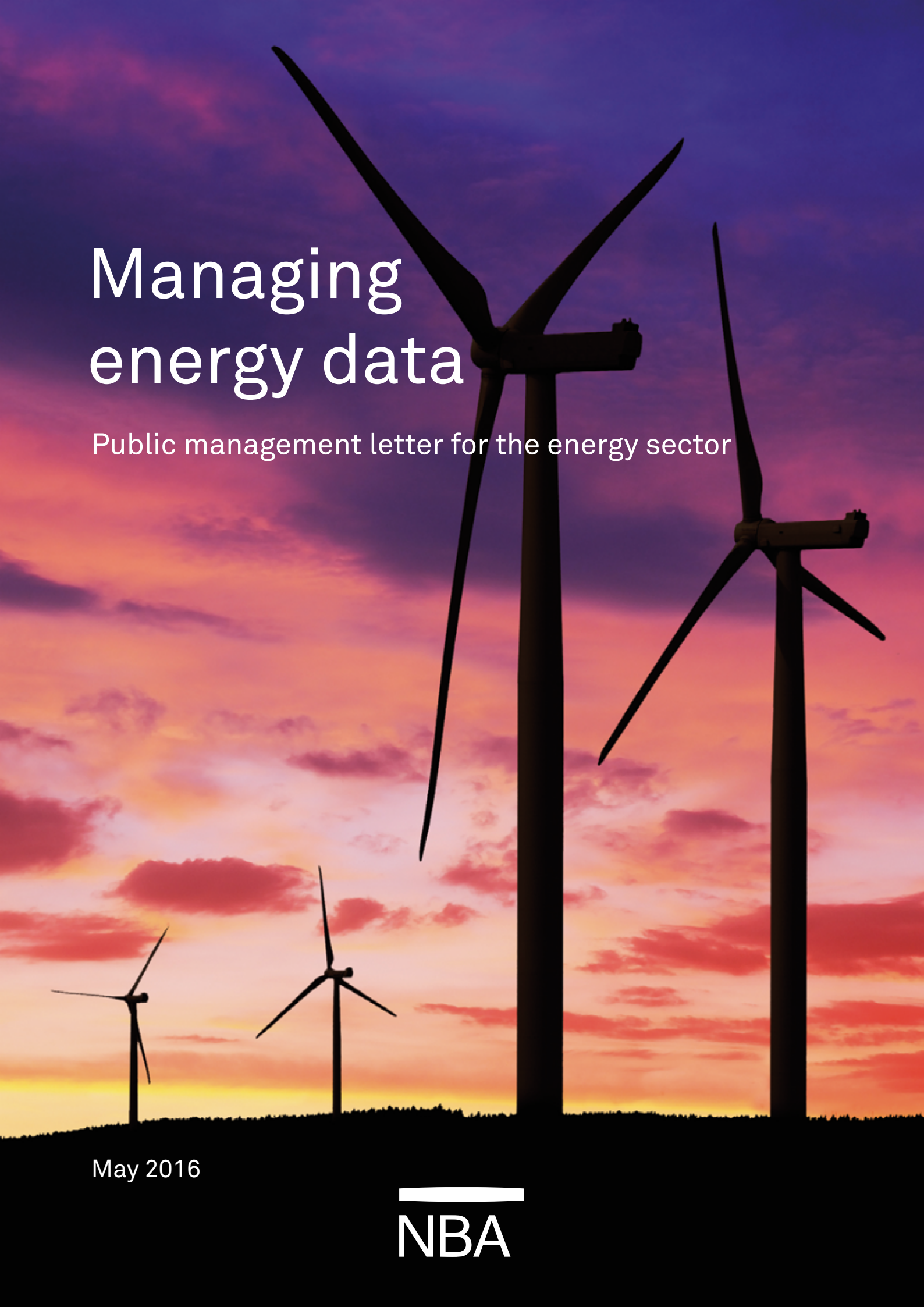

Managing energy data

Public management letter for the energy sector

May 2016

NBA

Royal Netherlands
Institute of Chartered
Accountants

NBA

The NBA's membership comprises a broad, diverse occupational group of over 20,000 professionals working in public accountancy practice, at government agencies, as internal accountants or in organisational management. Integrity, objectivity, professional competence and due care, confidentiality and professional behaviour are fundamental principles for every accountant. The NBA assists accountants to fulfil their crucial role in society, now and in the future.

To directors, supervisory bodies and other stakeholders
in the energy sector

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Date
May 2016

Dear Sir/Madam,

Energy is an essential part of modern society. Production, transport and communication would be impossible without it. With a total production value of 67 billion Euros and 67,000 jobs, the energy sector plays a significant role in the economy. The sector is undergoing a transition towards a more sustainable form of energy production. This is creating tensions between short-term political decision-making and the required long-term climate for investment. In addition, worldwide agreements have been made concerning CO_2 emissions, technology is developing at great speed and consumers are becoming increasingly vocal. Energy producers, dealers, suppliers and grid operators are now facing an uncertain future.

As a result, energy companies must critically examine the sustainability of their business models and their position in the energy supply chain. That is the main message of this public management letter (PML) entitled *Managing energy data*. What are they good at and what do they need to be successful? What is their license to operate? A great deal has already been written about the sector. This PML is thus not aimed at offering new insights, but actually highlights another perspective: that of accountants, who audit annual accounts and are familiar with the strengths and weaknesses of organisations.

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Managers must now think about potential future scenarios, new partnerships and alternative financing possibilities. How energy plants and grids are valued in annual accounts is also an area of attention. For instance, the energy transition, over-capacity in the market and increasing decentralisation are leading to specific valuation-related issues. Business strategies need to pay attention to the vast amount of legislation, both in the Netherlands and internationally. The sector is becoming more information-oriented and it is becoming increasingly important to manage the flow of data besides the flow of energy.
This means accountants can no longer restrict themselves to auditing figures in annual accounts. They must look to the future more than ever before, and open a dialogue about the issue with directors and regulators.

Five signals have been selected in this PML from an accountant's perspective:

1. Energy transition changes business model
2. Value of power plants is uncertain
3. Regulation provides risks and opportunities
4. Energy data is increasing
5. Accountants focus too much on the past

These signals are based on the knowledge of our members who work in the energy sector. Various stakeholders, including Energie-Nederland and the Ministry of Economic Affairs, have made their comments known to us. We would like to thank them for their contributions.

Yours faithfully,

Pieter Jongstra RA
Chairman NBA

Mr. Charlotte Insinger
Member NBA Identification Board

Managing energy data

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Contents

Sector in transition

Energy is an essential part of today's society. Production, transport and communication would be impossible without it. There would be no heat in the winter without gas and no light or internet without electricity. In 2013,[1] the Dutch economy consumed 3,500 petajoules[2] of energy, of which 20 percent could be attributed to private households. The vast majority was consumed by the industrial sector. In that year, the average household consumed 3,200 kWh of electricity and 1,600 m^3 of natural gas. In recent years, overall energy consumption appears to have stabilised or even decreased[3].

