Do you need a chief resource and energy officer?

The case for elevating the management of energy, water and other critical natural resources to the C-suite
Do you need a chief resource and energy officer?

Acknowledgments

EY would like to recognize and thank these experts for helping us explore the evolving need for energy- and resource-focused corporate officers. The insights of this group were invaluable.

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Commodities and natural resources drive roughly 10% of global GDP and underpin the performance of most industries. While this figure for the economic value of the natural resource industry is significant, perhaps even more significant would be the impact on GDP from constraint on the availability of a critical commodity or resource. The loss of business continuity due to severe resource constraints – imagine losing access to electricity, petroleum or water for a meaningful period – would impose substantial costs on most businesses and would reverberate through supply chains.

The world’s resources are finite; easily accessible commodities and sources of energy are giving way to harder-to-access and more costly alternatives. And the present tension between rising global demand – driven by population growth, urbanization and increasing wealth in emerging markets – and constrained supply will continue to rise.

Energy security concerns, rising and volatile energy prices, growing food challenges and water scarcity are creating new risks and new opportunities that no business can afford to ignore. Indeed, environmental, natural resource and water issues dominate the top 50 risks identified in the World Economic Forum’s Global Risks 2013 report.

In this context, we believe there is a compelling case for elevating corporate resource management to the highest levels of executive management through a C-suite position with the global perspective and remit to manage resource risk strategically – call it a chief resource and energy officer (CREO).

EY is committed to doing its part in building a better working world. At EY’s Global Cleantech Center, we contribute to this objective by helping to facilitate the transformation to a low-carbon, resource-efficient economy.

The Global Cleantech Center assists market participants across the cleantech landscape – innovators, project developers, corporations, investors and governments – to address the challenges of developing and deploying the innovative cleantech technologies and business models that are critical to achieving this transformation.

We provide our clients services informed by cleantech business experience and knowledge, share cleantech market insights globally and convene key industry stakeholders to think creatively about how to accelerate cleantech market development.

Successfully addressing corporate risk in the context of the transformation to a low-carbon, resource-efficient economy will be key to ensuring sustainable businesses. We hope that this white paper will provide ideas and insights that provoke further thinking and advance the development of the corporate resource and energy agenda.
Why a chief resource and energy officer?

Rising risks and value creation opportunities

Corporations face a set of resource and energy risks that are becoming more acute. These risks fall into four main categories:

- Weaker financial performance due to resource and energy price increases and volatility
- Business disruption resulting from resource or energy insecurity
- Brand equity erosion because stakeholder expectations related to resource and energy use have not been met
- Regulatory compliance costs and potential penalties

Companies in different market segments are at various stages of reckoning with these challenges. Those in resource- and energy-intensive industries like mining and transportation have been among the first to recognize and respond proactively to the risks.

Companies in other sectors have been slower to recognize their resource and energy risks because the risks derive primarily from their supply chain or from their customer base. For consumer products companies and a range of manufacturers, the risks are often hidden, originating in second- or third-tier suppliers that historically have gone unmonitored.

Since they use less energy, banks and other service providers face less direct exposure to such issues. They are, however, highly exposed in terms of second-order risks as their clients’ prospects can crash if energy prices spike or a key resource is suddenly in short supply.

One sector that is taking a proactive view of these risks is the global insurance industry as it begins to assess more seriously the various resource impacts that climate change might have on its underwriting exposures (e.g., power outages, energy supply chain disruptions, water scarcity). Companies with a reduced and more resilient resource risk profile may be better positioned to avoid costly premium hikes.

How best to orient a company’s executive leadership to minimize these risks and exploit related opportunities is a complex question. Managing resources and energy on a global scale – dealing with multiple jurisdictions and tax regimes, addressing the different resource contexts of each facility, understanding the most cost-effective and reliable local energy sources – is not a simple task.

For some organizations, the need to make resource and energy management a C-level priority may be self-evident. But for others, it may still be an emerging need.

