

CEER Vision for a European Gas Target Model

Conclusions Paper

Ref: C11-GWG-82-03
1 December 2011

INFORMATION PAGE

Abstract

Following a request from the 18th Madrid Forum, European energy regulators committed to produce a vision paper on a conceptual model for European gas markets (the “gas target model”). Building on regulators’ work to date (including on framework guidelines in specific areas), the feedback from four dedicated public workshops and one workshop discussing the view of academia, the outcome of the CEER call for evidence (5 November 2010 to 7 January 2011) and the CEER public consultation (5 July to 20 September 2011) and the discussions at the 19th and 20th Madrid Fora, the current conclusions paper sets out the vision for the European Gas Market in 2014 and beyond. Furthermore, this paper proposes measures to achieve the goal of the Internal Energy Market by 2014 in line with the commitment of the European Council of 4 February 2011.

Related Documents

CEER documents

- “CEER vision paper for a conceptual model for the European gas market. Call for evidence, 3 November 2010, Ref: C10-GWG-70-03, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/GAS/GTM_CfE/CD/C10-GWG-70-03_GasTargetModel_CfE_clean.pdf
- “CEER vision paper for a conceptual model for the European gas market. Evaluation of comments to the call for evidence”, 2 March 2011, Ref: C11-GWG-74-03, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/GAS/GTM_CfE/CD/C11-GWG-74-03_GTM_EoC_2%20March%202011.pdf
- “CEER Draft Vision for a European Gas Target Model. Public Consultation Paper”, 5 July 2011, Ref: C11-GWG-77-03, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/GAS/Gas_Target_Model/CD/C11-GWG-77-03%20GTM%20PC_5-July-2011.pdf
- “CEER Vision for a European Gas Target Model. Summary of Responses”, 11 October 2011, Ref: C11-GWG-81-03, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/GAS/Gas_Target_Model/CD/C11-GWG-77-03%20GTM%20PC_5-July-2011.pdf

ACER documents

- “ACER Framework Guidelines on Capacity Allocation Mechanisms for European Gas Transmission Networks”, 3 August 2011, Ref. FG-2011-G-001, [http://www.acer.europa.eu/portal/page/portal/ACER_HOME/Public_Docs/Acts%20of%20the%20Agency/Framework%20Guideline/Framework_Guidelines_on_Capacity_Allocation_Mechanisms_for_t/FG-2011-G-001%20\(final\).pdf](http://www.acer.europa.eu/portal/page/portal/ACER_HOME/Public_Docs/Acts%20of%20the%20Agency/Framework%20Guideline/Framework_Guidelines_on_Capacity_Allocation_Mechanisms_for_t/FG-2011-G-001%20(final).pdf)
- “ACER Framework Guidelines on Gas Balancing in Transmission Systems”, 18 October 2011, Ref. FG-2011-G-002, http://www.acer.europa.eu/portal/page/portal/ACER_HOME/Public_Docs/Acts%20of%20the%20Agency/Framework%20Guideline/Framework%20Guidelines%20on%20Gas%20Balancing%20in%20Tr/FG%20Gas%20Balancing_final_public.pdf

External documents

- Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:211:0036:0054:EN:PDF>
- Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:211:0094:0136:EN:PDF>
- European Council – Conclusions – 4 February 2011, http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/119175.pdf
- “Market design for natural gas: the target model for the internal market”, LECCG study, March 2011, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/GAS/GTM_CfE/Tab1/LECCG%20Gas_Target_Model_0700311.pdf
- “A vision for the EU target model: the MECO-S Model “, Glachant, Jean-Michel, Florence School of Regulation, EUI Working Papers, RSCAS 2011/38, June 2011, http://www.florence-school.eu/portal/page/portal/FSR_HOME/ENERGY/Publications/Working_Papers/2011/RSCAS_2011_38.rev.pdf
- Congestion management procedures / Commission proposal for guidelines to be adopted via a comitology procedure, http://ec.europa.eu/energy/gas_electricity/consultations/20110412_gas_en.htm

