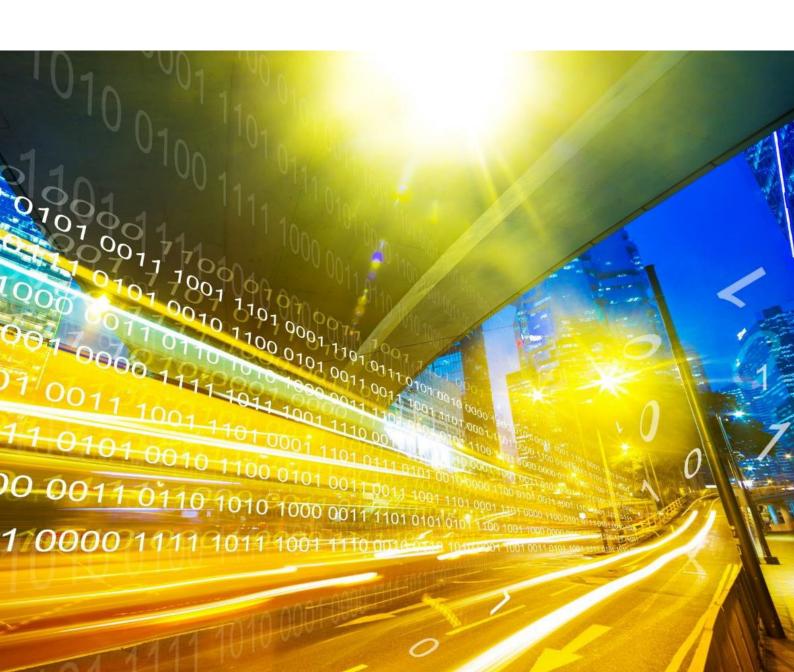# ENERGY AND WATER COMPANIES URGENTLY NEED TO TRANSFORM THEIR TECHNOLOGY STACK TO PROSPER IN THE SUSTAINABLE ERA

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Energy and Water Companies Urgently Need to Transform Their Technology Stack to Prosper in the Sustainable Era

Introduction

Tackling Constant Unpredictable Change

For over a decade, utilities have taken incremental steps to carve out space for themselves in the face of the ongoing energy transition. However, the events of the past two years have been a game changer, starting with the legal commitments to net zero — in Europe, for example, with the European Climate Law of July 2021, in Australia with the Legislated Emissions Reduction Targets of September 2022, and in California with the California Climate Commitment in October 2022. At the same time, a once-in-a-lifetime pandemic intensified focus on the sector, as demand and engagement from residential customers picked up with global lockdowns, and as redundancies escalated the share of vulnerable customers in need of attention. In addition, the ongoing Russia-Ukraine War has spiked energy prices around the world. While Europe is the war's epicentre, it has exacerbated market volatility globally by mixing with climate factors, market inefficiencies and tight supply in a fast-changing power generation landscape.

While more immediate matters such as security of supply and energy price volatility are drawing attention from longer-term initiatives, contingent factors such as extreme drought and catastrophic weather events are a vivid reminder that climate change is a non-linear process that must be addressed with urgency. The European heatwave in 2022 was among the most recent reminders of the impact of climate change on energy systems.

AT A GLANCE

This IDC Technology Spotlight examines how technology can be a game changer for utilities as they face growing unpredictability in the industry and navigate the energy transition towards a sustainable future.

To tap into new revenue streams and play a critical role in legal commitments to net zero, utilities need to transform their business to be more flexible in their decision making, business models, operating models and IT. This requires a complete transformation of the IT landscape to embrace cloud, advanced analytics, low-code and no-code technologies, and composable plug-and-play architectures.

With its cloud-native g2.0 platform, Gentrack can address these challenges and market needs.

Only by embracing technology can utilities hope to better support their customers (residential and C&I) with innovative commercial propositions that help them with their own sustainability goals and green agenda.

In addition to supporting financial metrics such as revenue growth and reducing cost to serve, these technologies enhance the customer experience and customer lifetime value, and lower customer acquisition costs.