As energy and resource anxieties rise, the strongest argument for dedicating an executive to oversee these issues goes beyond simply avoiding the risks to transforming them into opportunities. Indeed, left untended, resource and energy constraints pose a great threat to business operations. Conversely, companies that are well prepared for key shortages and price volatility can leap ahead of less-prepared rivals.
The prevailing risk environment argues for a heightened focus on resources and energy at the C-suite level.

Yet a number of factors work against strategic resource and energy management. As companies grow, operational complexity often multiplies faster than do skills or the capacity to keep pace. This can make it difficult for busy executives to keep on top of areas outside of their traditional portfolios.

Gaps in knowledge and responsibility can lead to fragmented understanding a company’s entire resource needs. A COO charged with managing physical plant and vehicle fleets, for example, may be paying the power bills for a data center but lacking the know-how to alter the center’s design in the way the CIO might.

The absence of a single high-level focus on these cross-functional issues can lead to missed opportunities for energy reductions, efficiency gains and cost savings.

As a formal position, the concept of a chief resource and energy officer is both young and rapidly evolving. Prior to 2000, few, if any, references to “chief resource officer” could be found in major US media. Even today, among the more than 225 million members of LinkedIn, the world’s largest professional networking site, fewer than 60 list such a title, and many of these relate to human resources, not natural resources.

Yet, taken as a precedent, the rise of the chief information officer — whose title became common only long after the first computers appeared in corporate America — is instructive. By analogy, we are just in the early stages of formalizing business processes dedicated to resource risk management.

Hence the question: is the CREO a new, stand-alone C-suite role or an additional one to be undertaken under the aegis of an existing position?

As discussed in detail later in the section on CREO models, in larger corporations CREO responsibilities may be at first assumed by one or more existing senior management positions – the chief operations officer, chief financial officer, chief sustainability officer or a senior supply chain executive – with the appropriate expansion of competencies and responsibilities. Therefore, although the CREO may not be a new stand-alone position in the C-suite in the immediate term, while real-world experience with the position is gained, it is an additional role that must be assumed by one or more of the existing C-level executives.

<table>
<thead>
<tr>
<th>Resource and energy risks</th>
<th>Value creation opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Weaker financial performance</strong></td>
<td></td>
</tr>
<tr>
<td>▪ Increased financial costs, lost sales due to rising input prices and resource shortages</td>
<td>▪ Reduced long-term costs from locking in favorable prices and improved ability to plan</td>
</tr>
<tr>
<td>▪ Impact on second-order derivatives, such as logistics, capital equipment and supply chain costs</td>
<td>▪ Competitive advantage over less resource-efficient competitors during shortages or spiking prices</td>
</tr>
<tr>
<td><strong>Business discontinuity</strong></td>
<td></td>
</tr>
<tr>
<td>▪ Lack of resource and energy security</td>
<td></td>
</tr>
<tr>
<td>▪ Supplies of raw materials and energy constrained for political, market, or natural disaster reasons</td>
<td>▪ Enhanced energy security through energy mix optimization and on-site/adjacent-site solutions</td>
</tr>
<tr>
<td>▪ Business resiliency enables uninterrupted sales; potential insurance benefits</td>
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</tr>
<tr>
<td><strong>Brand equity erosion</strong></td>
<td></td>
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<tr>
<td>▪ Failure to meet stakeholder expectations regarding the use of energy and resources</td>
<td>▪ Enhanced brand equity from resilient operations and robust sustainability initiatives</td>
</tr>
<tr>
<td>▪ Failure to meet customers' business continuity or sustainability expectations</td>
<td>▪ New business opportunities from companies that prioritize the same issues and insist on sustainable suppliers</td>
</tr>
<tr>
<td><strong>Regulatory compliance costs and potential penalties</strong></td>
<td></td>
</tr>
<tr>
<td>▪ Regulatory exposure from CO2 emissions, waste streams and water use</td>
<td>▪ Potentially lower carbon allowance costs and reduced landfill/sewage charges from emissions reduction initiatives</td>
</tr>
<tr>
<td>▪ Operating license at risk</td>
<td>▪ Discipline of measuring, managing and reporting on key resource performance indicators leads to enhanced efficiency</td>
</tr>
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CREO: a new role or an additional one?
Defining the CREO role

 Corporations typically subject projects designed to improve resource efficiency to the same hurdle rate as ones intended to improve top-line revenue growth. As a result, increasing energy and resource efficiency is often passed over, despite delivering virtually guaranteed, recurring returns.