Energy is a basic requirement, essential for everyone. As a result, the energy sector is regularly on the political agenda and emotions can sometimes become heated. This was demonstrated perfectly by the debate about the Stroomwet (Energy Act) in the Dutch parliament, which took place in December 2015. The Act was aimed at allowing grids for wind farms to be installed at sea, but encountered difficulties when two energy companies had to be split. Another example is the damage caused by gas extraction in Groningen. Due to all the resulting commotion, the cabinet decided to reduce gas production by almost 25 percent[4]. The latest political debate involves the closure of coal plants, even if they have only become operational recently.

The energy sector is part of the Dutch government's Top sector[5] policy. It has always been a traditional sector with capital-intensive investments, which focus on the long-term. However, the sector has become more liberalised over the past ten years, although it is still subject to a lot of regulation. Recurring themes include funding, reliability (certainty of supply) and sustainability. Energy has now become more of an interchangeable standard product (commodity) and the only real option is to compete on the basis of price, extras (additional service) or specific motives (sustainability). Increasing sustainability in the sector is referred to as the energy transition: the transition from fossil fuels (coal, oil and gas) to sustainable or renewable energy (sun, wind and water). In this case, 'renewable' means energy sources are not depleted when used.

A very diverse sector

According to the CBS,[6] the sector features approximately 1,600 companies, which employ 67,000 people (FTE's) and generate a total production value of 67 billion Euros and added value of 30 billion Euros. The Authority for Consumers and Markets (ACM) serves as the sector's regulator. Various sector organisations are active in the sector. The sector can be divided into four groups of companies, although the extraction and production of fossil fuels is beyond the scope of this PML:

- Energy producers
- Energy dealers in the wholesale market
- Suppliers of energy to consumers and companies
- Grid operators that manage energy network facilities

However, the sector also features measurement companies, programme managers (PV's), information managers like Energie Data Service Nederland (EDSN) and countless suppliers. The production, trade and supply of energy are fully commercial activities. The energy market is no longer national and most large-scale activities take place internationally.

1 CBS Statline, September 2015.
2 1 petajoule = 278 million KWh.
3 Energietrends 2014, September 2014.
4 See theCabinet policy timeline for gas production in Groningen, at www.rijksoverheid.nl.
5 More info at www.topsectoren.nl.
6 CBS Monitor top sectors 2015.

Energy production in the Netherlands is left to a colourful mix of large and small companies. There are major differences in scale (from electricity plants to homes with solar panels) and the extent to which production is renewable. In this case, besides sun, wind and water, they implement co-generation, geothermal energy, biomass or waste incineration. In 2014, renewable energy had a 5.6 percent share in total energy consumption[7]. Government subsidies still play a major role in the sector. Due to high costs, investments in wind farms are not appealing without such subsidies.

In total, there are over 400,000 km of cables and pipes in the Netherlands. The grids for gas and electricity are in the hands of eight regulated regional grid operators, which includes Enexis, Liander and Stedin. TenneT manages the national high voltage grid, which is connected to Belgium, Denmark, Germany, England and Norway. Gasunie Transport Services is responsible for the national gas grid, which is also connected to international grids. These connections create a solid foundation for the wholesale trade in energy, which comfortably exceeds energy consumption in the Netherlands and continues to increase. The government uses a so-called 'gas roundabout' strategy as far as the gas grid is concerned, which is aimed at retaining the Dutch gas sector's strong position in the future.

More and more end users are also becoming active in the energy market. Some of them as producers, via solar panels, windmills or power stations. It is difficult to enter the market due to low production and supply margins, high acquisition costs and seasonal patterns. Nonetheless, some new companies still decided to join the sector recently, often with different earnings models or strategies based on niches in the market. For example, Robin Energie, which focuses on customers subject to debt restructuring, or Van de Bron, which wants to create a direct link between producers and consumers.

The whole energy supply chain determines how the supplied product is perceived by end users. There is great interdependence between different companies in the supply chain and interaction is continuing to increase, as demonstrated by the various collaborations. The supply chain is not confined by national borders and is international. This makes it difficult for the government to implement a national energy policy. However, this policy is not always consistent either and can change quickly due to political choices. In turn, this undermines the sector's need for a stable investment climate in the long-term.

The government's sustainability objectives

In 2013, the government established the Energy Agreement[8] with around forty parties. This agreement stipulates that, by 2023, the market share of renewable energy must have risen to 16 percent of total energy consumption in the Netherlands. Besides energy-saving and encouraging the use of locally produced sustainable energy, the agreement also focuses on investments in the energy grid and an effective European system for trading in emission rights. Considering the number of players active in the sector, it remains to be seen who will take the lead role in implementing the agreement.

In January 2016, the government's Energy report[9] identified a vision for future energy supply in the Netherlands. Emphasis was placed on the reduction of CO_2, exploiting economic opportunities during the energy transition and incorporating energy into planning regulations. The report serves to start a National Energy Dialogue, which must result in a concrete policy framework by the end of 2016.

This framework will mainly be determined by international agreements concerning CO_2 reduction and the climate. By 2030, the European Union (EU) hopes to reduce CO_2 emissions by 40 percent in relation to 1990; reduce energy consumption by 27 percent and give renewable energy a 27 percent market share. According to the international Paris Climate Agreement 2015, the earth's temperature cannot increase by more than 2 degrees C up to 2100, compared to the pre-industrial era. Focus has been placed on reducing the use of fossil fuels, switching to sustainable energy and reducing worldwide CO_2 emissions by 50% by 2050. Europe is actually aiming for more or less CO_2-neutral energy production in 2050. Although the Paris Agreement is binding, it is not accompanied by sanctions, and individual countries have been allowed to determine their own strategies.

Turbulent developments

The energy sector is subject to a fast changing environment that is in full transition, and which is becoming more decentralised and international. Traditional strategies are no longer effective and continuity can no longer be guaranteed. For example, falling prices for fossil fuels contradict the desire to become more sustainable. That's why companies must critically examine risks associated with the energy transition and the feasibility of their business models.

