

KEYNOTE INTERVIEW

Solar investment 'drives the energy transition'



*Investors are finding more opportunity in solar investments, driven by economics, environmental effects and social need, say True Green Capital Management's **Panos Ninios** and **Will Morgan***

True Green Capital Management was founded in 2011 with the idea that increased power prices, decreasing entry costs of distributed power generation and favourable regulatory environments will offer compelling investment opportunities to investors in solar.

At the time and now 13 years later, Panos Ninios, managing partner, co-founder and chairman of the investment committee, and Will Morgan, managing director for Europe, see that not only to be the case but growing non-linearly. They say we are standing at the nexus of one of the greatest energy transition opportunities since the Pennsylvania oil boom of the 1870s.

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Q What is the current investment landscape for distributed solar power generation?

Panos Ninios: The most important measure for different technologies is the cost per megawatt hour of electricity produced and delivered. What is very important here is that the cost to build solar today is among the cheapest of all generation technologies, comparing very favourably with coal, nuclear

and gas peakers, and on par with combined cycle gas turbines. From a pure economic standpoint, that is true even before you consider that solar doesn't have fossil fuel volatility and it doesn't have CO2 emissions.

Economically speaking, before we talk about regulation or different geographies or politics or climate, distributed solar, today, is the economic choice if you want to build new power generation. When you put electricity through the transmission distribution network, depending on the country, you lose between 20 and 30 percent of the electricity you started with, so transmission distribution is a very

Q Is there a different approach to solar in the US versus Europe?

Panos Ninios: In terms of building solar, we think the approach is very similar, as ultimately you are investing in infrastructure. The execution matters and that is something we can bring to the table, as we have 13 years of execution track record.

Like the US, the UK and EU power markets are moving to market-based regimes: from a utility scale to a distributed model; from government feed-in-tariffs to bilaterally negotiated PPAs with commodity risk, including merchant customer acquisition and retail platforms in certain countries. Site origination is evolving to bilaterally negotiated leases for greater access to rooftops and government contracts are evolving to investment-grade contracts.

Will Morgan: Rather than thinking about territories, or thinking differently about the US and Europe, we think in terms of energy markets. And we look at the same fundamentals in those markets.

PN: In the US, the Biden administration created the IRA, which has been very supportive of renewable technology, both from the point of view of developing the manufacturing base in the US as well as renewable energy production.

So, on the margin, yes, different policies will put the finger on the scale, but the fundamental picture remains unchanged. I would also point out that a lot of the growth in green manufacturing has largely benefited Republican leaning states in the US. The governors in these states do not want the manufacturing jobs to go away.

Beyond that, the IRA is the law of the land. The only way that it can be reversed is for the Republicans to have the presidency, as well as majorities in the House and the Senate, which is unlikely. While a future administration may try to slow it down, the economics favour solar so strongly that this is not going to change dramatically any time soon.



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wasteful way to move electricity. If you had to build an electric power system today you would never do so on a centralised load basis, and yet we continue to do so, cultivating a historical accident.

Distributed solar power plants (ie, on commercial rooftops or ground mounted at the edge of towns) are the most efficient way, the most

environmentally friendly way and the most economically advantageous way to produce power because you don't need to build more transmission distribution. This is exactly why we are doing distributed solar, which makes the most sense.

Our view is that in the next several decades, we will be building a lot of new solar power plants that will be

coming online. The UK, in particular, for example, has put in law a target to reach about 70GW of solar between now and 2035. The entire UK power system is currently 90GW. So, the UK is basically going to double its installed capacity.

Q Which other regions are making progress?

Will Morgan: I think it is commonly known that Europe is leading in terms of decarbonisation. How solar fits into that obviously varies by country, but from a regulatory standpoint we have very strong support both in the UK and across the EU.

The EU has similar policies and is looking to implement a significant volume by 2030. Last year was their largest ever, with some 56GW of solar power plants built out.

PN: The US is a lot more fragmented and really varies state by state. The states with the highest populations, like New York, California, New Jersey and Massachusetts, have very aggressive decarbonisation targets. They are very similar to the European ones.

At the federal level, the Biden administration passed the Inflation Reduction Act, which has very significant incentives, both for green equipment manufacturing, as well as renewable power plants and solar. This is going a long way to address supply chain issues as well as ethical issues such as child and forced labour, as solar panels and polysilicon are now being manufactured in the US.

Q Are institutional investors taking advantage of the opportunities?