 This approach risks not only financial but also shareholder value as financial markets move toward rewarding resource efficiency as an indicator of resiliency. Resource resiliency may create meaningful value of its own even where efficiency gains are not available.

 Developing an effective CREO requires support from a CEO and board of directors who are advocates for the long-term benefits of resource efficiency and resiliency and have the vision to look beyond compliance and direct balance sheet impacts.

 A CREO’s role is to capture the shareholder value that can be gained through resource efficiency and resiliency. The role of the CREO is also to advocate a proper capital allocation for resources and energy related projects and define appropriate IRR measures.

 Key to achieving this is developing relevant per-product resource consumption metrics and communicating them externally. This requires a detective’s doggedness to comb through the enterprise to learn where resources are consumed; a programmer’s discipline to capture and standardize complex resource data; a trader’s understanding of commodity dynamics; and the analytical skills of an engineer to assess the potential for improving the way a company sources and uses energy, water and other natural resources.

 It follows that this role is best filled by a seasoned veteran well-versed in data-intensive analysis and able to delve into widely diverse operational areas — from raw materials in the supply chain to green building technology and data-center design. This person must also be able to architect the financial and risk management reporting through the supply chain which drives executive decisions. Ultimately, the CREO must be a change agent.

 As with any corporate position, the duties of a would-be CREO will naturally vary from business to business. However, based on our work with large companies, there is a common agenda of tasks facing resource-focused senior executives.

 Diagnose

 A CREO must diagnose the company’s current and anticipated resource and energy use and related risks. This requires engaging with business units, suppliers, customers and stakeholders, as well as benchmarking against peers.

 While companies usually have a good understanding of their first-tier resource and energy risks, most do not have such good visibility into those risks farther down into their global supply chains.

 To achieve this requires competence in a variety of specialized assessment and planning tools, including but not limited to energy and carbon audits and life cycle analysis (LCA) of key inputs stretching from third-tier suppliers to end-of-life and final disposal.

 Another important part of diagnosis is responding to the self-audit requests from non-governmental organizations to document greenhouse gas emissions, energy, water and other resource consumption. The process can yield a virtual mountain of data; making sense of the data is an additional challenge.

 Design

 With a clear assessment of a company’s resource and energy profile, the next step is to design an improvement agenda. No approach is applicable to all situations, of course. Risks are location-specific: energy, water and resource prices tend to vary by region and can be quite opaque, particularly in emerging markets.

 For example, water conservation may be a top priority in a dry region even though water’s dollar cost is lower than energy’s. Yet, as there are no substitutes for water, its strategic importance may exceed its dollar value.

 In this context, a CREO’s challenge is to optimize resource and energy procurement and consumption, market by market. This involves mapping out alternatives and devising an integrated approach to implementing improvement initiatives. Here are some of the key elements required in the implementation plan design:

 - Building the business case – financial, economic and energy modeling
 - Identifying incentive opportunities for energy and resource efficiency and the use of renewables
 - Integrating procurement strategy and planning with resource strategy
 - Developing risk mitigation planning processes
 - Addressing stakeholder relationships and reputational pressures

 Not least of all, the CREO must also gain approval and buy-in for the plan.

 Implement

 A CREO’s challenge is as much external as it is internal. To optimize a company’s capital stock and increase shareholder value, the resource manager’s team must comb through the portfolio of equipment, real estate and energy service agreements to build an understanding of specific improvement opportunities and implement savings where possible. Common areas of emphasis include:

 - Optimizing the energy-asset portfolio
 - Reviewing the market and analyzing contractual counterparty suitability
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Our research shows that a variety of CREO models are emerging, varying by industry and corporate structure, with the common aim of empowering cross-functional resource management—from raw materials in the supply chain to green building technology to enterprise data management and stakeholder reporting. In addition to an eventual stand-alone position, immediate models for the CREO role include more empowered versions of the existing C-Suite positions:

- **Chief sustainability officer.** If the CSO has the authority beyond moral influence to make operational decisions, this individual can be highly effective in assuming the additional role of CREO. For example, a large transportation services company with major fleet and physical plant investments has elevated its chief sustainability officer to act as overseer of energy, resources and operations across the enterprise.

