EN 2015

NO 16

Special Report

Improving the security of energy supply by developing the internal energy market: more efforts needed

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Luxembourg: Publications Office of the European Union, 2015

Print	ISBN 978-92-872-3329-5	ISSN 1831-0834	doi:10.2865/47520	QJ-AB-15-018-EN-C
PDF	ISBN 978-92-872-3347-9	ISSN 1977-5679	doi:10.2865/317301	QJ-AB-15-018-EN-N
EPUB	ISBN 978-92-872-3327-1	ISSN 1977-5679	doi:10.2865/623009	QJ-AB-15-018-EN-E

Printed in Luxembourg

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Special Report

Improving the security of energy supply by developing the internal energy market: more efforts needed

(pursuant to Article 287(4), second subparagraph, TFEU)

Audit team

02

The ECA's special reports set out the results of its performance and compliance audits of specific budgetary areas or management topics. The ECA selects and designs these audit tasks to be of maximum impact by considering the risks to performance or compliance, the level of income or spending involved, forthcoming developments and political and public interest.

This performance audit was produced by Audit Chamber II — headed by ECA Member Henri Grethen — which specialises in structural policies, transport and energy spending areas. The audit was led by ECA Member Phil Wynn Owen, supported by the head of his private office, Gareth Roberts, and Katharina Bryan, attaché; Pietro Puricella, head of unit; Erki Must, head of task; Jolita Korzunienė, Pekka Ulander, Svetoslav Hristov, Aleksandra Klis-Lemieszonek and Andrew Judge, auditors.

From left to right: P. Puricella, A. Judge, G. Roberts, J. Korzunienė, P. Ulander, K. Bryan, E. Must, A. Klis-Lemieszonek, P. Wynn Owen and S. Hristov.

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Agency for the Cooperation of Energy Regulators (ACER): an EU agency with its seat in Ljubljana, Slovenia, which was created in March 2011 under the Third Energy Package to further progress the completion of the internal energy market both for electricity and for natural gas. ACER is an independent European structure which fosters cooperation among European energy regulators.

Billion cubic metres (bcm): a measure of gas volumes used in both production and trade.

The **Baltic Energy Market Interconnection Plan** (BEMIP): a regional initiative signed in 2009 for the integration of Estonia, Latvia and Lithuania into the European energy markets, to end their status as energy islands and to liberalise their energy markets.

Business-to-business trade (B2B): a commercial transaction between two businesses, such as between a manufacturer and a wholesaler, or between a wholesaler and a retailer.

Comitology: a committee system which oversees the delegated acts implemented by the European Commission. The committees are composed of representatives of the Member States and have the mandate to regulate certain delegated aspects of the secondary legislation adopted by the Council and, where co-decision applies, the European Parliament. The Commission chairs these meetings and provides the secretariat.

Connecting Europe Facility (CEF): the CEF provides, since 2014, financial aid to three sectors — energy, transport and information and communication technology (ICT). In these three areas, the CEF identifies investment priorities that should be implemented in the coming decade, such as electricity and gas corridors, use of renewable energy, interconnected transport corridors and cleaner transport modes, high speed broadband connections and digital networks.

Energy Interconnector: a structure which enables electricity or gas to flow between national networks. These structures can be owned and operated by one or more transmission system operators.

Energy Island: a region with insufficient links to energy transmission networks. As a result, they are often dependent on a single external energy source or supplier.

European Energy Programme for Recovery (EEPR): the EEPR was introduced in late 2008 in response to the economic and financial crisis. It provides funding to projects which aim to make energy supplies more reliable and to reduce greenhouse emissions.

European Networks of Transmission System Operators for Electricity and Gas (ENTSO-E/ENTSO-G): these networks represent all electricity/gas TSOs in the EU and others connected to their networks, for all regions, and for all their technical and market issues.

European Fund for Strategic Investments (EFSI): the EFSI aims to mobilise, over the period 2015 to 2017, at least 315 billion euros in private and public long-term investment across the EU. The EFSI will be established within the European Investment Bank (EIB) as a trust fund, with unlimited duration, to finance riskier parts of projects. A guarantee up to 16 billion euro backed by the EU budget will compensate the additional risk taken by the EIB. Member States can contribute to the EFSI. The EFSI may fund projects of common interest (PCIs) or other interconnection projects. Energy infrastructure is one of the priorities of the fund.

European Structural and Investment Funds (ESIF): a common framework under which the European Regional Development Fund (ERDF), the European Social Fund (ESF), the Cohesion Fund (CF), the European Agricultural Fund for Rural Development (EAFRD) and the European Maritime and Fisheries Fund (EMFF) operate.

Glossary

06

Internal Energy Market: the internal energy market is the regulatory and infrastructure set-up that should allow the free flow and borderless trade of gas and electricity across the territory of the EU.

Liquefied natural gas (LNG): LNG is a natural gas that has been converted to liquid form for storage or transport.

National regulatory authorities (NRAs): NRAs are Member States' public organisations which check that the market has fair access rules and in some Member States set wholesale and retail prices for consumers. They provide analyses that are used to determine the tariffs charged by the TSOs.

Network codes and guidelines: these are sets of rules which apply to one or more parts of the energy sector. They are intended as a tool to achieve the internal energy market by complementing existing national rules to tackle cross-border issues in a systematic manner.

Projects of common interest (PCIs): in October 2013 the Commission adopted a list of 248 key energy infrastructure projects. PCIs should benefit from faster and more efficient permit-granting procedures and improved regulatory treatment. They may also be supported within the Connecting Europe Facility.

Security of energy supply: uninterrupted availability of energy sources at an affordable price, as defined by the International Energy Agency.

Ten-year network development plans (TYNDPs): TYNDPs for electricity and gas are biannual, non-binding documents published by ENTSO-E and ENTSO-G. TYNDPs are designed to increase information and transparency regarding the investments in the electricity and gas transmission systems.

Trans-European Energy Network (TEN-E): the TEN-E programme aims at developing the internal energy market through interconnection, interoperability and development of trans-European networks for transporting electricity and gas as well as ensuring the security and diversification of supply and promoting sustainable development.

Third Energy Package: a legislative package concerning energy markets in the EU. It sets out the main rules for the functioning of the internal energy market, including cross-border trade and the institutional set-up.

Transmission system operator (TSO): an entity entrusted with transporting energy in the form of natural gas or electrical power on a national or regional level, using fixed infrastructure.

Unbundling: the process of separating the transmission activities of a vertically integrated energy company from other activities, such as generation and distribution.

Executive summary

I

The European Union (EU) has, over the past 20 years, developed a comprehensive approach to energy and climate policy. This policy continues to evolve in the context of the growing challenge of climate change, and a changing international context that includes political developments at the EU borders and trade agreements with external partners.

II

Security of energy supply has become a major issue in Europe over the past decade. Governmental and public concern has focused on the risks associated with dependence on external sources, political uncertainty in external supplier and transit states, and the potential for disruptions to energy supplies. There is also growing recognition that transformations within the EU energy system, due to shifting demand patterns and the expansion of renewable energy sources, raises new challenges for the continuous supply of energy to end-users at an affordable price.

III

The EU has adopted a range of legislation to support the development of an internal energy market. The internal energy market is the regulatory and infrastructure set-up that should allow the free flow and borderless trade of gas and electricity across the territory of the EU. The most recent legislative package, known as the Third Energy Package, set an objective for achieving the internal market by 2014. The EU budget also provided 3.7 billion euro of financing for energy infrastructure between 2007 and 2013, with a further approximately 7.4 billion euro expected to be provided between 2014 and 2020.

IV

Our audit sought to determine whether implementation of internal energy market policy measures and EU spending on energy infrastructure have provided security of energy supply benefits effectively.

Executive summary

V

The EU's objective of completing the internal energy market by 2014 was not reached. Energy infrastructure in Europe is generally not yet designed for fully integrated markets and therefore does not currently provide effective security of energy supply. Financial support from the EU budget in the field of energy infrastructure has made only a limited contribution to the internal energy market and security of energy supply.

VI

Problems remain with the implementation of the EU legal framework for the internal energy market. Important differences in how Member States organise their energy markets can hold back the further development of the internal energy market. Though progress in joining the markets in Europe has been made, the full price effects of the internal energy market have not yet been realised. We recommend that:

Recommendation 1: with the internal energy market not yet having been completed, the Commission should complete its assessments and initiate any necessary infringement procedures against Member States by the end of 2016.

Recommendation 2:

(a) Member States should make sure that their national regulatory authorities (NRAs) are independent and do not face restrictions to the scope of their role. The NRAs should have sufficient resources available for their activities, including allowing them to participate fully in EU-level cooperation activities;

(b) the Commission should assure that the Agency for the Cooperation of Energy Regulators (ACER) has the necessary powers to obtain from key institutions in the Member States the information it needs to carry out the tasks assigned to it.

Recommendation 3: the Commission should promote widespread development of transparent trading mechanisms for both gas and electricity. This should include facilitating and supporting the establishment of exchanges in Member States where they do not currently exist or where B2B trading mechanisms dominate.

Recommendation 4: the Commission should expedite the process of comitology, with a view to securing approval of the electricity network codes by the end of 2015. It should also encourage ACER and the ENTSOs to support early implementation of network codes by Member States in the framework of regional cooperation initiatives.

Recommendation 5: the Commission should:

(a) consider establishing electricity interconnection objectives based on market needs rather than on fixed national production capacity;

(b) reassess the potential costs and benefits of the gas target model, and consider, in the light of uncertain demand, whether there are alternatives to the extensive construction of gas pipelines, such as the installation of strategically placed LNG terminals to serve one or more national markets using internal energy market-compatible solutions. This should be based on a comprehensive EU-level needs assessment.

VII

The infrastructure within and between many Member States is not yet suited for the internal energy market. There is no overall EU-level needs assessment to provide the basis for prioritising investments in energy infrastructure in the EU. Developing cross-border infrastructure requires cooperation amongst neighbouring Member States. We recommend that:

Recommendation 6: the Commission should:

(a) identify cross-border energy infrastructure that is not being used to its full potential to support the internal energy market, either because it is tied up in long-term bilateral contracts not allowing third party access, or because its technical capacities, such as reverse flows for gas, are not being used;

(b) work with stakeholders in the Member States in order to improve the extent to which such infrastructure is actually used continuously for the benefit of the internal energy market;

(c) explore the benefits for setting up regional transmission system operators (TSOs) as a means to encourage and manage efficiently energy flows across borders, making the most of existing infrastructure.