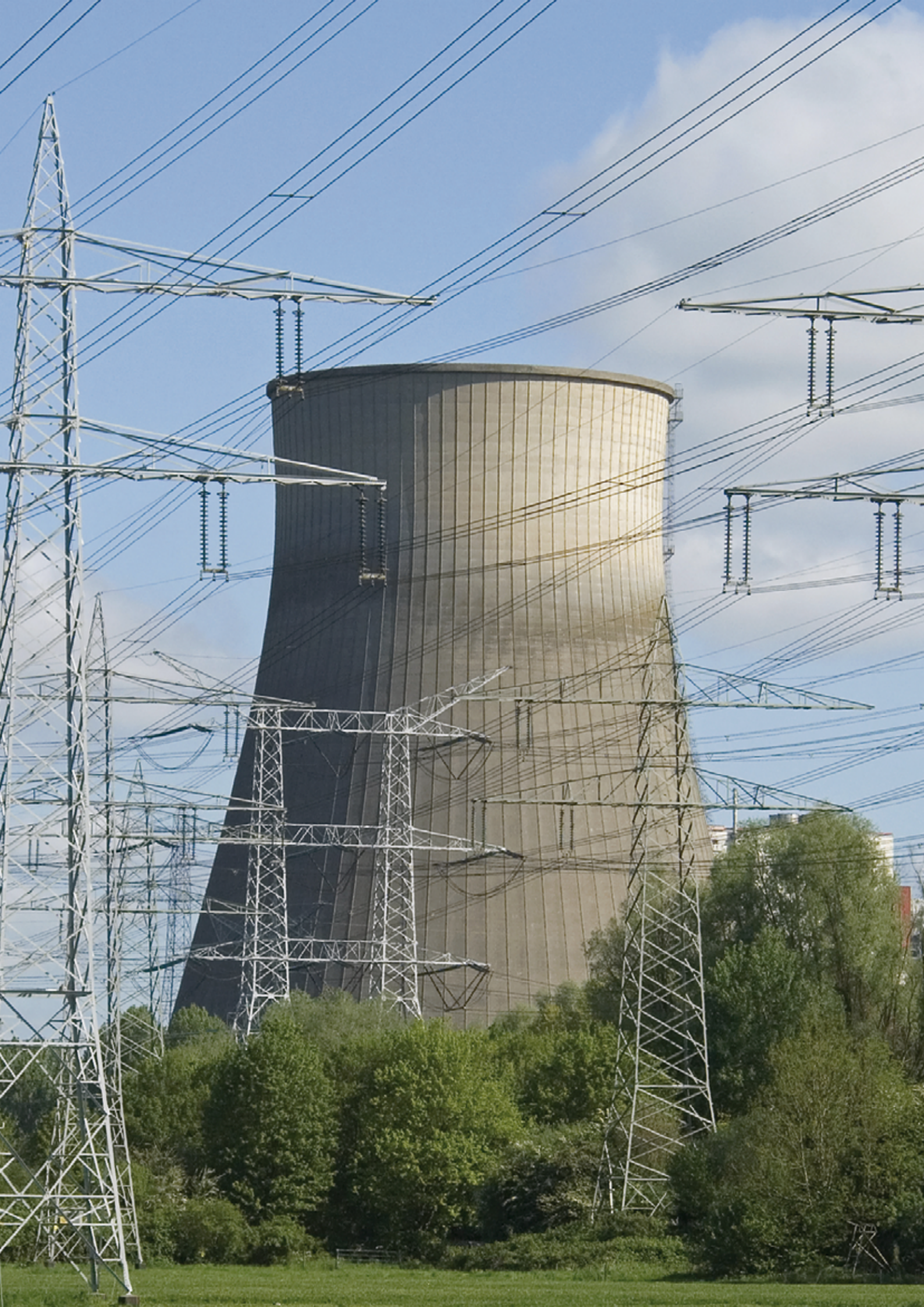
7 Persbericht CBS, maandag 29 juni 2015.
8 Energieakkoord voor duurzame groei, september 2013.
9 Energierapport - Transitie naar duurzaam, januari 2016.

Many electricity plants have been built in recent years, even though demand is stabilising, and this has partly resulted in overcapacity. Due to high gas prices and low emission costs, various gas plants and cogeneration systems have reduced production or shut down completely, while coal plants simply remain open. Such developments are leading to specific valuation-related issues in annual accounts, and are causing accountants to question how financing has been arranged. Similar issues are also encountered when valuing grids. In all cases, expected profitability and continuity plays a very important role. That is why future-oriented information is becoming increasingly important when positioning and valuing assets.

There is a lot of diversity in policy, regulations and subsidies within the EU. And a clear long-term vision is often missing. Prices and taxes differ per country. Each grid is regulated in a different manner. Trade in emissions is stuttering due to a surplus in emission rights. Regulations in the Netherlands are also changing. Even though rules are accompanied by risks, new opportunities can be identified by effectively exploiting new regulations. That is why legislation will remain an important area of attention.

Technological trends are leading to new developments and opportunities in the market. Examples of such trends include smart energy metres, smart grids, electrical transport and data analysis. This has caused an increase in data flows and means the sector is becoming more of an information processing industry. All these developments have increased the need for high quality ICT, appropriate legislation by the government and effective coordination between players in the market.

Accountants will have to take all these developments into consideration when performing their audits. And if they want to correctly assess the continuity of a company, accountants will have to be more future-oriented. Besides knowledge of ICT and regulations, they will also need to play an effective role in the company's governance.



Signal 1 | Energy transition changes business model

Due to competition in the energy market, changing regulations and more vocal consumers, companies must be agile and be able to respond quickly. They must also have a strategic vision about their investments, market and shareholder value. What is their license to operate?

Energy companies are facing difficult choices. Due to the energy transition and (inter) national agreements about reducing CO2, traditional business models are under pressure and there is increasing uncertainty about the future. This has created the need for new strategies, models and scenarios. Exactly how agile are energy companies?

The sector also has a social responsibility because energy plays an essential role in modern society. Although access to electricity has become self-evident, it still requires an effectively functioning energy supply chain. And each party in the chain has its own role and responsibilities. Besides inter-competition, the sector is also subject to government regulation and overlap with other sectors. Newcomers to the market can be of unexpected origin. The financial incentives that accompany sustainable energy have led to a major increase in energy production, which means the market model has primarily become supply-based. It has become more difficult for conventional plants to compete with sustainable energy sources, even though they are essential during energy shortages. As a result, energy producers are encountering major uncertainties in their earnings model. There is great pressure on funding for major investments. And this uncertainty is only being intensified by major fluctuations in the price of raw materials. For instance, the lower coal prices give coal plants an advantage over gas plants, even though they are more CO2 friendly.

Another development involves the decentralisation of energy production. This has led to an increase in local production of sustainable energy among households and neighbourhoods. As a result, production is being matched with consumption much later in the supply chain. Production often takes place outside the existing grid, or in areas with a concentration of demand. As a result, it has become a real challenge to create stability in the grid. For instance, inconsistency in the supply of sustainable energy has increased the likelihood of congestion (blockages). Upgrading the grid is not always the most efficient solution; alternatives could include influencing people's pattern of demand or storing energy. An increase in local storage could in-turn have an effect on the energy equilibrium and prices. From a supplier's perspective, the switch from product-based to data-based services for customers is already under way. Several energy producers have experienced major write-offs on their plants. These developments mean accountants must maintain a critical dialogue with directors and supervisory bodies.

