment to go beyond traditional transactional approaches. It was particularly inspiring to see how naturally the impact strategies of Zelestra, Microsoft, and ECODES converged, reflecting common values centered on climate action, environmental responsibility, and community empowerment. This alignment enabled the creation of a partnership built on trust, shared purpose, and long-term vision.

What were the most challenging aspects of the project/ initiative?

At the same time, the process required a significant effort to build trust and alignment across organizations with different roles, expectations, and operational frameworks. Meeting the high technical and sustainability standards expected by a global technology leader required demonstrating not only technical excellence but also the ability to act as a true long-term partner in advancing decarbonization and impact goals. This involved positioning Zelestra as a reliable partner capable of delivering innovative, customer centric solutions while maintaining the highest environmental and social standards. Mutual listening played a critical role, enabling each partner to understand the others' priorities and co-create a model capable of delivering meaningful outcomes for climate and people in the community. In parallel, identifying and engaging the appropriate organization to implement and manage the Community Benefit Fund required careful alignment to ensure consistency with the shared impact vision.

How do you think these challenges can be overcome in the European framework? What are potential solutions?

This initiative provides a strong example of how renewable energy procurement can evolve to deliver integrated environmental and social value alongside climate benefits. By embedding impact considerations into the structure of the agreement and fostering strong collaboration between developer, corporate buyer, and nonprofit partner, the project demonstrates a model that strengthens social license, enhances project resilience, and contributes to sustainable territorial development.

This PPA provides an example from Spain that structurally integrates a dedicated Community Benefit Fund, with strong potential for replication across Europe. It demonstrates that renewable energy partnerships can go beyond delivering clean electricity to become powerful drivers of inclusive, resilient, and just energy transitions — empowering communities while accelerating decarbonization.

Case Study: Handest Hede Energy Park, Eurowind Energy



©Eurowind energy

Description:

Handest Hede is an energy park in Denmark developed by Eurowind Energy.

The project combines renewable energy generation with biodiversity initiatives and local community engagement, helping to create value beyond energy production.

How does this project/initiative fit into the 3C framework (Community, Conservation, Climate?)

Community:

The project is designed to foster local ownership and participation. Residents and landowners are offered the opportunity to invest in the energy parks, while local associations receive annual financial support for community-driven initiatives, strengthening social cohesion and acceptance. To ensure genuine local anchoring, households within a defined distance, for example 1,200 metres or eight times the turbine height, are granted shares, typically 30, covering the average electricity consumption of a household. In addition, Eurowind establishes or designates a local association that receives annual funding from the energy park, with the purpose of supporting local initiatives, projects and communities, and the funds are managed under democratic and transparent conditions. The overall purpose of these measures is to share financial benefits, increase local ownership, and strengthen social acceptance.

Conservation:

A core element of the project is the protection and enhancement of biodiversity. Comprehensive environmental assessments are conducted, and the project actively works to preserve and expand natural habitats. Additionally, the "land sparing" approach is used to concentrate energy production in specific areas, freeing up more land for nature and ecological connectivity.

Climate:

The project supports climate objectives by maximising renewable energy output while minimising land use and carbon footprint. By integrating district heating and power purchase agreements (PPAs), the project supports the transition to green energy and contributes to significant carbon reductions, aligning with broader climate goals. Efforts are underway to connect district heating projects to the energy parks, which can provide affordable and price-stable heating to nearby towns. In parallel, local businesses can enter into PPAs to secure green electricity at fixed prices, thereby strengthening their sustainability profile.

What measurable positive impacts are expected from this project/initiative under the 3C framework, and what specific terms or strategies were used to achieve them?

The project is expected to deliver clear and measurable environmental and social benefits, reflecting its integrated approach to sustainability, community involvement and nature protection. These impacts include:

- Increased local economic participation and social capital.
- Enhanced biodiversity through the creation and maintenance of large, connected natural areas.
- Reduced carbon emissions due to optimised renewable energy production and improved carbon sequestration in restored habitats.

These outcomes are achieved through a combination of community-focused financial mechanisms, collaborative agreements, and standardised environmental practices embedded in project development and operation. The key strategies include:

- Offering local ownership and annual payouts to community organizations.
- Voluntary agreements for compensation and share options for neighbors.
- Implementing land sparing and biodiversity monitoring as standard practice.
- Integrating district heating and power purchase agreements (PPAs) to ensure the energy produced is both green and locally beneficial.

What was the most rewarding aspect of this project/initiative?

Local economic involvement and support for grassroots initiatives have strengthened community bonds and increased acceptance of renewable energy projects. The focus on biodiversity and nature conservation has enabled the creation of lasting, positive impacts on local ecosystems, which is deeply valued by both the project team and the community.

What were the most challenging aspects of the project/ initiative?