PN: We started doing distributed solar investments when this was truly a new industry. At the time, our investor base was mostly family offices. Today it is very different, very institutional; we have several insurance companies, we have a US state pension fund, corporate pension funds, asset managers,

fund of funds, and endowments and foundations, US and European investors, for example.

WM: You can't really discuss investing in real assets with most European LPs without having any kind of impact focus. Having a strategy that is both suited to good, stable risk-adjusted returns, that produces regular cashflow with some inflation protection, and provides an additional contribution to existing investments and strategies around the impact and energy transition theme, is something they are absolutely looking for.

PN: Institutional investors are looking for managers with a track record and a differentiated strategy. As these markets evolve, it is important to have experience and a deep understanding of how these distributed, negotiated markets work such as site origination, operations, customer access and acquisition, contract negotiation, credit-risk management, commodity exposure.

Q What is your investment thesis and approach to these different markets?

PN: We start by evaluating markets based on the current spread between cost of solar and delivered power prices. We look for markets with barriers to entry – with some constraint we can address and solve for bottlenecks. We then form relationships with key stakeholders, apply operational and technical expertise to bespoke solutions and move rapidly to secure a competitive “moat”.

We seek to acquire projects earlier in the value chain and engage in hands-on operations and asset management with the objective to create bankable portfolios of assets with diversified cashflow streams for future sales.

Q How is the end-user or customer evolving?

WM: We are trying to supply on-site or off-site solutions under energy/

power purchase agreements on a variety of terms – both price structures and contract durations – but fundamentally we are providing an energy solution to customers at a local level.

Sometimes those customers are owners of multiple sites or small- and medium-sized enterprises; or they could be large, international enterprises. Each situation requires a different approach, not least in the actual origination and sales process, but also in terms of how you contract and execute.

PN: In the US there is a regulatory construct called Community Solar, which is essentially about building small solar power plants at the edge of towns and selling solar power to the residents and the businesses in the town. New York has a very successful community solar programme, as an example.

To be successful as a solar business, today, you have to be able to identify and acquire customers, and then to manage those relationships. The entire business becomes very customer-focused, which has not historically been the case. The “customer paradigm” is changing, requiring increasing vertical integration between customers and solar power plants.

As an extension of this concept, last year we made an investment in a company called Clean Choice Energy. Clean Choice is a green retailer, and we made this investment because they had over 200,000 customers in the US Northeast. We are now building solar power plants on the back of these customers to create the first solar vertically integrated utility.

If you want to scale solar, you need to be able to access retail customers. Commercial customers remain important, but retail customers are becoming even more so. This is the direction the industry is going.

Q How do you see the market developing throughout 2024 and beyond?

WM: I think there are two things on the customer side. One is when we are providing or supporting businesses, or projects or pipelines, that are providing energy PPAs to customers; we see that as converting market risk to credit risk. We think that is a good strategy from an investor perspective as well as having the benefits to the customer, and that will continue.

The other side of the levelised cost of solar electricity is that there are significant savings achieved by the customer in using distributed solar energy. Again, it is not just the approach to net zero, or energy security, or the procuring local additional power, it can be an economic win-win for all parties.

PN: On top of the economic effect, seen through the levelised cost of electricity, there is also the environmental effect. As a planet we are going into an environmental crisis, so everything we can do as a society to decarbonise electricity and electrons makes a big difference.

There is a third driver to solar's growth, which is the democratisation of power generation, which actually started in the UK in the 1980s. Whereas, historically, power generation has been a government-owned business, the UK privatised it in the 1980s, and this has had a ripple effect globally. Now we are going from the world of central government-owned power plants to a world where everybody can have their own power plant on the rooftop.

This is a unique point in history where all three drivers – economic, environmental and social – meet. This is why we are extremely positive on solar investments as the next economic opportunity of a generation.

This is a great time to originate and to be investing in solar power infrastructure because we are now in a boom cycle where there is an unprecedented opportunity – more than we have seen in years. ■

13-year track record of sustainable investing

Focused on the U.S. and European distributed power markets

Sustainable Solar

- We believe the next energy transition is underway, where distributed power will become the **way to power our world**.
- We believe the continued increase of power prices, decreasing entry costs of distributed power generation technology, and favorable regulatory environments in both the U.S. and Europe will continue to lead to **compelling investment opportunities**.
- Our goal is **to deliver attractive returns** for our investors while remaining committed to all the Firm's stakeholders and the local communities in which we operate.