Recommendation 7: the Commission should:

(a) draw up a comprehensive EU-level energy infrastructure needs assessment as a basis for the development of the internal energy market; this should function as a reference to other strategic documents such as TYNDPs;

(b) put in place, to support the needs assessment, a capacity to model energy markets including a broad range of demand projections, either in-house or in ACER;

(c) work with ENTSO-E and ENTSO-G so that the needs assessment functions as an input for internal energy market-related infrastructure planning in the EU, including ten-year network development plans (TYNDPs).

VIII

The EU has several funding instruments to support energy infrastructure projects, but none have the internal energy market as a primary objective. EU co-financed energy infrastructures have a limited impact on the internal energy market. We recommend that:

Recommendation 8: the Commission should refine its planning procedures and in particular the prioritisation and funding of projects of common interest (PCIs) in the light of a comprehensive EU-level energy infrastructure needs assessment;

Recommendation 9: the Commission should make legislative proposals on how to make its decisions to select energy infrastructure projects for funding subject to the proper and continuous functioning of the energy market in the Member States.

Introduction

01
The European Union has, over the past 20 years, developed a comprehensive approach to energy and climate policy[1]. This policy continues to evolve in the context of the growing challenge of climate change, and a changing international context that includes political developments at the EU borders and trade agreements with external partners.

02
The mandate for developing an EU policy in the energy policy area is set out in Article 4 of the Treaty on the Functioning of the European Union (TFEU), which defines energy as a shared competence between the EU and the Member States. Article 194 states that the objectives of EU energy policy are to:

(a) ensure the functioning of the energy market;

(b) ensure security of energy supply in the Union;

(c) promote energy efficiency and energy saving and the development of new and renewable forms of energy; and

(d) promote the interconnection of energy networks.

03
The Member States take decisions about their national energy mix, the taxes and surcharges that apply to gas and electricity, and oversee the functioning of the electricity and natural gas markets within their borders.

04
Security of energy supply has become a major issue in Europe over the past decade. Governmental and public concern has focused on the risks associated with dependence on external sources, political uncertainty in external supplier and transit states, and the potential for disruptions to energy supplies. There is also growing recognition that transformations within the EU energy system, due to shifting demand patterns and the expansion of renewable energy sources, raise new challenges for the continuous supply of energy to end-users at an affordable price.

1 These include, but are not limited to, Commission communications on EU energy policy published in 1995 and 2007, the 2020 and 2030 Energy and Climate packages, and the recent Commission communication on Energy Union.

The security of energy supply and its relation with the internal energy market

05
The European Commission has consistently promoted the development of internal electricity and natural gas markets as the basis for securing energy supplies within the Union. The internal energy market is the regulatory and infrastructure set-up that should allow the free flow and borderless trade of gas and electricity across the territory of the EU. In the most recent Commission communication on European energy security strategy, which was published on 28 May 2014[2], the Commission states that: 'The key to improved energy supply lies first in a more collective approach through a functioning internal energy market and greater cooperation at regional and European levels, in particular for coordinating network developments and opening up markets …'

06
The development of open, competitive and fully functioning internal markets for electricity and natural gas supplies has the potential to deliver security of supply benefits for the Union as a whole. It opens up possibilities for greater supply diversification, mitigating local supply risks, liquid and flexible trading within and between Member States, and the delivery of energy supplies on an economically efficient basis. Security of supply is a public good which comes at a cost, and achieving this in the most cost-effective manner is a core objective of EU energy policy.

07
In December 2014, the Council of the European Union reiterated their support for the completion of the internal energy market, stressing that, 'all efforts must be mobilised to achieve the objective of a fully functioning and connected internal energy market as a matter of urgency'[3].

08
In order to develop an internal energy market, it is necessary both to establish rules for how the gas and electricity energy markets will function and to seek to ensure that there is adequate infrastructure in place for this purpose.

2 COM(2014) 330 final of 28 May 2014 'European Energy Security Strategy'.

3 Council of the European Union Conclusions of the 9 December 2014 Transport, Telecommunications and Energy Council meeting.

The internal energy market legal framework

09

Rules for the functioning of the internal energy market take several forms. The first stage is the development of a legislative framework which establishes the principles for the development of internal electricity and natural gas markets and the regulatory conditions under which energy should be traded. This legislative framework has been developed through three 'packages' of EU secondary legislation (see ***Figure 1***).

10

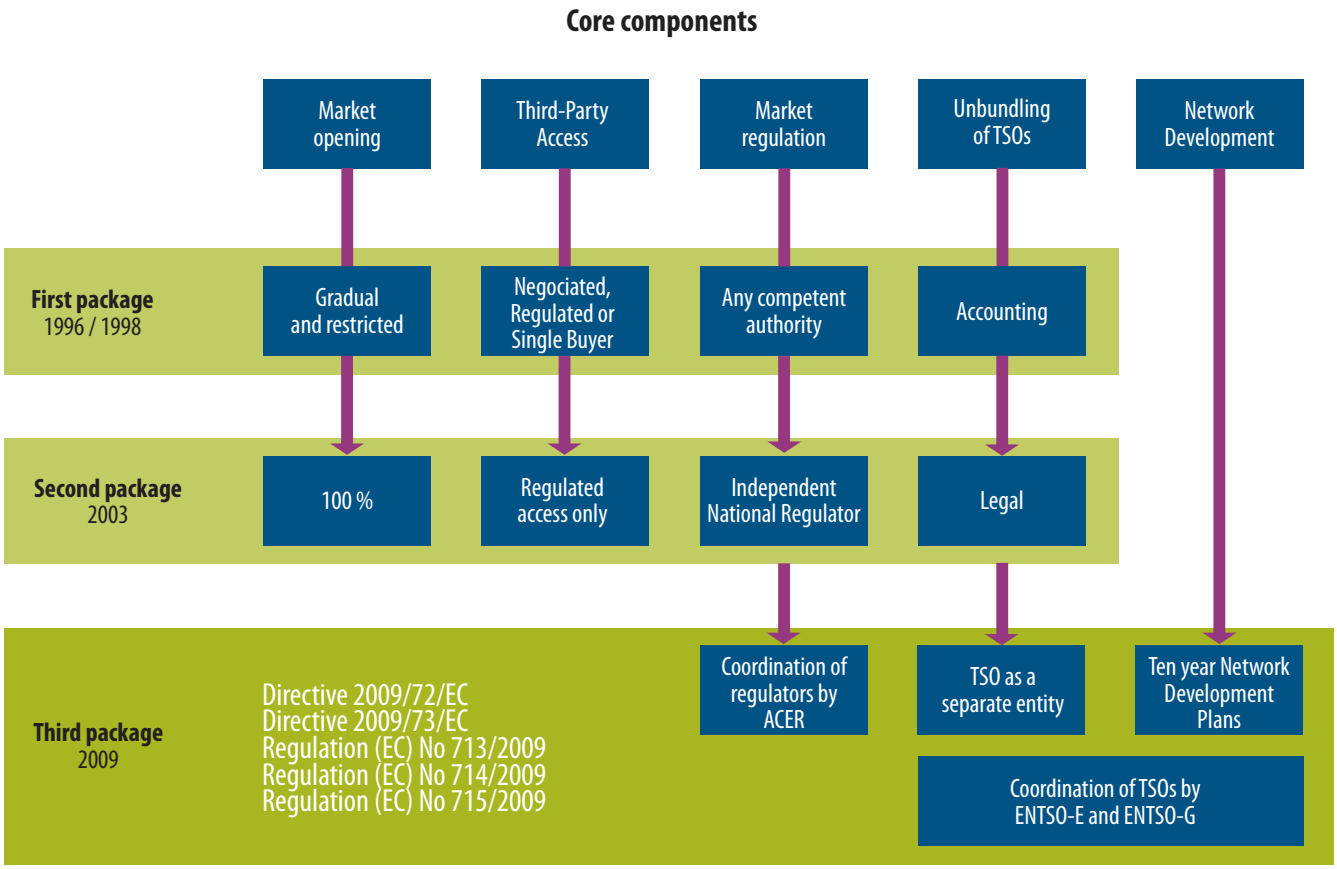
The third energy package was complemented in 2011 by the regulation on wholesale[4] energy market integrity and transparency (REMIT)[5]. This regulation targets the issues of market integrity and market abuse, and provides for the monitoring of wholesale energy markets in order to detect and deter market manipulation. It is supposed to be fully implemented by April 2016.

4 Wholesale takes place between the importers or producers of energy and the providers that sell the energy products to final customers.

5 Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency (OJ L 326, 8.12.2011, p. 1).

Figure 1

Development of the three energy packages



Source: European Court of Auditors.

11

There are also two EU legislative measures which address directly the security of electricity and gas supplies. These measures are based on maintaining the proper and continuous function of the internal energy market, even under exceptional circumstances:

(a) the **electricity supply directive**[6], which was adopted in 2005, commits Member States to the establishment of an adequate level of generation capacity, an adequate balance between supply and demand, and an appropriate level of interconnection with other Member States; and

(b) the **security of natural gas supply regulation**, which was adopted in 2010[7], sets out supply and infrastructure standards and defines the responsibilities of natural gas undertakings, Member States and the Commission for both preventing and reacting to supply disruptions.

12

This legislative framework sets out the basic principles of the internal energy market, but does not in itself constitute a practical template for energy markets. To this end, target models for electricity and gas were initiated by the Commission to realise the objective of price convergence[8]. These models have been further developed with the involvement of ENTSOs and ACER and representatives of the energy industry and are currently in the process of being fixed in a framework of guidelines and network codes which specify the technical rules for how these markets should function:

(a) The **Electricity Target Model** envisages the coupling of national markets into a single pan-European market[9]. Besides facilitating price convergence, the market coupling should assure the optimal use of cross-border transmission.

(b) The **Gas Target Model** promotes price convergence via hub-based trading[10]. It foresees the development of entry–exit zones and liquid virtual trading points.

6 Directive 2005/89/EC of the European Parliament and of the Council of 18 January 2006 concerning measures to safeguard security of electricity supply and infrastructure investment (OJ L 33, 4.2.2006, p. 22).

7 Regulation (EU) No 994/2010 of the European Parliament and of the Council of 20 October 2010 concerning measures to safeguard security of gas supply and repealing Council Directive 2004/67/EC (OJ L 295, 12.11.2010, p. 1).