Table of Contents

1. INTRODUCTION.....	5
2. BACKGROUND	5
3. CEER'S VISION ON A TARGET MODEL FOR EUROPEAN GAS MARKETS	8
ANNEX 1 - CEER	13

1. Introduction

At the 18th Madrid Forum (September 2010) European energy regulators were mandated to initiate a process to establish a target model for European gas markets. Since then, regulators have engaged in an intensive (and extensive) dialogue with all stakeholders on how the goal of the Internal Gas Market can be achieved. A CEER call for evidence was launched in 2010¹. CEER ran five public workshops, stakeholder roundtables, bilateral discussions as well as one webinar, all of which were very well attended. A formal public consultation was carried out between July and September 2011². Both the consultation document and a summary of responses can be found on the CEER website.

Regulators provided an update to the September 2011 Madrid Forum and the Forum invited NRAs together with Member States, ENTSOG and other stakeholders to clarify how the different gas framework guidelines/ network codes relate to each other, as well as to elaborate on market based mechanisms for network users to signal the need for incremental capacity and for that capacity to be allocated. Furthermore, the Madrid Forum invited regulators to examine where and how to implement the measures proposed in the Gas Target Model with a view to completing the internal market by 2014.

In their approach, regulators see a competitive European gas market as a combination of entry-exit zones with virtual hubs. Their vision suggests that the development of competition should be based on the development of liquid hubs across Europe at which gas can be traded (these may be national or cross-border). Market integration should be served by efficient use of infrastructures, allowing market players to freely ship gas between market areas and respond to price signals to help gas flowing to where it is valued most. The target model has to allow for sufficient and efficient levels of infrastructure investment, in particular where physical congestions hinder market integration.

The purpose of this paper is to set out the vision of the European Gas Market and is the result of this intensive dialogue with all stakeholders over the last year. Chapter 2 provides background information to this work and Chapter 3 describes CEER's vision on a target model for European gas markets.

2. Background

The European gas markets today

The European Union is highly dependent on gas produced outside of its borders – some 64% of demand in 2009³ – and transported either via long-distance pipelines or LNG facilities. Energy dependency is going to grow in the future, depending on the ENTSOG Ten Year Network Development Plan 2011 demand scenario considered, to more than 70%⁴.

¹ http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/GAS/GTM_CfE/CD

² http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/GAS/Gas_Target_Model/CD

³ Eurostat energy dependence EU-27.

⁴ Own calculations based on ENTSOG TYNDP 2011; shale gas not considered.

While there are also early developments in exploring shale gas in Europe, the decline of gas production in Europe leads to import dependency to remain a key feature over the period until 2020. At the same time, the need for downstream flexibility should increase. Indeed, with an obligation for 20% of Europe's energy to come from renewable sources in 2020, many Member States are seeing a significant increase in intermittent sources of generation, e.g. wind. As such, we expect much greater short term fluctuations in gas demand than previously, as we see more gas-fired power stations coming online.

In many European countries, security of supply has been historically met through long-term contractual arrangements (typically 25 years) between gas producers and buyers, which give gas buyers flexibility above an agreed minimum in the volumes of gas that will be delivered within a contract year. These contracts usually include "take or pay" obligations, meaning that European buyers must "take or pay" for the minimum agreed volumes of gas. The long-term gas contracts have also been seen as a key mechanism to underpin the investment in long-distance pipelines and in gas production by sharing risks between gas producers and importers. They remain important not only in guaranteeing security of supply but also in underpinning the investment in long-distance pipelines and in gas production. They have been seen as a key tool for sharing risks between gas suppliers and those investing. The import dependence also means that Member States require additional sources of flexibility to cover demand fluctuations. In many Member States, storage provides an important source of seasonal and short term flexibility, with gas being imported in summer to inject into storage to supply peak winter demand.

