Fixing the control room, speeding the energy transition

Utilities can't afford to wait to transform, the benefits significantly outweigh the risks

IT transformation will be critical to deliver the energy transition. Gary Miles, CEO of Gentrack, tells delegates at Future of Utilities that the world needs to learn lessons from Australia's "energy as a service" model.

Transitioning to a low carbon world involves huge upstream and midstream investment in solar, wind turbines and grid infrastructure to cleanly and reliably deliver electrons to people and businesses. But, as Gary Miles, CEO of Gentrack, made clear in his keynote presentation at the recent Future of Utilities Energy Transition conference, the IT systems which underpin the workings of the modern retailers and gen-tailers must transform to adapt to the decentralisation and decarbonisation challenges ahead.

> **Get this right and there's huge upside, both for the utility provider and the customer. "Amazing customer experience, digital first engagement, lower debt, more than 99.5% accurate billing and reduced cost to serve, with automation helping to deliver 30-40% lower cost-to-serve," said Miles.**

Miles is a newcomer to the energy industry, having spent most of his career in the telecoms industry. "Telecoms had the largest impact on GDP in the world over the last 30 years, delivering information and education to billions of people," said Miles. "It's been an amazing vehicle of progress for the world."

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> **"The energy industry today is more dynamic than the telecoms space. The pace of change is accelerating and the existential need to modernize is more profound."**

By comparison, few people would consider utility providers to be hubs of innovation. Yet this would, said Miles, be a misconception. "From time-of-use tariffing to virtual power plants there is an innovation highway ahead of energy suppliers and the industry today is more dynamic than the telecoms space was," he said. "The pace of change is accelerating, and the complexity is enormous, but so are the opportunities."

To illustrate his point, Miles highlighted the success stories from Australia, which, having been hard hit by blackouts, is now powering ahead with renewable and decentralised energy. The Australian Energy Market Operator and Energy Networks predict that generation from decentralised sources will be up to around 45% by 2040 – indeed, the country is already the number one in the world for solar PV per capita. This isn't just about being blessed with good weather –- after all, the country is also rich in oil, gas and coal – but about policy and investment.
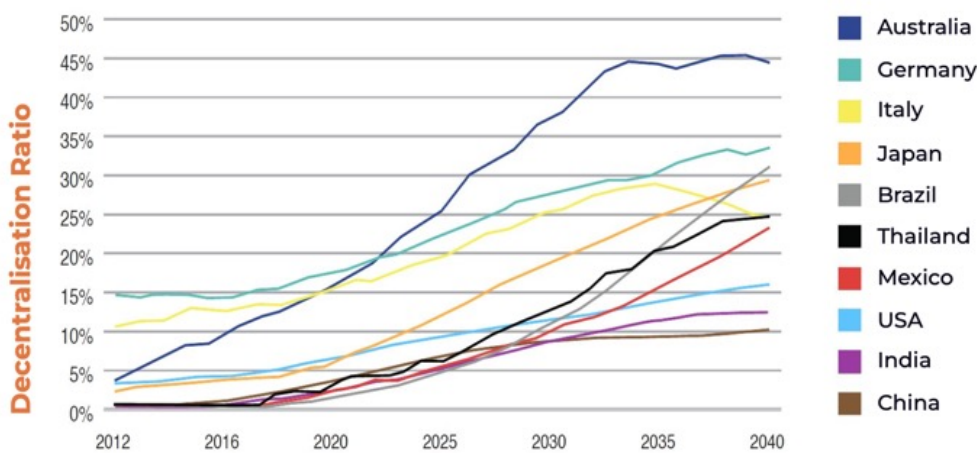
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Government policy has accelerated the uptake of solar and battery systems, which in turn is leading to innovations in customer propositions.

Energy as a service

"One of the more recent innovations we're seeing, powered by technology, is leveraging flexible behind-the-meter load from Solar and EVs," Miles says, highlighting the work of Gentrack client Energy Australia. They offer householders installations of solar PV and battery systems with zero up-front cost, and at the end of seven years they own the system. The solar option is highly popular, and the battery roll out is also growing fast; around 140,000 homes already have batteries, with the number installed expected to rise to 800,000 by 2025.

