



2017 REVIEW OF GAS MARKET LIBERALISATION

E-CONTROL

BUILDING PROGRESS

AUSTRIAN GAS MARKET LIBERALISATION:
15-YEAR ANNIVERSARY



A BETTER DEAL. WHEREVER YOU NEED ENERGY.

Austrian gas market liberalisation: 15-year anniversary

Milestones | liberalisation success stories | outlook

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CORNERSTONES OF AUSTRIA'S LIBERALISED GAS MARKET

Austria joined the European Union in 1995. This also meant adopting the existing EU-level measures towards realising the Internal Energy Market, where energy could be traded between member states without restrictions, like any other commodity. It became necessary to transpose the existing and developing Union legal framework for liberalised energy markets into Austrian legislation. This meant an overhaul of our energy industry in several respects.

Unbundling: Energy networks are classic cases of natural monopolies. Often, the owners of these networks are active in other parts of the gas supply chain as well. Where this is the case, the regulatory regime must make sure that network owners cannot use their position to put other (competing) market players at a disadvantage. This is achieved via a variety of unbundling options which effectively separate system operation from other, competitive market activities.

Third-party access: Unbundling is complemented by third-party access to the gas network. This ensures that market players are not discriminated against by system operators but are treated equally and all face the same conditions when it comes to being successful on the energy market. For consumers, this means that they can freely choose their gas retailer; which company they buy their gas from is completely separate from the capacity reserved for delivering this gas to them.

Cross-border trade: To create a genuine European internal energy market, it is not enough to liberalise national markets. Cross-border trade is essential, too. Common European rules for capacity allocation, tariffs, congestion management, transparency and several other areas enable and facilitate this cross-border trade.

Institutional framework: Checking compliance with the single market rules is the responsibility of member states' regulatory authorities, which must carry out their duties impartially and transparently, and without being susceptible to political influence or pressure from regulated companies. Since the outset of liberalisation the range of tasks that regulators have been relied on to perform has grown steadily. The Austrian national regulator for the electricity and gas markets is E-Control Austria. Our authority was founded in 2001 (originally as an electricity-only regulator) and converted from a private limited company into a public authority on 3 March 2011. The main institutions involved in further developing the gas market at European level include in particular the Agency for the Cooperation of Energy Regulators (ACER), the European Network of Transmission System Operators for Gas (ENTSOG) and the European Commission.



OPENING THE AUSTRIAN GAS MARKET

The European rules that were introduced when Austria joined the EU laid the basis for market opening. Over the years, this set of rules has continuously been expanded and further developed.

Though markets were liberalised all across the Union, this was done in very different ways in the individual member states. Also, the first stages of market opening quickly ran into difficulties with trying to ensure truly non-discriminatory treatment of all market players by former monopolists, in particular when it came to market entry, market exit and pricing policies. It was no surprise, then, that the European Commission's energy sector inquiry (2005-2007) revealed scarcely any improvement in concentration on national electricity and gas markets from pre-liberalisation levels. It also showed that there had been little progress towards integrating European energy markets, and that price formation remained opaque and inefficient.

The changes in Austria's energy market mirrored its obligations as an EU member state. The gas market was opened on 1 October 2002 and all natural gas consumers in Austria have since been able to freely choose their supplier. Most relating EU legislation was transposed to the Austrian level through the *Gaswirtschaftsgesetz* (Natural Gas Act).

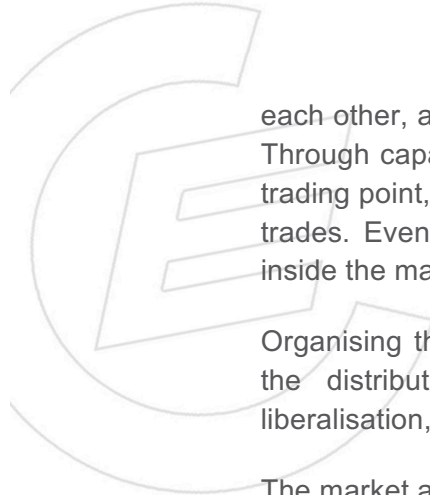
In 2011, the Natural Gas Act was completely recast to implement in Austria the major step forward achieved at European level by the third liberalisation package. As players' roles on the market were re-ordered and market processes were optimised in line with the European framework, the Austrian natural gas market transitioned into a new phase that promised livelier competition.

