

CAPTURING VALUE IN
CONNECTED
ENERGY





Future uncertain. Opportunity unprecedented.

Amid epic disruption of the utilities industry, the core tenets of yesterday's power model no longer apply. As a new power model takes shape, energy providers need to identify how and where they will invest to thrive in connected energy to achieve greater performance and value.

Opportunities for energy providers are emerging rapidly across home and business segments, transport, and digital connected services, with connected energy at the nexus. Services within the connected energy space include distributed energy resources (DER), eMobility, energy management, energy efficiency and flexibility.

Disrupting demand

On the demand side, disruption is increasing faster than ever. Electric vehicle (EV) adoption is accelerating, particularly in regions that have enacted ambitious laws to reduce greenhouse gas (GHG) emissions. Current projections show EV sales growing by 30% annually between 2020 and 2030, when EVs could account for 9% of the European fleet.¹ At the same time, there is a shift toward electric heating (such as heat pumps) and district heating to reduce GHG emissions. Between 2020 and 2030, the number of heat pumps in Europe could grow 18% a year, increasing from 1.6 million to 10 million devices.² In addition, as consumers take on more active roles as both producers and consumers of energy, companies are looking for cost-effective ways to reduce emissions and emphasize sustainability in how they make decisions and in how their brand is perceived.

Reshaping supply

Significant changes are underway on the supply side as well. Technological advances and decreasing costs are making renewables more competitive. By 2030, wind and solar could provide as much as 29% of the electric power generated in the European Union.³ Meanwhile, global uptake of behind-the-meter energy solutions such as rooftop solar by corporates is accelerating decentralization.

As a result of these changes in supply and demand, by 2030 utilities will need 30% more flexible capacity to balance supply and demand.⁴

Another major impact is the battery storage revolution, which is set to scale. Explosive maturation and growth of cheap battery storage is potentially the biggest energy disruptor for the future, driving a projected US\$620 billion investment opportunity for energy storage (excluding pumped hydro) by 2040.⁵ Indeed, energy storage has the potential to dramatically change how we generate, deliver and use energy, by increasingly decoupling the timing of generation and utilization of energy—unlocking a wealth of possibility for efficiency and arbitrage.

