PwC global power & utilities

The changing role of the CFO How energy transformation is shifting the CFO focus





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Introduction

The chief financial officer (CFO) role is changing. It's becoming more strategically-focused, more value-focused and more future-focused. But the role of the power utilities sector CFO is changing faster than most. The ambit of the power sector CFO is not only being reshaped by the overall transformation that is taking place in the CFO role but also by energy transformation, which is shifting the technological, market and customer context for companies in the sector.

> These twin shifts – in the overall role of the CFO in the C-suite and in the demands placed on power company CFOs by energy transformation – are leading power sector CFOs to look afresh at what they and their departments need to do to keep their companies successfully on track and ahead of change.

As the direction of the power sector shifts, the CFO's role in harmonising diverse business strategies becomes critical to aligning risks and rewards. The role is becoming more forwardand outward-facing, with the CFO at the centre of ensuring that value is maximised from new and existing activities.

In this report, which forms part of a series of PwC publications on energy transformation, we look at how the power sector CFO role is evolving, the challenges it needs to address and the capabilities that will be crucial for delivering first-class performance. The report includes contributions from power sector CFOs in different markets around the world on how their role is changing. And it concludes with a checklist of some of the key questions CFOs in the sector should be addressing as they face the challenges of energy transformation.



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Norbert Schwieters Global Power & Utilities Leader

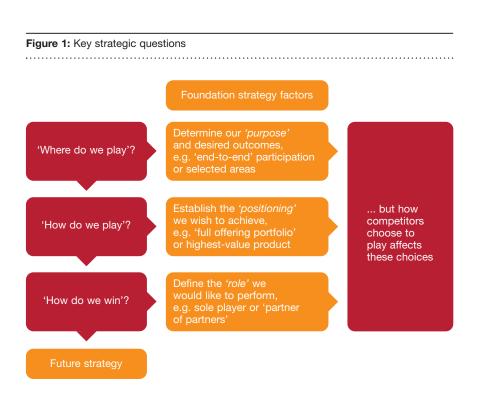
The CFO's new strategic lens

The world of electricity is changing fast. It's a transformation that is exercising a great deal of thought and action in the boardrooms of power utility companies whose traditional business models are under threat. Technological innovation is creating new choices for customers and new opportunities for a wider range of industry entrants. The combination of the 'push' of technology, the 'pull' of the customer and the threat that comes from new competitors poses questions that go to the heart of company strategies and the role of the CFO.

The changing CFO role

The CFO's role has always ranged from a fiduciary one (a custodian preserving value) to a visionary one (an architect creating value). In the past, the traditional business model in the power utilities sector has tended to move the CFO role towards the fiduciary end of the spectrum rather than the visionary end. But now this role is becoming much more about strategy than stewardship and even more about value realisation and optimisation.

Value for companies in the sector has been traditionally created by a well-understood capital investment and commercial model with a strong emphasis on effective regulatory positioning, clear competitive strategies for each market segment and disciplined infrastructure development and deployment. The emphasis changes for different companies, at different times and for different markets but the essential focus of producing or buying electricity, moving it and selling it on a large-scale centralised grid basis has been the same.



A different value focus

However, in the emerging digital, decentralised and technology-disrupted energy world, value is likely to come through more diverse and less stable sources. This broader value creation and greater uncertainty requires a new strategic lens to be applied by the CFO – one that is capable of discerning 'where to play' strategically, 'how to play' commercially and 'how to win' competitively (see figure 1).

At a time when energy transformation is leading many companies to embark on new value chain directions, consider restructuring to separate out different value streams and/or weigh up the merits of new outside collaborations and partnerships, the CFO needs to think more broadly and look harder at a wider range of issues to inform a winning strategy. While the CFO is not the principal architect of the corporate strategy, the focus provided by this position on realisation of value complements the design of these strategies.

The CFO will be particularly focused on creating congruence between the strategies developed for the enterprise and the financial imperatives established for the business. The CFO understands that strategic success cannot be achieved without financial success, and linkage of these two key dimensions is fundamental to realising expected values from strategy to execution. As this new era of industry disruption evolves further, the CFO will move from holding a perspective that effective execution is the primary driver of results to one that recognises that realised value is a function of strategic and operational alignment.

Successful CFOs in this new environment will develop an enhanced set of key capabilities that can be leveraged to strengthen strategic, financial and market positioning. These capabilities will need to evolve from an emphasis on rigorous planning and budgeting and financial performance management to building business acumen and designing effective collaboration models. While the historical capabilities related to management reporting, performance management and investor relationships will continue, they will become more akin to minimum requirements. Alongside them, differentiating capabilities focused on turning data into insight and, more importantly, insight into foresight will become more valuable.

This increased focus on building and embedding enhanced capabilities will enable the CFO to change the nature of the conversation with key parties – at the board level, within the business and with the investor community. This conversation will not abandon the underlying custodian and stewardship functions that have characterised traditional CFO roles; rather, it will now evolve to one that emphasises value realisation as the overarching outcome that guides strategic decisionmaking throughout the company.

Aligning cost to value

The 'strategic CFO' focuses on linking strategy with execution and market plans to deliver the positioning outcomes that are being pursued. This CFO understands that strategy is not an end in itself and lacks real value unless tightly aligned with a 'purpose' that visibly underlies its operationalisation. Achieving this type of perspective necessitates establishing a clear and common understanding of purpose, outlining how the company delivers value – upwards at the board, outwards to investors, policy-makers and regulators, and downwards through the organisation.

In practice, this requires understanding and separating those projects and practices that create clear market positioning value from those that merely draw resources and do not advance the strategic agenda of the company. This understanding needs to be based on a clear, evidenced rationale, drawing on experienced insights, strategic perspective and fundamental data analytics. In this case, the CFO needs to be well informed on the relative value to be derived from an investment, as well as persuasive in how to position the arguments favouring one option over another.