8 For further information about the target models' development see: https://ec.europa.eu/energy/en/consultations/consultation-generation-adequacy-capacity-mechanisms-and-internal-market-electricity

9 Market coupling describes the linking of separate day-ahead electricity spot markets using available cross-border transmission capacity. A specific algorithm called EUPHEMIA has been developed to implement electricity markets' coupling in European Union.

10 A gas hub is a physical or virtual trading point where gas supplies are priced according to the demand in the region. Hub prices move based on the changing interaction between gas demand and supply.

Roles and responsibilities of the main players in the EU energy policy field

13

The process of developing, implementing and regulating the internal energy market involves a range of public and private actors, which have particular roles and responsibilities.

(a) In the **European Commission**, the Directorate-General for Energy (DG Energy) is responsible for developing and implementing European energy policy within the scope of Article 194 of the TFEU. This includes ensuring the functioning of the energy market and the security of energy supply within the Union, and promoting the interconnection of energy networks. As far as the internal energy market is concerned, the Commission:

  (i) proposes policy documents and legislative measures as required;

  (ii) monitors the transposition of the Energy Packages into national law;

  (iii) adopts network codes with Member States through the comitology process.

(b) Energy markets should be monitored by **national regulatory authorities** (NRAs) that are fully independent of Member State governments. The requirement of establishing the NRAs was introduced in the Second Energy Package. The Third Package further enhanced their role.

(c) The **Agency for the Cooperation of Energy Regulators** (ACER), established under the Third Energy Package, should promote and facilitate cooperation amongst NRAs. ACER develops framework guidelines from which network codes are derived, and adopts opinions on a range of energy market matters. ACER does not possess any executive powers, so its decisions are not directly binding on the market participants.

(d) **Transmission system operators** (TSOs) are entities responsible for transporting energy in the form of natural gas or electricity on a national or regional level, using fixed infrastructure. They are expected to cooperate with each other within the framework of **European Networks for Transmission System Operators for Electricity and Gas** (ENTSO–E and ENTSO-G). ENTSOs are responsible for developing the network codes based on ACER's framework guidelines and preparing ten-year network development plans (TYNDPs).

Investment needs and EU financial tools in the field of energy infrastructure

14

Investments in energy infrastructure are needed so that security of supply benefits through the internal energy market can be realised. In the EU, energy infrastructure is mainly financed by TSOs through consumer tariffs under the 'user pays' principle. The TSO's own resources used to finance infrastructure investments can range from as low as 20 % of project costs, up to the full cost of the investment required. According to Commission figures from 2011, TSOs invested 9.1 billion euro per annum in energy infrastructure between 2005 and 2009. This included 5.8 billion euro per annum for electricity infrastructure and 3.3 billion euro per annum for gas infrastructure.

15

The **European Investment Bank (EIB)** is the largest supranational provider of loans and guarantees to energy infrastructure projects in the EU. Between 2007 and 2012, the EIB provided loans of 29.4 billion euro for investments in the modernisation and development of European electricity and gas networks[11].

16

Energy infrastructure is also one of the priorities of the newly established **European Fund for Strategic Investments (EFSI)**[12]. This fund combines capital from the EU budget and the EIB with a view to leveraging public and private investment of at least 315 billion euros across the EU[13].

17

Compared to TSOs' own investment and funding available from the EIB and EFSI, the **EU budget** is a relatively small provider of investments in energy infrastructure. Approximately 3.7 billion euro was allocated from the EU budget to energy infrastructure between 2007 and 2013, and a further 7.4 billion euro is envisaged for the 2014-2020 period, as shown in ***Table 1***.

11 European Investment Bank, 'Energy Lending Criteria', 23 July 2013.

12 Regulation (EU) 2015/1017 of the European Parliament and of the Council of 25 June 2015 on the European Fund for Strategic Investments, the European Investment Advisory Hub and the European Investment Project Portal and amending Regulations (EU) No 1291/2013 and (EU) No 1316/2013.

13 Opinion No 4/2015 concerning the proposal for a Regulation of the European Parliament and of the Council on the European Fund for Strategic Investments and amending Regulations (EU) No 1291, 12013 and (EU) No 1316/2013 (OJ 121, 15.4.2015, p. 1).

Table 1

Funds allocated to energy infrastructure for the period 2007-2020 (in million euro)

	Sector	TEN-E	EEPR	CEF Energy	ESIF	Total
2007-2013	Electricity	81	905		498	1 484
	Gas	64	1 363		814	2 241
	TOTAL	**145**	**2 268**		**1 312**	**3 725**
2014-2020	Electricity and Gas			5 350	2 000[1]	7 350
TOTAL 2007 - 2020		**145**	**2 268**	**5 350**	**3 312**	**11 075**

1 Indicative figure presented to the audit team by DG Regional and Urban Policy.

Source: European Court of Auditors, based on DG Regional and Urban Policy databases, EEPR implementation reports.

18

Allocations have been made through several funds, managed by the Commission, which differ in terms of their relative size, the kinds of projects they finance, and the type of financing they provide (see ***Table 1)***:

(a) **Trans-European Networks for Energy** (TEN-E) established in 1996[14] was an instrument, managed by the Commission, which financed electricity and natural gas infrastructure. The 2013[15] TEN-E regulations established criteria for the identification of projects of common interest (PCIs);

(b) the **European Energy Programme for Recovery's** (EEPR) was established in 2009 to stimulate the EU economy through infrastructure investments[16]. EEPR financed the agreed list of projects under the direct management of the Commission. The implementation of funded projects is still ongoing, but no new projects will be supported from this scheme;

(c) the **Connecting Europe Facility** (CEF)[17] was established to provide investments in the domains of transport, energy and telecommunications for the 2014-2020 period[18]. The fund is designed to attract private investment through a number of tools, including grants, special loans, guarantees, debt and equity instruments. The co-financing via grants is based on open calls for proposals and is managed by the Innovations and Networks Executive Agency (INEA); and

(d) financing for energy infrastructure is also provided by the **European Structural and Investment Funds** (ESIF)[19]. This financing is based on national operational programmes that are approved by the Commission.

19

The Commission estimated in 2010 that Europe's energy sector would require 1 trillion euro of investment by 2020. Of this, approximately 210 billion euro would be needed for electricity and gas networks of European importance[20]. More recently, the International Energy Agency (IEA) has estimated that the total investment needed for electricity and gas networks in the EU will rise to 931 billion euro over the 2014-2035 period[21].

14 The TEN-E programme was established by the following legal acts: Decision No 1364/2006/EC of the European Parliament and of the Council of 6 September 2006 laying down guidelines for trans-European energy networks and repealing Decision No 96/391/EC and Decision No 1229/2003/EC (OJ L 262, 22.9.2006, p. 1)

15 Regulation (EU) No 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulation (EC) No 713/2009, No 714/2009, (EC) No 715/2009 (OJ L 115, 25.4.2013, p. 39) is intended to facilitate the timely development and interoperability of trans-European energy networks (TEN-E).

16 Regulation (EC) No 663/2009 of the European Parliament and of the Council of 13 July 2009 establishing a programme to aid economic recovery by granting Union financial assistance to projects in the field of energy (OJ L 200, 31.7.2009, p. 31).

17 In accordance with Regulation (EU) 2015/1017 the European Fund for Strategic Investments, the financial envelope for CEF energy sector for the period 2014-2020 was decreased by 500 million euros (from 5 850 million to 5 350 million euros) in order partly to finance the contribution from the general budget of the Union to EFSI.

18 Regulation (EU) No 1316/2013 of the European Parliament and of the Council of 11 December 2013 establishing the Connecting Europe Facility, amending Regulation (EU) No 913/2010 and repealing Regulations (EC) No 680/2007 and (EC) No 67/2010 (OJ L 348, 20.12.2013, p. 129).

19 Regulation (EU) No 1303/2013 of the European Parliament and of the Council of 17 December 2013 laying down common provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European

Audit scope and approach

20
Through this audit the Court sought to determine whether implementation of internal energy market policy measures and EU spending on energy infrastructure have provided security of energy supply benefits effectively.

21
In particular we examined whether:

- the Commission and the Member States have ensured implementation of **internal energy market** policies, thereby improving the security of energy supply;
- the **energy infrastructure** in Europe is suited for fully integrated markets, thereby providing effective security of energy supply; and
- the **EU financial support** for energy infrastructure has effectively contributed to internal energy market development.

22
The audit fieldwork was carried out from mid-2014 until mid-2015.

23
Our audit focused on the transport of gas through pipelines; storage, including LNG terminals; and electricity transmission. We did not cover the generation of energy[22] nor energy efficiency[23]. Also not covered were energy distribution systems to final consumers, energy poverty, energy taxes and subsidies, and the 2020 and 2030 energy and climate policy targets.

24
Our audit covered policy measures and funding from 2007. We took a regional approach and examined case studies in six Member States — Bulgaria, Estonia, Spain, Lithuania, Poland and Sweden. We analysed the regional markets and the extent of the interconnections between these Member States and their neighbours.

25
In these case studies, we assessed how investment needs have been determined, implementation of internal energy market principles, cross-border cooperation aspects and the rationale behind project proposals. This selection provided a wide geographical representation from across the EU. Case studies included 15 examples of specific EU co-financed projects. The audit work for each case study involved interviews with Member State and EU officials.

26
We also identified, where possible, good practices which could be shared amongst stakeholders in other Member States.

Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund and laying down general provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund and the European Maritime and Fisheries Fund and repealing Council Regulation (EC) No 1083/2006 (OJ L 347, 20.12.2013, p. 320).

20 COM(2010) 677 final of 17 November 2010 'Energy infrastructure priorities for 2020 and beyond — A blueprint for an integrated European energy network'.

21 International Energy Agency World Investment Outlook 2014. Paris: OECD/IEA, p. 167.

22 On generation see Special Report No 6/2014 'Cohesion policy funds support to renewable energy generation — has it achieved good results?' (http:/eca.europa.eu).

23 On consumption see SR 21/2012 'Cost-effectiveness of Cohesion Policy Investments in Energy Efficiency' (http:/eca.europa.eu).

The objective of completing the internal energy market by 2014 was not achieved

27

Since 2007, the internal energy market has been at the centre of EU-level energy policy development. The Third Energy Package, adopted in 2009, required the transposition of the gas and electricity directives by 3 March 2011[24]. However, this objective was not achieved in that year. In addition, three Commission regulations which form part of the Third Energy Package were adopted in 2009[25].