Customers are changing from passive connections to active consumers. They are able to personally decide how and when energy will be generated, when it will be used and which services they want to acquire and from whom. And besides being consumers, customers can now also be energy producers. Customer loyalty is decreasing and traditional sales channels are no longer effective.

The question every party in the sector needs to ask is: what are my competencies and which do I need in order to be successful? How can I implement them? What makes me unique? And which advantage can I offer? But above all: how am I going to respond to the energy transition? Suppliers, producers, dealers and grid operators need to consider their positions and roles in the supply chain. And they can use this as a basis to evaluate their current product portfolio and planned investments. In addition, stakeholders are also facing challenges when it comes to ICT and their employees. Employees are ageing and it has

become more challenging to retain and recruit technically qualified personnel. This means it is crucial to develop new business models and alternative scenarios. Success will be determined by the organisation's flexibility and how clearly its role has been defined. And accountants can speed up dialogue about such matters.

Negative example

Failure to acknowledge changing market situation on time

Energy company A operates conventional plants, which are experiencing losses due to the sluggish market. This is seen as a temporary situation and there is no active response with potential counter-measures, like optimising work processes and cut-backs. A few years down the line, the situation appears to be far from temporary, and there has been structural deterioration in the market. As a result, A encounters serious continuity problems.

Positive example

De klant bepaalt de nieuwe wereld

Energy supplier B has responded appropriately to the energy transition. After liberalisation in the sector, B decided to become active in a niche market. B is operating in the sustainable segment of the market and is introducing sustainable energy producers to buyers of sustainable energy. Instead of price, sustainability is the primary motive for stakeholders. B is prospering and growing as a result.

RECOMMENDATION 1: Implement an agile business model

- Energy companies
  - If possible, build a flexible and diverse business model, which is able to compensate for disappointments in one segment with results in another segment. Work with future scenarios and develop new partnerships. Exploit the energy transition: how can the organisation anticipate new technologies? Which partners are needed when doing so? What are the risks? How can access to innovation be safeguarded?
  - Evaluate opportunities for attracting capital and other funding, while considering changes in the risk profile. Current developments in the market are associated with higher costs for capital and borrowing.
- Government
  - Ensure clear and consistent policy for the short and long-term, so the sector can make well-founded decisions about strategic options and business models. Facilitate the energy transition and, as the party responsible for the system, take control of the situation if there is a major risk for certainty of supply. When doing so, bear in mind that failure to establish long-term policy causes companies and their financiers to be cautious with their investments.
- Accountants
  - Consult with the Board of Directors, Audit Commission and Supervisory Board about the feasibility of their strategy, the real value of business plans and their desired role within the sector. Ask critical questions about strategic choices: has the company's business model considered the main social developments? Make dilemmas debatable: why, for example, has a coal plant been selected? Why are investments in projects for the energy transition being cut back and why now? Also examine financing arrangements: in principle, standard covenants with banks can be terminated by the bank at any given moment.
  - Consider the consequences that strategic choices could have on reporting. When doing so, pay attention to separating revenues from costs, and check if costs have been activated. Reporting about investments in participations can be a complicated issue, particularly for start-ups. How they are processed is mainly determined by the details in specific contracts.

Signal 2 | Value of power plants is uncertain

What is a coal plant or grid actually worth? Developments in the energy sector are also having an impact on annual accounts, particularly when it comes to the valuation of assets. Whether it involves plants or grids, profitability - and continuity - always plays an important role.

The energy transition is causing a lot of changes in the sector. On the one hand, existing assets (for example coal plants) are becoming obsolete to varying degrees while, on the other hand, investments are being made in new assets (for example offshore wind farms). Due to the sector's capital-intensive nature, and the long-term outlook towards investments, these developments have resulted in various valuation and funding issues among energy producers and grid operators.

The development towards sustainable energy production is having an impact on assets that are based on existing fossil fuels. The transition from gas to renewable energy, via heat pumps and geothermal energy, is reducing payback opportunities for the existing gas grid. In this case, the question is, is the grid's prescribed regulatory life-span (50 years) still realistic? Grids that are not being used are no longer of value, even if they have not been technically written-off. Under the current system, costs are divided among users; the question is, is this model still appropriate? Costs will have to be spread across a decreasing number of users, and will become higher. The alternative would be to write-off that part which will not be re-earned. But what should be done with pipes in the ground, which could become obsolete due to new developments? Can they be put to an alternative use? What are the potential disassembly obligations and how would this be done in densely populated areas? Can pipes simply be left in the ground?

The increasing market share of sustainable energy, greater links to international grids and the economic crisis have led to considerable over-capacity in electricity produced by conventional gas and coal plants. As a result, certainly in the short-term, it is no longer possible to recoup fixed costs. Therefore, valuations for these plants have become a critical issue in the annual accounts of energy producers, even though the price of fuel is currently relatively low. In addition, other factors are also playing a role, such as uncertain government policy, economic developments and the increasing use of electricity as energy source, for example as in electric cars.

A reduction in the deployment of gas plants means demand for gas has also decreased. Gas plants can be deployed flexibly and are mainly intended for peaks in demand. Because gas can be stored, energy companies are able to buy it when it is cheap. A decrease in the use of gas plants also reduces the need for storage capacity. As a result, investments in such capacity, as well as long rental contracts for capacity, have become unprofitable.

Suppliers are having to keep retail costs as low as possible, while substantial investments in acquisition and ICT are needed. In this case, the question is, how can investments be funded in a market which is undergoing transition? Valuing assets based on ongoing sales contracts could be problematic if they are loss-making for the counter party. In such situations, one can expect agreed prices to be renegotiated.

Accountants should not shy away from discussions with directors and supervisory bodies when it comes to the positioning and valuation of assets. They will have to assess whether underlying business models and encountered cash flows are realistic. And all decisions must be appropriately substantiated in the annual account. As a result, the length of the explanation seems to be increasing with every annual report.

Negative example

Market developments not acknowledged on time

Market prices and the spark spread (difference between the price of electricity and fuel costs) for electricity are under pressure, particularly those for the coming years. This has increased losses and negative cash flows for conventional plants. These developments have not been appropriately addressed by company C. The accountant has also been basing asset values on results in the current year and has not paid enough attention to long-term continuity. As a result, the annual account still looks too optimistic. Cash flows for the coming years are becoming increasingly negative. The company's credit rating has been lowered and additional deposits are needed to cover the trading portfolio. C is unable to attract additional funding and encounters continuity problems.

