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The quest for profitable growth in B2B energy solutions

Capabilities, culture, commitment

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We would like to thank Adrian del Maestro (Strategy& UK) and Paul Nillesen (Strategy& Netherlands) for their valuable contributions to this viewpoint.

EXECUTIVE SUMMARY

Three transformative energy trends – decarbonization, decentralization and digitization – are creating significant growth opportunities for energy companies in the B2B energy solutions business. These solutions help businesses achieve several benefits: reduced energy bills, improved carbon footprints and higher energy independency and flexibility.

Energy solutions offer the opportunity to build a faster growing customer business and diversify revenue streams away from traditional energy retail which is increasingly under pressure from limited growth prospects and stagnating margins. At the same time, energy companies are in a prime position to succeed in the energy solutions market given their strong customer base, established brand and deep know-how of demand trends.

Most energy companies are already active in many of the market's key segments and plan to increase their presence even further, both organically and through M&A. Our research highlights that the number of acquisitions by energy companies in this market more than doubled between 2016 and 2019. And these acquisitive players are on the right track: We believe that M&A is the quickest and most suitable way to enter this nascent market, as long as integration is handled carefully, balancing freedom to operate with the desire to realize synergies.

Based on our project experience, expert interviews, and specific research, we conclude that three factors are critical when building up or integrating an energy solutions business within an energy company:

- **Capabilities:** Assess capability gaps honestly and create a clear roadmap to close them
- **Culture:** Build the right conditions to allow an energy-solutions-focused culture to prosper
- **Commitment:** Be prepared to invest a disproportionate share of management attention and resources and be ready to take risks for long-term success

If done properly, the B2B energy solutions market represents an attractive growth opportunity for energy companies. But energy companies will need to prepare themselves to participate in the right segments, with the right capabilities.

The quest for profitable growth

Three transformative energy trends – decarbonization, decentralization and digitization – are creating the need for fundamental change, but also significant growth opportunities for energy companies. The market for energy solutions can be an attractive pathway for energy companies for several reasons:

Additional sales potential with a wider set of energy solutions for the existing customer base
Energy companies can offer energy solutions to their (commodity) customer base and differentiate themselves from smaller, specialized players through their brand and the scale of their existing customer relationships.

New and cheaper technologies making new innovative services a reality
Technological progress in areas such as monitoring and digital optimization of consumption, demand response and overall increased connectivity, as well as enablers such as digital tools and data analytics, collectively create the possibility of new digital services and solutions. Additionally, available technologies such as photovoltaic generation went through a steep cost degression and are now more economically attractive than ever.

Favorable regulatory developments
Policymakers increasingly tighten their regulatory tools such as carbon pricing, emissions trading, reporting requirements, standard-settings, and additional taxes. As a result, energy consumers and producers are compelled to lower their carbon emissions and energy usage, raising the complexity of energy management solutions.

Increasing stakeholder demand for sustainable solutions
Manufacturing companies' customers and employees alike are more and more demanding production processes with a lower carbon footprint and lower energy consumption. Consequently, businesses are experiencing a market pull to invest into green, sustainable and energy efficient technologies.

Shrinking attractivity of traditional energy retail business
Margins in power and gas commodity businesses in many market segments are stagnating due to pressure on volumes (that is, increased efficiency is reducing the overall consumption of energy) and prices (commoditization).

COVID-19 and the increased focus on a sustainable and green economic recovery
The demand shock caused by the COVID-19 situation has accelerated the need for effective energy management and requires businesses to cut their energy bills, for example through greater efficiency and strengthening their energy independence.

Given these drivers and the fact that the established commodity business is shifting away, there is hardly any alternative for energy companies than to invest into new energy solutions to set themselves up for sustainable growth.

Knowing where to play

The overall value proposition of all segments in the energy solutions market is to optimize the energy use of businesses and thus reduce their energy bill while abating carbon emissions. The energy solutions market is essentially made up of two sets of products and services (*as illustrated in Exhibit 1*). There are those solutions that have been established for some time (think of energy efficiency measures) and then there is the emergence of new technologies. While the former has already led to profitable business models in the market, the latter are niche applications so far, but have the potential to develop into scalable business models in the future.