28

In 2011, the Council restated its commitment to the internal energy market, stating that it 'should be completed by 2014 so as to allow gas and electricity to flow freely'[26]. By December 2014, with the objective still not having been achieved, the Council again reaffirmed the 'urgent need for effective and consistent implementation and applications of the provisions set out in the Third Energy Package by all Member States ...'[27].

29

The following are important for achieving this objective:

- implementing the EU regulatory framework of the internal energy market;
- harmonising a patchwork of local and national markets;
- achieving price convergence; and
- availability of appropriate energy infrastructure (see as from paragraph 72).

24 For electricity, Article 49(1) of Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC (OJ L 211, 14.8.2009, p. 55). For gas, Article 54(1) of Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/55/EC (OJ L 211, 14.8.2009, p. 94).

25 Regulation (EC) No 714/2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003. Regulation (EC) No 715/2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005. Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators.

26 Conclusions adopted by the European Council on 4 February 2011.

27 Council conclusions, Transport, Telecommunications and ENERGY Council meeting, Brussels, 9 December 2014.

Problems remain with the implementation of the EU legal framework for the internal energy market

30

The Third Energy Package includes both regulations that are directly applied, and directives that need to be integrated into the legislative framework of each Member State. The Commission monitors this progress by carrying out:

(a) **transposition checks**, which seek to verify whether the Member States have updated their national law with a view to incorporating the provisions of the directives[28]. Where the Commission deems that a Member State has not done so, it may open an infringement procedure which can lead to a case being filed before the European Court of Justice; and

(b) **conformity checks**, which assess whether the changes that have been made in practice are consistent with the provisions of directives. To facilitate this assessment, the Commission sends requests for information and clarification to the Member States — this exchange of information is done via a tool known as 'EU-pilots'. Where the Commission assesses that the changes made in practice in a Member State do not reflect properly the provisions of the directives it may open a formal infringement procedure under Article 258 of the TFEU.

28 The Commission's assessment is based on official documents from the Member States, contractor's reports, country desk knowledge, and market monitoring via media outlets, and specific requests to third parties.

31

Table 2 provides details of the status of these checks, including infringement procedures in respect of the Third Energy Package legislation as at 30 June 2015. This analysis shows that there remains a long way to go before the Third Energy Package could be deemed to be fully implemented in the Member States. By 30 June 2015:

(a) in respect of **non-transposition** of the provisions of Third Energy Package, the Commission deemed it necessary to launch infringements procedures against 19 out of 28 Member States. All of these procedures had been closed by 30 June 2015;

(b) regarding **non-conformity** with the provisions of Third Energy Package, in 2013, the Commission began the process of requesting information from Member States and in some cases launching infringement procedures:

(i) for 10 Member States, the Commission had completed its assessment, and opened infringement procedures under Article 258 of the TFEU. All of these remain open;

(ii) for four Member States, the Commission had requested information, via an EU pilot, but had not yet completed its assessment; and

(iii) for 14 Member States, the Commission had not yet sent a request for information.

32

The provisions in the Third Energy Package, relevant to this audit, about which the Commission's checks have revealed problems include:

- the functioning of the national regulators (see paragraphs 34 to 36);
- the functioning of transmission system operators (see paragraphs 37 to 42);
- issues related to different forms of price regulation (see paragraph 64).

33

During the audit, we confirmed the existence of problems in these areas as set out in the following paragraphs.

Table 2

Commission's transposition and conformity checks of the Third Energy Package as at 30 June 2015

	Transposition checks		Conformity checks	
	Commission's transposition check completed	Infringement procedure opened and closed	Commission opened infringement procedure	Infringement procedure closed
Belgium	√	√	√	Not closed
Bulgaria	√	√	No open procedure	
Czech Republic	√	N/A	No open procedure	
Denmark	√	√	No open procedure	
Germany	√	N/A	√	Not closed
Estonia	√	√	No open procedure	
Ireland	√	√	No open procedure	
Greece	√	N/A	No open procedure	
Spain	√	√	√	Not closed
France	√	√	√	Not closed
Croatia	√	N/A	√	Not closed
Italy	√	N/A	√	Not closed
Cyprus	√	√	No open procedure	
Latvia	√	N/A	No open procedure	
Lithuania	√	√	No open procedure	
Luxembourg	√	√	√	Not closed
Hungary	√	N/A	√	Not closed
Malta	√	N/A	No open procedure	
Netherlands	√	√	No open procedure	
Austria	√	√	√	Not closed
Poland	√	√	No open procedure	
Portugal	√	N/A	No open procedure	
Romania	√	√	√	Not closed
Slovenia	√	√	No open procedure	
Slovakia	√	√	No open procedure	
Finland	√	√	No open procedure	
Sweden	√	√	No open procedure	
United Kingdom	√	√	No open procedure	

Note:
— 'N/A' means that no infringement procedure was opened, and the Commission will not open one in the future based on the transposition checks, which are now completed for all Member States.
— 'No open procedure' means that no infringement procedure has been opened for the Member State in question. The Commission is reviewing the situation and may open infringement procedures in the future.
— 'Not closed' means that an infringement procedure is currently ongoing but has not yet been closed.

Source: European Court of Auditors based on information provided by the Commission.

Energy regulators face challenges in fulfilling their tasks on both the national and EU levels

34

Evidence gathered as part of this audit indicated the following problems in the operations of the NRAs:

(a) the **independence** of the NRAs is crucial for ensuring that they can fulfil their tasks properly. The heads of regulatory bodies should be selected in a transparent manner and provided with freedom to operate. These principles are not always followed, see examples in ***Box 1***.

(b) representatives of several of the NRAs highlighted risks concerning **restrictions to the scope of their role**. Some governments retained for themselves certain regulatory powers, or have imposed on NRAs methodologies for setting tariffs that could favour certain market participants. See examples in ***Box 2***.

(c) although the duties of the NRAs are the same for all Member States, the **level of resources** available to different NRAs varies considerably. The number of people dealing with energy issues in NRAs we visited ranged from 21 to more than 200. Some NRAs consider themselves to be sufficiently resourced to deal with all energy market aspects. However, due to resource constraints, some NRAs are better equipped than others to participate in international cooperation, which is crucial for the internal energy market (see paragraph 35). See examples in ***Box 3***.

Box 1

Issues affecting the independence of NRAs

Bulgaria — In the period 2009 to 2015, the Energy and Water Regulatory Commission (EWRC) chairperson was replaced by the government several times, including four times in 2013 alone. Independent regulators are required to set energy tariffs with reference to the actual cost base. However, EWRC set regulated electricity prices which have led to the situation in which the incumbent energy company is obliged to buy electricity at high prices and sell it at lower prices as a public provider, accumulating a deficit of approximately 800 million euros between 2010 and the end of 2014.

Lithuania — Since 2013, the Lithuanian Parliament has had the power to vote for replacing the head of the NRA if it does not approve the annual report of the energy regulator's activities.

Box 2

Restrictions to the scope of NRAs' role

Spain — The Ministry of Industry, Energy and Tourism fixes the gas and electricity tariffs, or system charges, that TSOs invoice infrastructure users for both gas and electricity. The NRA proposes a methodology for the elements that make up only 1/3 of the final grid tariffs, while the cost items comprising the other 2/3 are set only by the Spanish government. This raises questions about whether the NRA has adequate powers to exercise this part of its regulatory functions.

Lithuania — It is foreseen in the Third Energy Package that NRAs should have the responsibility for setting transmission or distribution tariffs in accordance with transparent criteria. However, in Lithuania, the government prescribes the methodology for setting gas and electricity transmission tariffs and retail prices are regulated. As a result, according to the NRA's preliminary calculations, the two government-owned incumbent energy companies will be able to collect, up to 2024, via the tariffs, 167 million euro more than if the tariffs would have been set by the NRA.

Box 3

Adequacy of resources of the NRAs

Sweden — The Swedish Energy Inspectorate confirmed that, with its 100 sector specialists, it is fully equipped to participate in the work of ACER, including providing seconded national experts. It also confirmed that it has made all preparations to implement the REMIT regulation, including fully equipping the necessary team.

Estonia — Only 21 out of the 61 employees of the National Competition Authority are involved in the energy field. The Commission raised, in its analyses of the Estonian energy market, concern about whether the NRA has sufficient resources adequately to regulate Estonia's energy markets and to participate in the EU-level cooperation activities (see ***Annex III***).

35

There is no one single EU-level energy regulator, but the NRAs are expected to cooperate within the framework of ACER (see paragraph 13). As EU energy markets become more integrated, solving cross-border regulatory issues is becoming increasingly important. Currently, ACER operates through a system of working groups including on electricity, gas, market integrity and monitoring to deal with these issues. Whilst this approach seeks to facilitate the direct involvement of Member States, in practice not all Member States participate to the same extent, and the more active Member States therefore have more influence in the work of these groups. Some of the NRAs indicated that resources, in the form of the existence of specialists who are capable of interacting in an international environment, as well as travel budgets, are constrained (see paragraph 34). ***Annex III*** provides details of the participation of Member States' representatives in ACER working groups.

36

One of the duties of ACER is to analyse energy market trends and to provide policy advice to NRAs and EU institutions. However, it does not have powers to compel NRAs or Member States' governments to provide it with relevant energy market data. Lack of data limits ACER's ability to provide market analyses and policy advice for EU institutions and Member States' NRAs.

The unbundling of TSOs has been formally realised, but this has not always led to liberalised and competitive markets

37

Electricity and gas are rarely consumed at the place where they are produced or enter into a country. In order for the vast amount of energy to reach the consumers, transmission systems have been developed. The organisations that manage these transmission systems are, in EU Member States, called transmission system operators.

38

The process of separating transmission from other activities, such as generation and distribution within vertically integrated energy companies, is known as unbundling. This began with the First and Second Energy Packages. The Commission has confirmed that all Member States have formally transposed the Third Energy Package legislation, including the provisions relating to unbundling (see paragraph 31). ***Figure 2*** describes the role and the position of the TSO in the energy trade before and after unbundling.