In particular, the capital allocation process now needs to focus more diligently on investment screening, benefits evaluation, expenditure priorities, commitment management, results verification, and return realisation – all from the perspective of how value will be created and at what level against the full portfolio of available options. Managing these processes is critical to a company being able to improve total value contribution and optimisation of the current and future investment portfolio. These processes, however, will now need to be executed directly against the strategies that guide the business rather than against the financial constraints that limit the ability to invest indiscriminately. And, if the enterprise's strategic outcomes are to be achieved, these will now need to be designed to enable comparison of capital deployment options across the business, not just within a particular business unit. The application of this perspective to potential capital investment options becomes the basis for achieving greater clarity about strategic cost allocation. It helps the CFO identify those projects and investments that are capable of delivering distinctive, sustainable growth and which should be backed and nurtured. It also enables the CFO to identify others that may not be as profitable, but are necessary to create a 'right to grow' or to establish a market presence to build and sustain customer credibility.

Key areas of future CFO focus:

For many key processes, the CFO is an architect of what to do and how to do it. Energy transformation¹ has added a new dimension to how the CFO approaches these key areas.

Strategy design: As the direction of the utility sector shifts, the CFO's role in harmonising diverse business strategies becomes critical to aligning risks and rewards. As this strategy devises and leverages new investment structures, the CFO is at the heart of the consideration of how these models are best structured and managed.

Governance model: Effective alignment and decision-making within the enterprise are fundamental to both strategic and financial success. The CFO is at the centre of designing how to increase collaboration and transparency within the business, in order to support decision-making and reinforce accountability.

Inorganic growth: Organic business expansion will need to be complemented by targeted inorganic growth to support future enterprise success. In addition to creative transaction structuring, the CFO has to display a dispassionate corporate conscience over valuation and priority among options.

Portfolio optimisation: The selected strategies also lead to a more diverse portfolio of businesses and assets, many of which do not co-exist. The CFO needs to be both the custodian and craftsman of all sources of shareholder value, instilling the discipline to optimise the parameters and composition of the current portfolio.

Capital allocation: The disciplined deployment of investment capital is a distinctive way to 'stretch' financial resources. CFOs need to sharpen the criteria employed to assess alternative investment uses so that allocation of capital flows to the most attractive blend of available options and projects.

Market positioning: Once the enterprise has selected 'where and how to play', a requirement still exists to communicate the strategy in a compelling manner. The CFO is the face of the company to the market and will need to articulate positioning and value in a distinctive and differentiating manner.

Risk management: The future utility competitive environment and market model are redefining the nature of industry risks and uncertainties. These emerging challenges require the CFO to rethink how to frame relevant risks and to reassess how to evaluate and mitigate their impacts.

Performance management: After the corporate strategies and deployment decisions are executed, outcomes become the yardstick for whether results conformed to expectations. The CFO performs a vital role in not simply tallying the resulting metrics, but in shaping the overall assessment framework.

¹ For a full discussion of energy transformation see The Road Ahead: gaining momentum from energy transformation, PwC, 2014.

Going beyond the numbers

RWE is one of Europe's five leading electricity and gas companies, active at all stages of the energy value chain, and serving over 16 million electricity customers and seven million gas customers with energy.



Dr Bernhard Günther, Chief Financial Officer of the Executive Board, RWE AG, says the CFO needs to play a key part in shaping strategy, change and

competitive direction as the utility industry transforms.

I see two forces at work driving the evolution of the utility CFO. The first one is the general development of the CFO role into broader tasks than pure finance which we observe in many industries. The second one is the transformation of the utility industry towards becoming 'greener', leaner and more decentralised.

These factors can be summarised in three trends. CFOs will increasingly:

Go beyond the numbers to be a co-shaper of the corporate agenda

They will be contributors and challengers to strategy and business development by providing a critical and independent second pair of eyes. Likewise they will be in the natural position to challenge the performance of the business and push for continuous efficiency improvements – more than most other members of the C-suite.

Act as change leaders

As the utility world becomes greener, leaner and more de-central, the finance functions have to change as well in terms of how they operate. And the CFO must personally lead this change. There are three directions emerging in parallel. Firstly, some functions which are more of a service-like nature (e.g. transactional accounting, tax or treasury) will be bundled company-wide including near- or offshoring or even outsourcing. Secondly, functions such as performance controlling which are close to the operational business will see even more 'de-central' empowerment as the business models become more decentralised. And thirdly, there are emergent new and innovative business models which require setups for financial control and compliance that are rather different from the established large-scale, capital-intensive utility businesses.

Define the right arena for utilities to compete

The CFO will drive the debate on which role in the utility arena one should adopt as opposed to other players active there. This is about consciously choosing whether your company should seek its competitive advantage in the role of asset owner (as compared to, for example, financial investors who may be seen as 'natural' asset owners with their low cost of capital and ample funds), or asset operator, or service provider, or systems integrator of all those bits and pieces on a higher level.

A sharper focus – specific energy transformation challenges

Energy transformation, as we saw in the previous chapter, is forcing power company CFOs to take a more strategic view in addressing business challenges with consequences for the nature of their role. Many power utility companies are now operating in conditions where the traditional core revenue stream is much more uncertain. For the first time ever, the potential for a power utility company's business model to become eclipsed and left stranded is a real one.

> Customer- and asset-relevance are everything. Power utilities cannot afford to be seen as being of dwindling or marginal relevance to the customer or being left with the wrong set of assets, technologies or capabilities. The business models and the operational focus of many companies in the sector are changing in response. In broad terms, there is the distinction between asset-based strategies, with returns largely set by the ability of the company to manage assets within a defined regulatory regime, and those that are customer-focused, with returns dictated by the competitive margin achieved by delivering greater value to customers and, in turn, gaining greater value from them.