Trading at Europe's gas wholesale markets or hubs has made progress over the last decade, particularly in North West Europe. However, progress has not been the same in all parts of Europe and also where gas hubs have emerged, liquidity is still regarded by many as insufficient. The British National Balancing Point (NBP) is the most liquid hub with churn ratios (total volume of gas traded compared to the volume of gas consumed) of 15 in 2010. But churn ratios at hubs in continental Europe are, although increasing, much lower. With the reduction in gas demand due to the economic downturn in 2009 and the increase in LNG imports available for Europe, we have seen a renegotiation of the oil-indexed prices in the long-term gas contracts in favour of a more "gas-on-gas pricing". However, more needs to be done for European gas wholesale markets to be sufficiently liquid sending reliable price signals.

Any gas target model will need to provide a regulatory framework that secures supplies in the long-, medium- and short term, which means making Europe attractive for gas imports also in the future and taking into account seasonal and short term fluctuations in gas demand. The idea of the integrated energy market is to promote competition in the European wholesale markets and facilitate new entry to compete against the incumbents in supplying gas. A competitive wholesale market will need to be efficient, thereby delivering gas to where it is valued most whilst providing shippers with the right incentives to secure supplies to European consumers. An efficient market must also provide investment signals in both gas production and in gas network infrastructure, including transmission and storage, in order to meet the demands of European gas consumers. Non-discriminatory and fair arrangements for shippers to access the gas infrastructure are also needed in order for competition to develop and for the network to be used efficiently while guaranteeing adequate remuneration for investments.

European legislation

One of the key challenges in creating an integrated market is to put in place effective rules for facilitating cross-border trading and market integration between Member States. As such, the 3rd Package establishes a new regulatory framework for cross-border trade with the creation of the Agency for the Cooperation of Energy Regulators (ACER) and provisions for legally-binding European network codes to regulate cross-border aspects.

The European regulatory framework aims to improve efficiency in the use of cross-border capacity and to enhance competition through liquid wholesale markets. As part of the 3rd Package the Gas Regulation⁵ makes TSO wide entry-exit systems, in which entry capacities can be booked independently from exit capacities, obligatory by September 2011 and abolishes tariffs set on the basis of contract paths⁶. Measures are being pursued to open up network access to new entrants in a bid to foster greater competition. The Gas Directive⁷ requires increased unbundling of the ownership and operation of gas networks from gas supply in order to remove potential for discrimination when granting network access. ACER has already finalised framework guidelines on capacity allocation mechanisms and gas balancing. These propose that cross-border network capacity should be sold through auctions as 'bundled' products on a central booking platform. They also set out a vision for market-based balancing regimes, where liquid wholesale markets enable network users to balance their portfolio efficiently in response to incentives provided through cost-reflective imbalance charges. Work on other ACER framework guidelines is underway, including on harmonised tariff structures and interoperability which will all contribute to non-discrimination, effective competition and the efficient functioning of the market. Interlinkages and overlaps between the different topics need to be addressed in the course of the development of the framework guidelines in order to meet the overall objectives. The European Commission (Commission) is considering proposals to maximise cross-border capacity and to free-up unused capacity and offer it back to the market (Congestion Management Procedures or CMP guidelines). Other measures as e.g. included in the framework guideline on Gas Balancing are designed to promote liquidity in gas traded at hubs. However, in some Member States further steps in addition to the implementation of the envisaged network codes might be necessary.

The basis for the development of the vision for the European Gas Market is the full implementation of the 3rd Package. However, as of 29 November 2011, only 12 Member States have notified the Commission of full implementation of the 3rd Package. With work progressing on the framework guidelines setting the objectives and principles for European network codes it became clear that there are important interactions between the different topics to which a high-level vision would add value.

⁵ Regulation (EC) 715/2009.

⁶ Recital 19 Gas Regulation.

⁷ Directive 2009/73/EC.

3. CEER's vision on a target model for European gas markets

Natural gas will continue to play an important role in Europe as a source for energy and as feedstock. The EU environmental policy goals, as e.g. the integration of intermitted power sources, will have a significant impact on the role of gas in the future. To master the challenges for the European gas markets ahead it is crucial to set a structural framework that allows that functioning markets do emerge.