EXHIBIT 1
Overview of product/service segments in B2B energy solutions

	Consulting	**Decrease customer's energy bill by combining technological, business, project management and legal advisory** Energy consulting support across all horizontals to improve the energy ecosystem, streamline the client's business operations and support in creation of decarbonization roadmaps
Established solutions	Energy efficiency	**Decrease customer's energy bill by reducing energy consumption** Efficiency improvement to reduce consumption through more efficient infrastructure (lighting, HVAC, insulation, etc.), more efficient business processes, industrial processes and an effective steering mechanism
	On-site generation	**Decrease customer's energy bill by generating own energy supply** On-site generation infrastructure (CHP, boilers, solar, wind) to reduce energy demand from the grid and improve sustainability. An alternative to owning assets can be physical PPAs (Power Purchasing Agreements)
	Flexibility services	**Decrease customer's energy bill by increasing and monetizing flexibility** Better management of energy demand leveraging on-site generation, on-site storage and alternative energy sources to introduce flexibility to the demand profile reducing power price peaks and additional charges
Innovative solutions	Electronic vehicle (EV) solutions	**Decrease carbon emissions by providing EV charging infrastructure** Building and managing charging infrastructure as well as providing energy for in-home, urban and intercity/motorway charging points
	Hydrogen (H_2) solutions	**Decrease carbon emissions by replacing fossil gas by hydrogen** Providing solutions to replace natural gas for power generation with hydrogen solutions e.g. retrofitting of gas turbines and installation of stationary fuel cells
	Carbon capture and storage/ utilization (CCU/CCS)	**Decrease carbon emissions by capturing and using carbon dioxide before it gets released into the atmosphere** Capture carbon emissions directly where they take place (power plants, industrial processes) and utilize them chemically or biologically (CCU) or store them geologically (CCS)

Source: Strategy& research

Our analysis of the largest European energy companies in 2019 by market capitalization illustrates that, to date, energy companies are primarily active in the energy efficiency, on-site generation, and flexibility services segments. The share of European energy companies offering solutions in the energy efficiency segment is also significantly higher than in North America (about 80% compared to about 50% respectively)[1] (*see Exhibit 2*).

EXHIBIT 2

Degree of solutions offering by major European Energy companies

		Enel	Iber-drola	EDF	National Grid	ENGIE	Ørsted	Endesa	E.ON	Fortum	Verbund	Uniper	TOTAL	Shell
		Utility players											Oil and gas players	
Established solutions	Energy efficiency	Extensive	Extensive	Extensive	Extensive	Extensive	Limited	Extensive	Extensive	Selective	Limited	Extensive	Significant	Significant
	On-site generation	Extensive	Limited	Extensive	Significant	Extensive	Significant	Extensive	Extensive	Selective	Significant	Extensive	Significant	Extensive
	Flexibility-services	Extensive	Extensive	Extensive	Significant	Extensive	Selective	Limited	Extensive	Significant	Limited	Significant	Selective	Extensive
	Consulting	Extensive	Significant	Significant	Limited	Extensive	Limited	Selective	Selective	Limited	Limited	Significant	Selective	Significant
Innovative solutions	EV	Extensive	Extensive	Significant	Significant	Significant	Limited	Limited	Significant	Extensive	Selective	Limited	Significant	Significant
	H_2	Significant	Limited	Selective	Selective	Limited	Limited	Limited	Limited	Limited	Limited	Selective	Selective	Significant
	CCU/CCS	Selective	Selective	Selective	Significant	Selective	Limited	Limited	Selective	Significant	Limited	Limited	Significant	Significant

Extensive offering Significant offering Selective offering Limited offering

Source: Strategy& research; company websites

However, European energy companies are so far under-represented in innovative solutions, especially in hydrogen and carbon capture and storage (CCS). Some of the oil and gas companies are increasingly offering services in this segment, particularly in CCS. Based on this gap and the high growth prospects for the innovative solutions segment in the long-term, energy companies could prioritize this segment in their expansion strategies. However, we doubt that all the services offered by energy companies in energy solutions have generated significant business yet.

In conclusion, attempting to be active in all these segments has only few advantages and hinders companies from committing the required amount of management attention and allotting the necessary resources. Energy companies therefore need to make smart decisions and choose their segments wisely if they are to become significant and successful players in the rapidly evolving solutions market.