Aiding Residential Customers to Meet Their Own Sustainability Goals

These frontpage challenges have put the customer spotlight on a previously fairly uneventful sector. At the same time, utilities need to prioritise what is important to younger customers, as Gen Zs and millennials will make up the majority of the consumer population globally (60%) by 2031. These customers' purchasing tendencies vary significantly from older generations. They already demonstrate greater awareness of climate change and interest in sustainability and net-

zero targets, and want to play a more active role in the energy transition, thanks to energy-related products and services such as distributed generation combined with residential storage systems and electric vehicles.

A recent global IDC survey of energy consumers (*IDC EMEA's Global Utilities Consumer Survey*, July 2022) highlighted that an increasing share of residential customers are:

- Interested in green energy and sustainable energy products, and are looking for energy-efficiency and demand response (DR) programmes to play an active role in the energy transition
- Interested in personalised energy-related products, services and bundles, as well as related discounts and offers
- Eager to meet all their needs by self-serving through digital channels, especially dedicated mobile apps, instant messaging services, text/SMS and dedicated customer portals

This is a huge opportunity for utilities, as these customers seek value-adding relationships with their energy suppliers, and for them to be their trusted energy advisors. A recent IDC survey revealed that by 2025, 73% of utilities globally will invest in customer-facing solar programmes (solar plus battery, net metering) to advance energy transition goals, while 55% plan to invest in EV programmes. Also, 67% of utilities globally will invest in energy-efficiency programmes (such as energy-efficient appliances) and 42% will invest in demand-side management (DSM)/DR programmes by 2025 (*IDC Energy Transition Survey*, June 2022).

As water scarcity increases, water utilities need to drive awareness and customer engagement to mitigate leakages, encourage water conservation and promote more sustainable water consumption habits.

For utility suppliers around the world to tap into this value, they must evolve from their traditional meter-to-cash business to a broader product-to-profit process. To get relevant products, services and bundles to market at the right time, with the right channels and at the right price point to ensure maximum profitability, companies need to transform their IT stack to eliminate system and data silos and improve flexibility in their operations, while leveraging pervasive data analytics to expose pockets of additional value.

EnergyAustralia's Solar Home Bundle

UTILITY PLAY

In mid-2022, in a disruptive business model play, EnergyAustralia pushed to market its Solar Home Bundle to support Australians actively seeking renewable energy alternatives to mitigate expected energy price increases.

The bundle includes tier 1 rooftop solar panels, an inverter and 10.1kWh battery that are installed and managed by EnergyAustralia with no upfront costs as part of a seven-year energy plan. After the seven years, ownership of the solar inverter, panels and battery system passes to the homeowners.

EnergyAustralia is a retailer and generator with 1.6 million customers across eastern Australia.

ENABLED BY GENTRACK

EnergyAustralia selected Gentrack to provide the software solution to deliver a seamless customer experience for its Solar Home Bundle.

Gentrack's technology is at the core of an integrated solution including digital consumer engagement, field services management and automation, and a virtual power plant (VPP) solution.

IDC

Abetting Commercial and Industrial Customers to Capitalise on Their Green Agenda

The recent turmoil in the energy sector has had a particular impact on commercial and industrial (C&I) customers, putting their very livelihood at risk. A recent IDC survey revealed that globally 35% of C&I organisations expect a decline in business activities due to high energy costs in 2023. To mitigate this, 53% plan to improve the efficiency of their energy usage and a further 40% plan to decarbonise their energy sourcing and production, including by investing in self-generation (27%) by 2024 (see *Globally, How Are Businesses Reacting to High Energy Costs and What Does This Mean for the Utilities That Serve Them?* IDC #EUR150085523, January 2023).

npower Business Solutions

UTILITY PLAY

In 2022, E.ON and npower Business Solutions consolidated their I&C divisions into a single specialist unit, npower Business Solutions (nBS). nBS supplies 33TWh of electricity and 11TWh of gas to UK businesses, serving around 24,000 industrial and commercial customers at more than 237,000 sites.

nBS also offers value-add solutions — including a full range of energy management solutions from metering and data collection services to monitoring and targeting software, energy-efficiency expertise and carbon-reduction support — to help businesses buy and use energy more efficiently.

