

Blog: Finding New Value in Nature-Positive Solar

The solar industry's journey is not just a story of technological improvements and growth but also of a growing concern in how businesses can, and should, interact with the natural world as part of their business activities. The use of metrics and indicators is the first step of this process by helping businesses and others understand not only their impacts on nature but also create new opportunities for business to unlock new sources of value by helping to clearly and transparently demonstrate the environmental outcomes that people want to see. In measuring and embracing these new sources of value, solar companies can transform their projects and sites from being singularly sources of clean energy into multi-faceted assets that regenerate ecosystems and build resilient and profitable business models.

This changing perspective on the value and capabilities of the land under a solar farm allows solar to move from being a 'nature-derived' energy source to becoming a 'nature-based solution' that can unlock multi-layered sources of value that drives financial performance, enhances brand reputation, and mitigates strategic risks. However, this is not an incidental outcome but a deliberate business choice that creates a new value proposition from enhancing nature on site. There are multiple ways that this deliberate choice can generate value for the solar industry.

For example, agrivoltaics can represent a positive investment in nature through the co-location of solar systems and agriculture on the same parcel of land (e.g, growing crops, raising livestock, or creating pollinator habitats underneath solar panels). In an immediate business sense this can generate alternative sources of revenue while helping to address a key conflict in renewable energy development: the perceived competition for land. Nature positive actions can transform this perceived zero-sum land-use conflict into a mutually beneficial partnership. A related example would be grazing livestock to manage vegetation growth at ground-mounted solar sites. This practice transforms a necessary operational expense into a value-creating partnership. The farmer receives money from leasing parts of their land for solar without compromising their ability to farm. The lease for solar gives the farmer stable income while the solar farm facilitates grazing as well.



Dr Paul Hudson

Senior Lecturer in Environmental Economics
Chair of Board of Examiners for the Department
of Environment and Geography
University of York



Blog: Finding New Value in Nature-Positive Solar *continued*

Another example, would be promoting pollinator-friendly solar involves planting vegetation under and around solar panels to create and restore habitats and thereby creating space for various pollinator species.

This practice is a strategic tool for enhancing local biodiversity and delivering a positive ripple effect that extends beyond the project's boundaries. The impact of this practice is its ability to catalyse ecosystem services for the communities surrounding solar sites. Pollinators from the solar sites will visit neighboring crop fields, increasing their productivity and enhancing agricultural production. This makes the solar farm a positive contributor to the local agricultural economy, directly addressing potential land-use conflicts and strengthening the social license to operate. Additionally, the vegetation helps stabilize the soil, improve its health, and reduce stormwater runoff for further long-run improvements to the environment.

A further example is that, we see in today's economy, 'corporate responsibility' is another driver of value. Consumers, investors, and employees are increasingly scrutinizing a company's environmental impact. Nature-positive initiatives are a powerful tool for building corporate reputation and brand differentiation. They also provide a direct pathway for a company to improve its standing in the Environmental, Social, and Governance (ESG) landscape. These are not separate components rather they are deeply interconnected. An environmental action, such as implementing solar grazing, creates a new revenue stream for a local farmer, which is a key social benefit. This, in turn, builds community trust and strengthens the company's, and sectors, social license to operate. This entire process can be transparently reported as part of a strong governance framework, which helps attract green investors, secure green financing, and stay ahead of regulatory changes. This creates a positive feedback loop where environmental action fuels social benefit, which in turn fortifies governance and financial stability, creating a holistic, resilient business model. Moreover, in going beyond what is expected in terms of regulatory compliance new revenue streams in the form of carbon or biodiversity credits can be generated and sold.



Value creation opportunities and reputational benefits from nature-positive activities on solar farms

	Financial Value	Operational Value	Strategic Value	Environmental Value	Social Value
Agrivoltaics	Diversified revenue streams from crop sales or leases.	Increased panel efficiency from microclimate effects. Reduced water needs for crops.	Mitigates land-use conflict. Optimizes land use efficiency.	Regenerates soil health. Reduces water consumption.	Enhances food security. Creates jobs in both sectors.
Grazing	O&M cost savings from reduced mowing. New income stream for farmers.	Efficient, natural vegetation management.	Strengthens community relations. Market differentiation.	Improves soil health through natural fertilization. Reduces erosion.	Supports local agricultural economies. Promotes animal welfare.
Pollinator-friendly solar	Reduced maintenance costs compared. Potential for ecosystem services market.	Increased panel efficiency from cooler temperatures. Improved soil health and water retention.	Strengthens brand reputation and ESG scores. Builds community goodwill.	Creates and restores habitats for biodiversity. Increases pollinator populations.	Supports neighboring farmland productivity. Enhances quality of life.
Reputational benefits	Improves access to green finance mechanisms; moving beyond regulatory compliance allows for new revenue from nature markets.	Staff motivated by environmental outcomes can be more easily recruited and retained. This would lower staff turnover costs and staff productivity.	Aligns the company with emerging regulations and ESG standards, demonstrating leadership and proactive risk management	The formulation of nature positive actions required for ESG standards creates a sustainable value proposition for nature.	Can help to maintain and improve the organisation's social license to operate.