The objective of an integrated and competitive European gas market that is sustainable, offers choice to customers and promotes security of supply is enshrined in the 3rd Package. The February 2011 European Council confirmed its commitment to this objective⁸, and set 2014 as the deadline for the completion of the internal market. This CEER vision paper considers both what can be put in place by 2014 and issues for a longer term vision until 2020.

All proposals made in this context, including all framework guidelines and network codes, will need to be able to deal with changes in supply or demand patterns. For example, any market rules will have to enable the gas industry to provide flexibility to electricity markets to support the increase in the amount of renewable power generation. Also, infrastructure development will have to be able to cope with changes in the sourcing of gas, by bringing about necessary investment in import infrastructure, whilst avoiding overinvestment and asset stranding.

Enabling functioning wholesale markets

To achieve the objectives, functioning wholesale markets need to exist throughout the European Union. They will be structured as entry-exit zones, where entry capacity is allocated separately from exit capacity and any gas entered into the entry-exit zone can be delivered, at least commercially, to any exit point in that zone. The creation of entry-exit zones will facilitate the development of trading hubs. Harmonised market-based balancing arrangements will mean that TSOs' role on gas markets is reduced and the bulk of balancing actions is taken over by network users on the hubs. Transparency requirements have already become legally binding and will create a level playing field on each trading hub. We will observe reliable price signals which will indicate the value of gas on each hub for different timeframes.

Even where entry-exit zones have been put in place and the new market rules have been implemented, market liquidity may be insufficient. While the introduction of entry-exit systems, transparency rules and market-based balancing regimes may help, this in itself may not always be sufficient to create a liquid and functioning wholesale market. Functioning wholesale markets require a sufficient presence and low concentration of players active in the wholesale market, availability of gas from diverse sources, multitude of customers (i.e. sufficient demand for gas) as well as a certain level of trade in terms of the total volume of gas traded compared to the volume of gas consumed (i.e. churn ratios). To illustrate this, we believe that, as a reference, a set of parameters including a churn rate of 8, a Herfindahl-

⁸ European Council – Conclusions – 4 February 2011,
http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/119175.pdf

Hirschmann Index (HHI) below 2000⁹, gas being available from at least 3 different sources, a total gas demand within the entry-exit zone of at least 20bcm and a Residual Supply Index (RSI¹⁰) of more than 110% for more than 95% of days per year are desirable. The values mentioned are meant as indication.

CEER calls on each NRA to publish a review of its market liquidity and market integration by 31 December 2012 and to explore whether additional measures are needed to improve the functioning of the wholesale market. These reports shall be conducted in cooperation with adjacent NRAs to explore whether there is mutual benefit in joint actions. Such actions could include mandatory release programmes whereby those with significant market power are obliged to sell their gas on wholesale markets, improving the efficiency of interconnector flows or changing the shape of entry-exit zones. This could be done through merging them or, in the interim, by creating trading regions which create a common entry-exit zone for transmission and a single virtual point for trading gas between at least two Member States (or parts thereof) but maintain “national end-user zones” in different Member States for distribution and balancing of forecasting errors. Whilst considering merging zones or setting up trading regions one must carefully weigh costs and benefits and consider their distribution between the relevant zones.

Recommendation 1:

As a first very crucial step, the 3rd Energy Package in general and the entry-exit systems in particular need to be implemented in all Member States as required by Article 13 of the Gas Regulation. National Regulatory Authorities (NRAs) shall then assess market liquidity and the degree of market integration in close cooperation with each other. Member States, TSOs and other interested stakeholders shall be involved in this work, within the framework of the Gas Regional Initiatives¹¹. Where necessary for creating functioning wholesale markets, NRAs shall explore measures to improve market liquidity and the degree of market integration. These measures may be of a national nature, but could also include joint actions with neighbouring markets, for example improving the efficiency of interconnection arrangements or the creation of market areas or trading regions into which network access to the European gas market could be structured so that every final consumer is accessible from a functioning wholesale market. This assessment, as well as the development of options to bring about functioning and integrated wholesale markets, shall be concluded by 31 December 2012.