ENABLED BY GENTRACK

nBS' business transformation was a joint effort with Gentrack and consolidated two legacy platforms onto Gentrack's technology.

This is a significant opportunity for utilities to support their energy-intensive customers by providing them with expertise on energy efficiency, decarbonisation and electrification. Once their energy consumption needs are met, these customers can look to their utility for energy-as-a-service capabilities to manage their energy assets and energy demand holistically, potentially opening up new revenue streams by selling energy surplus back into the grid, participating in flexibility schemes, etc. According to a recent IDC Energy Insights presentation, almost a quarter of all flexibility available in the European system in 2050 will sit behind the meter, including 10% from demand response and 4% from stationary storage from industry and building demand coupling.

To support their customers in the energy transition while reaping the benefits of new revenue streams, utilities and energy suppliers need a flexible IT landscape unburdened by the rigidities of legacy systems and operating models that can rapidly respond to ever-changing market conditions.

Embracing Technology to Address Challenges and Opportunities

To their advantage, energy suppliers already have abundant data on energy consumption. Energy suppliers should make this data work for them, extracting key insights to offer customers highly personalised recommendations at the right time, for the right price and on the right channel. This cannot efficiently happen without eliminating data silos and disparate customer systems and harmonising processes. They need to carve out efficiencies, leveraging automation tools, to keep cost to serve down as energy costs will continue to be subject to volatility. They also need to continue to improve the customer experience by enhancing:

- Trust through bill accuracy
- Convenience through a unified bill experience for all products and services
- Customers' digital journey

This requires companies to revisit and rethink their business models and propositions, decision making, operating models and processes, and the underlying technologies. Companies need to transform their IT stack to be scalable and agile, through speed, responsiveness and flexibility, while investigating the benefits of low-code and no-code technologies and the need for a single source of truth as their product portfolio expands beyond the commodity business and becomes more intricate with products and services bundling. This requires utilities that haven't already done so to embrace a cloud-first strategy, prioritise the adoption of cloud-native applications, and tap into an ecosystem of partners that supports this strategy and approach.

Benefits

Utilities, energy and water suppliers embark on business transformation journeys from many different angles. There is no "one size fits all" approach, and for the most part journeys will be staged across multiple horizons as a simultaneous approach would be too burdensome, from both a financial resources and a talent/skills resources perspective. Whether by first investing in a new CRM solution or starting with a new CIS and billing solution or ancillary solution such as configure, price and quote (CPQ), distributed energy resource management system (DERMS) or data and analytics capabilities, companies should benefit from the flexibilities enabled by cloud-native platform solutions.

For greater success and faster return on investments, solutions must be outcomes focused. For instance, utilities focusing on revenue improvements need to be able to launch competitive and innovative offers into the market quickly (days instead of months), which requires them to use composable architecture and low-code or no-code technology. Utilities seeking to reduce their cost to serve will need to automate processes, for instance by tripling the number of meter points a full-time equivalent (FTE) can cater to. Energy suppliers seeking to improve customer experience will need to foster a digital-first engagement with customers, enabling them to self-serve, especially around the most critical moment of the customer journey, the bill, providing them with accurate on-time bills, which in turn will help companies improve their debt management.

When deciding how best to invest, utilities, energy and water suppliers need to consider various types of benefits, including the scale of their impact as a critical component of the evaluation process. Importantly, the technology itself will not suffice if deep industry-specific knowledge does not support a business transformation in line with utilities' purpose.

Considering Gentrack

Gentrack has supported both water and energy suppliers for over 35 years with end-to-end utility-specific solutions, catering to utilities' B2B and B2C multiplay needs. Gentrack's industry-specific expertise is backed by its 700 utility software professionals, who cater to the needs of their client portfolio. Gentrack is active in 15 regulatory environments and has customers in the UK, Australia, New Zealand, Singapore, Papua New Guinea and Fiji.

g2.0: Unifying the Front and Back Office for a Seamless Value-Driven Customer Experience

In late 2020, Gentrack accelerated its R&D investments and developed its g2.0 solution. Starting September 2022, to better support its utility clients' and prospects' needs, Gentrack has offered utilities its g2.0 product-to-profit end-to-end solution to manage the customer life cycle and support customers along the customer journey across myriad tasks. The g2.0 platform runs on AWS in the cloud "as a service" and is extensively cloud native, providing the benefits of high availability, reliability, scalability and security.

