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The only viable solution

War in the Middle East has reinforced the importance of renewables for both energy security and affordability, investment professionals tell Amy Carroll and Zak Bentley

The outbreak of war in the Middle East has become the latest in a series of global crises underscoring the importance of domestic energy security and, by extension, the continued roll-out of renewables.

“This latest conflict is highlighting the need for energy security,” says Roger Pim, managing director, strategy and capital formation at NTR. “It is also taking place against a backdrop of increasing demand for electricity, which is exacerbating its effect.”

“This is a single event in a long transition, but it is certainly a tailwind,” agrees William Blake, managing director at Quinbrook. “It further illustrates just how fragile global supply chains are and the importance of domestic energy supply.”

The impact of the Iran war is being felt differently, of course, depending on

where in the world you are, says Joost Bergsma, global head of clean energy at Nuveen Infrastructure. “In Europe, the energy transition started out as a sustainability drive 15 years ago, but Russia’s invasion of Ukraine, and now the Iran conflict, have amplified the need for energy independence and Europe has already started to respond.”

Bergsma adds that those European countries with a high proportion of clean energy, such as Spain and the Nordic countries, had experienced notably lower levels of power price increases over the preceding two months, when compared with those still highly dependent on gas. “That should be all the proof that anyone needs,” he says.

Despite this seemingly irrefutable evidence, Angelo Prete, partner at Stafford Capital Partners, says governments are still failing to grasp how essential it is that we use renewables to

create energy independence. “We are hearing a lot of talk about returning to coal or even nuclear,” he says. “We are still not seeing an understanding that what we really need is the deployment of renewables, coupled with investment in storage and the grid.”

“That investment in storage and the grid is crucial, because without that, we are leaving the door open to renewables’ critics due to inevitable instability and a lack of baseload supply. And yet I don’t see governments taking this kind of long-term view.”

Umberto Tamburrino, managing partner and CEO at Sosteneo, agrees that governments do not seem to have learned lessons from previous crises. “We have seen an attempt to diversify supply chains from Russian gas to US gas, but what war in Iran clearly shows, if it wasn’t already obvious, is the absolute necessity of energy independence,” he says. “The transition



Bill Green

Managing partner,
Climate Adaptive Infrastructure

Bill Green has more than 30 years' experience in sustainable energy and infrastructure investment. Prior to founding Climate Adaptive Infrastructure, he was CEO of MIC Renewable Energy Holdings and co-founder of VantagePoint's cleantech practice.



Umberto Tamburrino

Managing partner and CEO, Sosteneo

Umberto Tamburrino has almost three decades' experience in the renewable energy sector, having previously acted as CEO of Elliott Green Power and Antin Solar Investments, as well as co-head of renewable energy principal investments at Deutsche Bank. He co-founded Sosteneo in 2022.



Roger Pim

Managing director, strategy and capital formation, NTR

Roger Pim leads NTR's strategy and capital formation, and sits on the firm's management board. Pim was previously a senior director in Aberdeen Group's infrastructure business. He was also managing partner at SL Capital.



Angelo Prete

Partner, Stafford Capital Partners

Angelo Prete leads the operations of the STAR strategy for Stafford Capital Partners' repowering platform. He has previously worked at primary operators including LDK, Bain and WElink, and also founded and led an EPC company.



William Blake

Managing director, Quinbrook

William Blake has 12 years' experience in global clean energy and infrastructure investment. He joined Quinbrook from Denham Capital in 2019, having previously worked at Bank of America Merrill Lynch.



Joost Bergsma

Global head of clean energy, Nuveen Infrastructure

Joost Bergsma is global head of clean energy at Nuveen Infrastructure, formerly Glennmont Partners, where he was CEO and managing partner. He previously worked at SG Warburg & Co, ABN Amro and BNP Paribas.

Analysis

is no longer about ideology, fashion or politics. It is an urgent necessity. I would like to think that this latest crisis will prove to be the wake-up call that our governments need.”