⁹ HHI must never be judged in isolation. It is key to consider the relevant market evolution when calculating HHI, for instance including evolving control over LNG and shale gas resources. HHI in itself is not the issue in the context of the functioning market. What matters is the actual behavior of market parties and trust of market parties in the development of the functioning of the gas market(s).

¹⁰ $RSI = (\text{total supply} - \text{largest seller's supply}) / \text{total demand}$.

¹¹ http://www.acer.europa.eu/portal/page/portal/ACER_HOME/Activities/Regional_Initiatives/Gas_Regional_Initiatives

In case the concept of trading regions – as an intermediate step – is deemed appropriate, it shall be ensured that there is one virtual trading point and that gas can be transported between the trading region and end-user zones without constraints. A cost benefit analysis shall be carried out to assess the economic viability of any proposed measures. The respective Member States, NRAs and TSOs shall implement the identified measures in the framework of the Gas Regional Initiatives by September 2014.

Connecting functioning wholesale markets

In order to connect wholesale markets, it is important that interconnector capacity is used efficiently, i.e. that all market participants can access it, unused capacity is offered back to the market and capacity is used such that gas flows from low priced areas to high priced areas.

Gas transmission networks will be owned and operated by certified transmission companies under the 3rd Package which will help to ensure that they do so in a non-discriminatory and efficient manner. To purchase network capacity, network users will have to participate in auctions, as set out in ENTSOG's capacity allocation network code. These will offer a small set of standardised bundled products (instead of selling entry/exit capacity products per interconnection point separately) on a central booking platform. Tariffs will be set in a way that they are transparent, cost reflective, non-discriminatory and promote efficient investment. ACER is therefore examining in its consultation on the scope of the transmission tariff structures framework guideline how reserve prices in the long- and short term should be set in order to encourage efficient system use in both the long- and the short run. ACER will present the outcome of this consultation, as well as a first outline of the framework guidelines on harmonised transmission tariff structures at a future meeting of the Madrid Forum.

In order to tackle contractual congestion and to ensure the efficient use of interconnection capacity efficient allocation mechanisms for capacity in the short term are also necessary. This capacity may be available because there was no demand for it at the long-term auctions or it was not offered in the long-term auctions (the framework guidelines envisage retaining 10% of capacity for the short term) or it has become available through congestion management procedures. Explicit auctions are more efficient than current first-come-first-served arrangements and require shippers to coordinate buying network capacity with gas in order to trade across borders, which may be challenging in short timescales. Therefore, a platform (whether it is operated by TSOs or third parties such as exchanges or hub operators) whereby shippers can submit bids and offers for cross-border gas trades and capacity is implicitly allocated to these trades may be a more efficient alternative. Under implicit allocation, market participants submit bids and offers onto the platform to buy and sell gas on two (or more) entry-exit zones. The platform collates all bids and offers into a single "bid-offer ladder", TSOs provide details on the available interconnection capacity between the entry-exit zones and those bids and offers with the greatest price spread will be accepted until the capacity is fully used or wholesale gas prices converge. As gas is traded on a continuous basis an approach to implicit allocation, which is appropriate for the gas market, has to be ensured. As such, it may be preferable for the implicit capacity allocation to be a continuous process or to be repeated several times during the gas day to facilitate shippers' and traders' within-day gas trading rather than on a purely day-ahead basis. This would allow

optimised cross-border trades between the two markets, providing greater price convergence when there is sufficient physical interconnection capacity between the two markets but allowing price divergence when the interconnection is insufficient.

Recommendation 2:

The Commission, Member States, ACER, regulators and TSOs shall cooperate to ensure that the capacity allocation mechanisms (CAM) network code and the Commission's congestion management proposals (CMP guideline) are adopted and implemented on all interconnection points as soon as possible but by 1 January 2014 at the latest.

In their review of market liquidity and market integration (set out above), NRAs shall consider whether measures, such as implicit auctions, would improve the efficiency in the use of interconnection capacity. Keeping in mind that the ultimate goal of the internal gas market is to achieve functioning markets, regulators, Member States, TSOs and market participants should cooperate to conduct pilot projects that design and trial an implicit capacity allocation mechanism between at least two entry-exit zones in different Member States. Regulators recommend that the initial conclusions of these pilot projects are presented by early 2013. Experience gained in these pilot projects shall be used to agree on a common understanding of the meaning of implicit capacity allocation for gas markets.