There is an industry transformation taking place and, within that, companies are embarking on their own transformation strategies. Some companies are moving fast to occupy new positions while others play more of a 'wait and see' game. CFOs are at the centre of explaining and delivering on their company's chosen strategy. Their audiences are still the same – boards, investors, policy-makers, regulators, ratings agencies – but the story is much more diverse and complex.

Energy sector participants are increasingly operating under a mix of business models along the value chain, from traditional rate of return or revenue cap to margin-based and incentive models. As their operating environments become more complex and unpredictable, the CFO role needs to take on a much greater focus on both strategy and optimising value through continuous improvement.

As well as the overarching issues discussed in the preceding chapter, energy transformation presents a number of specific challenges. In the sections that follow, we highlight eight that we believe should be at the front of every CFO's mind. The degree to which each challenge applies will depend on each company's exact market context and jurisdictional variations.

Figure 2: Business model and technology transformation

Business model transformation

- New markets
- New customers
- New products and services
- New competitors
- New partnerships

Technology transformation

- Digitisation of customer
- Digitisation of assets and operations
- Distributed energy resources and micro-grids
- Energy efficiency and demand response
- Beyond-the-meter automation

Anticipating and leveraging the impact of new technologies

The acceleration of technologies such as digitalisation, combined with the expansion of the breadth of the 'internet of things', is creating new opportunities for utilities. The pace of development of many of these technologies is far faster than many of the technological changes that have taken place in the power sector in the past and well beyond the expectations of many industry observers. Importantly, barriers to entry are being broken down and new entrants are taking up positions in the sector, particularly in distributed energy resources and customer-facing technologies.

The rapid change in technology also creates business risk, not just because the technology is new but also because the increased digitisation of assets and customers opens up the utility to greater risk of malicious cyberattacks. Ensuring that the business has robust cybersecurity protection, along with contingency arrangements that allow it to continue to operate, is now high on the agenda of many CFOs.

Internet-connected home devices of all types, premises-based distributed generation and higher-efficiency storage enable business-to-consumer and business-to-business relationships and have the potential to realign elements of the traditional energy value chain through the creation of new value networks. Data directly from the proliferation of discrete generation and consumption points may become a commodity that can be monetised by new market entrants through new products and services, as well as enhanced grid 'value'. Utilities need to assert their role in these future value networks to reduce the risk of losing revenue, market share or the ability to build new sources of margin.

The effects of technological change pose both an opportunity and threat to utilities. For example, it can help utilities meet demand loads while limiting capital commitments for generation through net-metering of the contribution from distributed generation and by supporting the smarter utilisation of energy when it is necessary to be consumed. But the same 'beyond-the-meter' technology also enables new market entrants to disintermediate certain customer loads from their traditional utility providers and to do so without costly infrastructural investments.

Among the issues that are of CFO relevance:

- Evaluating the impacts on revenues and business models from new technologies.
- Leveraging the capabilities of new technologies to enhance business execution and customer value.
- Predicting the pace of change and the risks and rewards of 'first mover' investments.

Challenges for the CFO to address

Assessing and quantifying the business risk associated with the adoption of new technologies and making the right technology bets.

Utilising new technologies to create or enhance revenue streams.

Managing the costs of implementation and maturation, with good risk mitigation plans.

Advising on appropriate risk/reward incentives for new forms of technology partnerships.

Positioning communications with financial stakeholders as the business embraces technology.

Ensuring the business has effective cybersecurity protection in place and has robust business contingency and recovery arrangements that will allow it to withstand cyberattacks.

On the ground: examples and issues

The smart meter rollout in the UK is being hampered by delays in agreement on technical specifications, creating reluctance to commit capital for full-scale implementation.

In countries such as Japan, where full customer competition is due to take place, utilities need to determine their strategy for investment in end-to-end customer and revenue systems.

Reassessing and restructuring the asset portfolio to optimise value

Regulatory policies, financial pressures and market outlooks are forcing utilities to look both at the appropriateness of their corporate structures and the parts of the value chain where they wish to participate. As energy transformation expands, the need to introduce responsive capabilities increases and the need for new assets, delivery systems and execution processes lead to the reassessment of the capability to succeed in current business areas or to optimise the value potential of the portfolio.

On the one hand, companies are being forced to make a choice where none was required before – do I 'hold or harvest' certain assets or businesses? These determinations will need to be based on a sober assessment of whether the incumbent owner is best suited to maximise the value of the asset or business, or whether a new owner would be better positioned to add value.

Alternatively, the choice may be between traditional or unconventional ownership. New structures are emerging, such as REITs, yieldcos, etc. that enable owners to restructure the business and create a new source of financial value. These structures offer the potential to realise higher valuations, as well as capture tax and earnings benefits. As companies make these assessments - and wrestle with the dual dilemma or whether to 'hold or harvest' and 'retain or restructure' the asset or business, companies will need to place greater emphasis on understanding business and financial risks and managing portfolios to optimise value.

Among the issues that are of CFO relevance:

- Separating or exiting businesses to be either fully regulated or fully unregulated.
- Derisking asset investment projects to make them attractive to particular types of investors.
- Expanding access to non-traditional forms of capital.
- Devising defensive or proactive interactions with regulators to address the impact of market changes on asset recovery.

Challenges for the CFO to address

The benefits of restructuring or 'carve-out' of segments of the business to reflect new strategic goals and value optimisation.

Optimising the financial viability of any 'carve-outs' from the core business.

Developing investment propositions with a risk profile that will attract new capital.

Alternative approaches to investment financing in an environment of more competitive markets.

The need to reassess the structure of transfer pricing agreements between different parts of the business.

On the ground: examples and issues

The split of E.ON into two groups (the future E.ON, including the German nuclear business of PreussenElektra, and Uniper) with different strategic focus and operating models.