1 see also Strategy&'s Global Power Strategies Report (https://www.strategyand.pwc.com/gx/en/insights/2019/power-strategies.html)

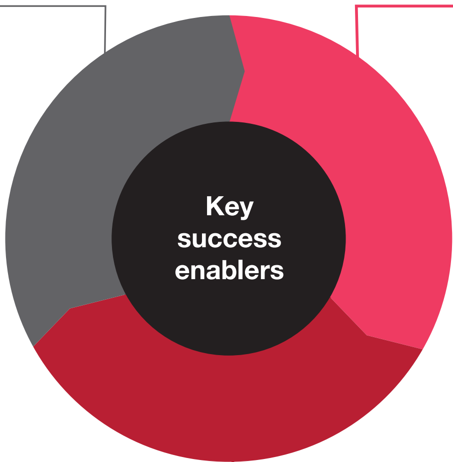
Pathways for energy companies' success

Setting the scene for success: the three C's – Capabilities, Culture, Commitment
According to our experience and extensive discussions with clients, the key success factors for energy companies building B2B solutions businesses fall broadly into three categories: capabilities, culture, and commitment. To succeed, companies need to close their capability gaps, allow space for a different culture to develop within the new business and commit top management attention and sufficient resources. These key enablers are summarized in *Exhibit 3*.

EXHIBIT 3
Key success factors

Capabilities

- Understanding of critical capabilities (sales, on-site delivery, digital platform) and approach to close capability gaps
- Roadmap to align new project development with capability build-up (e.g. IoT-readiness)



Culture

- Maintain and support entrepreneurial and risk-taking spirit of the new business
- Carefully evaluate elements of corporate processes and policies to adopt versus to shield new business from

Commitment

- Willingness to think big, take a few bets and tolerate initial financial setbacks
- "Don't treat it as a hobby" – ensure sufficient resources and top management attention

Source: Strategy& research

"Don't treat energy solutions as a hobby. Past failures by energy companies expanding into the energy solution market were caused by a lack of top management attention."

Dr. Paul Nillesen, Partner

Focus: Capabilities

Challenges
Energy companies typically struggle with several types of capabilities required for success in the B2B energy solutions market. The most common are: go-to-market capabilities (including brand management, channel and platform operation, and deep customer understanding), product design capabilities (such as the solution bundling offer, product and service creation and value based-pricing), technical capabilities (such as analytics or new engineering solutions like waste heat recovery), and experience in partnering and innovative financing.

Dos	• Assess the required capabilities and existing capability gaps systematically and honestly; and develop a clear roadmap to close these gaps • Share insights about existing customers and give the new business access to those customers
Don'ts	• Don't superimpose on the new business established processes from the mother company that are not suitable for the solutions environment (a classic example is unwieldy corporate procurement processes geared towards large investments or traditional hiring processes) • Don't focus only on internal transfers and hiring to build-up capabilities; also consider M&A and joint ventures with companies that bring additional capabilities at larger scale

Focus: Culture

Challenges

In both, organic and acquisition-driven build-up scenarios, energy companies need to consider the differing cultural DNA of players. In the energy solutions market, the risk of a culture clash is arguably higher due to significant cultural differences. On the one hand, the traditional energy business operates within the context of a relatively stable demand base, an often-regulated business environment and is part of the critical infrastructure that comes with high standards of compliance, regulation, and safety. On the other hand, the energy solutions business faces more fluctuating and project-based revenue streams based on intense customer intimacy. As a result, these businesses tend to have a more agile, risk-taking, and entrepreneurial culture.

In an M&A scenario, the risk of cultural clash should be screened beforehand and addressed already during the investment and due diligence process. In an organic scenario, it will be necessary to create sufficient space for an emergence or development of a suitable project and solutions culture[2].