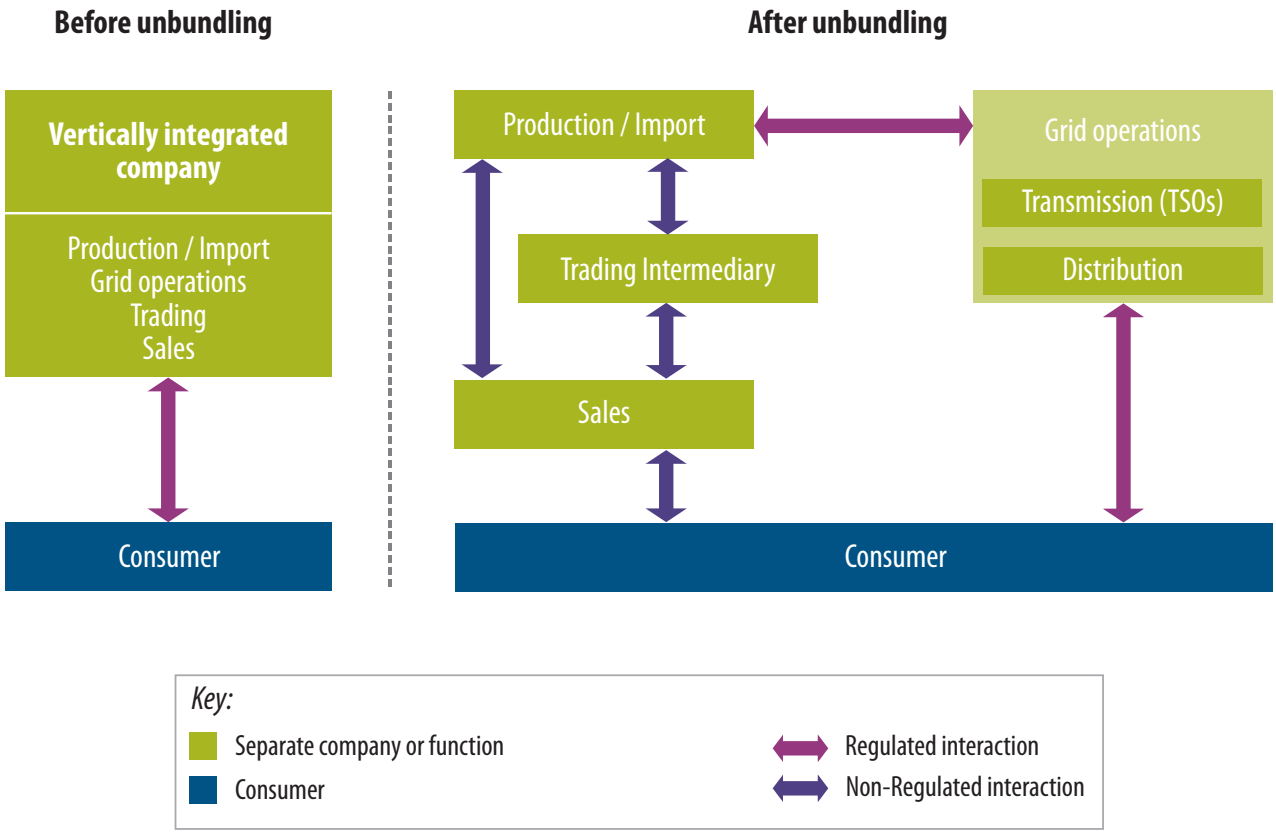
39

While the aim of unbundling and other measures was to create the regulatory conditions for an internal energy market, a liberalised and competitive market has often not emerged. This is because many governments and incumbent energy companies have continued to restrict third-party network access through regulations and technical restrictions. For instance new providers in the gas and electricity markets need access to transmission and storage facilities. Without such access, entry into national electricity or gas markets for new entrants is difficult. For example, in Poland the incumbent gas company established a special-purpose company in 2010, which is not considered by the NRA to be a TSO, which owns 100 % of underground gas storage capacities in Poland. Such a situation carries the risk that this subsidiary is able to restrict market access of new gas providers to Poland[29].

29 According to figures published in the 2014 national report of the Energy Regulatory Office of Poland, the incumbent gas provider holds approximately 95 % of the gas wholesale market in Poland.

Figure 2

Energy trade and transmission before and after unbundling



Source: Presentation by James Matthys-Donnadieu on 26 August 2014 in Summer School 'Economics of Electricity Markets', University of Ghent.

Observations

40

As Member States' networks become increasingly interconnected via infrastructure, there is clearly a need for more cooperation between neighbouring TSOs, including a coordinated approach to infrastructure development, especially with relevance for security of supply. As an example of good cooperation, the Swedish electricity TSO is also able to manage the networks in Norway and Denmark because they have agreed to do so and because their networks are technically interconnected. This level of cooperation is not, however, widespread.

41

All TSOs have to be certified by their NRAs. The Commission has a role in this process and provides an opinion on draft decisions prepared by the NRAs. When providing its opinion, the Commission verifies whether the TSO has sufficient assets and can make independent investment decisions. There are still TSOs about which the Commission has not concluded the certification[30].

42

There is no one single EU level TSO. TSOs cooperate with each other in the framework of ENTSO-E and ENTSO-G. The participation of national TSOs in ENTSOs activities varies, and this poses a risk that any technical solutions that are developed are more suitable for the parties most actively involved.

30 As of 1 June 2015, the Commission had issued 109 opinions. There are seven gas and three electricity TSOs still awaiting certification: gas TSOs for Estonia, Latvia, Finland, Italy, Hungary, Belgium (recertification) and United Kingdom (recertification); electricity TSOs for Hungary, Baltic Cable between Sweden and Germany, Italy (recertification).

Important differences in how Member States organise their energy markets can hold back the further development of the internal energy market

43

The Commission has evaluated the progress towards the internal energy market and concluded that there are 28 different national legal frameworks for energy markets[31]. The EU has therefore a patchwork of local, national and regional markets rather than a single internal energy market. The challenge for the further development of the internal energy market is finding means for these markets to work together. This is a significant challenge because:

- there are still several different trading mechanisms used in the EU;
- energy markets are influenced by various interventions;
- the development and implementation of network codes remains challenging; and
- the level of market integrity and transparency varies between markets.

There are still several different trading mechanisms in the EU

44

The Third Energy Package does not stipulate specific trading mechanisms that should be implemented throughout the EU. In practice, the trade of gas and electricity takes place in a variety of ways (see paragraph 60). Liquidity, transparency and openness to participation are characteristics of markets which facilitate effectively the internal market. During the audit we observed at least four different trading mechanisms which demonstrate these characteristics to differing degrees, as set out in ***Table 3***.

National energy markets are influenced by governmental interventions aiming at achieving objectives of other national or EU policies

45

Energy policy is closely linked to many other policy areas, on both the national and EU level, such as broader economic, climate change, industrial, innovation or labour market policies. Measures to implement these policies can have an effect on the functioning of energy markets, for example by influencing the choice of certain energy sources, or providing specific support for one. While these policies may be entirely rational at the level of a single Member State — for instance, supporting indigenous energy sources and therefore possibly contributing to domestic energy security perceptions in the Member State concerned — they can introduce distortions to markets and pricing across the internal energy market.

31 COM (2015) 80 final of 25 February 2015 'A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy'.

Table 3

Energy trading mechanisms identified

	Liquid	Transparent	Open to participation	Example from the audit case studies
Regional exchanges These markets are supported by long-term financial hedging mechanisms, include several countries, and aim at creating an area where energy can flow freely. They are usually very liquid, and function based on the voluntary will of the market participants.	√	√	√	The common exchange for electricity trade in the Nordic and Baltic region.
Direct Business-to-Business (B2B) Trade These involve trade between an energy producer and its client. These agreements, usually long-term contracts, are not transparent because the conditions of the trade will not be made public to other market participants. This makes it difficult to determine a reference price for gas and electricity in a specific market area.	x	x	√	At the time of the audit, 100 % of gas and electricity was traded in this way in Bulgaria. There was no integrated, organised gas market in Spain until 2014. In 2013, about 66 % of the gas was traded in LNG terminals through bilateral contracts. The NRA faced difficulties in obtaining unbiased data about gas prices
Limited exchanges These are set up by an initiative or an order of Member States' governments. The obligation to trade via such an exchange could indicate that the price offerings are not fully based on the dynamics of supply and demand.	√	√	x	In 2013, 50 % of electricity in Poland was sold via exchange while the remaining part was B2B trade. The Polish Energy Exchange was initiated by a group of traders, but was later supported by national authorities which required electricity producers to sell at least 70 % of their production via the exchange.
Markets of Excess Quantities These mostly exist in the gas sector. These exchanges are working in a situation whereby the market is mostly regulated or dominated by one major supplier. This results in trades which, although made in a transparent way, do not reflect the price dynamics in the market as a whole.	√	x	x	The Polish gas exchange provides options to purchase gas that is priced more than 20 % lower than the regulated wholesale price.

Source: European Court of Auditors.

46

The Commission is aware of the influence that these interventions can potentially have on the functioning of the energy markets. However, its ability to restrict them, even in cases where it wished to do so, is limited. The Commission has set out its position in the guidelines for state aid in Energy[32] and in explanatory notes concerning the Energy Packages. The main points advocated by the Commission which are of relevance to this audit are:

- regulation of wholesale prices should not be allowed[33]; and
- regulated retail prices should be set at a level that would allow the possibility for competing offers. The cost of the electricity component in the regulated price should not be below the average wholesale price on a specific market[34].

Adoption of network codes and guidelines: particularly slow for electricity

47

Network codes are technical rules that seek to provide a basis for technical interoperability within electricity and gas transmission systems in the EU. The codes set out common technical standards that should ensure the free flow of energy across borders. They add further detail to the legislative framework of the energy markets to ensure common implementation of the packages. The network codes, when fully implemented, could allow the number of trading mechanisms to be reduced and provide the necessary conditions to ensure the integration of compatible markets. ACER plays a particularly prominent role in the process; it develops framework guidelines and also evaluates the codes developed by the ENTSOs before submitting them to the Commission. The Commission is then responsible for adopting the final text of the codes and for coordinating the comitology process through which the codes are formally adopted.

48

Currently, the trade of energy does take place within and between some Member States even without fully agreed and approved network codes. Even so, accomplishing this process would be an important step in the development of a properly functioning internal energy market.

49

As shown in ***Table 4***, agreeing the codes has proven to be a long and difficult process. As at 30 June 2015:

- for gas, some progress had been made, as four out of five codes had been approved, while one was being negotiated; and
- in the electricity sector, by contrast, none of the 11 codes have been approved. Even after ACER has submitted the file to the Commission, the approval of the network codes via comitology procedures is experiencing lengthy delays. Out of the nine codes which have been submitted to the Commission, only five have entered the comitology process.