The affordability question

That wake-up call is, above all, being driven by energy affordability concerns. According to Tamburrino, policy makers are making snap judgments and coming to the wrong conclusion on this issue. “Fossil fuel prices change all the time, while clean energy prices are predictable and consistent,” he explains. “What governments should really be asking is what is the least volatile option, not what is the cheapest option at a particular moment.”

The affordability equation is not without its challenges in the context of renewables, however. As Bergsma says, there is sometimes a perception that because renewable energy stems from the wind and the sun it should somehow be free.

“Politicians need to step up support in some areas, something that has been done effectively in the UK with offshore wind, for example,” says Bergsma. “That is not to say we want to see the return of feed-in tariffs, but it isn’t the job of institutional investors to pay for our energy security. The world is very volatile right now. Supply chains are risky. Investors expect to be compensated for that risk. At the end of the day, they have options. They can invest in digital infrastructure or airports, for example. We need to dispel this notion that renewables are free.”

Prete agrees that investors are no longer looking for subsidies from government, but they are looking for long-term PPAs. “I think that creates a win-win situation where governments, or utilities, can secure energy at a fixed price for multiple decades, while at the same time providing investors with a secure revenue stream that enables them to obtain financing from banks.

“If we were forced to go merchant today, we would not be able to achieve

the right financing structures in order to generate the returns that investors are looking for. Signing PPAs with governments, and not with traders, is the answer to providing society with affordable, secure energy.”

While there is still some frustration with policymaking and the pace of approval processes, renewables investors are noting positive changes due to the increased awareness of the importance of clean power in terms of energy security and affordability, which seems to have led to improved engagement, according to Pim, who adds that

“We are electrifying transport and heat. We are digitalising everything. That is all driving huge demand for electricity consumption. AI is just part of the mix... but it is far from being the only driving factor”

ROGER PIM
NTR

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Sosteneo

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BILL GREEN
Climate Adaptive Infrastructure

this has been particularly evident with regards to energy storage.

The duality of country-wide and local policy support for renewables is particularly stark in the context of the US, of course. Blake says that what US investors really crave is policy clarity.

However, he adds that it is the corporate buyers – and the hyperscalers, in particular – really driving procurement, rather than federal or state government. “If you look back over the past five years since covid-19, PPA contracts have increased in terms of both value and duration. Those large, creditworthy corporate buyers are taking a long-term view on energy availability. That is what is driving our market. Policy certainty, or a lack thereof, is just something we have to manage.”

Bill Green, managing partner at Climate Adaptive Infrastructure, meanwhile, says policy certainty is an unattainable dream. “Every four years, I watch the latest president be sworn in, sometimes with joy and sometimes in horror. Of course, I’d always prefer a tailwind to a headwind, but the reality is that what happens at the federal government level usually makes very little difference in the direction of travel.”

Green points to recent headlines proclaiming that China is clamping down on excess solar production, driving the cost of solar panels up from \$0.09 to \$0.11/watt, which has nothing to do with US policy. “I have been doing this long enough to remember when we said that if the cost of solar panels ever got down to \$1/watt we would be at parity with the grid,” Green recalls. “Our job as investors in infrastructure is to ride the policy wave, by understanding the inevitability that lies beneath it, rather than trying to shape the policy itself.”

The inevitability that Green refers to comes back to the perennial question of affordability, which tends to trump political ideology.

“A group of Republicans in the House recently introduced a bill to overturn the HR1 restriction on tax

credits in the One Big Beautiful Bill,” Green says. “I can only speculate that that is a result of concerns among their constituents who are watching their electricity bills climb. We all know that solar, wind and storage are the fastest path to power, and in many places the cheapest. It is not our place to search for policy certainty, but rather to navigate policy uncertainty by looking to the unchanging fundamentals that underpin investments.”

AI tailwinds

One of the fundamentals supporting power dynamics that is changing is the rapid roll-out of AI. This surge in demand from data centres has led to a renewed interest in gas.