Positive example

Active exploitation of market situation leads to opportunities

Energy company D has long since realised that production via conventional plants is not sustainable and thus shifted its strategy to sustainable energy production. D had responded to changing market conditions on time. The efficiency of existing conventional plants was optimised, costs were reduced and new services were introduced. Thanks to this strategy, and optimisation of its existing processes, D has been able to retain its credit rating.

RECOMMENDATION 2: Be critical towards future scenarios

- Energy companies
  - Be alert for developments and changes in the market and their impact on the valuation and funding for material and immaterial assets.
  - Develop scenario analyses that allow well-founded decisions to be made about the positioning and valuation of the asset portfolio. Make sure decisions are appropriately substantiated and explained in the annual account.
- Government
  - Develop a support policy to encourage the transition at energy companies and, wherever necessary, to compensate for the negative consequences. Realise that investments in the sector are long-term, have a long payback time and require stable policy.
- Accountants
  - Ensure thorough sector-specific knowledge in terms of legislation, regulations and subsidies. Obtain an insight into the company-specific situation, like investment criteria used by the company, links between the various assets (for example gas storage, a gas-based electricity plant and a wind farm) and how management manages its asset portfolio.
  - Be alert for indicators that point to a sustained decrease in value. Ask critical questions about how effectively cash-flow generating units have been defined, and about the data used to generate forecasts for the asset portfolio. Take the counter party into account when it comes to loss-making sales contracts; they will probably be renegotiated.

Signal 3 | Regulation provides risks and opportunities

Changing laws and regulations are having a major impact on the business models of energy companies. Besides creating risks, this has also revealed opportunities. Timely anticipating and dealing with new rules is an important area of focus in business models and long-term strategies.

Laws and regulations in the energy sector are subject to a lot of change. Developments are being encountered at international, European and national level, which are very important for all companies in the sector. Besides new possibilities, these developments regularly lead to ambiguity because agreements are not always converted into actual legislation.

Member countries of the EU are normally left to set their own energy objectives, which leads to differences. Regulations in Europe's energy markets vary greatly, as do compliance requirements of supervisory bodies like the ACM in the Netherlands. This prevents a level playing field from being established. Although the energy market is international, legislation is often defined at national level. An example of this is the absence of a single standard for smart meters. Each EU member country uses its own measures when promoting the reduction of CO2, such as subsidy programmes, cheap loans or funding for sustainable improvements to buildings. The question is, are these national policy instruments actually compatible with the European vision towards energy? Due to the absence of uniform legislation, individual countries are making decisions which are not always in line with European energy policy. The German Energiewende (energy transition) and French support for nuclear energy are just two examples of choices by individual member countries having a major impact on the whole European energy sector. The government must make sure it continues to be a reliable partner for the sector. Existing business models are not really at risk because of diversity, but they do face risks from factors like the predictability and stability of long-term policy.

However, too many laws and regulations, which are sometimes rather complex, are also encountered at national level. Examples of this include the Electricity Act, the Gas Act, the Code of Conduct for Consumers and Energy suppliers, the Measurement Code and Methodology rulings, the Personal Data Protection Act, the Standardisation of Top incomes Act (WNT) and a variety of fiscal legislation such as the Environmental Taxes Act. A reporting obligation for data leaks was also introduced recently. Various bodies, including the ACM, are responsible for ensuring compliance with these laws and regulations. The public shows little mercy towards companies that fail to comply with laws and regulations. Besides having a financial impact, penalties by the ACM also result in negative publicity.

Customers are also becoming more vocal and more familiar with legislation. Organisations must thus create an effective compliance and management framework. The size of an organisation often determines the budget available for internal control measures and the department responsible for ensuring compliance with legislation. But even the largest players in the sector are having difficulties complying with all legislation. The scope and complexity of laws and regulations also unintentionally serves as an obstacle for parties thinking of entering the market.

When auditing annual accounts, accountants normally check whether customers have complied with laws and regulations. In addition, accountants are subject to an investigation and reporting obligation due to laws like the WNT. They can be of better service to their customers if they discuss the consequences of (new) laws and regulations with them. They can also demand attention for situations not covered by existing laws and regulations due to the energy transition. This could possibly result in interpretation-related disputes with the supervisory body, or even to claims by customers.

Negative example

Sea-based wind energy - a real hodgepodge

The EU has failed to introduce uniform regulations concerning the production of wind energy at sea. In the United Kingdom, developers of wind farms are also responsible for the accompanying sea-based network. However, in Denmark and the Netherlands, one central grid operator is responsible for the whole grid at sea, and developers do not have to invest in sea-based grids. This creates an unfair playing field for potential candidates. Energy producers don't necessarily possess the required grid expertise either and will be less likely to invest in the United Kingdom unless they receive extra subsidies in return.

Positive example

Specific decisions based on the long-term

Germany and France are creating long-term certainty by making clear political choices. Unlike the Dutch government, they have adopted specific energy policies so the layout of the energy landscape is in keeping with their political objectives. Certainty of supply is not an issue in France because the French government has re-emphasised its belief in nuclear energy. Companies and consumers in Germany have been mobilised because the government has placed its emphasis on renewable energy. Subsidies facilitate the transition. Due to such decisions, investors, financiers and consumers have retained their trust in the government and actually dare to make investments.

RECOMMENDATION 3: Ensure consistent and stable policy

- Energy companies
  - Make sure there is a balance between the selected short-term dividend policy and the sustainability of future investments. Enough financial capacity must be left over for long-term investments.
  - Determine a common agenda for the sector in the Netherlands and try to achieve more cooperation in the supply chain. Also converse with parties from neighbouring countries. Try to establish links with politicians at national and European level so, wherever possible, you can have an impact on decision-making.
- Government
  - Make clear choices when it comes to future policy. Enable companies to make strategic choices that keep them attractive to financiers. Be clear when allocating roles: which tasks will be left to the market and which will be regulated.
  - Try to establish a dialogue with the sector. Energy producers and grid operators periodically need to converse with politicians about the main themes in the sector. When doing so, try to connect with the rest of Europe or a group of countries that are in a similar phase when it comes to energy policy. Do not introduce new legislation which has not been adopted by the rest of Europe.
- Accountants
  - Make sure there is enough legal know-how in the audit team to deal with complicated legislation and, if necessary, introduce a specialised lawyer.
  - Be alert for new legislation and situations that do not fall under existing regulations. Identify potential impact on the company's business model and continuity. Discuss the matter with the Board of Directors, the Audit Commission and the Supervisory Board.

Signal 4 | Energy data is increasing

Data flows in the sector have increased due to the introduction of smart grids and smart meters. Digitalisation, data processing and data management are becoming major factors for success. On the flip side, there are also issues concerning privacy and the risk of cyber crime.