Dos

- Maintain and promote an entrepreneurial and agile working environment and encourage (sensible) risk-taking: “try fast, fail fast”
- Carefully balance the integration of the new solutions business into the existing business while maintaining its freedom to operate

Don’ts

- Don’t ignore cultural issues and differences – these need to be put on the table during target selection and addressed systematically
- Don’t impose the entirety of operating procedures and the current ‘way of working’ on the solutions business (for example, stringent reporting requirements or unnecessarily elevated IT/technical standards are not suitable for these types of business)

2 See also Strategy&’s report “Creating value beyond the deal: Culture is critical in New Energy deal making” for more detail (https://www.pwc.co.uk/industries/power-utilities/insights/creating-value-beyond-the-deal-energy-utilities-mining.html)

Focus: Commitment

Challenges

Successful energy solutions businesses will need buy-in from the very top of the company, both in terms of resources and visible leadership support. Furthermore, these businesses will likely be more volatile than traditional energy businesses and therefore need a longer-term horizon to endure fluctuations.

Dos

- Show visible leadership commitment – show your intention and your support via internal communication channels and stay in regular contact with the team to support removing roadblocks
- Be prepared to invest a disproportionate amount of time and resources in the beginning to get it going – “make a few bets”

Don’ts

- Don’t expect positive cash contribution from day one – as for most new business endeavors, this is a long-term game to establish brand, credibility and necessary capabilities
- Don’t let it run by itself, without constant protection, support and guidance from top leadership – your new business will require it to prosper

Possible paths to enter energy solutions market

In general, four possible approaches exist to building up or expanding a solutions business:

1. Organic

Developing a new business from scratch within the company offers the advantage of building a culture that is highly compatible with that of the core business. This facilitates combining the capabilities of the core business with the energy solutions business. Compared with M&A, fewer financial resources are required, since, for example, no control premium needs to be paid.

On the negative side, it will take time to build up the business and may not achieve sufficient scale in a foreseeable timeframe.

"Energy companies overestimate how quickly they can grow organically. Particularly in the energy solutions market, a significant number of competitors with established brands already prevail."

Christian von Tschirschky, Partner

2. Strategic alliance

A strategic alliance offers a loose form of collaboration that can be set up quickly, with clearly defined objectives and timeline. It typically involves limited financial resources and can be scaled up or down with growth requirements more easily. In some industries alliances have served as platforms to test and build capabilities becoming a precursor to mergers.

3. Joint venture

Joint ventures (JV) enable companies to combine different capabilities within an agile and focused operating model – if it is well-structured. If the JV is treated as an independent company, a more entrepreneurial culture can flourish. However, if the benefits are not equally balanced and complementary for all partners, joint ventures face the risk of being pulled in different strategic directions.

4. M&A

Acquiring companies means obtaining control over an established operating model with a functioning business case and offers the advantage of gaining scale rapidly. However, a potential culture clash is among the key risks of an M&A transaction. According to the Harvard Business Review, companies with cultural mismatches see their return on assets drop significantly three years after their merger[3].