32 Guidelines on state aid for environmental protection and energy 2014-2020; (2014/C 200/01).

33 The criteria to be met by price regulation in order to comply with EU legislation have been recently confirmed by the Court of Justice in the judgment delivered on 10 September 2015 in the infringement case against Poland concerning regulated gas prices for non-household customers (C-36/14).

34 Communication from the Commission on Energy prices and costs in Europe SWD(2014) 19 final and SWD(2014) 20 final.

Table 4

The process of developing the network codes

		Framework guidelines established by ACER	End of code development within ENTSO-G and ENTSO-E	ACER final recommendation	Start of comitology procedure	Code published in the Official Journal of the EU
Gas	Capacity allocation mechanisms	Q3 2011	Q3 2012	Q4 2012	Q1 2013	Q4 2013
	Congestion management procedures	N/A	N/A	N/A	Q1 2012	Q3 2012
	Gas balancing and transmission systems	Q4 2011	Q1 2013	Q1 2013	Q3 2013	Q1 2014
	Interoperability and data exchange rules	Q3 2012	Q4 2013	Q1 2014	Q3 2014	Q2 2015
	Harmonised transmission tariff structures	Q4 2013				
Electricity	Capacity allocation and congestion management	Q2 2011	Q3 2012	Q1 2013	Q3 2014	
	Forward capacity allocation		Q3 2013	Q2 2014	Q2 2015	
	Generation connection	Q2 2011	Q2 2012	Q1 2013	Q1 2015	
	Demand connection		Q4 2012	Q1 2013	Q2 2015	
	High Voltage Direct Current connection		Q2 2014	Q3 2014	Q2 2015	
	Operational security	Q4 2011	Q1 2013	Q4 2013		
	Operational planning and scheduling		Q1 2013	Q4 2013		
	Load-frequency control and reserves		Q2 2013	Q3 2013		
	Operational training					
	Requirements and operational procedures in emergency		Q1 2015	Q2 2015		
	Balancing	Q3 2012	Q4 2013			

Note: The gas congestion management procedures did not go through the same process as other network codes. Such procedures had already been established as part of the Third Energy Package in Regulation (EC) No 715/2009 and subsequently updated in 2012 through comitology.

Source: European Court of Auditors, based on information provided by ACER.

50
Our audit identified four reasons why this process has been slow:

(a) a **lack of perceived need** in markets which already function adequately. The stakeholders in such markets are reluctant to change to a new set of technical rules and benefits for more integrated European markets are not prioritised. For example, the intraday market mechanism ELBAS[35] of the common Nordic and Baltic electricity exchange is not technically in line with the intraday trade platforms in central Europe. The Nordic and Baltic Member States were reluctant to agree to a common European solution which differed from ELBAS. The resulting debate about which system to use across Europe is delaying market coupling;

(b) in the Third Energy Package there is a **lack of a clear timeframe** or indication of deadlines for preparing, approving or implementing the network codes;

(c) there is a **complicated process** for developing the codes between the ENTSOs and ACER. Decisions on network code development are taken via majority voting of the TSOs within the ENTSOs and of the NRAs within ACER. This is problematic because, although the ENTSOs are European bodies with roles for the development of the internal energy market, they also represent the interests of their individual members. This indicates potential conflicts of interest for participants, and could lead to the risk that lowest common denominator solutions would be agreed, which do not facilitate market coupling in an optimal way;

(d) especially for the electricity, the **Commission has not initiated and driven** the comitology process in a timely manner.

51
There has been limited early implementation of network codes. For the early implementation of two network codes, TSOs and NRAs from some Member States have formed regional initiatives; seven Member States have cooperated on early implementation of the capacity allocation mechanisms code for gas since 2012[36].

The level of integrity and transparency varies between trading mechanisms

52
The principles of the internal energy market require energy to be traded on rules-based markets that are transparent. As described above, different trading mechanisms have different degrees of transparency (see paragraph 44). It is in this context that an EU regulation[37] was adopted in 2011 on wholesale energy market integrity and transparency (see ***Box 4***).

35 For more on ELBAS, see: http://www.nordpoolspot.com/TAS/Intraday-market-Elbas/.

36 Czech Republic, Spain, France, Hungary, Poland, Portugal and Romania.

37 Regulation (EU) No 1227/2011 complemented by the REMIT Implementing Acts in mid-December 2014.

Box 4

REMIT and ACER

REMIT, implemented by ACER, is a system of monitoring the wholesale energy markets in Europe, and is a significant new responsibility for ACER in addition to those assigned to it in the Third Energy Package. ACER has required new IT infrastructure, monitoring tools and specialised expertise.

- The **implementation phase** started with the adoption of the regulation and was completed with the entry into force of rules about data collection. ACER defined the methodology, procedures and IT tools for wholesale energy market monitoring including on data sharing with NRAs and other authorities at national and EU level.
- In the **operational phase**, ACER is collecting and analysing data in a four-stage approach: surveillance, pre-investigation of anomalous events, case investigation and enforcement. ACER collects data directly from market participants and third parties.

53
ACER and the regulators from four out of the six Member States visited for the audit declared that they are not fully prepared for REMIT implementation. One NRA, in Bulgaria, indicated that, because there is currently no energy exchange in their country, REMIT is not applicable.

54
Well-functioning exchanges have internal transparency mechanisms that are designed to prevent market manipulations. These services could provide inputs for ACER and regulators in the framework of REMIT. Less transparent trading mechanisms, such as B2B trade and markets of excess quantities, have not yet functioning oversight mechanisms. As a result, even after the REMIT regulation comes fully into force, risks of market manipulation and irregular information exchange may remain.

Though progress in joining the markets in Europe has been made, the full price effects of the internal energy market have not yet been realised

55
The Third Energy Package approaches the electricity and gas markets in a similar way. Likewise, the models that have been developed for the two markets are similar, insofar as they foresee access to energy from several sources and the existence of price competition in each market area (see paragraph 12).

56
Wholesale prices rather than retail prices should be used to compare energy price levels between Member States because retail prices include taxes, other surcharges and discounts which vary between Member States. Average prices paid by household and industrial clients are significantly different from the wholesale prices, see ***Annex I***.

57
One of the indicators for a well-functioning internal energy market would be relatively small wholesale price differences of energy between neighbouring countries and within regions. Significant wholesale price differences would indicate that the potential economic gains that open markets and interconnection capacities could deliver are not being realised.

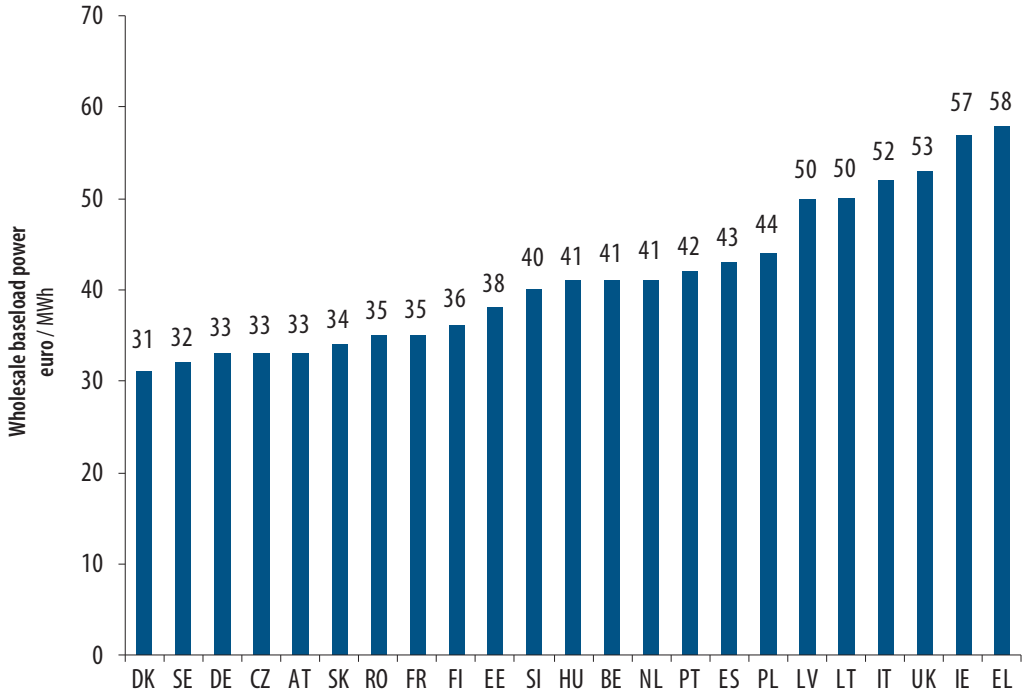
58
Wholesale and retail energy prices are regulated in some Member States, and this can have an effect on the extent of price differences amongst Member States (see paragraphs 45 and 46).

59
The electricity wholesale prices have not converged between Member States. As presented in ***Figure 3***, wholesale electricity prices range widely across the EU. The highest wholesale price is more than 85 % higher than the lowest[38]. Substantial differences can be noted between some neighbouring Member States. For example, between Estonia and Latvia or between the Czech Republic and Poland.

38 There was a similar range of wholesale electricity prices between the highest and lowest also in 2013 and first quarter of 2015.

Figure 3

Comparison of average wholesale baseload prices for electricity in 2014 in Member States with exchanges



Note: Price information is not available for Bulgaria, Croatia, Cyprus, Luxembourg and Malta.

Source: European Court of Auditors, based on European Commission data.

60

In market economic terms, in order for price convergence to be realised in practice three conditions are essential:

(a) the Member States have to be committed to ensuring the development of liberalised and competitive markets (see paragraph 39);

(b) the trading mechanisms used in Member States have to be compatible across borders. If one Member State uses a B2B model and the other is part of a regional exchange, effective market coupling is impossible (see paragraph 44); and

(c) sufficient capacity of the transmission networks across borders, but also within Member States, has to be made available.

61

Most Member States that utilise some form of exchange as a trading mechanism are involved in day-ahead market coupling[39]. However this has not led to fully converged electricity wholesale prices because these Member States do not necessarily use the same trading mechanisms and the interconnections between and within Member States are limited. As evident from ***Figure 3***, price differences remain between these Member States.

62

Interconnectors facilitate coupling of national energy markets, which in theory should have an effect on energy prices by allowing cross-border market effects. The EU has set an objective for the capacity of cross-border electricity interconnections to be at least 10 % of the installed electricity production capacity in a given Member State[40] (see also paragraph 75). However, achieving a 10 % interconnection rate has not necessarily led to price convergence.