> "Most importantly, for the consumer this is a super simple and very affordable proposition"

"Consumers pay a flat energy rate for seven years on an 'energy as a service' model," Miles explained. "Energy Australia leverages their ability to aggregate this flexible load and bid it into the grid as a virtual power plant, so they can take advantage of wholesale revenue streams. Most importantly, for the consumer this is a super simple and very affordable proposition."

"Your systems need to deliver a simple customer experience in the face of extreme complexity"

This is key, and it's why the IT side is just as important as the panels and batteries. To work, the hugely complex, multi-faceted and vastly expensive energy transition must be presented to the end-user as simple, reliable and good value for money. "Your systems need to deliver a simple customer experience in the face of extreme complexity," said Miles.

While telcos responded to the cyclical waves of innovation that would routinely hit every eight years or so by renewing and reinventing their IT infrastructure, Miles believes that the systems powering much of the energy industry are stagnant and act as a brake, rather than an accelerant, on progress.

"The IT systems of many retailers are old and broken," he told delegates. "The systems are 20-30 years old and they're leaking and creaking. The shift to upgrade and transform has happened in leading markets with huge success as retailers move off of these antiquated systems. The rest of the world is due to follow as it sees that such transformations are both achievable and able to deliver significant results."

Existing legacy systems are, quite simply, not fit for purpose if the energy transition is to be achievable to any meaningful timescale.

"Leading utilities are telling us that their legacy systems are like cement in their business."

"Today, leading utilities are telling us that their legacy systems are like cement in their businesses," he said. "Those platforms are literally weighing their organisations down and stopping them from moving forwards."

Investing for a smarter, greener future

The good news is that this overdue investment is now being made. Miles cited statistics from a leading industry analyst that suggest that all of the utilities companies will upgrade their systems in this decade and the first 20% will choose a replacement system by 2026.

And this comes with a kicker in the tail. "If you don't do it, you will fall further and further behind," he said, stressing this wasn't just an energy company issue; water companies need to make this investment too.

These investments in IT are part of the enabling technologies for the energy transition. Because clean energy isn't just about turbines and solar; as demonstrated by Energy Australia, it's about building a grid that can deal with intermittency and distributed generation, flexing and adapting and hedging to changing inputs and outputs, offering dynamic pricing and giving more power to consumers – who are becoming generators in their own right.

> Get this right and there's huge upside, both for the utility provider and the customer. "Amazing customer experience, digital first engagement, lower debt, more than 99.5% accurate billing and reduced cost to serve, with automation helping to deliver 30-40% lower cost-to-serve," said Miles.

What's more, this kind of digital transformation can be done relatively quickly, using low-code, no-code technologies. "It means you can be launching innovative propositions and new services in days rather than months," he said.

The energy transition is going to require constant innovation and systems will need to be able to flex, whether it's in response to new technologies, customer behaviours or market

conditions. Future optionality can come from being part of an open ecosystem, enabling companies to partner with specialists and leverage existing capabilities. This is a new way of thinking and working for many in the utilities sector but it's going to be essential to deliver perhaps one of the biggest challenges facing humanity: the transition to a low/no carbon future.

"The world needs to look at places like Victoria in Australia, and make that leap," stressed Miles. "The time to do this was yesterday."

As delegates at the conference would no doubt agree, the next best time is now.

Gary Miles

Chief Executive Officer, Gentrack

Gary joined Gentrack in October 2020 following an extensive international career in enterprise technology innovation and cloud capabilities, including serving on the leadership team of Amdocs (NASDAQ:DOX), a provider of cloud business software and services to the communications industry. At Amdocs he served as Chief Marketing Officer and prior to this role, was Division President and CTO, leading strategy development, building the product portfolio and sales organisation as well as overseeing Amdocs' digital services, big data and mobile engagement divisions.

He has also founded and successfully scaled several technology companies including jNetX, a next-generation intelligent network platform for communication service providers, prior to its acquisition by Amdocs in 2009.

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