The unbundling of different parts of the business as part of national electricity industry restructuring in Saudi Arabia.

In the US, alternative corporate structures such as yieldcos, master limited partnerships (MLPs) and real estate investment trusts (REITs) play a significant role in the energy sector.

Turning transformation to advantage



long been recognised for its fiscal management prowess and attractiveness as a stable yield and growth investment.



Art Beattie, the Executive Vice President and Chief Financial Officer, Southern Company, knows that a company's past is not a prologue to its future

and successfully meeting tomorrow's challenges requires strategically positioning the business.

The role of today's CFO has evolved beyond the custodial model so common in the past and often focused on accounting over finance. While preserving enterprise value remains a key focus, it is just one of several roles that I play. Now, there is an ever-increasing emphasis on architecting a strategic future and transforming legacy value into new value sources.

Our company operates in an environment where increased complexity, and thus uncertainty, is the norm. When you factor in sustained economic malaise and market risk, it's increasingly difficult to ascertain exactly how the future may look. We try to 'skate to where the puck is going to be', but it's not easy to see around the corner in today's world, especially with the acceleration of technological advances.

I'm acutely focused on ensuring that our strategy is directly linked to our financial and operating imperatives – more than ever before. Historically, our assets and the service we provide have been an important foundation for the economic health of our service territories. Today I need to understand 'where and how' the electric grid will sustain and add value in the future. I also need to understand how Southern Company can capitalise on its position as one of the most admired companies in our industry and commercialise that reputation.

For sure, the financial markets will continue to focus on the fundamentals, i.e. sales, return on capital and cash flow. However, our long-term investors are also increasingly thinking like business owners and focusing on broader non-financial dimensions than they have in the past, e.g. competitive capabilities, business models and innovation. Each of these factors will likely receive greater scrutiny in the future and we need to educate our investors on our readiness and commitment to protect our intrinsic value and take advantage of opportunities that present themselves.

It will not be an easy task to preserve value in the electric industry in light of transition we are now seeing. But if we can design our strategies in a manner that enables new or enhanced business models, we can open new revenue streams, solidify our customer relationships and build sustainable value for our owners.



Designing new ventures and commercial arrangements

The new business models we are seeing require new business partners, new skills and competencies and different kinds of commercial relationships. The digital revolution is leading to customer access innovation at the same time that technology performance innovation is leading to grid parity across renewables. This trend is set to continue across both the technologies and solutions that will be offered to customers along the energy value chain.

If utilities are to maximise the opportunities arising from technology, they need to take a different strategic approach. The challenge is to determine which technologies to support, the type of services to offer to consumers and how best to harness the skills and competencies required to move from strategy to market delivery. Incumbent utilities will need to assess whether they have the requisite innovation, experience and portfolio breadth to address future customer needs for products and services. From the current standing start, the answer is likely to be that the requirements of the future are not met through the capabilities of the past.

We see first movers appreciating the need to learn from the experiences of other industries, by entering into strategic partnerships and recognising that the traditional self-contained utility mindset can actually constrain innovation. These companies are identifying potential partners that can accelerate their market readiness through available technology, market positioning or innovative products and services. The type of collaborative arrangements that might open up are a new departure for many utility companies who may have previously not ventured beyond traditional partnership arrangements. As transformation unfolds, utilities will take advantage of capabilities, channels and relationships that were either not available or not leveraged for market advantage.

Among the issues that are of CFO relevance:

- Assessing opportunities against the existing portfolio of businesses and relationships.
- Defining the range of structural approaches to position within an evolving marketplace.
- Balancing the need to invest in new channels to market with the need to maintain adequate visibility.
- Defining the parameters of attractive partnering relationships and arrangements.

Figure 3: Designing new ventures and commercial arrangements

 Utility		New partner
Limited number of products/services	Customer relationship	Channel to market for multiple products
Risk averse	Risk preference	Risk takers – 'big bets'
Proven	Technology preference	Innovative
Slow, driven by approvals	Timescale for implementation	Fast-moving
Limited, ring-fenced projects	View of competitors	How to partner to increase value
Constrained by regulation	Competition	Free market mindset

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Challenges for the CFO to address

Achieving congruence in partner strategy from the early stages of any formal relationship by aligning interests and appropriately sharing costs, risks and rewards.

Maintaining adequate control of investments while giving leeway to business partners to enhance value.

Management and optimisation of a portfolio of business relationships with non-utility partners.

Gaining comfort on the ability to risk assess new ventures – especially technical risk and optimism bias, and putting in place appropriate mitigation measures.

Development of the right exit strategies when necessary to preserve value.

On the ground: examples and issues

Emergence of 'beyond-the-meter' home automation devices and services (e.g. Google, Apple and Samsung through their Brillo, HomeKit and SmartThings initiatives).

Data aggregation as a service enabling, distribution businesses to partner to manage energy balancing on a more local level (e.g. pilot projects in the UK and France).

Achieving full recovery of prior investments

In many markets, serviceable generation assets are being retired early. In Europe, this is driven by environmental subsidies and public policy initiatives. In the US, expansive gas supplies, market structures and environmental policies are contributing to assets being prematurely taken out of service. And in developing countries, inadequate rates and non-payment are forcing assets out.

In particular, electricity markets have become less stable. Merit order dispatch has changed as a result of low-carbon policies such as the introduction and removal of feed-in tariffs for renewable energy, relative fuel prices (gas vs. coal), market intervention such as capacity markets, the impact of technology on fuel prices (for example, shale gas) and increasing levels of distributed and micro-generation. With little prospect of change in the medium term, some thermal and renewable generators have found themselves unable to compete. The need to maintain shareholder returns has led to unexpected decisions being taken with impacts occurring in cost recognition, cost recovery and asset reinvestment.