A major transition (disruption) is taking place in the energy sector: besides the supply of energy, data management and data processing are becoming an increasingly important part of business operations. Business is no longer possible without effective ICT. Data management and security must be key elements within strategy. The transition is being caused by consumer behaviour and the emergence of smart grids. It is important for accountants and the government to keep pace with these developments.

Consumers are becoming more active. They want user-friendly online services and up-to-date insights into their consumption. Furthermore, they want to save energy and receive advice about it, while also generating their own energy. They want the lowest price, but are not willing to accept disruptions in energy supply. An innovative and flexible customer management system can be an important tool for acquiring new customers and retaining existing ones. Smart ICT systems and data analyses offer opportunities for fast, reliable and predictable management information, for example about evolutions in energy consumption. This makes it possible to match acquired energy with expected consumption. Smart grids enable two-way traffic in grids; this means information can be collected directly from customers. Smart meters offer consumers a better insight into their energy consumption. In addition, companies can analyse this and use it to develop new services and products. Grid operators, producers and suppliers have great need for supply and consumption-related information, so they can effectively deal with fluctuations. To be successful on this front, it is important to obtain data by cooperating within the supply chain and to effectively implement data models.

Investments in ICT are essential and, due to the speed of technological change, have a relatively short payback time. As a result, companies can no longer afford long drawn-out or failed introduction processes. ICT systems must be flexible in order to respond to changing customer needs, be able to process large amounts of data and must operate continuously and reliably. Negative customer experiences due to failing ICT systems can be disastrous.

The risk of cyber crime is increasing hand-in-hand with increasing digitalisation and the use of online data. Data and sensitive personal information must be secured effectively. Within the supply chain, it is not always clear where each party's ownership and responsibility starts and finishes. This is certainly the case when it comes to accessing aggregated data: who can access it and for which purposes can they use it? Complexity is continuing to increase due to an increase in cloud-based services. This means data management occurs externally, whereby stored data could fall under foreign legislation. In recent years, there has been a major increase in legislation in the field of data privacy. The continuity of companies could be threatened by breaches in privacy and/or incidents where sensitive information is released into the public domain. It is important to acknowledge these risks on time and to manage them effectively. Companies can distinguish themselves from competitors via a privacy certificate. However, an official benchmark for such certification is not yet in place.

It is important for accountants to acknowledge these risks in good time and to discuss them with their customers. Do they have a business control framework that focuses on data management? Have risks been identified; have control measures been taken and has their effectiveness been safeguarded? In addition, accountants can assess the quality of major ICT projects (quality assurance) and exploit the need for assurance when it comes to compliance and information security.

Negative example

Conversion error results in compensation claim

Grid operator E was in the process of switching to a new ICT system. This switch included converting customer data so it could be used in the new system. This data, for instance, mentioned what kind of meter customers were using. However, the programmer used the wrong calculation model during the conversion, which meant customers were assigned the wrong, and more expensive, meter. And this error went unnoticed because there was insufficient internal control. E only investigated the matter when customers started to complain. In the end, E was forced to reimburse almost 3 million Euros to its customers.

Positive example

Implemented ICT checked in advance

Supplier F developed an app which enabled customers and non-customers to follow their energy consumption, and to compare this against a reference group. F instructed an external party to examine the security of its app. This involved checking whether third parties could gain unauthorised access to consumption-related data. E was positively surprised by the results of the investigation: security in the app was perfect.

RECOMMENDATION 4: Make sure data management plays a central role in strategy

- Energy companies
  - Emphasise the crucial role of ICT, data management and cyber security in strategy and business models. Make sure risks like non-compliance with laws and regulations, data leaks and cyber crime are monitored, reported and managed within the organisation.
  - Ensure ICT representation in the Board of Directors and sufficient ICT knowledge among regulators (Supervisory Board and Regulatory Council).
- Government
  - Promote and facilitate the development of certification, and the availability of aggregated and anonymised data throughout the supply chain. If necessary, resolve disputes about ownership, access and use by establishing clear rules.
- Accountants
  - Pay attention to the maturity, quality and sustainability of the customer's ICT systems. Discuss risks concerning non-compliance and cyber security. Adjust the audit approach and composition of the audit team accordingly.
  - Invest in developing new assurance products for customers. For example, about compliance with laws and regulations, the privacy of data and the quality of ICT projects.

Signal 5 | Accountants focus too much on the past

Accountants pay a lot of attention to the past, and often only check past information. But more and more future-oriented information is appearing in annual accounts. Therefore, accountants must now look more to the future if they want to effectively assess continuity.

The customers of accountants are finding themselves in turbulent surroundings, where major changes have taken place in a short time frame. The energy transition is having an impact on all companies, whether they are energy producers, dealers, suppliers or grid operators. Future-oriented information is becoming increasingly important, as is quickly responding to new developments in laws and regulations and ICT. And this is having an impact on reporting and internal controls – the area in which accountants operate. These developments must thus be considered when they perform their audits. A recent development on this front involves the government's intention to award grid operators the status of public interest entities (OOB)[10]. This will require extra effort on the part of auditing accountants.

First and foremost, accountants must possess the required sector know-how. If necessary, they must consult specialists or even include them in their audit teams. In order to assess the feasibility of business models, they must have an insight into scenario evaluations and cash flow analyses. Knowledge in the field of ICT and data analysis will be essential. Cyber security and security against data leaks are specific areas of attention. Comprehensive knowledge of laws and regulations is essential. Considering the diversity of policy instruments available to national, European and international authorities, it would be wise to have sufficient experience about subsidy schemes and other fiscal provisions.

Besides sector-related knowledge and suitable professional expertise, it is particularly important for accountants to effectively perform their role in the company's governance process. And this involves more than just auditing the annual accounts. Accountants must be able to discuss with managers and regulators about the sustainability of their strategies. Who are, for example, the company's main stakeholders; which dividend policy is implemented; and how is the situation when it comes to funding future investments? It is important for accountants to make sure business plans have paid sufficient attention to major developments in society. Although it is not really the role of accountants to question implemented strategies, they are entitled to ask critical questions about appropriate guarantees for continuity.

There are two important developments to consider: increasing importance of management reports, as well as integrated reporting. Companies use management reports to explain the strategic choices they have made, the risks that have been identified and the extent to which the organisation is in control. At this moment in time, there is debate about whether accountants must do more than simply compare the management report against the annual account[11]. Since 2014, the new auditor's report has made it possible to explain key audit matters which are relevant to users of the annual account.

Integrated reporting is an excellent opportunity for companies to explain their strategy, governance and performance to stakeholders. An integrated report shows how companies create value for their stakeholders. It offers a comprehensive performance overview using a combination of financial and non-financial information. Considering the role played by accountants when it comes to accountability and control, it would make sense for them to converse with managers and regulators about this matter.

10 Letters from Minister of Finance to the parliament on 26 June 2015 and 2 November 2015.
11 See for example NBA consultation document entitled 'Accountants and the management report', November 2015.