63

The interconnection rate necessary to actually obtain price convergence varies due to the market needs and specific circumstances in the Member States and surrounding regions. The interconnection capacity to achieve electricity price convergence could be a lot more than 10 %, but in certain situations, especially between large markets, the necessary interconnection capacity could be lower. For example, according to ***Table 5***, Portugal's interconnection rate is below 10 % but, as seen on ***Figure 3***, there is no significant price difference with neighbouring Spain. Further examples of the relationship between price convergence and this interconnection target are given in ***Box 5***.

39 The exceptions are Greece, Ireland and Poland.

40 The 10 % interconnection target was developed at the 2002 European Council in Barcelona. It calls for all Member States to develop interconnection capacities that are at least 10 % of their installed electricity production capacity by 2020. This means that each Member State should have in place electricity cables that allow at least 10 % of the electricity that is produced by their power plants to be transported across its borders to its neighbouring countries.

Box 5

Electricity price convergence and the 10 % electricity interconnection target

Estonia and Latvia have current interconnection capacity which stands at approximately 60 % of Estonian production capacity and 33 % of Latvian capacity. Therefore the interconnection rate is well above the 10 % target, but price differences remain significant.

Poland has sufficient interconnection capacities with its neighbouring countries. When excluding the interconnections to non-EU Member States — Belarus and Ukraine — the interconnection capacity is at 15 % of the available generation capacity. Nevertheless, the existing cross-border lines, with a total capacity of 5 GW, are largely not available for commercial trade due to restrictions set by the Polish TSO for coping with unplanned energy inflows from Germany.

These unplanned inflows are due to large productions capacities of wind-powered electricity in northern Germany and limited transmission capacity within Germany. As the electricity cannot be transmitted within Germany, it can flow into the networks of the neighbouring countries creating so called 'loop flows.' To cope with these potential flows, the Polish TSO closes all but a very small capacity of the interconnection with Germany for trade of electricity.

The only fully operational interconnection that has an impact on the electricity price in Poland is the ***SwePol*** link to Sweden (600 MW), which represents approximately 1.6 % of total national available electricity production capacity in Poland (see ***Box 7***).

64

Some Member States, although committed to implement internal energy market-related reforms, still do not allow energy prices to be determined by the dynamics of supply and demand. Wholesale energy price regulation was used in one of the Member States covered in our audit, and different forms of retail price regulations were used in four Member States in the audit sample.

The full implementation of the gas target model may have only a limited effect on the average wholesale prices of gas

65

The gas target model stipulates the need for hub-based trade (see paragraph 12). So far, only seven Member States currently have hub-pricing[41]. In other Member States, gas trading takes place using B2B trading models with exclusive contracts for the use of pipeline capacities, in which gas producers commit themselves to delivering specific amounts of gas for a fixed price. This fixed price is then the basis for the wholesale price in a country.

41 Hub-to-hub cross-border gas trading is currently possible between Belgium, Germany, France, Italy, Netherlands, Austria and United Kingdom.

66

Both hub-based and B2B trading mechanisms for gas can be found working in parallel within a Member State. For example, in Italy there is a gas hub and its gas suppliers have committed to four separate B2B contracts. On the other hand, Estonia and Latvia each have a single source of gas with B2B contracts that determine the price[42].

67

Hubs depend on there being more than one source of gas supply, delivered either via pipeline interconnectors or from other sources, such as LNG. Developing competitive hub-based trading all over the EU would require significant investments in infrastructure in order to facilitate deliveries of gas from alternative sources. If such significant investment costs were expected to be recovered in network tariff increases over time, the economic case for seeking to develop hub-based trading all over the EU may be limited, especially given that average hub-based prices are only 10 % lower than average B2B prices[43].

68

Furthermore, competitive hub-based trading requires sufficient supply from different sources of gas. However, whilst having several gas suppliers from the same national source may create competition of margins, it would not necessarily ensure security of supply benefits, because disruption from that single, national source could have an impact on all the supply routes therefrom.

42 Some countries implement certain hybrid systems. For example, Poland has regulated wholesale and retail prices for gas, but part of the imports and certain unused capacities are then sold on an exchange. In the fourth quarter of 2014 the price of gas on an exchange was 26.2 euro per MW/h while the regulated price was 36 euro per MW/h. In 2013, only 3 % of the total gas trade took place via the exchange.

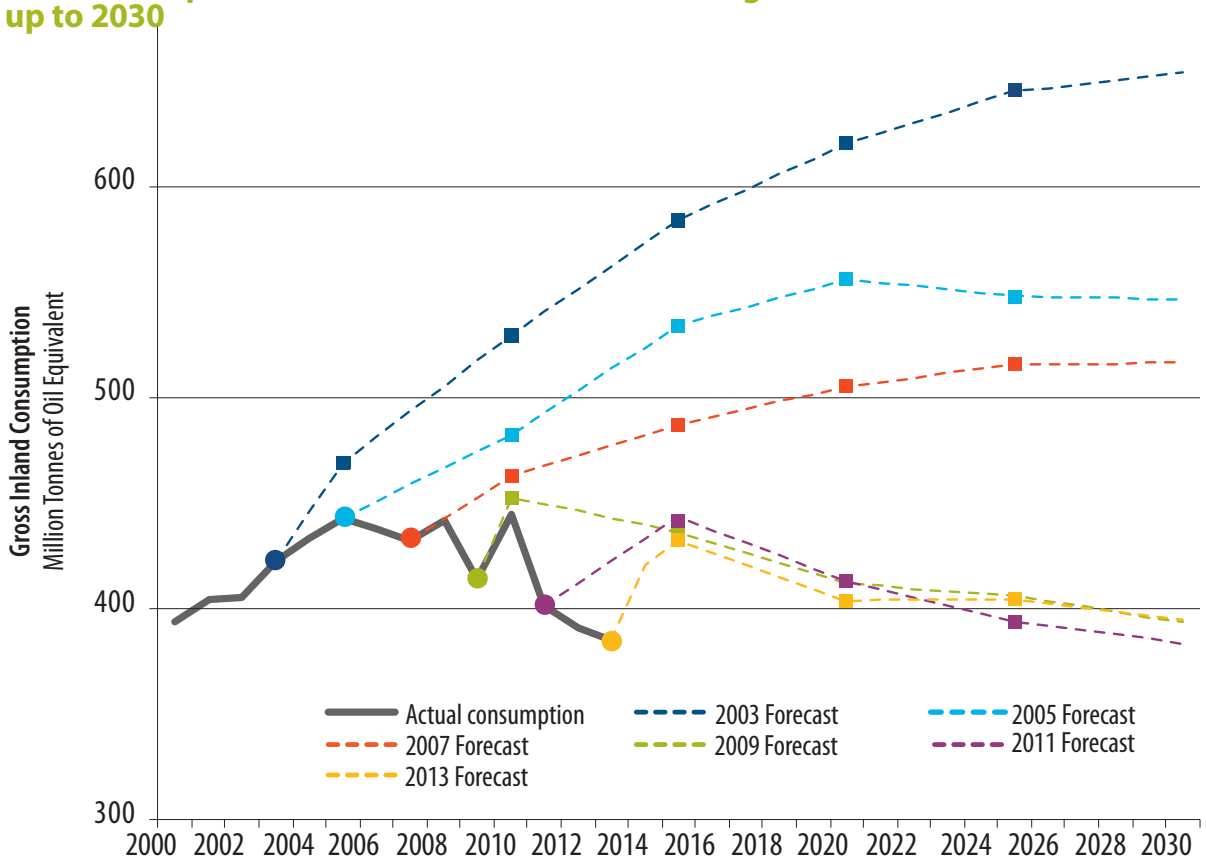
43 Based on information provided by ACER, the average hub price in 2014 across the seven Member States where there were hubs was 24.8 euro per MW/h while the average import price on B2B contracts in 2014 was 27.0 euro (see ***Annex II***). The price range between the highest and the lowest B2B contract varied between 22.1 and 32.0 euro per MW/h and between 23.4 and 27.8 euro per MW/h for the hubs. The average B2B price calculation takes into account the 21 % retroactive discount obtained by Lithuania as described in ***Box 6***.

69
All of this also needs to be considered in the context of significant uncertainty about future gas demand in the EU. Between 2010 and 2013, as shown in ***Figure 4***, aggregate gas demand in the EU fell by 14 %, and even the Commission's own forecasts suggest that gas demand is unlikely to increase. This makes potential investors wary of future investment commitments.

70
The Commission does not have its own in-house functioning capability for generating projections of gas demand in the EU; rather it uses forecasts provided by an external contractor (see paragraph 83). ***Figure 4*** also shows that the Commission has persistently overestimated gas demand during the period, and needs to restore the credibility of the forecasts it uses.

Figure 4

Gas consumption in EU-27 2000-2013 shown alongside the Commission forecasts up to 2030



Note: All forecasts are for EU-27 consumption at 5-year intervals (2005, 2010, 2015, etc.). The latest figures available from Eurostat for actual gas consumption are for 2013.

Source: European Court of Auditors, based on Eurostat and European Commission biannual energy forecasts published between 2003 and 2013.

71

There are alternative ways to introduce competition to the gas markets which, while being short of fully functional, competitive, hub-based pricing, would bring greater security of energy supply. This could be done by providing an alternative source which would influence the price offered by the other gas provider. The LNG terminal in Lithuania is an example of how such a price effect could be achieved, while also ensuring that an alternative supply is available in case of disruption affecting gas pipelines in the Baltic region. See ***Box 6***.

Box 6

'Independence': the LNG terminal in Klaipeda, Lithuania

The floating LNG terminal 'Independence' was installed in the Port of Klaipeda in November 2014. It is a Norwegian-owned terminal vessel leased by Lithuania for a period of 10 years with a subsequent right for purchase by Lithuania. The terminal, capable of supplying 3.8 billion m^3 of gas per year, has significantly increased the security of Lithuania's gas supply and the competition between gas suppliers in the whole region.

According to the Lithuanian NRA, after the completion of the main works for the LNG terminal in 2014, a gas import price reduction of 21 %, to about 28.6 euro per MW/h, was provided by the other gas provider to Lithuania, even before the LNG terminal was fully operational.