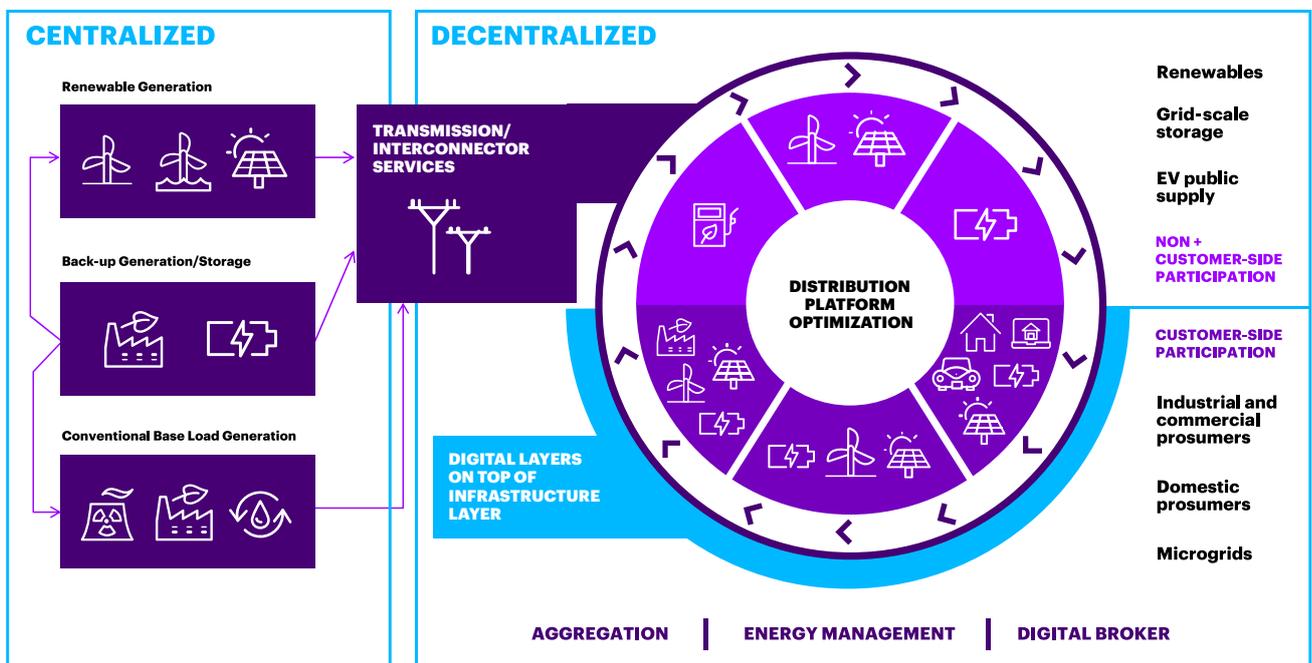
Connecting the future

Add up these pervasive trends and a new power model is emerging—one that will be more decarbonized, decentralized and customer-oriented. Core to the new system will be multidirectional flows of energy and information enabled by widespread digitization. However, the utilities industry will likely operate for many years, even decades, in a hybrid model with both the traditional system and the new power model (see Figure 1).

As utilities plan to pivot to the new power model, there is a huge opportunity for connected energy services—finding ways to deliver distributed generation and EV products and related services, energy management, energy efficiency and flexibility as part of consumers’ new connected energy experience.

Figure 1.

Most utilities will operate in a hybrid model as the new energy system takes shape.



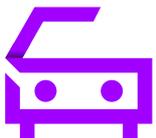
Opportunity quantified

There is good reason to give consumers what they want. Our analysis suggests that much of future growth will likely come further downstream through new energy retail products and services. Currently, energy retail accounts for about 10% of total industry value. We predict that number will rise to about 25% through the introduction of new revenue opportunities (see Figure 2).

We estimate that in Europe alone the market for connected energy products and services could represent a potential €52 billion to €73 billion in revenue in 2030 across three core value pools:



Behind-the-meter offerings related to DER, focusing on helping customers achieve sustainable, manageable and efficient energy with rooftop solar, storage, electrified heating, energy-efficiency measures and energy management solutions.



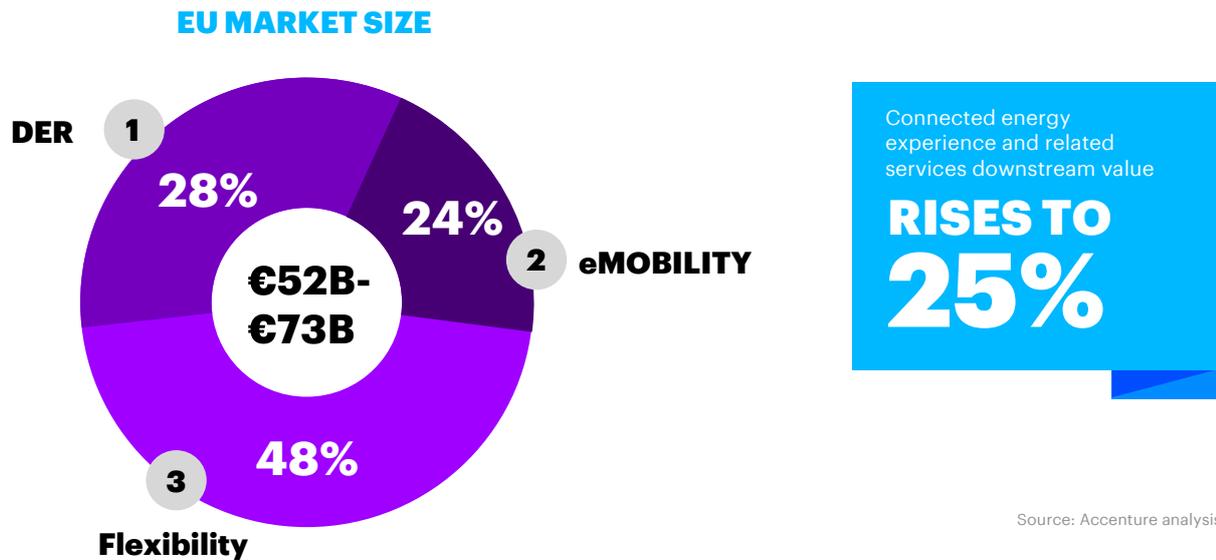
eMobility offerings, such as chargepoint infrastructure, charging services and data integration services to facilitate the eMobility ecosystem.