The platform is strengthened by Gentrack's new partnership with Salesforce as the utility-specific 360-degree front-end CRM, supporting the new technology stack. Gentrack has embedded Salesforce into g2.0 and invested significantly to develop over 100 APIs into Salesforce, so all components in Salesforce Customer 360 are preconnected and embedded into the g2.0 platform. Over 100 drag-and-drop components are currently made available to users, with new components and journeys being added according to market needs to ensure every agent has at their fingertips the information they require to best service all customers.

In addition to offering pre-integrated end-to-end customer journeys with Salesforce in its g2.0 platform, Gentrack has also redesigned its own user interface and user experience for utilities' back-office agents, who are increasingly playing a more important role in the customer journey.

Expansion of the Product-to-Profit End-to-End g2.0 Solution

Gentrack g2.0 offers composable modules such as billing, payments and credit, profit and risk, and product catalogue to support plug-and-play capabilities for a global market. The new platform's composable plug-and-play architecture enables utilities to start their journey with one solution and then scale up or expand their collaboration with additional Gentrack products or services as their journey progresses. This is enabled by Gentrack's suite of products and services working seamlessly together, with product-to-profit by design. Flexibility is embedded with out-of-the-box functionalities and a no-code/low-code platform. Solutions are architected on a multitenant platform to provide the right mix of high performance and low cost to customers. With a cloud-native architecture it also easily enables upgrades.

The company has also expanded its g2.0 solution with a suite of products and services including B2B Pay as You Go, Quote and Bill Anything, Broker Management and DERMS. For DERMS, for example, Gentrack is collaborating with partners that will carry out the dispatch and readings, creating a billing event that is then fed back through a pre-built connector into the Gentrack billing engine all the way into the front-facing CRM.

Business and Data Applications

Gentrack has also expanded its offering with data and analytics. It packaged several tools together to support its data and analytics offering, including Snowflake (data storage, comprising a raw data layer and analytical data layer), Qlik (near-real-time and batch processing), Tableau and Power BI (reporting and dashboards), and Matillion (cloud data warehouse). Gentrack's new Logical Data Model (g.ldm) is designed around the business process owner and built on key

domains applicable for business users, supporting data democratisation. It also offers a 360-degree view and the ability for fast self-serve reporting to avoid additional IT costs. This directly helps utilities to better navigate the increasingly unpredictable nature of the industry and the need for companies to respond more quickly to changing market needs by quickly providing them with actionable insights. With its billing engine underpinning the other solutions in its portfolio, Gentrack supports a single version of the truth through which companies can derive further value from the data and analytics layer. Gentrack helps many of its clients with their smart meter data, to understand splits in import volumes from the grid and export volumes from batteries and PV (photovoltaics) systems, or to enable better forecasting activities. This is very important given the rapidly evolving landscape with uptake of EVs and PV systems already disruptive in some parts of the globe, which makes it impossible for companies to do reliable forecasting activities based on historical values. The next step is enhancing the analysis with profitability insights by building in associated costs.

Operating Model Flexibility

Gentrack is highly flexible in its operating models, supporting new customers with their existing operating models and facilitating changes when necessary. For its B2C customers, for example, it can support pod and front- and back-office models, enabling its utility customers to decide whether to have team members that can deal with all elements of operations or team members with established responsibilities and related respective benefits. For its B2B customers, for example, Gentrack can support revenue split and account management models, enabling utilities to prioritise between customer intimacy and improved resolution times, and aligning process across the front office and reducing process management, respectively. For more ground-breaking projects, Gentrack also offers its utility customers a shared-outcomes-based engagement.

Challenges

The utilities industry has always been cautious when undertaking large-scale transformation projects, especially when it concerns the billing engines, as these tend to be significantly more complex and require more resources (financial and people) than originally planned for (and failures are not unheard of). This has given household names in this market an advantage, especially after new cloud-native players rattled the market but then struggled with the industry expertise needed to succeed in such complex markets.