Among the issues that are of CFO relevance:

- Determining investment hurdle rates that reflect the changing risk profiles in energy markets.
- Determining the level of sustained investment to maintain individual assets until the market improves.
- Assessing impacts on cash flows, credit rating and financing capability of impaired assets.
- Weighing up the costs of closure, mothballing, operating or conversion of 'underwater' assets.

Challenges for the CFO to address

Whether, how and when to take capital write-downs given broader strategic and financial imperatives?

Understanding the value of the asset portfolio to drive rebalancing decisions and mitigate the impact of stranded assets.

Adjusting long-term capital spending plans to take account of uncertainties in supply sufficiency and demand projections.

Determining which new investments can achieve financing that will support maintenance of the utility's target credit rating.

Dealing with liabilities linked to specific assets in the portfolio.

On the ground: examples and issues

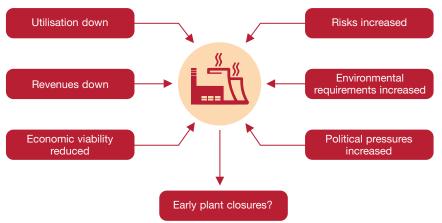
According to the expert opinion published by the Federal Ministry for Economic Affairs and Energy, companies supplying nuclear energy in Germany have made €38.3 billion in provisions for decommissioning nuclear generation.² And in the UK, there was a £2.8bn writedown of generation assets according to the 2014 reports of the seven biggest power utility companies.³

In the US, Duke Energy closed 3.8GW of coal-fired plant and expects to close a further 2.5GW by 2018 due to environmental regulations and the price of shale gas.⁴

In Saudi Arabia, diesel-fired generators are stranded as part of a planned decommissioning programme.

- 2 Federal Ministry for Economic Affairs and Energy expert opinion, 10 October 2015.
- Analysis of company annual accounts.
 Duke Energy, https://www.duke-energy.com/ about-us/retired-coal-units-potentialretirements.asp





Communicating where the future is taking us

AGL Energy is one of Australia's leading integrated energy companies and was the first energy retailer to launch a battery storage device into the Australian market, as it shifts its business strategy. The company has traditionally pursued a classic 'gentailer' business model of vertical integration but now asserts that "the categorisation of a gentailer is not something that should define AGL. Rather, our new business definition is to 'harness insights to enrich the customer's energy experience.' In this way, everything we do is centred on the customer and the interaction they have with AGL around their energy use."



Brett Redman, Chief Financial Officer, AGL Energy Limited, gives his perspective on how the role of the CFO is evolving as his and other power

companies respond to a changing energy model.

The pace of change is picking up in the power and utility space. Ten years ago investments were large, long-term and made off the back of a steady rise in consumption. In ten years' time, the centralised energy model will be fragmented and more engaged customers will be demanding rapid innovation to meet their lifestyle and business needs.

The role of the CFO is simultaneously changing. A shift is underway to move from being the custodian of a largely stately balance sheet to finding ways to support nimble start-up ideas without compromising the integrity of the central systems. At AGL we have identified the need to develop an anticipatory culture to prepare for these changes early. It began with a strategic review and organisational restructure during 2015 and is ultimately focused on improving return on equity against the tide of falling energy demand.

One noticeable impact on the role of CFO at AGL has been to group in IT, procurement and corporate development functions alongside traditional finance activities. This is allowing for a stronger focus on cost and process improvement, even while strengthening business partnering to get strong endorsement for the changes needed.

At a more macro level, the change is also helping to enable what AGL is calling 'asset portfolio management', which is building in the right processes and cultures to move in and out of asset positions fast as the market evolves. In the short term it includes selling non-core assets and strengthening the balance sheet. At the same time, we are developing ways of valuing and on-boarding new, often small and hard-to-value business ideas which may or may not work as the future unfolds.

Now more than ever, the ability to communicate is vital. As a leader in talking to share markets, banks, boards and internal stakeholders, the CFO in active partnership with the CEO must be able to explain where the future is taking us.

* AGL Energy, 2015 Annual Report.



Delivering growth and transformation



Saudi Electricity Company (SEC) is the largest utility in the Middle East, addressing megatrends such as growing urbanisation, demographic changes and increasing sustainable technology breakthroughs. The Saudi electricity market is the largest in the Arab world. Demand for electricity is predicted to increase by an average annual rate of 7–8% for the foreseeable future, driven by a growing population, rising per capita consumption and an expanding industrial base. As well as meeting the demands of growth and potential changes in regulation, SEC is implementing positive internal changes through its Accelerated Strategic Transformation Programme (ASTP).



Ahmed Jogaiman served as Chief Financial Officer CFO of SEC and has seen at first hand the changing role of the CFO.

Whatever the elements of energy transformation, the role of the CFO in SEC has evolved in order to meet the environmental challenges of that time. Between 2000 and 2010 the CFO of SEC was mostly looking at cost control. SEC was a service provider, with little room for change. Expenses were strictly controlled and any gaps would be supported by further government spending.

Around 2011 the CFO's role changed to one of cost control and treasury. Empowerment was given to treasury and financing options whilst costs and efficiencies within the utility became more complex due to changes in technology. More recent and drastic changes in finance have impacted the role of the CFO, requiring new skills. SEC adapted well to local financing, having a credit rating and reviewing international financial transactions.

Today's CFO is to help shape and direct the strategy of the SEC business with financial decision-making processes, whilst recognising the changing regulatory environment. Finance now works hand in hand with engineering to define high-vale capital programmes, with stage gates monitored by the financial function. Therefore, today the business strategy is fully supported by Finance, which in turn protects the company and the Kingdom of Saudi Arabia (KSA), taking into consideration the risks exposed by growth. Redefining the finance budget engineering improved the ability to support the high-value capital spend, including sourcing primary and secondary loans. The CFO has to consider the credit rating of SEC to ensure the capital costs are protected. Changes in credit rating affect the ability to raise income over a long period of time. The CFO now has the ability to reflect with the government and regulator on how to protect the credit rating of the business.