E-Control Austria was entrusted with designing many details of this new market and enacting them via ordinances.¹ For this purpose, we established a discussion process which has since continually ensured that market players and interest groups are involved and can contribute to the development of Austria's gas market rules.

THE CURRENT MARKET MODEL

While originally, market players booked transmission capacity for contractually agreed transport routes, Austria moved to an entry/exit system on 1 January 2013. Under this regime, entry and exit capacity are booked (through auctions) and used separately of

¹ Legally based on section 41 Natural Gas Act 2011, which empowers the regulatory authority to issue ordinances on several matters.



each other, and also the corresponding rates are separate for entry and exit capacity. Through capacity bookings, market players gain direct access to the so-called virtual trading point, a notional point in the market area that serves as contractual pivot for all trades. Even if they do not hold any capacity at all, market players can trade gas inside the market area through the virtual trading point.

Organising the balancing regime through balance groups had proven successful for the distribution area (formerly called control area) during earlier stages of liberalisation, which is why we now use it for the entire market area.

The market area manager acts as a one-stop shop responsible for registering balance responsible parties and managing balance groups. In a step that brought major operative and procedural advantages for market players, the same undertaking took on the functions of market area manager and distribution area manager in June 2017.

The clearing and settlement of imbalance charges for balance groups that are active at distribution level has remained with the clearing and settlement agent. It is also responsible for running the switching platform and simplifying the supplier switching process.

Separate rules were implemented for the Tyrol and Vorarlberg market areas, as they are fed entirely from Germany. The framework established there enables the two Austrian market areas to directly access the liquid NetConnect Germany (NCG) market area in Germany. We consider this a flagship example of successful cross-border market integration.

In 2012, E-Control's Executive Board issued an ordinance directed at strengthening consumer rights and safeguarding the quality of the services rendered by system operators. It introduced uniform standards for commercial and technical system service quality, including clear deadlines for responding to system admission applications.²

Electricity and gas consumers have had access to a dedicated dispute settlement service at E-Control since 2002. It supports them with any issues they might have with their system operator or supplier and has developed into a frequently-used service for energy consumers over the years. In 2016, the Ministry of Labour, Social

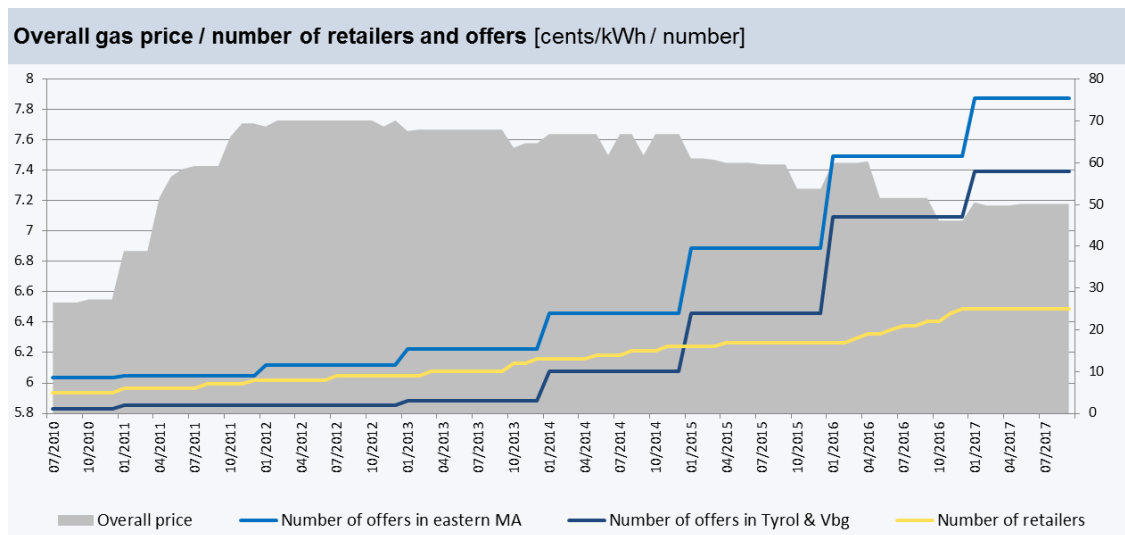
² For more information, consult E-Control's monitoring report on system service quality: <https://www.e-control.at/de/industrie/gas/versorgungssicherheit/versorgungsqualitaet/qualitaet-der-netzdienstleistung> (in German)

Affairs and Consumer Protection notified the service's role as an official alternative dispute resolution body to the European Commission.³

COMPETITION BUILT FROM SCRATCH

Fifteen years of gas market liberalisation have driven the development of the gas market both in Austria and in central and southern Europe as a whole. A brief overview reveals the successes that have been achieved.