Balancing the interests of local residents, nature conservation, and efficient energy production has been the greatest challenge. This requires ongoing dialogue, transparency, and flexible solutions - especially regarding compensation, ownership, and land use. Navigating regulatory frameworks and aligning diverse stakeholder expectations also presents significant complexity.

How do you think these challenges can be overcome in the European framework? What are potential solutions?

Overcoming the challenges of balancing local interests, nature conservation, and efficient renewable energy production in a European context requires a holistic and principle-based approach.

Working on the basis of the AMRO principle - Avoid, Minimize, Restore, and Offset - which provides a structured framework for managing environmental and social impacts. This strategy ensures the project not only reduces harm but actively contributes to improving nature.

Developing a scalable method for measuring and enhancing biodiversity impact through a BACI analysis (Before-After-Control-Impact): collect baseline data, monitor during construction, compare with control areas, and assess long-term impact. This approach enables us to document the effects of our nature initiatives and adjust them if they do not meet the objectives.

This pilot project serves as a learning foundation to help understand the impact of biodiversity measures and how they can be adapted and scaled in future projects.

Case Study: Procuring renewable energy from community-centric distributed generation solar projects, Microsoft



©Pivot Energy

Description:

Microsoft's distributed generation solar portfolio includes projects across the United States, Mexico and Brazil, developed in collaboration with suppliers including Pivot Energy, Clearloop, Sunwealth, Nexamp, Reactivate, OneEnergy and Powertrust.

These projects are designed to deliver community benefits alongside renewable energy generation, supporting a more inclusive and locally anchored energy transition.

How does this project/initiative fit into the 3C framework (Community, Conservation, Climate?)

Microsoft has collaborated with renewable energy suppliers across the US, Mexico, and Brazil to enable distributed generation solar projects with community benefits. Because of their size, these projects are located close to the communities they serve (often on the rooftops of important community spaces) and bring communities in direct contact with solar.

This effort align with the 3C framework:

Community:

Each Distributed Generation Solar project enabled through this initiative includes tangible benefits to the local community, from bill savings to workforce development to direct community investment. In the collaboration with Sunwealth, for example, projects are deployed in partnership with schools, affordable housing providers, community centers, nonprofits, small and mid-sized businesses, and other community serving organizations. These projects offer direct benefits, from electricity bill savings to local grid resilience and reliability. The collaboration with Powertrust in Mexico and Brazil offers similar benefits and emphasizes inclusive project development and long-term community engagement.

Conservation:

Agreements require suppliers to meet a high standard of excellence when it comes to impact on nature. Many projects include explicit wildlife and habitat restoration efforts such as planting of native plants and

supporting pollinators. Pivot Energy, ensures that land is properly stewarded and offers valuable ecosystem services.

Climate:

Microsoft set a 2020 commitment to be carbon negative by 2030 and to reduce our historical emissions by 2050. While all renewable energy projects inject clean, carbon-free electrons onto the electricity grid, many distributed generation projects have localized climate impacts. For example, collaboration with Clearloop is enabling 100 MW of renewable energy projects in socioeconomically diverse American communities where new solar generation can displace as much carbon as possible.

What measurable positive impacts are expected from this project/initiative, and what specific terms or strategies were used to achieve them?

Each distributed generation project supplying Microsoft with Renewable Energy Credits is contractually required to deliver community benefits. These measurable benefits include:

- Energy bill savings for low- and middle-income household and community serving organizations
- Workforce training and placement
- Diversifying the subcontractor pool
- Prioritizing small and emerging businesses as suppliers
- Direct investment in communities, facilitated through 3rd party non-profit foundations called community benefits managers.

These benefits are a part of the product that Microsoft is purchasing from these suppliers, ensuring that community impact is an equally important part of the project as the clean energy itself.

What was the most rewarding aspect of this project/initiative?

This initiative provided an opportunity to not only diversify procurement options, but also to work with locally-rooted suppliers that have a strong community focus. Collaborations have enabled these suppliers to deepen the impacts that they can have locally, as well as grow their businesses to deliver impact to more communities across the country and around the world.

What were the most challenging aspects of the project/ initiative?

Developing the right contracting structures to facilitate distributed generation procurement at scale required collaboration and iteration from Microsoft's internal teams and with our collaborators. These projects are 10-100x smaller, on average, than the utility-scale portfolio, requiring many more individual projects to cover the same volume in MW. This required creative thinking about how to structure contracts to minimize administrative burden the project team and on suppliers while ensuring high quality contract management and project integrity.

Another challenge is that there is significant regulatory diversity across the US when it comes to community solar programs that enable distributed generation projects. Working with suppliers to understand the differences and how they impact available community benefits, project sizing, and pricing has been an important, if complex, part of structuring distributed generation offtakes at scale.

How do you think these challenges can be overcome in the European framework? What are potential solutions?

As they consider opportunities beyond the US, Mexico and Brazil, identifying suppliers that know the regulatory environment can help teams anticipate and prepare for material differences between distributed generation and utility-scale development and offtake.