Flexibility services to enable energy providers to leverage the interconnection of devices such as smart meters, smart thermostats, and residential and commercial energy management systems and their data—creating value for actors across the new power model through modulation of energy supply and demand.

Figure 2.

European utilities could unlock significant value by investing in connected energy services.



To tap into connected energy value pools, these customer plays are taking shape (see Figure 3):

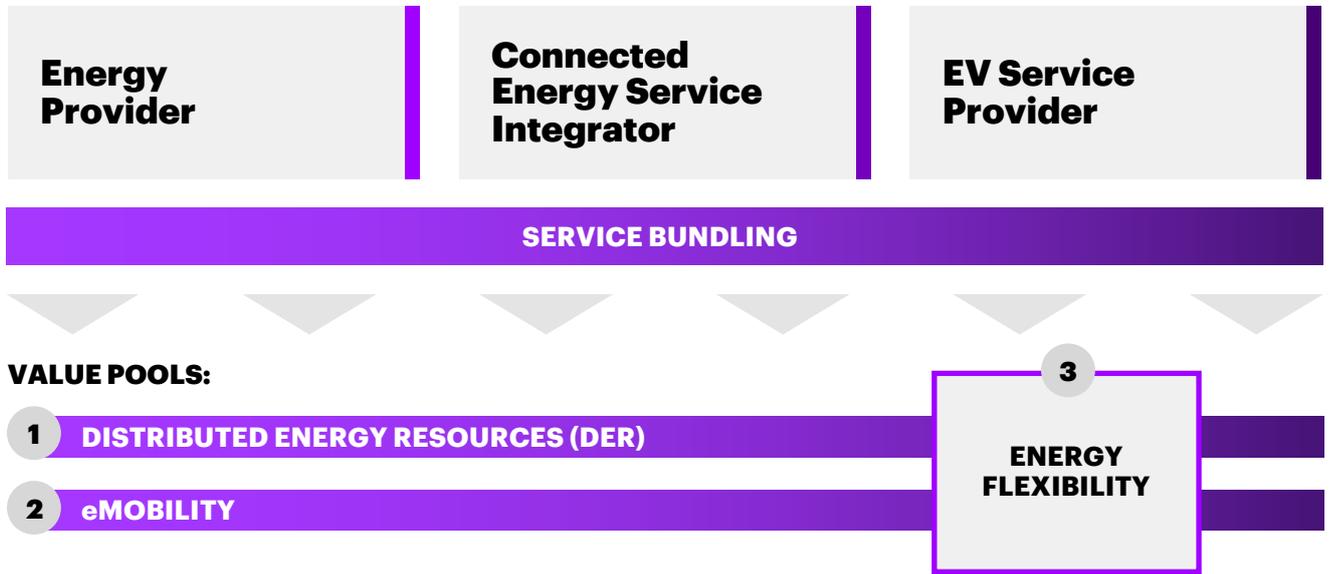
The Energy Provider customer play focuses on both selling and democratizing energy. This play focuses on kilowatt-hour (kWh) sales through a retail business model. In doing so, it drives toward automation, robotics and operational efficiency. Through energy democratization, this play can help support an energy model in which many parties supply and/or consume energy from each other. Energy providers can participate in this model by connecting producers and consumers via a platform.

The Connected Energy Service Integrator customer play focuses on serving as installer, integrator, maintainer, and/or operator for rooftop solar, storage, heating electrification, and smart home devices such as thermostats. Energy providers can develop service capabilities for these DERs in-house or provide them via an online marketplace. This model emphasizes an end-to-end range of products and services, and success tends to be contingent on developing an integrated offering suite that is “greater than the sum of the parts.”