More competition means putting consumers first



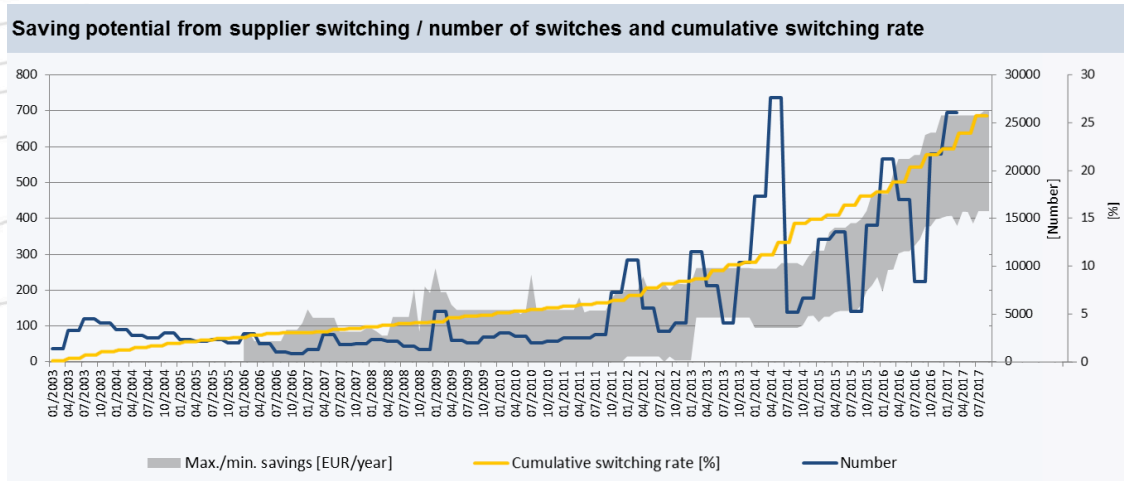
The retail market has benefited from more and more suppliers competing with each other and a much improved range of offers. At the outset, consumers could not switch suppliers or choose between different products at all; now, the average Austrian household⁴ enjoys an overall downwards tendency in prices and can choose between 70 products offered by currently 25 retailers that are active all across the country (cf. the figure above).

The greatly improved range of offers is a sign of innovative customer acquisition and retention strategies that suppliers employ in a competitive environment. In this context, we have observed the development of digital communication channels and intensified direct marketing efforts over the past years.

³ For details, please refer to the dispute settlement service's activity report: <https://www.e-control.at/de/schlichtungsstelle/taetigkeitsberichte> (in German)

⁴ Based on an annual consumption of 15,000 kWh.

Liberalisation brings savings for consumers



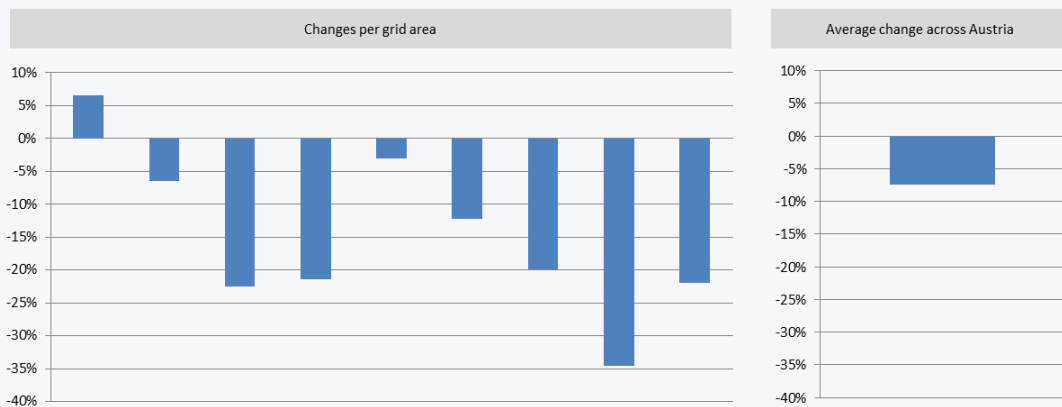
As the supply side of the market has gradually opened up to a multitude of retailers and offers, consumers have become increasingly aware of the advantages this brings them. Switching numbers have been on an upwards trend for years now, indicating that consumers want to gain more active control of their energy expenses. Price competition has created considerable saving potentials for consumers, and these savings remain the primary reason for switching. E-Control's tariff calculators, which clearly display the potential savings for households and for small businesses, have been major contributors to improving consumer information and decreasing information asymmetries.⁵

Wholesale prices have gone sideways since 2010, which means increased saving potentials for consumers must come from pressure on retailers' margins.

