

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

SUMMARY

Since the last IEA in-depth review in 2000, the Netherlands has made progress in most energy policy areas. Liberalisation of electricity and gas markets has advanced. The country has ratified the Kyoto Protocol and is pursuing active climate policies. Research and development (R&D) policy has been rationalised and the initiative towards a sustainable energy system has been launched. The Netherlands has shown great pragmatism in the attention it has accorded to cost-effectiveness while pursuing its energy policy targets, namely energy security, environmental protection and economic efficiency. Despite this progress, the Netherlands still faces challenges in all areas of energy policy as discussed hereunder.

Energy security is attracting increasing attention in the Netherlands. Whilst the most recent Energy Report 2002 concludes that no urgent problems are foreseen, the Netherlands recognises the need to stay alert, improve monitoring and create the necessary instruments to deal with future problems.

The Dutch government has made great efforts to meet its Kyoto target of a 6% reduction in **greenhouse gas (GHG) emissions** between 1990 and the first commitment period (2008-2012). While the government's analysis shows that the country is well on track to meet the target, with GHG emissions having almost stabilised, it is still a challenge. For example, curbing the rapid growth of energy demand in the transport sector will require strong policies and measures.

Cost-effectiveness of GHG emissions reductions has received a lot of attention. Extensive use of Kyoto flexible mechanisms, reduction of non-carbon dioxide emissions, streamlining subsidies for renewables and combined heat and power (CHP), and keeping the Borssele nuclear power plant open are such examples. However, there may be further room for improving cost-effectiveness, which should be looked for and pursued.

The decision to fill up to half of its GHG emissions gap through joint implementation (JI) and clean development mechanism (CDM) projects is ambitious. Given that there are few international examples, the Netherlands is in a forerunner position in creating and testing the methodologies. Finalising the preparations for the European Union carbon dioxide (CO₂)

trading scheme, scheduled to start at the beginning of 2005, is a challenge for the Netherlands as it is for all other EU member States.

The introduction of the reserve package to support the basic package of domestic climate change mitigation measures is a prudent and effective approach, because the Netherlands can immediately embark on the reserve package if it finds itself off track. A reserve package is no longer required for sectors that take part in the EU emissions trading; however for the other sectors it is important to develop new measures into the reserve package as most of the existing ones have already been used. This will be carried out within the so-called *Optiondocument*, which is expected in summer 2004.

The Netherlands has had an ambitious **energy efficiency** policy, which includes the use of benchmarking covenants and active monitoring and evaluation of policies to reduce policy "free riders". However, the targeted 1.3% annual improvement in energy efficiency will become more challenging if the momentum of energy efficiency policies is weakened by budget cuts. Moreover, it is important to ensure good co-ordination of policies within the government.

The principal energy efficiency measure in the industrial sectors is the Benchmarking Covenant which is a voluntary long-term agreement. Historically, voluntary long-term agreements have performed well in the Netherlands but the covenant needs to be adapted to the forthcoming CO₂ emissions trading. This reflects the increasing impact of EU legislation on energy efficiency policies at the national level. The current measures are inadequate to meet the energy efficiency goals in the transport sector, which appear to be overly optimistic. As more and stronger measures are necessary, road pricing would definitely merit more attention as would modification of vehicle taxation to take into account energy efficiency. In the residential and commercial sectors, efforts could be strengthened by, for example, stricter norms for the renovation of buildings. While streamlining the subsidies for energy efficiency in the residential sector to avoid "free riders", care should be taken not to abolish the investment subsidies, which improve energy efficiency in a cost-effective way and would not be implemented without subsidies.

Gasoline prices in the Netherlands are among the highest within IEA member countries. The reason appears to be inadequate competition in the retail market, which is dominated by few players. Auctioning of filling stations and other measures may help but the government should continue monitoring the market and take further measures as necessary, especially in encouraging new entrants.

Recognising the great contribution of the large domestic **natural gas** resources to security of supply both in the Netherlands and abroad and state revenues, the government has protected the resources by controlling

the depletion of the Groningen field via a national production cap, by maintaining the small fields policy and promoting imports. However, the gradual depletion of the Groningen field, declining small fields production and market liberalisation necessitate an upstream gas policy review. For example, the alternative mechanisms for capping the Groningen production need to be carefully evaluated and the small fields policy should be adapted to the liberalised markets. Stable and cost-effective fiscal incentives and streamlined regulatory procedures related to environment and spatial planning would encourage investment.

One of the major challenges is reorganising the gas market structure (*Gasgebouw*) to the present circumstances and EU legislation. This should occur in a manner that creates a compatible and open market, encourages competition and meets energy security objectives. The first step is to establish an independent transmission system operator (TSO), which will happen with implementation of the second EU Gas Directive. Although the second step, the split of Gasunie Trade and Supply into two competing companies, is a highly complex one, it could help to increase competition.