The EV Service Provider customer play focuses on serving as integrator for chargepoint services (for example, physical maintenance and operation), information services and mobility services. It also aims to serve as aggregator and provider of flexibility services for eMobility (including smart charging and vehicle-to-grid).

Figure 3.

New customer plays are taking shape to tap into connected energy value pools.



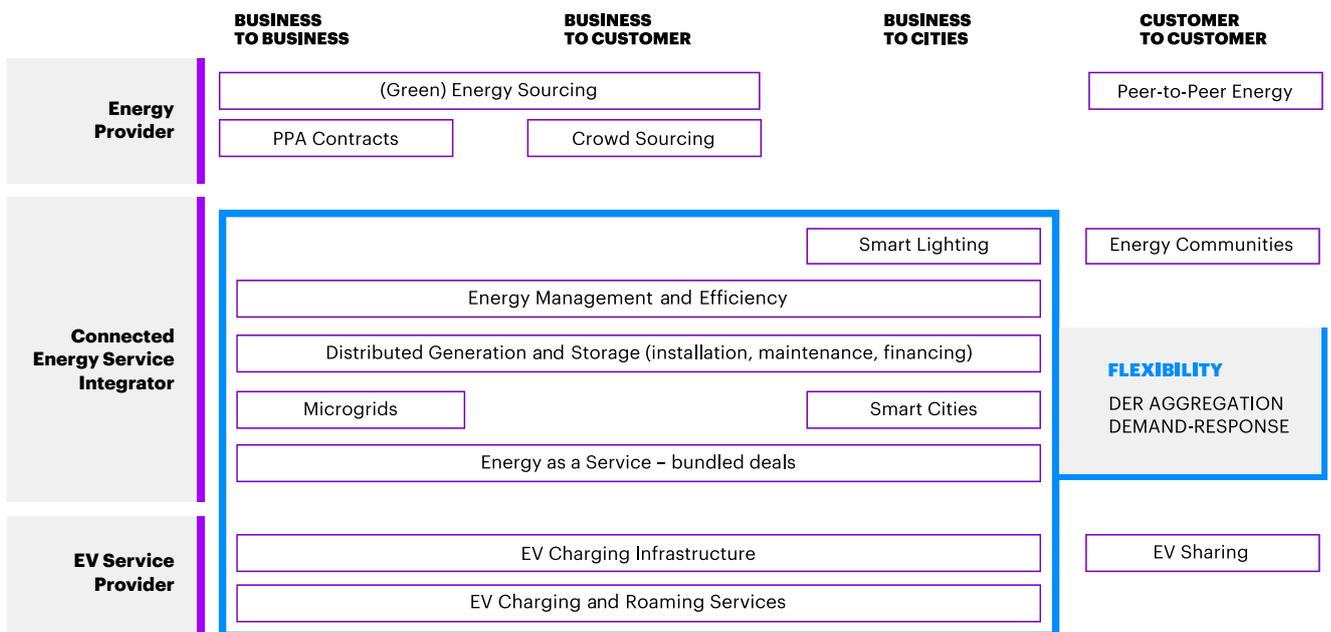
As energy providers continue to develop their commodity business and expand their connected energy service and flexibility offerings, they can bundle across these areas to create integrated offerings. In doing so, they can target improved customer satisfaction (e.g., as measured by Net Promoter Score (NPS)), increased loyalty, reduced churn and increased price tolerance.

European energy providers are well-positioned to capitalize and seize market share as these emerging opportunities grow and mature. For one thing, they have unrivaled expertise in energy management and trading, as well as decades of experience working with regulators. They also potentially boast the most powerful competitive advantage in the field: a large existing customer base with long-established relationships and physical proximity to energy consumers.

Energy providers can bundle energy, DER, eMobility and flexibility into holistic value propositions for end consumers, many of whom find such bundles attractive (see Figure 4). If energy providers do not create such bundles, other entities likely will. Case in point: when asked why they would consider purchasing energy, energy-efficient products and/or related services from a provider other than their current energy provider, 41% of consumers cited the ability to “bundle products and services to receive a discount.”⁶

Figure 4.

Consider the power of integrating offerings to create holistic customer value propositions.