Looking at the overall price, contracting grid charges have also contributed their share to relieving consumers' budgets. The figure below compares the grid charges payable by a typical household in 2006 with those in 2016. The multi-year average for a typical household consumer, corrected for inflation, shows decreases in eight out of nine Austrian grid areas and a 7% average drop in grid charges across Austria..

⁵ In addition to the tariff calculators, which render electricity and gas price comparisons, E-Control also runs a petrol price database that enables consumers to search for the filling stations offering the lowest prices for diesel, petrol and CNG (compressed natural gas).

Development of grid charges for a typical household (15,000 kWh/yr), 2016 vs. 2006 [%]



Please note that the above costs are corrected for inflation and for the total annual volume of gas supplied to consumers, which forms the basis for tariff reviews.

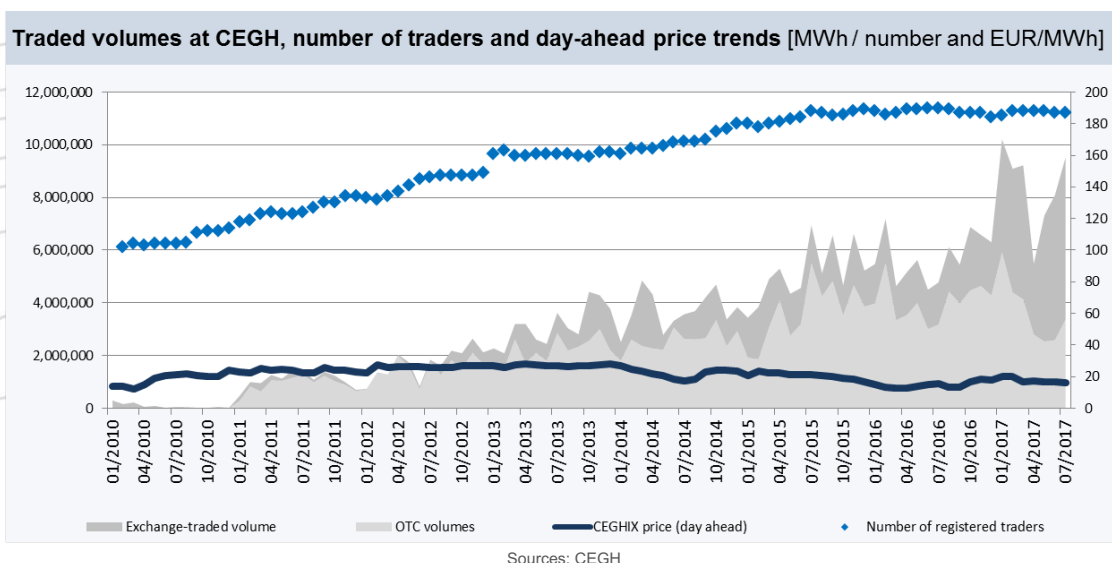
Source: own representation based on published rates, total volumes supplied and inflation over time

Among other things, the system charges serve to cover the costs for considerable network investments. Expanding the supra-regional network (the southern and western lines) alone has cost about 500 million EUR over the last 15 years, and a further 1.9 million EUR has gone into maintaining and expanding the grid in the interest of domestic customer supply.⁶ These investments have made the Austrian gas grid fit for the future. We do not expect further large projects of this kind to surface over the next couple of years, i.e. the additional upwards pressure on gas network charges due to necessary investments should be very limited.

Austria functions as a gas trading hub

Gas wholesale trading in Austria saw milestones when the Central European Gas Hub (CEGH) was established as operator of an organised and transparent OTC trading venue in 2005 and when the gas exchange started operating in December 2009. Since then, trading has increased steadily and Austria has established itself as a major gas hub in Europe.