- **Chief operations officer.** The COO already heads operations and thus is a natural fit to oversee energy and resource consumption. But this responsibility requires a broader view of resource risk and an understanding of resource reporting requirements. At one large financial services provider, the senior executive in charge of energy reports to the COO, with a dotted line to the CSO.

- **Chief financial officer.** The CFO brings a focus on risk management and an existing competency in reporting that can be extended to the internal and external reporting frameworks for managing resources. In many services companies, such as software and finance, there is already a tendency to house resource and energy management within the finance function. The growing global movement toward integrated reporting, with its attention to sustainability risk factors, only increases the importance of CFO insight into corporate resource and energy use.

**CREO models**

- Innovating and optimizing finance, capital-raising and investment options
- Planning and structuring energy transactions
- Implementing procurement through tender, contract negotiation and evaluation
- Implementing tax-optimized improvement initiatives

**Sustain**

Sustaining the benefits of resource and energy optimization requires continuous measurement and improvement. A disciplined measurement and evaluation program will include these elements:

- Measurement tools
- Assurance and verification of measurements

- Progress monitoring
- Global regulatory and energy landscape updates
- Strategy review and update
- Communication to stakeholders

Sustaining the benefits also requires culture change within the organization and its supply chain. As technical as the tasks facing a CREO, evangelizing the adoption or modification of these goals among colleagues and partners may prove the greatest challenge.

A CREO’s job, in this respect, is made easier by the fact that many of these changes cuts costs, and thus will benefit a business unit’s bottom line. Also, corporate sustainability programs have long shown that workers have a strong emotional connection to efforts that improve the environment. For these reasons, while the initiatives can be complex to roll out, organizational support is often high.

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- Planning and structuring energy transactions
- Implementing procurement through tender, contract negotiation and evaluation
- Implementing tax-optimized improvement initiatives
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Corporate resource and energy agenda

Energy mix optimization

The energy landscape for corporate consumers is shifting. Energy security concerns, rising and volatile energy prices, and the shift to a resource efficient and low-carbon economy are creating new risks and new opportunities that no business can afford to ignore. As a result, energy and resource optimization has risen high up corporate management agendas as executives and directors seek to:

- Increase energy efficiency, improve energy price predictability and switch to low-carbon energy
- Improve energy security through access to a portfolio of alternative energy sources
- Enhance reputation and brand by meeting the sustainability expectations of key stakeholders
- Gain competitive edge through energy-efficient, low-carbon and lower-resource products and processes
- Avoid long-term carbon and environmental penalties by complying with current and future regulations

An essential element of this is using resources more efficiently and reducing carbon emissions. A key enabler is utilizing renewable energy, which is becoming increasingly cost-competitive with conventional energy sources. Today, leading global corporate energy strategies are focusing on long-term cost savings and cost predictability, combined with the reputational benefits of securing a sustainable energy supply.

Two approaches to energy mix optimization

There are two approaches to implementing a corporate energy strategy: procuring energy from an external provider (contract-led) or self-funding energy asset investments with the expectation of generating a return (investment-led). A sequential approach in either case is most successful, with an initial focus on reducing energy consumption and carbon emissions through efficiency measures. Once commercially justifiable energy efficiency measures have been explored, the focus should shift to integrating renewable energy into the energy mix.

Overall energy mix optimization strategy has to be coordinated globally, with clear ownership, as well as being tailored to local markets. Careful consideration must therefore be given to the various options available to the corporate as they offer very different risk profiles and returns on capital. An integrated approach focused on optimizing the use of renewable energy in the corporate energy mix as well as integrating the technical, commercial, financial and reputational elements of the resource and energy agenda is essential.
Chief information officer. The CIO’s concern with productivity and data management lends itself to the enterprise-wide resource data collection and analysis that is essential to the CREO role.