When it came to utilities' recent customer experience transformation projects, companies tended to build on their existing legacy stack to add functionalities such as a 360-degree view of customers and expand the digital channels they leveraged to serve customers. However, companies further along their CX transformation journeys have come to realise that a fundamental enabler of CX transformation is having a CIS and billing solution that unleashes the full potential of the transformation, rather than holding it back, as with some legacy systems. This is especially true for data needed in real time or near real time.

Gentrack has taken significant steps to expand beyond its traditional English-speaking core markets, recently opening an office in Singapore, and now operating in three continents and 15 regulated sectors.

Conclusion

IDC believes that investments in these areas will continue to increase as the energy transition picks up speed, specifically utilities' intentions to invest in customer-facing programmes (as highlighted in IDC's *Energy Transition Survey*). To do this successfully, energy suppliers need to embrace business transformation that pivots them to a broader product-to-profit process. Companies will need the right technologies, the right set of processes and the right talent to cover product ideation, design time, time to market, marketing activities, sales activities, bundling and quoting of new products and services, and customer service support (across different channels). It's not enough to have a great product: an offer needs to be timely; competitively priced; and supported by effective marketing, sales and customer support. It also needs to reach customers on their preferred channels. The pricing of the product/bundle needs to be attractive to customers, but also profitable. This requires energy suppliers to tap into more data than they currently leverage. Utilities and energy retailers will feel greater pressure to have solutions to cater to an increasingly sustainability-conscious customer base that will prioritise having an active role (and hence investing) in net-zero targets.

Utilities, energy and water retailers that have been stacking up customer systems as they launched new businesses or brands or absorbed competitors are expanding from meter-to-cash to a product-to-profit process to tap into new revenue streams coming from innovative business models. They will compete not just with traditional competitors, but also with the increasing number of new entrants in the energy transition space. This requires secure and flexible systems that can react faster than ever before to be relevant and valuable, and requires backend systems that operate in and are integrated for real time to support customers and customer service agents.

If Gentrack can address the challenges and market needs described in this paper, its cloud-native g2.0 platform has a significant opportunity for success.

By embarking on a comprehensive business transformation, utilities, energy and water retailers can not only benefit from tapping into new high-value revenue streams but also reduce cost to serve, improve customer satisfaction or net promoter scores (NPS) in competitive markets, enhance customer lifetime value and lower customer acquisition costs.

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MESSAGE FROM THE SPONSOR

g2.0 by Gentrack: Technology Designed for Business Outcomes

Most utility providers will transform their IT systems in the next 10 years to meet the demands of the sustainable era. There is no time to waste: those that adapt best will pioneer the way energy and water are consumed in the future.

For over 35 years Gentrack has been partnering with the world's leading utilities. More than 60 B2C and B2B energy and water companies in 15 regulatory markets rely on our solutions. Our g2.0 product-to-profit solution offers extensive out-of-the-box capabilities focused on business outcomes by design:

- Increasing revenue and accelerating time to value with new proposition launches in days and not months

- Enhancing the customer experience and digital-first engagements and achieving +99.5% accurate bills on time

- Reducing cost to serve by 30% and increasing FTE-to-meter point ratios from 3k to 12k

Lead in the sustainable future and grow your customer base. To learn more, click here.

About the Analyst

Gaia Gallotti, Associate Research Director

Gaia Gallotti leads IDC's Energy Insights Worldwide Utilities Customer Experience Strategies advisory service, designed to help utilities and energy and water suppliers service customers in competitive and regulated markets globally. The service provides them with guidance to make the right IT investments and meet corporate objectives around customer satisfaction, reduction of cost to serve and innovation. She joined IDC Energy Insights in 2007, after joining IDC in 2006, and has become a recognised independent industry analyst across Europe in the utilities domain.

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International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications, and consumer technology markets.

With more than 1,300 analysts worldwide, IDC offers global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries. IDC's analysis and insight helps IT professionals, business executives, and the investment community to make fact-based technology decisions and to achieve their key business objectives.

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