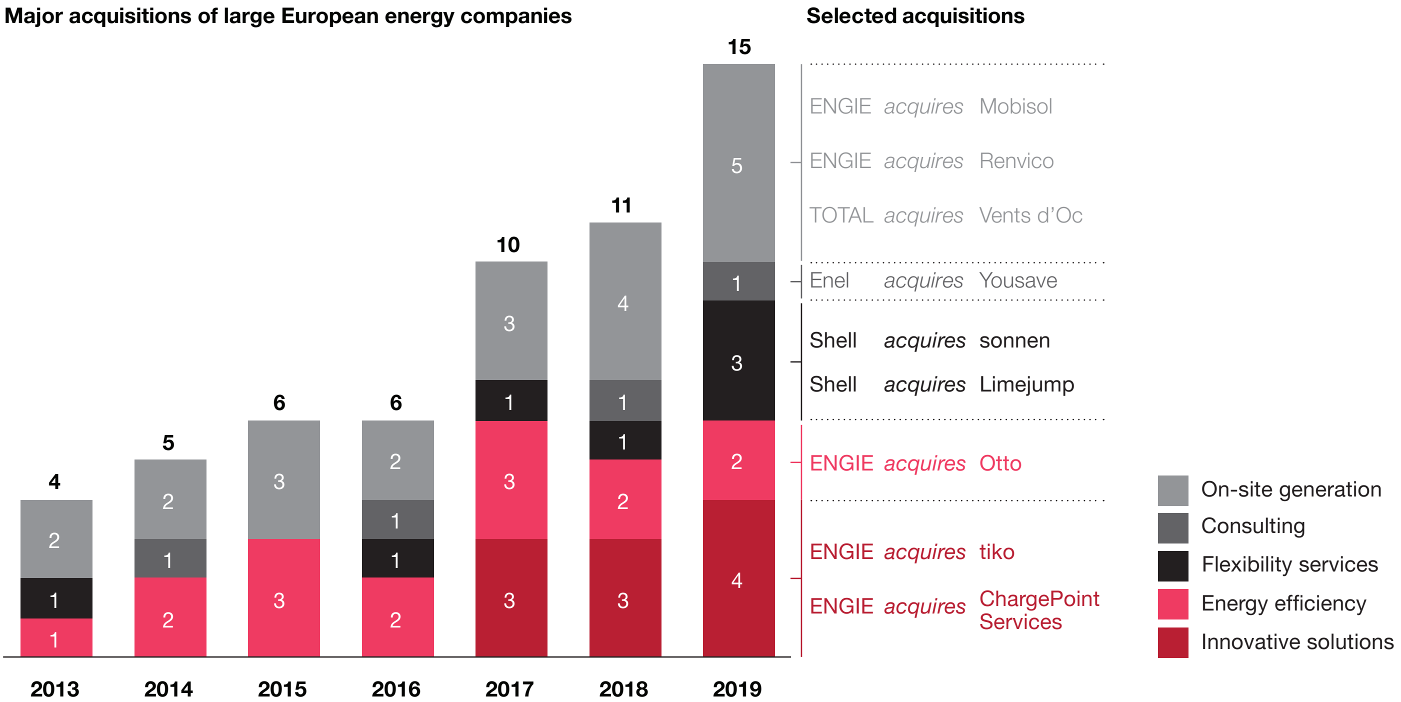
3 Source: Harvard Business Review "One reason why mergers fail: the two cultures aren't compatible" (https://hbr.org/2018/10/one-reason-mergers-fail-the-two-cultures-arent-compatible)

Choosing the right pathway

Of all these options, we consider M&A a highly suitable way for energy companies who want to quickly enter or expand their presence in the energy solutions market. Given the rapid pace of market development and the competitive head start that some companies already have, the other options are typically too slow to build an entire business on. Many energy companies across Europe understand this and the number of their acquisitions in this market is accelerating, as our research in *Exhibit 4* shows.

EXHIBIT 4

M&A in Europe in energy solutions



Source: Mergermarket; Strategy& research

According to our analysis of recent acquisitions by European energy companies, the number of deals in this market more than doubled between 2016 and 2019. This strong increase was primarily driven by acquisitions in the innovative solutions space. The on-site generation segment recorded the highest deal activity with approximately 21 major deals executed between 2013 and 2019.

One notable M&A example was Enel's acquisition of EnerNOC, a provider of smart energy management services. The acquisition was completed in 2017 and valued EnerNOC's shares at US$300 million, an approximate 42% premium to its stock price[4]. It enabled Enel to offer innovative solutions to its customer base. Another example was Shell taking over the majority in battery storage and energy services provider Sonnen. The German firm was acquired in 2019 and Shell declared that it would keep Sonnen's brand identity and leadership team to support their growth under their own brand.

An additional indicator of the appeal of this market is the observation that also oil and gas companies, whose core business has fewer overlaps with energy solutions, completed numerous acquisitions in this space. Within our sample group, TOTAL was the second-biggest acquiror between 2013 and 2019, purchasing eight targets. Across all energy companies, Engie leads the field with 27 acquisitions in total, primarily in the on-site generation segment.

4 Source: Enel Group's press statement, dated August 7, 2017

The time to act is now

In our work with clients developing successful energy solutions businesses, analysis of recent deals and expert interviews, we have learned four key lessons:

1. Organic growth is too slow to reach meaningful scale fast enough
Several utility, oil and gas and pure-play solution companies have already entered the market. To catch up and secure relevant market share and the necessary technological capabilities, M&A is the preferred option.

2. There is no single target that can be acquired to build up all the required capabilities
The necessary build-up of capabilities can be supported through a series of smaller acquisitions, intelligently combined and thoughtfully integrated. However, acquirers cannot expect that acquired companies will operate at full performance without creating the right conditions for the new capabilities to thrive.