Green, however, says it is important to separate noise from the signal. “Clearly AI is driving demand, but the real question is: how fast is this happening? I have been struck by how

many people are talking about investment in gas generation to meet AI’s insatiable demand for power, but the reality is that a lot of this gas development is still speculative. You only need to look at Fermi in the US to see what happens when enthusiasm gets ahead of fundamentals. That company has fallen apart based on the fact that it did not secure creditworthy contracted offtake for the theoretical gas power it was going to build.”

Meanwhile, Green highlights that data centre demand is just part of the equation. “We are electrifying everything from vehicles to industry to the home,” he says.

Pim agrees that the role of AI can sometimes be overstated. “We are electrifying transport and heat. We are digitalising everything. That is all driving huge demand for electricity consumption. AI is just part of the mix. Yes, it is a tailwind, particularly given

stipulations that data centres in Europe use a given proportion of clean power, but it is far from being the only driving factor.”

Another fault line in the case for gas is timing. “Increased demand is happening now. People tend to forget that gas has a long lead time, as does nuclear, so I certainly don’t think there is a magic solution to a problem to be found there,” says Tamburrino. “On top of that, you have grid constraints. Gas and nuclear simply aren’t compatible with an immediate increase in demand.”

One solution that is gaining real traction, however, is the hybridisation of solar and storage, which is increasingly taking place at scale. “The interconnection queue in California is full of solar projects paired with battery storage,” says Blake. “It is a very potent combination.”

Indeed, Quinbrook owns the Gemini solar plus storage project in Nevada, a huge hybridised project, operating in the Mojave Desert, northeast of Las Vegas. This project is underpinned by a 25-year PPA with NV Energy. “Several projects of this nature have now been announced at scale,” says Blake. “The technology combination just makes sense.”

Blake adds that hybridisation is not just a greenfield strategy. “There is also an opportunity to add storage or generation to existing assets in order to further optimise.”

Hybridisation is not a panacea, however. “There are a lot of different variables at play,” says Prete. “There are some assets where hybridisation is not appropriate. There are also some investors for whom hybridisation is not a good fit, because they are not suited to taking on the risk of managing storage. Rather than hybridising every plant with specific storage, therefore, it can be easier to hybridise at a system level.”

Tamburrino, meanwhile, is a fan of both standalone batteries and hybridisation. “Having lived in Australia, I have seen first-hand what it means

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WILLIAM BLAKE
Quinbrook

to introduce intermittent power to a highly constrained grid.”

Sosteneo has around 4GW of sustainable batteries in Europe and Australia. “We are absolutely convinced that the world needs more. But the world also needs more investment in grids, and opportunities for private investors remain comparatively limited, with the UK being one of the more established markets,” Tamburrino explains. “It is the combination of generation, storage and grid investment that is required, irrespective of whether the storage is standalone or hybridised.”

Climate Adaptive Infrastructure’s IPX Power, meanwhile, is about to build the largest single-site co-located solar and battery project in the world in California with 4.6GW of battery storage next to a 1.1GW solar plant. “That is fully contracted to the largest two IOUs in the state and we have just financed the project to the tune of almost \$5 billion,” says Green.

“That just shows that there is demand for fully contracted, fully financed hybrid systems, but this is only part of the story. The other part involves regional standalone batteries that sit in areas that are irresolvably constrained. These are areas that cannot be rescued by either new generation or transmission and therefore provide the economic underpinnings for standalone battery storage.”

Long-duration storage

The development of long-duration energy storage, meanwhile, is also deemed essential to the energy transition, bridging the gap between intermittent renewable generation and continuous, reliable electricity demand.

Long-duration storage has historically been viewed as more of a venture capital play, but that may now be changing. Quinbrook, for example, recently announced plans to pioneer an eight-hour battery in Queensland, Australia. “We are also starting to see utilities in the US value extended duration battery capacity,” Blake says.