⁶ For an overview of current and planned infrastructure projects, please consult the long-term plan and the coordinated network development plan:
<http://www.aggm.at/en/netzinformation/netzentwicklungsplaene>



Both the number of traders active at the hub and the volumes traded show upwards trends. Though OTC continues to be an important segment, including for long-term products, trading at the gas exchange has picked up markedly and has contributed to more transparent pricing in Austria and the entire region, thereby boosting trust in CEGH as a reliable trading venue.

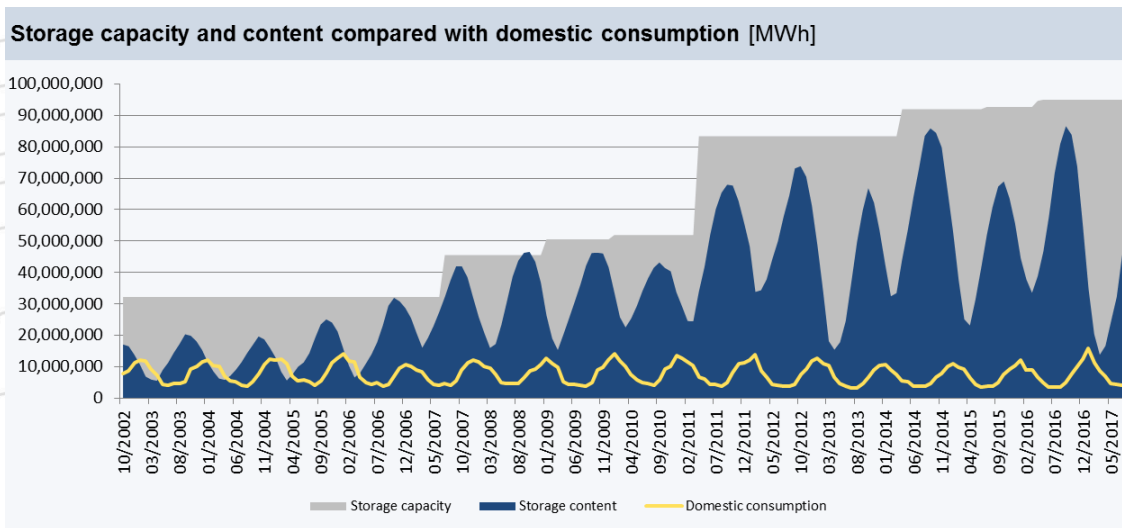
This can be firmed up by a series of infrastructure projects that are currently being discussed or planned: a bidirectional line to connect the Austrian and Czech gas markets (BACI), firm capacity from Hungary into Austria and, similarly, network coupling with the Slovenian gas market.

Market mechanisms secure supplies

Liquid markets with sufficient depth to cover demand even at peak times are a centrepiece for secure energy supply.

The large storage capacities available to the Austrian gas market are also a positive supply security factor. Over the last 15 years, storage capacity has increased by almost 200% and also the number of storage system operators has grown markedly, thereby pushing down supply-side market concentration on the storage market.

On the demand side, we have noted clear changes in the number and structure of storage customers, and overall a rise in national and international storage customers. This latter factor confirms that Austrian storage facilities contribute to security of supply also at the level of the CEE/SEE region.