In the future, the CFO will be more focused on the KSA electricity market changes, including more privatisation and increased competition. The future CFO must protect SEC market share whilst dealing with reduced obligations from government and possible electricity price changes. The CFO will also require a strong relationship with government and the regulator to drive changes in the utility market.



Influencing policymakers and regulators

Balancing the energy trilemma of affordability, security of supply and decarbonisation is resulting in increased regulation and scrutiny from policymakers, leading to increased uncertainty for utilities and an unwillingness to make significant investments without support.

Renewable portfolio standards and smart grid mandates are increasingly driving investment priorities. Alongside this, utilities are under pressure from energy efficiency standards which reduce energy revenues, depress demand for new generation and can lead to excess network capacity. Regulatory regimes are thus having a more intense effect on the nature of investments, including delaying expansion and replacement decisions. At the same time, increased regulatory scrutiny is necessitating additional reporting and data gathering, affecting processes, systems, staff and operating efficiency.

There is now also a much wider set of regulations that come into play as well as energy regulation. Health and safety, environmental, data protection and privacy, and legislative safeguards against bribery and corruption all need robust auditing and reporting to be in place. This becomes even more of an issue for the CFO as companies extend their global footprint and/or partner with new organisations. Companies will find that an ever greater portion of their strategic focus is directed toward policy, rather than the competitive markets. In this environment, capabilities will need to centre on building and honing legislative and regulatory prowess. Incumbents will spend more external effort on shaping near-term policies that have long-term implications for their business positioning and their financial performance.

Among the issues that are of CFO relevance:

- Shaping the proactive role to be taken with the regulator to make the case for new sources of revenue or defend existing ones.
- Managing the obligation to deliver accurate and timely financial and regulatory reporting during periods of significant business change.
- Forecasting business performance and demonstrating continuous improvement through periods of regulatory and policy uncertainty.
- Educating regulators on the business and financial risks related to transformation of the industry.

Challenges for the CFO to address

Developing investment and financial management strategies that recognise regulatory policy uncertainties and their impact on the business.

Adapting the financial management of the business in response to regulatory obligations such as mandates for unbundling, smart grid or renewable programmes.

Devising new regulatory mandates to address changes in current markets related to transformation.

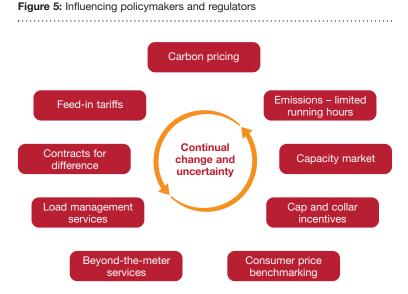
Defining the right future policies to address 'second stage' effects from poor policy design.

Determining and defending the rate case or regulatory submission to regulators to incorporate the operational implications of technology and transformational change.

On the ground: examples and issues

The UK network regulatory regime incorporates incentives for network businesses to adopt operational innovation and to share the resulting benefits.

In India, utilities have had to justify retrospective changes to regulated tariffs to reflect changes to fixed costs and fuel costs.



Replacing declining revenues from traditional businesses

In recent years, utilities have experienced the sharp adverse impacts of demand destruction from economic stress, as well as the sustained impact of declining consumption as the cumulative effects of energy efficiency programmes continue to mount. More recently, new technologies, such as roof-top solar, and changed customer behaviours, such as the desire for choice, threaten traditional utility business models. Customers can now self-supply, bypass utility infrastructure and install more inventive consumption tools, challenging the role of utilities.

For example, traditional utility network business plans are based on regulated returns from long-lived assets. As technology leads to more decentralisation, the network businesses need to raise the same level of revenues from a smaller number of customers and reduced volume throughput. The necessary solutions will be guided by both strategic and regulatory solutions. To avoid a continuous decline, the utility sector needs to look at both how to deliver traditional services efficiently, but more importantly create the ability to backfill revenue erosion, regardless of cause. This will demand more innovation at the top line, as well as more inventive policy definition to enable pricing models to be redefined to match the nature of market structure and cost-recovery requirements.

Among the issues that are of CFO relevance:

- Reassessing timescales for capital investments and efficiency improvement schemes to offset reductions in revenue.
- Identifying alternative business models and partnerships to offer alternative services and approaches to pricing and recovery.
- Justifying regulatory tariff requirements given forward revenue and volume projections.

Challenges for the CFO to address

Predicting, measuring and managing the impact of customer load reduction on revenues.

Defining the options and potential for new revenue creation and capture.

Design of alternative cost-recovery approaches given the decline in volume and level of potential unrecovered costs.

Identification and development of other services that could be offered to replace lost revenues.

The appropriateness of different business models to be considered for network ownership or operation to enhance derived value.

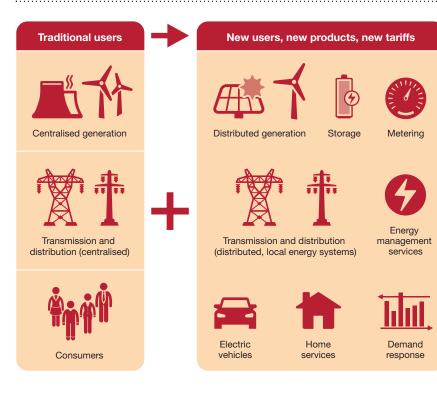
On the ground: examples and issues

In Australia, network utilities are having to review their maintenance and investment programmes as reduced demand results from economic downturns, micro-generation and energy efficiency.

In the US, focus is now turning to the adoption of more certain cost-recovery mechanisms, e.g. straight-fixed variable models, to reflect fixed cost levels.

