Research Brief

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Energy in 2030- Determined opposition and painful choices

In order to ensure clean, reliable and affordable energy beyond 2030, the Netherlands has to make painful choices today. But politicians are alarmed by opposition among ordinary citizens to technologies that could prevent a future energy crisis. These are the findings presented by the Rathenau Instituut in its report *Energy in 2030: Decisions for today's society*, based on new research into developments concerning all sources of energy.

Balancing the books

There is a lack of objective data regarding the affordability, reliability and sustainability of our energy. According to the Rathenau Instituut, we have to balance our energy accounts now so that the Netherlands can make convincing and well-considered choices and enable support for unpopular decisions to grow.

Challenges

Contrary to popular belief, we are actually using increasing amounts of fossil fuels while the production of natural gas and oil is becoming more difficult, relying on increasingly expensive processes that result in greater pollution. Our energy-efficiency policy is not causing our national energy consumption to fall, if anything the opposite: a lower fuel bill means we have more money to spend on bigger televisions and international flights for an extra holiday. Moreover, renewable energy generated by biomass, the sun and the wind is turning out not to be an infinite resource. These forms of energy will also meet with shortages, environmental problems and sustainability issues.

Protests and procedures

The Rathenau Instituut concludes that all energy sources that can help avert a looming energy crisis are controversial from a social perspective. Our sensitivities are not limited to nuclear energy, coal-fired power plants and shale gas production. Underground CO_2 storage, bio fuels and wind energy projects are also encountering determined opposition from citizens, lower-level government and environmental organizations. These protests are propelling us towards alternative or more advanced technological solutions resulting in a lack of social clarity on the energy issue, as well as political indecision and uncertainty for companies and lower-level government bodies.

RECOMMENDATIONS

- **Awareness**
  Citizens are insufficiently aware just how urgent the energy issue is. The government and politicians in general therefore have to take a clear stand today on the inevitability of painful measures. Collective knowledge can foster understanding and support for unpopular policy measures.

- **National balance**
  For well-considered political choices and wider support in society, we need to put our national energy-economy accounts in order between now and 2030, but we lack essential information. How much is the government investing in energy? What are the returns? What is it costing the citizen? What is the citizen getting in return? And how affordable, reliable and sustainable are all these different forms of energy in the final analysis?

- **Sustainability criteria**
  Sustainability criteria which measure and improve the social and ecological effects of energy sources are important for both the consumer and the market, since sustainability is becoming an important competitive resource. Although difficult to implement, it is advisable to apply criteria to *all* energy sources. This leads to market competition, enables consumers to make a well-considered choice, and ensures that fossil fuels and nuclear energy will also become demonstrably more sustainable.

- **Energy price increase**
  A painful but effective measure would be to increase energy prices and it needs to be seriously investigated. A rise in energy prices will make saving energy more attractive to both producers and consumers.

Debunk the energy myths

“Technology will solve the energy issue." ... "Fossil fuels have had their day." ... "Renewable energy is an infinite resource."... “Greater energy efficiency leads to less energy consumption.” ... “The government only sets the parameters for a free market.”... “We are on the road to CO_2 neutrality.” ... “Dutch sustainability efforts are sustainable.”

Seven widely accepted myths shape the energy debate and deny us a clear perspective on the major challenges the Netherlands is facing if it wants to achieve an affordable, reliable and clean energy economy in the future. In reality, our energy is generating more pollution, costing more money and is likely to become less reliable.

The Rathenau Instituut is calling on government, the market and environmental organizations to do away with these energy myths. It must be made clear that painful interventions are unavoidable, and we need to start taking action today. A further imbalance between energy objectives and reality will create an unnecessary rise in social unrest and its associated challenges. Collective knowledge about the urgency of the energy issue can increase understanding and support for policy measures.

Taboo: energy rationing
The Rathenau Instituut advises the government to set clear limits on national energy consumption. The current policy of energy efficiency is not prompting a downturn in consumption. But the less energy we need in future, the smaller our energy problem will be. The advantages and disadvantages of a rise in energy prices therefore need to be investigated seriously. Though energy price increases appear to be politically unfeasible, hard limits have been set before, such as with national CO_2 emissions. For the Netherlands as a whole, emissions will have to be 20 per cent lower in 2020 than they were in 1990.

Sustainability = competition
In the Netherlands, and internationally, there is a growing demand for openness about the sustainability of products. Criteria in the form of a quality mark or label could play a useful part. They make the sustainability or unsustainability of energy sources more visible and easier to compare.

While it will be very difficult and may take decades to achieve, it is nevertheless advisable to follow this path. Without such criteria for all energy sources, we will remain in the dark in our attempts to achieve sustainability.

Doing the sums
The government is working towards an energy economy in which the Netherlands not only obtains clean and affordable energy but also generates revenue. In order to build support for energy choices, it is important to obtain a clear picture of cash flows in our national energy balance between now and 2030. The contribution made to the affordability, reliability and sustainability of each energy source must be clearly identified. This information is not currently available. How much does the government invest in energy and what are the returns? What does it cost our citizens and what do they get in return?

A clear overview of the Dutch government’s role as shareholder in various forms of energy production in the supposedly "free" market, and the revenues generated, must also be achieved. It is worth remembering the government still exerts a major influence as a shareholder in energy companies. This brings opportunities – but also limitations – in relation to management and control, which are often forgotten in practice.

One thing is certain - the billions of euros in revenue from traditional natural gas production will fade away over the next two decades. The debate on a number of future scenarios must produce a well-balanced economic policy which ensures that our energy remains affordable and reliable, becoming cleaner, while generating income.

SUMMARY

Energy has to remain affordable, reliable and clean in future. But achieving an even-handed distribution of the rewards and burden of our energy supplies, both national and international, is difficult, politically charged and socially controversial.

- Over the next twenty years, billions of euros in revenue from traditional natural gas production will gradually disappear. Energy supplies to the Netherlands will also generate greater pollution and probably become more unreliable, with imported energy from distant countries. Ultimately the government will have to get the message across that painful and far-reaching measures are necessary. These will be expensive and affect a great many parts of society.

- All future energy sources are controversial from a social perspective. Nuclear energy, coal-fired power plants and shale gas production are three prime examples. But biofuels, underground CO_2 storage and land-based wind energy are also sparking determined opposition.

- Seven myths shape the current energy debate (see text). These obscure the perspective of politicians as well as citizens when it comes to the urgency of the energy issue and form an obstacle to supportive social policy.

- Policy makers need to take measures today to prevent social resistance in the future. The necessary conditions are a clear energy policy and a transparent energy market. The extent to which the Netherlands' energy supply is sustainable has to become apparent. How much do we really spend? How much do we earn? At present, this simply is not known.

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