Negatief voorbeeld

Insufficient attention to impact of legislation

Accountant X is confronted by an ACM ruling, which says that grid operator G had previously charged incorrect prices to a limited number of consumers. This means G will have to reimburse its customers. Although the matter will not have a material impact on the annual account, it is still of considerable magnitude. And its lack of material impact is merely coincidental because the incorrect pricing can be attributed to a legal failing. X had insufficient knowledge about applicable legislation, which meant it failed to notice this error in financial data

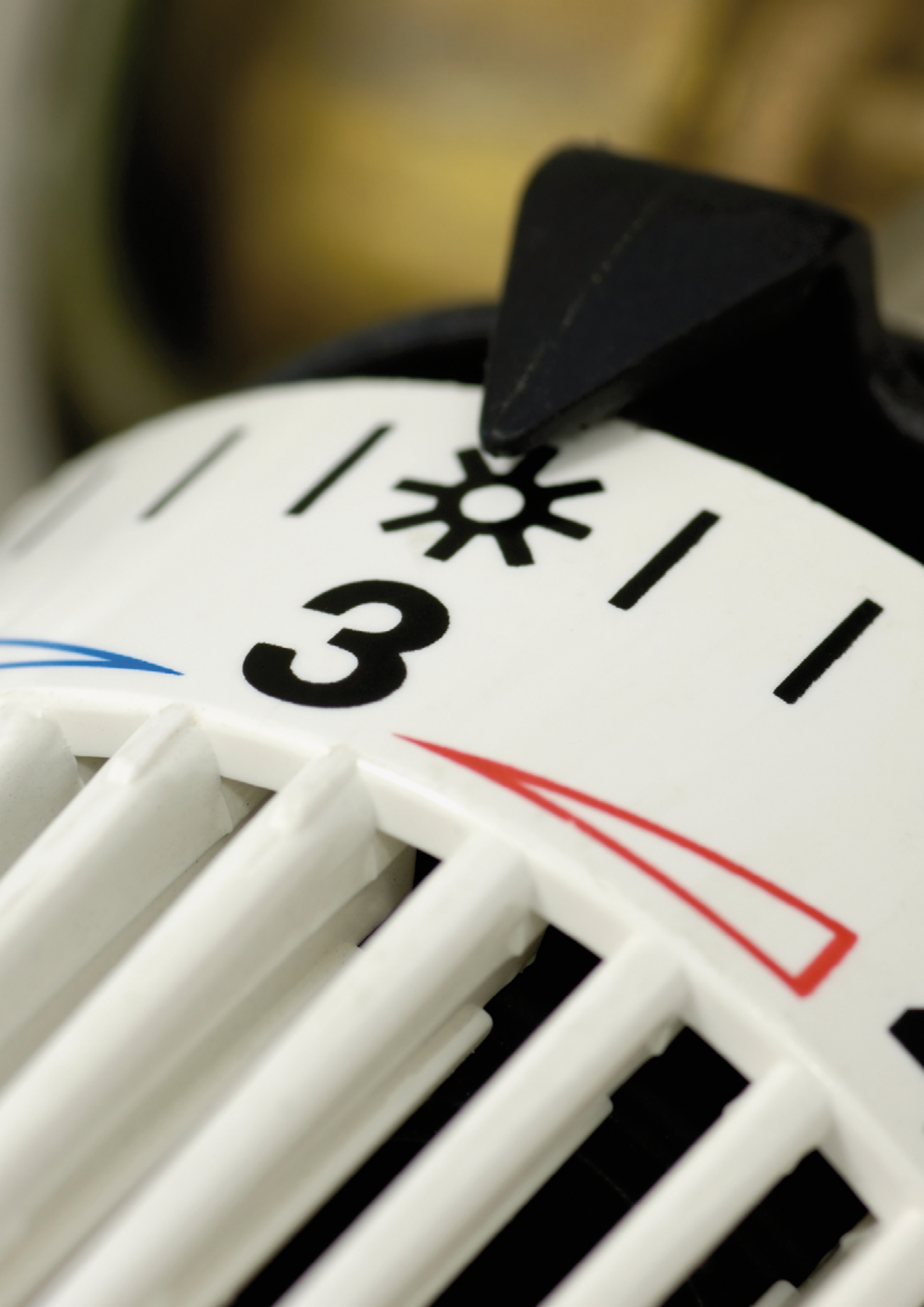
Positief voorbeeld

Active role in governance

The ruling by the ACM in 2014, which stipulates that grid operators may have to use past measurement-related profits to finance the introduction of smart meters, means that part of a company's equity capital may not be freely available. Accountant Y supplements his natural advisory role by raising this issue with grid operator H's management and audit committee. Y has hereby encouraged discussions about consequences of the ACM ruling for dividend policy and the annual account of H.

RECOMMENDATION 5: Accountants, broaden your gaze!

- Ensure sufficient knowledge and expertise about the sector, ICT and applicable laws and regulations. If necessary, bring in specialists and make sure there is enough expertise in the audit team. When doing so, also pay attention to subsidy schemes and fiscal matters.
- Evaluate what impact developments in the sector will have on the business model and the valuation of assets and liabilities in annual accounts. Determine whether this casts doubt on the continuity of the company and whether the matter has been appropriately explained in the annual account and management report.
- Exploit scope provided by the new auditor's report to offer a complete insight into core issues. Do not use standard text, but focus on things that are relevant to users of the annual account.
- Consult with the Board of Directors, the Audit Committee and the Supervisory Board to see if the accountant needs to play a broader role in the annual account. In addition, ask if the use of integrated reporting can assist the company. Not only from a reporting perspective, but also in terms of better and more integrated internal controls.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Summary of stakeholders' responses

At the request of the NBA, the following stakeholders have responded to the public management letter. Their responses are summarized in this chapter.

Energie-Nederland

Energie-Nederland sees the management letter as an interesting document for accountants, as well as a broader group of stakeholders looking to be informed about the energy sector. The world of energy is changing very quickly. And these changes are important to everyone involved in the supply of energy: consumers, industry, energy companies, suppliers, governments and supervisory bodies. Energie-Nederland finds it positive that the NBA has decided to examine developments in the gas, electricity and heating sector and has considered the consequences for accountants and involved energy companies. It is also important that the NBA is bundling the knowledge of accountants and passing it on to many parties involved directly or indirectly with the energy sector. This shared knowledge is needed if we are to jointly and responsibly transform the sector so supplied energy is sustainable, reliable and affordable. Energie-Nederland hopes and expects the presented management letter to make a useful contribution on this front, both in the sector and beyond.

Ministry of Economic Affairs

The Ministry is pleased that more and more parties in Dutch society - including the NBA - are aware of the increasing importance of a timely energy transition, which goes hand-in-hand with climate objectives agreed in Paris in December 2015.