Network companies in the UK have entered into strategic partnerships with companies in their supply chain to more effectively manage their cost base in areas such as maintenance, new connections and network expansion. They have adopted multi-year contracts with incentive arrangements that encourage operational innovation and management of schedule, cost and quality.

Figure 6: Replacing declining revenues from traditional network businesses



Constantly mapping changes and risks

> India's Mytrah Energy has developed a substantial windpower portfolio spread across six Indian states – Rajasthan, Gujarat, Maharashtra, Andhra Pradesh, Karnataka and Tamil Nadu. The company's portfolio was built using a combination of 'turn-key' developers and in-house project development, with wind turbines purchased from three leading vendors.



Shirish Navlekar, Chief Financial Officer and Director, Mytrah Energy Limited, gives his viewpoint on the contrasts between the CFO role

today and what it will look like in ten years' time.

What are the biggest changes you expect to see in the CFO role in power and utility companies?

I see the CFO role transforming to something more akin to a business intelligence unit where constant mapping of environmental changes would need to be simulated to predict and realign the strategy and reduce risks.

What do you see as the major challenges for the CFO role arising from energy transformation?

I'd expect the transformation of energy to lead the CFO role to move to more of a chief risk officer considering the emergence of newer technologies, renewables becoming the mainstream source of energy at competitive prices, and the expected shift in the whole energy chain to a totally different scale and methodologies. The way the energy business is expected to run would be very different from today considering various factors, most importantly the environmental and social considerations.

How do you see your role and your department changing to keep your company successfully on track and ahead of change?

Diversification of sources of generation, geographies, customers and suppliers would be the key requirement apart from asset sweating in a traditional way. Of course, diversity in financing sources, innovation and differentiation would be necessary to keep ahead of competition. As a finance function and CFO, the role has to be seamlessly integrated in every functional area to protect and enhance value.

Measuring enterprise performance as business models shift

While changes to business models are driving new relationships with customers and suppliers in the energy value chain, they are also putting additional pressure on the management of business performance in a more demanding market and investment environment. They are also causing traditional business models to change, which further exacerbates the stress to produce requisite financial results.

Utilities need to put in place more definitive operational standards and targets that directly address these heightened enterprise performance requirements. Customer behaviours are changing rapidly. The need to recognise customers' greater demand for higher value from their discretionary spend is leading utilities to focus with greater diligence on aligning business strategies, financial targets and market outcomes. As this range of issues broadens, the responses of the industry will also need to expand. While some of these issues are linked to the process of liberalisation and others are arising due to the proliferation of emerging technologies, the challenges to the industry do not differ greatly. Companies will need to find the right balance between pursuing aggressive strategic goals and ensuring that core operational performance is not only sustained, but also enhanced.

Among the issues that are of CFO relevance:

- Determining how to monetise information about customers and customer demand and develop new opportunities.
- Determining how to assure revenue as billing becomes more complex and new bi-directional customer/supplier channels emerge.
- Determining the new levers and key performance indicators (KPIs) required to manage increasing complexity.

Challenges for the CFO to address

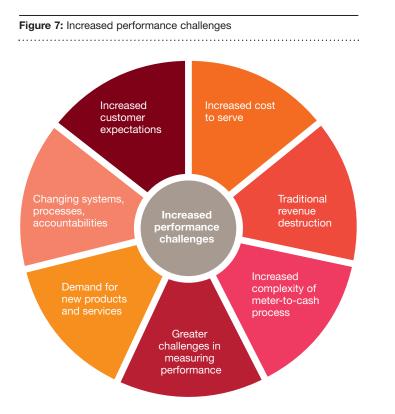
Ensuring that the execution models utilised by the company are aligned with the financial needs of the business.

Making sure that finance performs the role of an agile business partner to the operations and commercial parts of the business.

Ensuring that the KPIs monitored are effective at demonstrating quality outcomes against strategic objectives, balancing consistency, quality and efficiency.

Implementing a culture of continuous improvement and efficient change management.

Developing a model for measurement of business performance that extends beyond common financial and operational metrics.



On the ground: examples and issues

Some US utilities have adopted a new tariff strategy that incentivises consumers to reduce load at short notice in return for lower tariffs.

Similarly, in the UK, the introduction of smart meters is set to reduce to cost to serve for pre-payment customers and result in the advent of lifestyle tariffs. These tariff structures will require radically different sets of KPIs and performance measures to track profitability.

Across the globe, the advent of the prosumer – a customer that both produces and consumes – is creating new business models requiring more complex billing and settlement processes. Monitoring the effectiveness and ensuring the accuracy of these processes requires new models for measuring performance that cut across different parts of the utility value chain.

8

Attracting capital through appropriate risk allocation

The energy sector competes for scarce global capital with large infrastructure projects, regulated businesses and cross-industry retail investment opportunities. The unprecedented volatility and uncertainty in the energy sector is changing investor risk perception, placing additional pressure on utility balance sheets.

Attracting capital has always been a challenge, but the disruption caused by energy transformation has added a new dimension to the challenge for utilities. As the structure of the market changes and becomes less stable, both in the competitive and regulated sectors, the choices of where to allocate scarce capital become more complex. Investors have a vast array of infrastructure projects in which to place their capital and the advent of smart grids, renewable technology and beyond-the-meter services increases the risk profile above that of a traditional utility. Companies need to balance the longer-term capital replacement requirements associated with traditional business models with the shorter-term capital return horizons that align with the new fundamentals of the market. Risk allocation to the party best able to manage the risk becomes ever more important in attracting investment.

Among the issues that are of CFO relevance:

- Risk management of projects, new business assets, new ventures and operations.
- Prioritising capital investment across traditional and new ventures to assure competitive position.
- Structuring supply chain contracts to provide a more appropriate risk/reward balance to demonstrate derisking of projects to investors.

Challenges for the CFO to address

Prioritisation of future capital investment levels and timing to optimise financial outcomes.

Understanding of the differences in risks related to capital projects across the company value chain.