Competition electrified

The value pools are significant. The opportunities are compelling. As a new ecosystem develops, new entrants are investing in connected energy solutions for future growth (see Figure 5).

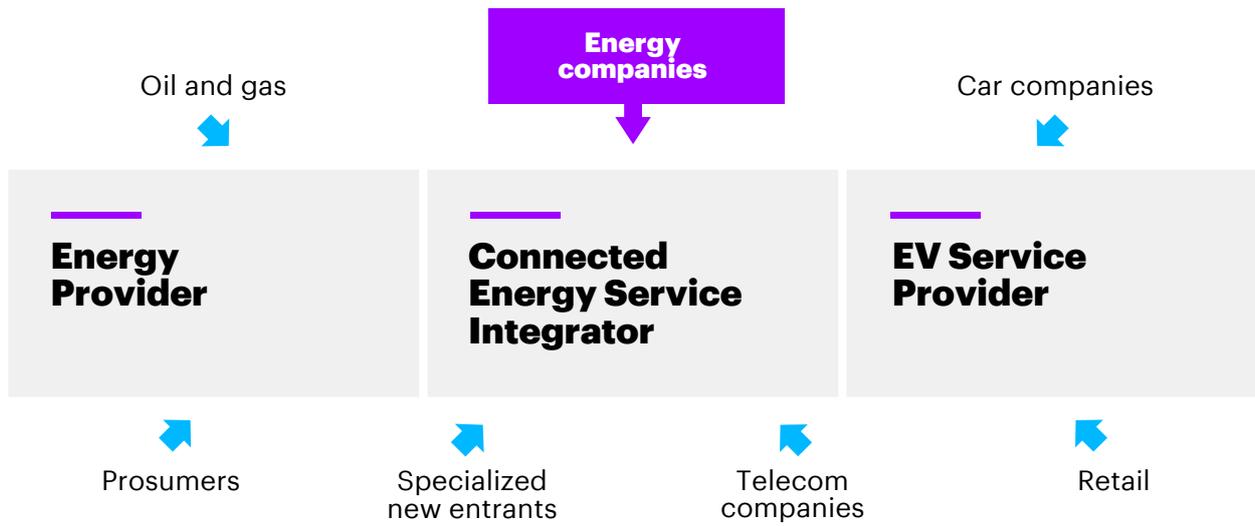
In a world where oil is declining, the oil and gas industry is looking for new growth strategies, with electricity emerging as a key component. Already, some global oil and gas companies are actively working to transform from “oil majors” to “energy majors.” They are leveraging mergers and acquisitions to accelerate transformation by investing in renewables and energy management-related services and by aggressively acquiring startups.

For car manufacturers, the focus is no longer solely selling EVs. Major players are now looking to combine EVs with smart, data-driven energy solutions. Some are even creating new companies to allow people to produce and sell renewable energy, either with or without an EV, as well as offering storage solutions that could be connected to energy management systems.

Meanwhile, we see the rise of a new generation of startup companies with provocative value propositions that span flexibility services, peer-to-peer (P2P) energy trading, connected home solutions, and eMobility services. And digital giants are taking bold positions in such areas as smart homes and energy management services.

Figure 5.

Energy companies need to accelerate investment in connected energy.



Opportunity is here. Don't wait to pursue it.

To capture value in connected energy, energy providers need to grow new routes to market. As companies work to find and scale growth, Accenture recommends starting with three areas of focus:



Evaluate new growth areas. Decide where to play, what to disrupt and how to win considering EBIT potential, time to benefits and competitive landscape.



Earn the right to win. This is about understanding the tipping points. Incorporate an open innovation mindset to be agile, and complement capabilities with external partners, new acquisitions or minority-interest participation in startups.



Get to scale. The current market requires a dynamic, disruptive approach to innovation. Maintaining momentum from proofs of concept and minimally viable products through full-scale launch requires investment, commitment and acceptance of failure.

Above all, energy providers must accelerate investment in the connected energy future—or risk being left behind.

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AUTHORS

Wytse Kaastra

Managing director, Accenture

Sanda Tuzlic

Senior manager, Accenture

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