Access to import infrastructures, flexibility, short-term balancing and quality conversion facilities are essential for the effective functioning of the market. At present, available contractual capacity at interconnections is very small calling for better capacity management and new capacities. The EuroHub and Title Transfer Facility (TTF) are still at an early stage; however, they could help to increase liquidity in the market by facilitating a spot market and creating new possibilities to access gas. At present, Gasunie Trade and Supply, and Nederlandse Aardolie Maatschappij (NAM) have a dominant position in providing short-term balancing services. The Office for Energy Regulation (DTe) has taken an initiative to establish third party access (TPA) regulation to gas storage but the effectiveness of the rules remains to be demonstrated because there are very few practical access cases. Investments in new storage capacity should be encouraged and TTF could be further developed to include access to flexibility services. Furthermore, the Netherlands has opted for an hourly balancing regime, which is more stringent than the daily balancing option of most other countries. There are two gas markets in the Netherlands, high and low calorific gas markets, making conversion facilities absolutely essential for the consumers of low calorific gas to change suppliers. Access to conversion services should, therefore, be carefully monitored. In this context, it is helpful that one of the planned tasks for the new TSO will be to provide conversion services.

Competition has developed relatively well in the Dutch gas market, with two-thirds of the market being liberalised. It is commendable that the government has recognised the benefits of market liberalisation even though state revenues from gas may be negatively affected in the short term. However, the functioning of the market will be further enhanced through better

transparency via market restructuring and solving the existing switching, measurement data and billing problems. The special requirements of small consumers need to be addressed in the full market opening that is scheduled for 1 July 2004. Given their requirement for a very high reliability, effective and fairly priced access to flexibility services needs to be ensured. Adequate information will have to be provided for the small consumers and attention given to minimising the costs of switching.

Full liberalisation of the green electricity market and the ecotax exemption substantially increased demand for electricity generated from **renewable energy sources** but not for domestic generation. Instead, renewable electricity imports increased greatly, leading to congestion in the transmission system. The feed-in tariff system included in the new supply-oriented approach, Environmental Quality of Electricity Production (MEP), is likely to boost domestic renewable electricity generation, but its cost needs to be monitored. As with all incentive regimes, the incentives for cost reductions should be maximised. Moreover, whilst government support for renewables is a sound policy because the externalities of renewables and other competing fuels are not fully captured by the market, all such measures should be regularly assessed to ensure they are as cost-effective as possible.

The overall design of the Dutch **electricity market** is good with adequate unbundling, the necessary bodies for regulation, transmission and market operation in place and network use based on regulated TPA. Consequently, competition has developed relatively well in two-thirds of the market, which has been opened for competition. The Dutch government should be commended for its approach to market liberalisation.

However, the government still faces some challenges, including increasing interconnection capacity and its fair and transparent allocation, enhancement of network reliability and expanded operation of power exchange. Administrative problems with switching of supplier and billing need to be solved without delay. This is a prerequisite for effective full market opening on the planned date of 1 July 2004. Consumers need to be informed about the reasons for market opening, ways to access the market, possible risks and how to avoid them, and the cost of switching needs to be minimised.

Reinforcement of interconnection capacity is essential both for security of supply and more effective competition. This is an international problem that requires solutions at the international level. Therefore, it is very important that the Dutch government and TenneT (the electricity transmission system operator) continue to work closely with other European TSOs. It would also help to address these issues at governmental level in Memoranda of Understanding between the Netherlands and its neighbouring countries to create a single market among them, comparable to the Nordic and Iberian markets. The auctioning mechanism of interconnection may need to be

reviewed. Price-setting mechanisms for networks and interconnections should take into account the costs generated by increasing interruptible sources, notably wind power.

Security of electricity supply has received due attention. Nevertheless, it is a challenge to encourage adequate investment in generating capacity, particularly peak load capacity. Although there is abundant capacity at present, in the longer term, excess capacity will be absorbed and the decision by Belgium and Germany – at present important import sources – to phase out nuclear power can increase the need for domestic generating capacity. Allowing markets to signal the need for new investment means that prices will go high on occasion but better transparency could reduce such price peaks as would better information on the maintenance and outages of production capacity. The Dutch government considered different capacity mechanisms and better demand response. Capacity mechanisms are believed by the government to have negative effects such as being expensive. Consequently, the government concluded that optimising the wholesale market and improving demand response was a better approach, which can reduce the need for investment in peak load capacity.

The Dutch **energy R&D** framework has undergone several changes over the last three years, but overall, it has produced a coherent long-term R&D strategy addressing energy policy goals, with a clear regard for cost-effective policy and evaluation procedures. Despite a tightening government budget, the energy R&D budget has been relatively stable over the last ten years. The government initiative towards a sustainable energy system (energy transition management), which has a broad policy context, incorporating R&D discussions, is a good example of clear and systematic treatment of energy policy and priority setting.