“The trend is clear,” says Tamburrino. “The 2022 auctions in Italy all involved four-hour batteries. The auctions in 2025, however, all involved six-hour batteries. The shift is happening gradually.”

Green is more circumspect, however. “We have not seen anything to suggest that eight- or 10-hour batteries are moving down a commercial pathway as a near-term reality,” he says. “Our approach has long revolved around pumped storage hydro. It is a mystery to us why there has been so little investment in the only proven form of long duration energy storage in the US. This technology has been built for over 75 years and today comprises over 80 percent of the world’s energy storage. We know it works. We know it is reliable and cost effective.”

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ANGELO PRETE
Stafford Capital Partners

Grid interconnections

One problem, of course, is the sheer volume of battery projects – along with generation projects – that are now stalled in interconnection queues.

“This is an ongoing problem across Europe, particularly in certain markets,” says Pim. “We try to target specific opportunities where lead times are not too long and we have good visibility. We also invest in a mix of development, ready-to-build and some operational assets, which enables us to construct a diversified portfolio where we can be patient with some projects seeking to benefit from strong capital appreciation, while others aim to produce more immediate yield for investors.

“It is also important to understand the system and have good relationships

“[We’re not seeking] the return of feed-in tariffs, but it isn’t the job of institutional investors to pay for our energy security... We need to dispel this notion that renewables are free”

JOOST BERGSMA
Nuveen Infrastructure

with grid operators and other market participants, so you are aware of their requirements and constraints, meaning there are fewer surprises.”

Prete, meanwhile, says his firm is focusing on campaigns of revamping and repowering existing assets in order to make use of existing connections. “This enables us to avoid the risk of asking for new connections, meaning we can stay in control of timelines for our capital deployment.”

Green, however, points out that there are many ways to get power onto the grid, and they don’t all need to happen at scale: “Distributed generation was once viewed as little more than a sustainability feature on a building or commercial site. Now it is viewed as an important part of the energy affordability agenda.

“Community solar programmes in the US were historically associated with

blue states but are now being rebranded in red states as energy affordability initiatives. We expect to see an expansion in this form of community or C&I solar, both for the avoidance of grid connection delays and to address the problem of affordability that is top of mind for all energy consumers.”

Employing strategies to circumnavigate interconnection queues of this nature is critical, because delay means additional cost.

“It has become more expensive to participate in the interconnection queue,” says Blake. “That is creating challenges for earlier-stage developers that may not have the financial backing to progress projects.

“There are plenty of developers capable of finding land and filing for interconnections with minimal capital exposure. It is a very different challenge, and risk profile, to manage

projects from initial concept through construction and into operations. You must manage a number of both interrelated and interdependent workstreams, from permitting to offtake strategy, all while having enough margin of error built into your financing and capex assumptions.”

That margin of error has proved crucial given a climbing interest rate environment. “When there is ample cheap debt,” Blake continues, “even mediocre projects can look acceptable to investors, but that is no longer the case. There are areas of distress in the US with plenty of project-level M&A taking place.”

Elevated interest rates have certainly put pressure on renewables returns, says Bergsma: “Over the past couple of years, returns for clean energy have been compressed, particularly for larger projects and particularly for offshore wind. The sensitivity to interest rates is considerable. If you are building a \$2.5 billion offshore wind park, half of which is financed by debt, and suddenly the interest on that debt goes from 2 percent to 5 percent, then clearly your return profile will have completely changed.”

There is a spectrum of risk-return profile on offer within the renewables market, of course. But when it comes to greenfield development, the returns on offer are not always at a level that is acceptable to the institutional investor universe.

“Brownfield contracted assets are safe and so the returns are inevitably not going to be all that high,” says Bergsma. “Investors do, however, expect to achieve higher returns for new build. At the end of the day, clean energy is competing with digital infrastructure and transport, and the returns on offer for renewables are not always high enough to secure investor interest. Some countries are going to struggle to attract investment for some time because the risk return is not attractive. A new equilibrium will therefore need to be found.” ■