Development of risk-adjusted returns to reflect the true level of risks associated with individual capital projects.

Management of capital deployment performance in a manner consistent with internal risk assumed.

Adoption of more stringent project evaluation business case methodologies to ensure optimisation of scarce resources.

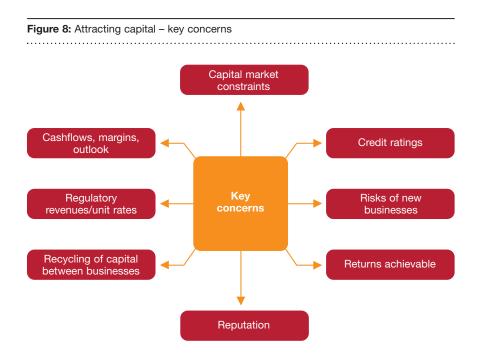
Ensuring appropriate risk allocation and return on investment to attract financial investors for major projects.

On the ground: examples and issues

US utilities are seeking to spread the risk associated with major capital projects by offering a larger number of discrete work packages where risks can be more appropriately allocated.

Some UK distribution companies are addressing the challenge of managing maintenance and expansion capex by entering into strategic partnerships with supply chain companies and using risk/reward incentive structures.

Also in the UK, major capital projects are seeking support from the government's Infrastructure UK Guarantees scheme to reduce the project risk profile and provide additional comfort to the financial community for financing purposes.



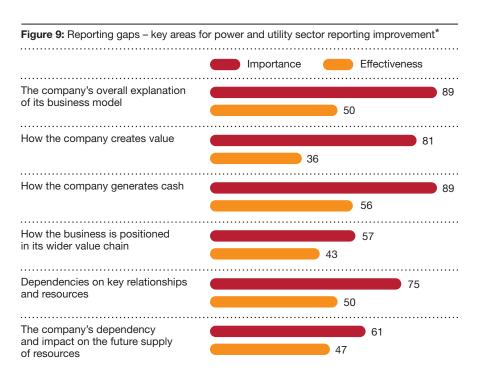
Reporting more effectively

The range of strategic and energy transformation issues discussed in the preceding chapters add to the reporting challenge faced by power and utility sector CFOs. As the nature of their business models and the structure of their markets change, the need to explain this through good reporting becomes all the more important. Formal reporting is a key channel for communicating the company's story, its strategy for future investment, approach to risks and opportunities and the way it monitors performance.

Investment professionals have specific information needs and many power and utilities companies struggle to satisfy them completely. Recent PwC research with investment professionals who specialise in the power and utilities sector found that there are important areas where a review of current reporting could deliver improvements.⁵ In particular, it found that investment professionals focusing on the power and utilities sector are highly interested in business model disclosures – but see huge room for improvement (see figure 9). The PwC research found substantial 'effectiveness gaps' in the reporting of strategy and risk. Investors and analysts told us they need clearer explanations of issues such as how long-term strategy relates to the current business model, and how key risks are managed and mitigated. They also want to see clear links between strategic goals, risks and KPIs. The level of granularity, clarity and specificity are the most frequently cited areas of business model explanations that need attention. Many investment professionals said they would like to see more transparency about how capital flows through the company. They also want a better focus on how power and utility companies make money, both in terms of cash today and value that will convert to cash in the future.

Ultimately, companies that fail to provide investors and analysts with the information they need could face a higher cost of capital and greater difficulty in funding infrastructure investment. As energy transformation results in strategies diverging further away from the familiar, traditional power utility business model, company CFOs will need to ensure that their reporting keeps pace and that they bring the investment community along with them. This report highlights a number of the important areas for CFO attention and some of the ways in which they could be addressed. It will be vital that these are also reflected in improved reporting.

If companies can deliver better reporting, we see another important benefit in the form of building and improving trust with all stakeholder groups. Energy is by its nature a key public trust issue, with a great amount of trust invested in power utility companies. Energy transformation creates challenges for companies to ensure that they build on that and don't have this trust eroded. More effective and transparent reporting can help with this.



*On a scale of 0 to 100, where 0 is not at all important or not at all effective and 100 is very important or very effective.

5 PwC, Powerful Reporting: what do global power and utilities sector investment professionals want to see in company reporting? November 2014.

Round-up The CFO checklist

- 1. Does the board have a clear view of the answers to the questions that need to shape your focus as a CFO 'where to play' strategically, 'how to play' commercially and 'how to win' competitively?
- 2. Are the requirements of the transformation being matched with the capabilities to analyse value and to differentiate activities that create clear market positioning value from those that merely draw resources and do not advance the strategic agenda of the company?
- 3. Have you got the necessary tools and insights to judge the best financing and corporate restructuring options to deliver on the chosen future strategy?
- 4. Do you have the right forward- and outward-facing data gathering and analysis capabilities in place that can turn data into insight and, more importantly, insight into foresight?
- 5. Is your reporting keeping pace? Are you able to align and communicate about the energy industry transformation that is taking place with a clear and convincing value realisation strategy upwards at the board, outwards to investors, policymakers, regulators, customers and the public, and downwards through the organisation?
- 6. Do you know what impact different incubation, collaboration and partnering structures might have on value and on your options for venturing into new areas?
- 7. Have you got processes in place that enable comparison of capital deployment options right across the business, not just within particular business units, so that capital allocation can be truly matched to the enterprise's strategic outcomes?
- 8. Do you have effective processes that enable alignment of the critical functions necessary to support quality financial stewardship and a distinctive strategic architecture?
- 9. Are you gathering the evidence and insight that will enable you to have a proactive dialogue with policymakers and the regulator to ensure that the regulatory roadmap around energy transformation does not lead to unintended consequences?
- 10. Do you have flexible risk allocation and mitigation strategies in place to enable the company to manage the impacts of energy transformation?

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