RECOMMENDATIONS

The government of the Netherlands should:

General Energy Policy

- ▶ *Ensure a stable policy approach to encourage investments in the energy sector.*
- ▶ *Streamline the licensing procedures.*
- ▶ *Enhance local authorities' and the general public's understanding of national energy policy challenges and objectives.*

- ▶ *Further clarify the relations between the regulator and the Ministry of Economic Affairs. Ensure that the regulator has adequate powers and means to effectively carry out its tasks.*
- ▶ *Increase involvement of consumers in designing liberalised energy markets and introduce greater consumer protection, including ensuring smooth transition to full market opening.*
- ▶ *Strengthen the transition management process through clarifying targets for the transition projects, developing milestones and benchmarks to monitor their progress.*
- ▶ *Deepen collaboration with neighbouring countries in order to increase the effectiveness of energy policy. This includes continuing the efforts to create a real single energy market with the neighbouring countries via Memoranda of Understanding, and eventually the EU market.*

Energy and the Environment

- ▶ *Continue the approach in which both national and international policies are implemented and monitor these in order to be able to prioritise according to cost-effectiveness.*
- ▶ *Make greater use of economic instruments, including tax differentials based on external cost.*
- ▶ *Ensure that other climate policies and measures are streamlined with respect to the emissions trading scheme. In particular, clarify the relationship between the benchmarking covenants and the emissions trading.*
- ▶ *Continue the projects for flexible mechanisms to give a concrete example of how they can be used as a tool to supplement domestic measures.*
- ▶ *Consider promoting natural gas and other alternative transport fuels to contribute to achieving EU biofuel and national GHG targets.*

Energy Efficiency

- ▶ *Enhance the role of energy efficiency in the energy policy, including securing adequate budget but continuing to pay attention to cost-effectiveness.*
- ▶ *Take stronger measures in the transport sector, including road pricing, modification of vehicle taxation, extension of eco-driving and the promotion of on-board technologies.*
- ▶ *Introduce further measures in the existing buildings such as stricter building standards for renovated buildings.*

Fossil Fuels

- ▶ *Continue to monitor the development of competition in oil retailing and take additional measures as necessary.*
- ▶ *Promote a stable regulatory and fiscal framework for domestic gas production by:*
 - *Revising the tax and fiscal incentives, including the reintroduction of "depreciation at will" or other incentives.*
 - *Reviewing and streamlining regulatory procedures related to environment and spatial planning, including searching for an environmentally sustainable solution for using the gas deposits in environmentally sensitive areas.*
- ▶ *Review the cap mechanism on national gas production with a view to securing production from the small fields.*
- ▶ *Adapt the small fields policy to be compatible with an open and competitive market as long as it makes a positive contribution to energy security. Make this a continuous process.*
- ▶ *Restructure the Gasgebouw as soon as possible, including promptly establishing a legally independent TSO.*
- ▶ *Monitor and facilitate the development of EuroHub and Title Transfer Facility.*
- ▶ *Create a framework that encourages investment in infrastructures, including interconnectors, gas storage and quality conversion facilities, which is compatible with market mechanisms.*
- ▶ *Set a clear plan to tackle gas market bottlenecks in order to facilitate new market entry and to avoid excessive market power. This should address access to flexibility (including storage) services, quality conversion, inadequate import capacity and the balancing regime but without endangering investments.*

Renewables

- ▶ *Monitor closely the costs of the Environmental Quality of Electricity Production (MEP) scheme and incorporate strong incentives for cost reduction and competition, recognising that global learning will be the principal driver of cost reduction.*
- ▶ *Monitor closely the long-term economic impacts and the impact on international biomass markets of expanding domestic biomass production and importing biomass.*
- ▶ *Place caution on promoting technologies not necessarily suited to the climate conditions in the Netherlands, such as photovoltaic energy.*

- ▶ *Assess progress towards a competitive renewable energy sector with a view to ensuring a stable investment environment until targets are met. Phase out the subsidies in the longer term when the different positive and negative externalities of renewables and other energy forms have been internalised.*
- ▶ *Investigate the requirements for the reliability and stability of the future electricity network, given the indicative goal of connecting large amounts of wind power to the grid.*
- ▶ *Study the possibilities to increase the use of renewables in heat production.*

Electricity, Heat and Nuclear Power

- ▶ *Evaluate the different market mechanisms for ensuring security of supply and adequate peak load capacity. Pay attention to the possibilities of improving demand response as an alternative to capacity increases. Avoid the introduction of maximum levels for consumer prices.*
- ▶ *Improve the monitoring of the generating capacity and publish the data to increase transparency. Publish maintenance outages of production capacity.*
- ▶ *Continue to increase interconnection capacity and improve its operation in co-operation with neighbouring countries, for example through Memoranda of Understanding.*
- ▶ *Facilitate the further development and broadening of the power exchange. Enhance co-operation with other power exchanges in Europe.*
- ▶ *Ensure that full market opening will be implemented effectively and without further delays.*
- ▶ *Ensure a stable and predictable policy framework for nuclear power.*

Research and Development

- ▶ *Stabilise the R&D programme framework and avoid disruptions to long-term R&D planning.*
- ▶ *Ensure that there is clear multisectoral communication regarding R&D programmes and policy priorities across ministries.*
- ▶ *Extend to all relevant stakeholders the current approach for discussing the development of specific R&D programmes.*
- ▶ *Ensure that all government departments consider creating new international research networks, or using those of the IEA, to bring in international partners from both the public and private sectors to support the work on the new R&D priorities.*