The assessment of market liquidity and the degree of market integration (as set out above) should also address the question whether more measures need to be taken to ensure a more efficient use of interconnection capacity and this should be reflected in the proposed measures.

Ensuring secure supply and economic investment

The question arises of whether the approach described above suffices as the longer term vision beyond 2014 for a single European gas market or whether further efficiencies can be achieved. Functioning wholesale markets with liquid trading hubs will generate strong price signals which will continue to allow the European gas industry to make long-term commitments where this is needed (for example to external gas suppliers or for the purposes of infrastructure development). European regulators consider that removing (implicit) destination clauses (as required by European legislation) and contractual paths, introducing auctions and standardised capacity products, which are appropriately coordinated at interconnection points, will provide a solid basis for long-term bookings. These arrangements should promote the development of competitive wholesale gas markets.

It will be important that efficient investments in network interconnection capacity take place. One way to support this is for network users to signal their willingness to pay for this additional capacity. Historically, the main mechanisms for this have been Open Season procedures. NRAs propose to implement and design a harmonised approach in which the same principle can be applied on a coordinated and ongoing basis, whilst ensuring that incumbents do not hinder market access for new entrants. This approach shall be market based and consistent with measures proposed in the framework guideline and network code

on capacity allocation mechanisms as well as the Commission's proposal for congestion management procedures to eliminate physical congestion. This would e.g. entail a regular "bidding" process for testing shippers' commitment to book new interconnection capacity. TSOs would define the relevant costs of a potential investment at a cross-border point. Shippers would submit bids to the TSOs to buy "new capacity" on a firm basis¹² at this cross-border point, before the investment was made. If the bids received by the TSOs to pre-book the new capacity cover a pre-determined percentage of the overall investment costs, the investment would be approved. This can help ensure efficient investment and reduce the risk of asset stranding. The rules for this process need to be known upfront by all market participants. This system would require close cooperation between the relevant national regulators at the cross-border point to agree on the design of this "market test".

Recommendation 3:

CEER, in consultation with stakeholders, will develop proposals how to identify and integrate new capacity, based on market demand established through coordinated market-based procedures. CEER includes this topic in its work plan 2012.

Evolution of a gas target model

European Energy Regulators note that the gas target model has been developed under the current legal framework and existing market structures in Europe. The model should be evaluated and if necessary further developed after the implementation of the network codes on capacity allocation mechanisms, gas balancing, harmonised transmission tariffs and gas interoperability in 2013 as well as in the light of the work on incremental capacities in 2012 and their practical implementation. In this context a change of market structure may result from the integration of renewable energy and the increasing interrelation between gas and electricity markets. An evaluation against these developments may be necessary for further development as well.

¹² In other words they would commit to buying the capacity before the investment is made. If the investment is made, they would be liable to paying the price for the capacity. Equally, if the investment is subsequently not made, they would not pay and would be reimbursed if they had.

Annex 1 - CEER

The Council of European Energy Regulators (CEER) is the voice of Europe's national regulators of electricity and gas at EU and international level. Through CEER, a not-for-profit association, the national regulators cooperate and exchange best practice. A key objective of CEER is to facilitate the creation of a single, competitive, efficient and sustainable EU internal energy market that works in the public interest.

CEER works closely with (and supports) the [Agency for the Cooperation of Energy Regulators \(ACER\)](#). ACER, which has its seat in Ljubljana, is an EU Agency with its own staff and resources. CEER, based in Brussels, deals with many complementary (and not overlapping) issues to ACER's work such as international issues, smart grids, sustainability and customer issues.

The work of CEER is structured according to a number of working groups and task forces, composed of staff members of the national energy regulatory authorities, and supported by the CEER Secretariat.

This report was prepared by the Gas Working Group of CEER.