Executive management board. The alternative to giving the CREO role to a single individual is to create an executive management board to develop resource and energy strategy, taking a cross-functional approach and backed by the authority of the CEO.

The key commonality among these models is that the CREO has the authority to implement change across the enterprise.

Developing the CREO role

Filling the CREO role requires a diverse – and currently rare – set of skills. Of course, the precise blend of qualifications for the role will vary by company and by sector, but it is safe to say that the qualities of a successful CREO should include:

- Data savvy
- Understanding of energy resource markets and options
- Knowledge of the different resource contexts in which the company operates globally
- Experience in corporate project development
- Skill with innovating new corporate processes and approaches
- Familiarity with emerging resource and energy technologies
- Big thinker who not only finds savings but also sees new opportunities

Market dynamics suggest that a pool of candidates with various combinations of these skills is developing in companies across the economy. The next several years are likely to see a formalization of the role as the CREO’s abilities to boost competitiveness becomes better understood and recruiting becomes more targeted to the skill set.

In the near term, however, the CREO is most likely to come from within the company because of the specialized company knowledge required.

Now is the time, therefore, for boards and C-level leaders to become more sophisticated in their understanding of the potential contribution of a CREO. Initially, this may mean an exercise to scope out the potential objectives of a new post, to understand how it overlaps with the current divisions of responsibility, and to assess the potential return in terms of savings. Likewise, as is the case with all ambitious efforts at corporate transformation, it’s useful to map out the ripple effects of such a position on the existing managerial framework.

Whether it’s a newly established title or the role is handled by expanding the mandate of an existing officer, such as the COO or CIO, it’s wise for the effort to be championed by the CEO and involve early-stage collaboration with peer executives whose realms may be affected by the new or expanded CREO role. Establishing a new executive post without consultation with other executives is likely to be unproductive, at best.

Assuming the new role achieves success by delivering increased savings, reducing the risk of business disruption and preventing crises, other executives are likely to recognize the value of the new post in time and to support it.

Resource and energy imperative

There is little debate that most companies face rising risks from less predictable, costlier and scarcer resource and energy supplies. Depending on the sector, companies are responding to that challenge with varying degrees of in-house expertise. Yet in all cases, an evaluation of the need for, and potential role of, a CREO will prove a revelatory exercise, regardless of the outcome.

After all, if a company pays close attention to energy and resource issues, it’s good for the bottom line. The smarter a company is about energy, the lower its costs can go, and the better off it is as a business. It’s not either efficiency or profits, it’s both.

Given the increasing risks of resource volatility, chief executives and top leaders should no longer be wondering “Should we prioritize these issues?”, Instead, they should be working to answer the questions “Who will lead this effort and how?” and “When do we start?”

Boardroom questions

- Do we have defined resource and energy targets? Are we on track to meet them?
- What would be the financial and operational impact of an abrupt change in the price or availability of resources and/or energy?
- What would be the operational impact of disruptions in materials and basic inputs to our second- and third-tier suppliers?
- How do we compare in resource and energy efficiency to other companies in our industry and our direct competitors?
- Do we have sufficient skills to assess global energy and resource trends, risks and potential solutions?
- Given current resource demands and the anticipated intensification of resource scarcity, do we now have an executive with the capacity to extend her/his mandate to encompass resource and energy strategy?
Other EY recent publications on resources and energy

**From boiler room to boardroom: optimizing the corporate energy mix**

Conventional renewable energy procurement instruments are rarely fit for purpose. Corporations are challenged with moving beyond conventional thinking to include renewable energy as part of a more diversified energy strategy. This report examines the range of innovative strategies at their disposal.

**US water sector on the verge of transformation**

The US faces several major water challenges: increasing water scarcity, aging infrastructure, climate volatility, water quality issues and rising water-related energy risks. This report analyzes these challenges and the opportunities for change, concluding with an action agenda of ten proactive steps to help establish the long-term sustainability and growth of the sector.

Visit www.ey.com/cleantech to learn more about EY perspectives on the resource and energy agenda.
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