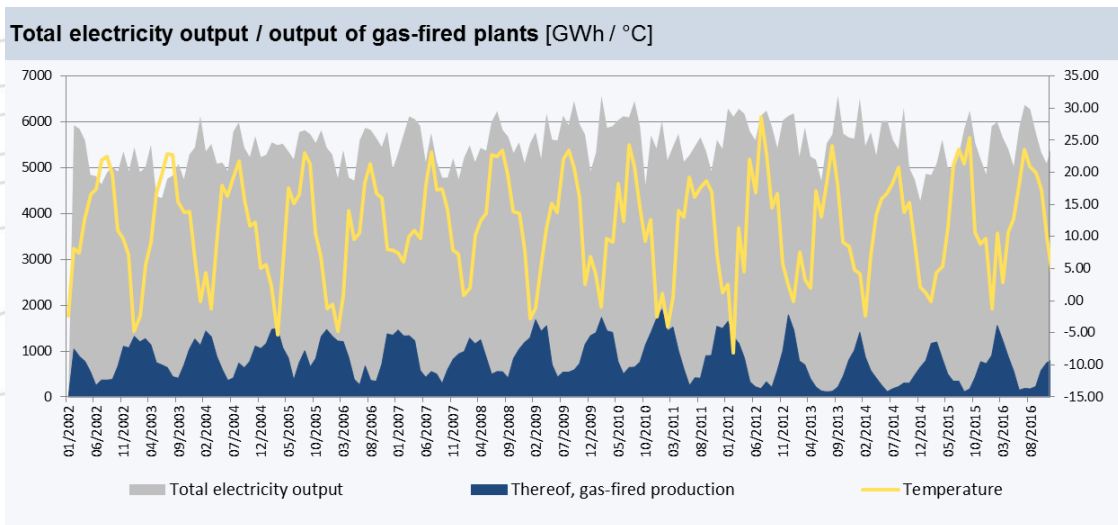


Sources: E-Control data collection

Thanks to Austria's large storages and to close and well-functioning cooperation between E-Control Austria, the Ministry of Science, Research and Economy, system operators and the relevant market players, Austria weathered the supply difficulties in 2006 and 2009 confidently and without having to restrict supply to consumers.

To ensure that also future potential crises can be successfully managed, Austria's gas infrastructure has been continuously expanded over the past years. Several projects in the distribution area manager AGGM's long-term plan foresee better connections of storage facilities to the pipeline network. This further improves the sites' availability for the market. Even periods of extremely cold weather would not constitute a danger for gas security of supply in Austria.

Due to the interlinkedness of the markets, secure gas supplies are relevant not only for heating and in industrial manufacturing processes but also for securing the supply of electricity to Austrian consumers.



Sources: E-Control data collection, Central Institute for Meteorology and Geodynamics

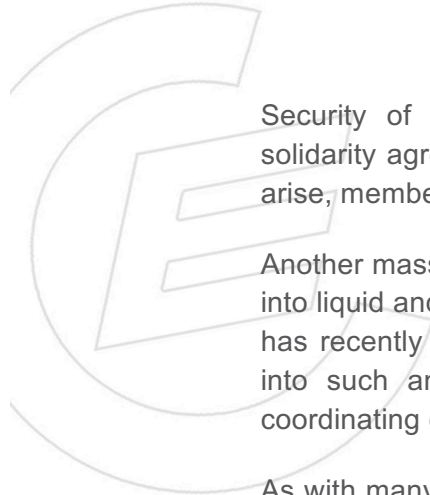
Gas power plants can be used to generate electricity flexibly and precisely, which makes them the ideal partners for intermittent generation from wind, solar and other renewable energy sources. Market pressures on gas-fired power plants have been considerable in recent years, even though they account for sizeable shares of electricity output during autumn, winter and spring (>30% in the monthly graph above, while individual days score even higher). As the fossil fuel that causes least CO₂ emissions when converted into power, natural gas also plays a role in greening the country's electricity supply.

OUTLOOK

Fifteen years ago, at the outset, the Austrian energy market was fully regulated. Since then, we have seen a competitive, transparent and efficient natural gas market evolve. Consumers benefit from it in many ways, including through excellent security of supply.

But the evolution is not at an end yet. Common efforts will continue to be required if we want to further develop our gas market in the interest of consumers and the interest of the Austrian natural gas industry in the face of a challenging future.

It is crucial that we continue to improve our market's processes and its structure in line with the framework established at European level and with a view to harmonising regional rules wherever possible. As part of this effort, we must implement the new



Security of Gas Supply Regulation,⁷ which includes an obligation to conclude solidarity agreements with neighbouring countries. Should difficulties with gas supply arise, member states will be able to rely on each other's assistance.

Another massive push will be needed to transform the national gas markets in Europe into liquid and integrated market places that truly transcend borders. E-Control Austria has recently undertaken a study that should help integrate the Austrian gas market into such an international frame. To follow up on this, we are assessing and coordinating concrete market integration options with our neighbours.

As with many areas of our modern lives, we expect the issue of “greening” the gas to increasingly dominate further discussions. CO₂ emission reduction targets mean that we will need to create an energy system that runs largely without fossil fuels in the long term. Our natural gas infrastructure can function as an enabler for integrating renewable generation from wind, solar and biomass etc. What is more, renewable gases – biomethane and synthetic methane – are an alternative that is economically feasible and reliable enough to ensure security of supply for a variety of energy end-uses.

⁷ Replacing Regulation (EU) No 994/2010 concerning measures to safeguard security of gas supply.

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