The Ministry would like to point out that De Nederlandsche Bank (DNB) has also demanded attention for this issue, and has said that a gradual transition will be needed to prevent social adjustments leading to major shocks. DNB confirmed that the earning capacity and stock market value of CO2-intensive companies in the oil, gas and coal industry is (partly) based on them acquiring raw materials in the future. If such reserves can no longer be accessed due to climate agreements, the market would have over-estimated the earning capacity and stock market value of these companies. This would lead to major changes in the business models of the concerned companies.

Recommendations in the management letter are more or less in line with the Energy report. The Ministry fully supports the need for a long-term vision. That is why the Energy Agreement was established in 2013, to create transparency for social partners and companies for the coming 10 years, about the first step in the energy transition. The previously mentioned Energy report was formulated to provide a strategic insight into what will happen after the Energy Agreement. The Energy dialogue started this year and is aimed at preparing society and the government for the energy transition as we head to 2050. The results of this dialogue should lead to a long-term policy framework by the end of 2016. In addition, all EU countries, including the Netherlands, will be compiling a national energy and climate plan in 2019, which will focus on the period 2021-2030.

The Ministry believes it is essential for CO2 to be correctly priced if CO2 emissions are to be reduced at the desired tempo. That is why the Ministry aims to further improve the ETS system. This will involve examining possibilities to rid the market of surplus emission rights and prevent parties from buying more than their fair share. The aim is to make the emission system in Europe more effective so the market can function properly.

Credits

Sharing Knowledge

In the NBA Sharing Knowledge policy programme the expertise of accountants is collectively applied to signal risks early in social sectors or relevant themes. In doing so the emphasis is on governance, operations, reporting and audit.

The NBA has used this public management letter (PML) to present five recommendations for the Energy sector. The sector is the seventeenth topic to be selected by the Identification Board of the NBA. A working group of public accountants in the sector gathered anonymised findings and discussed them. This was then discussed at a sector meeting with stakeholders.

The Identification Board then gauged the signals from a social perspective and applied a social assessment to the signals. Stakeholders in the sector were willing to respond in writing to the PML. Coordination and final editing was provided by the Sharing Knowledge programme team.

More information

A public management letter is one of the publications issued by the Sharing Knowledge policy programme. Open letters and discussion reports are also released. The NBA has released the following publications:

- 2016: Cyber security
- 2015: Curative healthcare and Hospitality
- 2014: Life Sciences and Banks
- 2013: VET colleges, Risk management and Transport & Logistics
- 2012: Municipalities, Tone at the Top and Charities
- 2011: Commercial Property, Pensions and Greenhouse Horticulture
- 2010: Insurance and Long-term Care

All publications are public and are intended for a wide audience.

Identification Board

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Illustration

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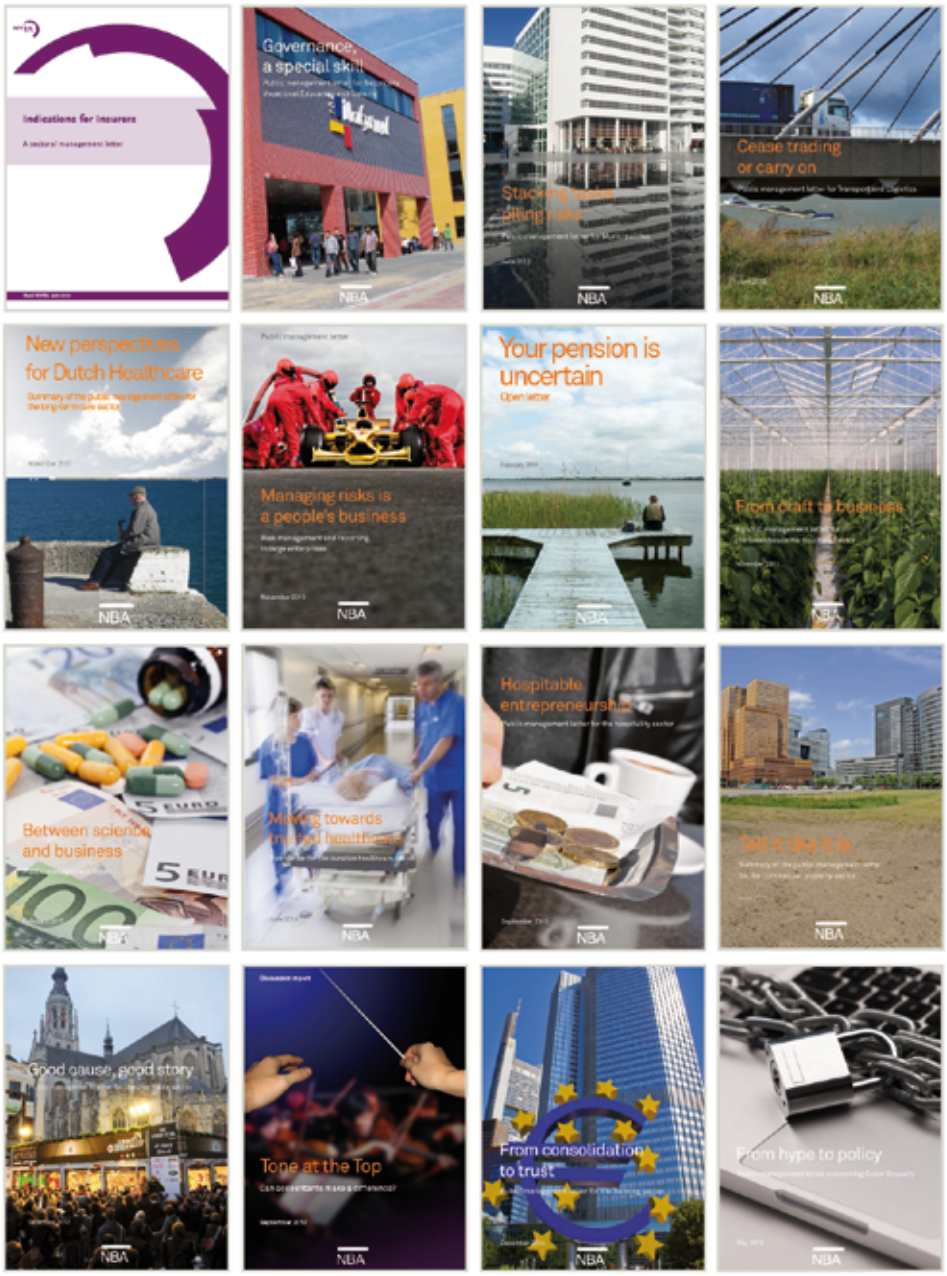
The last five years NBA published sixteen Public Managementletters (PML's) concerning specific sectors or themes.



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