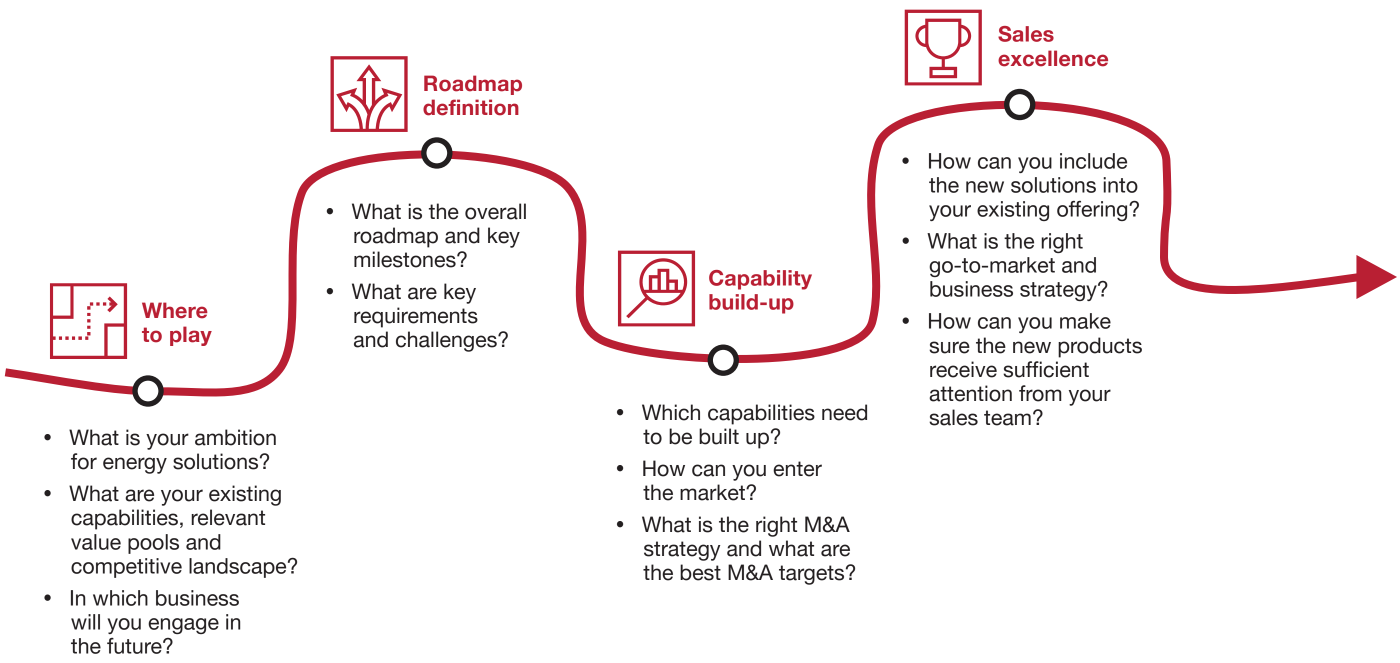
3. Integration must strike the right balance between adaptation and freedom to operate
Integrating acquired companies is always a challenge, and even more so when the size, culture and maturity of the two companies are very different, as is the case between established energy companies and energy start-ups. To capture the full value of the acquisition, a balance must be struck between the target fulfilling the acquirers' synergy targets and maintaining the unique culture that allows the target to fully unfold its capabilities.

4. Entering the energy solutions market is not a side hustle – a dedicated team is required
Market entry and M&A activities fail when they do not receive the top management attention they need. Dedicated teams with a concentrated focus are required to screen and scout the market for potential partners or targets, build up long-term relationships and to take responsibility for delivering transactions and integration.

For energy companies thinking about entering the market, we advise to follow a sequential approach as outlined in *Exhibit 5*, to define, create and build their energy solutions business.

EXHIBIT 5

Potential next steps for energy companies



Source: Strategy& research

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Entering the energy solutions market does not only create long-term growth, but is also an actionable strategic avenue, which we can support with our “Strategy made real” approach.”

Christian von Tschirschky, Partner

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