© Hoëgh LNG

Photo 1 — Arrival of the floating LNG terminal 'Independence' to the port of Klaipeda

Energy infrastructure in Europe is generally not yet designed for fully integrated markets and therefore does not currently provide effective security of energy supply

72

Suitable infrastructure is as necessary for the functioning of the internal energy market as market structures and effective regulation. This section of the report:

(a) evaluates whether energy infrastructure in the EU is currently designed for the development of the internal energy market;

(b) assesses whether infrastructure is being developed based on a comprehensive assessment of needs; and

(c) considers the cooperation needed to realise infrastructure projects.

The infrastructure within and between many Member States is not yet suited for the internal energy market

The energy infrastructure within one Member State can influence the energy markets in other Member States

73

The characteristics of energy infrastructure in Member States can, in practice, give rise to constraints on the flow of electricity and gas between neighbouring and other Member States. We observed such situations during the audit in the following ways:

(a) **insufficient absorption capacity**. This problem can emerge when the infrastructure within a Member State has insufficient capacity to allow for import and export between neighbouring national markets. This occurs when the national transmission networks are overloaded, or where electricity networks lack sufficient frequency, or gas systems lack free capacity and/or pressure. See examples in ***Box 7***;

Box 7

Examples of insufficient absorption capacity of national transmission infrastructure

The SwePol interconnector between Poland and Sweden, with 600 MW installed capacity, commissioned in 2000, is not being used to full capacity despite there being significant differences in electricity wholesale prices between the markets in the two Member States. According to the Polish TSO, the electricity transmission infrastructure in northern Poland does not have sufficient capacity to receive this amount of electricity into Poland and distribute it within the national network. During 2014 the capacity offered to the market ranged between 273 MW and 424 MW, which is considerably lower than the maximum capacity of the interconnector.

Estonia has gas interconnectors to third countries and to Latvia, and the pressure in its system is ensured by pumping stations in Latvia. A new underwater gas pipeline is planned between Estonia and Finland. For gas to flow in this pipeline, the gas pressure in the Estonian system would have to be increased, either by constructing a pumping station in Estonia or by upgrading the Latvian pumping station.

(b) **insufficient capacity to allow energy transit**. Some Member States have become, or are expected to become, so-called corridors for energy transit. These are situated between Member States that are energy rich and could export competitively priced gas or electricity and Member States that would benefit from this flow. Energy transit across a Member State requires capacity that is not fully used by domestic demand. Some transit countries do not have such capacity and this can lead to congestion, see examples in ***Box 8***.

The opposite problem can occur when gas pipelines are reserved by long-term contracts for transit and are not available for domestic use (see paragraph 111).

Box 8

Challenges with energy transit

Sweden is a transit country for Norwegian electricity flowing to Finland, Denmark, Germany and Poland. It has invested in interconnections that facilitate this flow. However, internal congestion in Sweden did not allow stable export to Denmark. Therefore, in 2011, following a claim from Denmark to the European Commission, Sweden rearranged its electricity market into four trading zones. This helped to identify congestion areas, which then led to network reinforcement.

France would have to act as a transit country for gas to flow between the Iberian Peninsula and the rest of Europe. However, this would not currently be possible because of prevailing market conditions, network congestion in southern France, and problems related to gas flows between the North and South of France.

Also in the electricity sector, besides the limited availability of physical connections between Spain and France, another important obstacle to the integration of Spain and Portugal to the internal energy market is the need to strengthen the internal electricity grid systems in both Spain and France, as it will not otherwise be possible to transmit electricity between Iberian Peninsula and central Europe.

Gaps remain in the cross-border infrastructure between Member States

74

Problems with the capacity of cross-border interconnectors become evident as the demand for energy trade between Member States increases. There is no single comprehensive analysis of the state of cross-border infrastructure gaps in the EU (see paragraph 82). Even though there is no such strategic needs assessment, targets for electricity and gas interconnection have been set at EU level.

75

The **10 % electricity interconnection target**[44] was established by the European Council in 2002[45]. However, there remain Member States that have little or no electricity interconnections with their neighbours, and, as of June 2015, there are 12 Member States below the 10 % interconnection target, see ***Table 5***. As pointed out in paragraph 62, meeting the 10 % interconnection target does not necessarily mean that price convergence is achieved in the electricity markets of neighbouring Member States.

44 The interconnection ratio is calculated by comparing the installed electricity production capacity to the total capacity of the electricity interconnections of a Member State. There are differing interpretations as to whether electricity production should be calculated according to installed capacity or actually used capacity.

45 Presidency Conclusions: Barcelona European Council 15 and 16 March 2002 SN 100/1/02 REV 1.

Table 5

EU Member States' electricity interconnection ratios in 2014

Above 10 % electricity interconnection ratio	
Member State	%
Luxembourg	245
Croatia	69
Slovenia	65
Slovakia	61
Denmark	44
Finland	30
Hungary	29
Austria	29
Sweden	26
Netherlands	17
Belgium	17
Czech Republic	17
Bulgaria	11
Greece	11
Germany	10
France	10

Below 10 % electricity interconnection ratio	
Member State	%
Ireland	9
Italy	7
Portugal	7
Romania	7
United Kingdom	6
Estonia	4
Latvia	4
Lithuania	4
Spain	3
Poland	2
Cyprus	0
Malta	0

Note: the three Baltic countries are considered as a region, although individually they fulfil the 10 % target.

Source: Communication from the Commission to the European Parliament and the Council on achieving the 10 % electricity interconnection target.

76

Some Member States, such as Cyprus, are genuine electricity energy islands, from which developing interconnections is very complicated. Some Member States have a low interconnection ratio because they restrict the development or use of interconnectors, see ***Box 5***.

77

The N-1 rule for gas[46], introduced in 2010 by the Security of Gas Supply regulation, seeks to ensure that there are alternative providers of gas available in every market. This rule was supposed to have been complied with by December 2014. Whether or not a Member State is deemed to have complied with the rule was based on a calculation comparing the significance of the largest gas entry point with the significance of all the other entry points to that Member State combined. It is possible to fulfil the N-1 rule on a regional level if relevant Member States establish a Joint Risk Assessment and a Joint Preventive Action and Emergency Plan. According to the Commission, based on data provided to it by the Member States, by December 2014, six of the 26 Member States with gas entry points in the EU did not fulfil the N-1 rule[47].

78

In order to meet the N-1 rule, reverse flow capability has been installed to some existing gas pipelines. Out of six Member States included in the audit, four[48] have equipped one or more gas interconnectors with reverse flow capability, so that gas can flow in both directions. However, these reverse flow capabilities have had almost no impact on the functioning of the gas markets because they are intended primarily for use during supply disruption.

79

Similarly to the 10 % target for electricity, the N-1 rule is of limited use for analysing gas infrastructure needs, because where the alternative entry point provides the gas from the same national source as the largest entry point it does not necessarily increase competition and has little effect on security of energy supply. For example, Finland and Latvia, although each having more than one entry point, remain in reality dependent on a single gas provider, because all gas entering these points comes from the same national source.

80

Due to the fact that constructing gas infrastructure often involves significant investment, there is not always a strong economic case for constructing pipeline interconnections with several suppliers (see also paragraphs 67 and 69). Against this background, some Member States are considering the comparative merits of alternative approaches to developing their gas markets, such as installing LNG terminals. LNG terminal projects are either planned or being finalised by, among others, Lithuania (see ***Box 6***), Poland, Estonia, Finland, Sweden, and Croatia.

81

Nevertheless, some Member States are continuing to consider ambitious developments in their gas systems, including constructing new gas infrastructure with a view to creating gas hubs. For example, despite falling domestic gas consumptions[49], Bulgaria and Poland are each preparing for the creation of gas hubs.

46 The N-1 criterion was introduced by Regulation (EU) No 994/2010 on the security of gas supply in October 2010. This rule — based on the example from the electricity sector — obliges those Member States who are dependent on a single import pipeline, underground storage facility or other type of essential infrastructure, to make sure that demand on extremely cold days can be covered even if the main import infrastructure fails.

47 SWD (2014) 325 final of 16 October 2014,'Commission Staff Working Document. Report on the implementation of Regulation (EU) 994/2010 and its contribution to solidarity and preparedness for gas disruptions in the EU'. The six Member States were: Sweden, Lithuania, Bulgaria, Greece, Slovenia and Luxembourg. Three of these, Luxembourg, Slovenia and Sweden, have been provided with an exemption in accordance with Article 6(10) of the Regulation.

48 With the exception of Estonia and Sweden.

49 According to the Bulgarian Statistics Office, the gas consumption decreased from 3 218 billion cubic metres (bcm) in 2011 to 2840 bcm in 2014.

There is no overall EU-level needs assessment to provide the basis for prioritising investments in energy infrastructure in the EU

A comprehensive assessment of EU level infrastructure needs is not in place

82

A comprehensive assessment of EU-level infrastructure needs is necessary to inform the decisions about development of the internal energy market and security of energy supply and other EU policy commitments for which the energy sector plays an important role, especially those relating to climate action. Furthermore, with significant energy infrastructure investments needs across the EU, such an assessment is also a crucial tool to inform decisions about targeting the limited EU and other available funds. The Commission has not developed such a comprehensive plan that could combine the EU-level policy inputs into a long-term transmission infrastructure development plan.

83

An indispensable input to inform such a comprehensive assessment would be a sophisticated market development model capable of describing predictions for infrastructure needs under various policy and market scenarios, including a robust range of demand scenarios (see paragraph 70). At present, the Commission does not have a modelling tool in-house, nor does it have access to such a tool in ACER. To date, the Commission has used energy market modelling from an external contractor, while ACER relies on ENTSO-E and ENTSO-G modelling.

84

Not having such a needs assessment as a basis for targeting EU funds could lead to projects being financed across the EU that are not necessary to meet anticipated energy demand, or which have limited potential to provide security of energy supply benefits. For example, although the capacity of the Klaipeda LNG terminal (see ***Box 6)*** is sufficient to cover falling gas demand of the three Baltic countries[50], an additional regional LNG terminal in the region around the east coast of the Baltic sea, to be built in Finland or Estonia, is included in the BEMIP plan[51] (see ***Box 9)*** and is amongst the list of projects of common interest (see ***Box 12***).

The planning tools used to inform investment planning have limitations

85

In the absence of a comprehensive assessment, the Commission has relied on a number of more specific infrastructure planning tools including:

- lists of projects of common interest (PCIs) (see analysis in paragraph 103);
- ten-year network development plans (TYNDPs).

50 According to the Eurostat statistics, the total natural gas demand of Estonia, Latvia and Lithuania has decreased from 5.6 bcm a year in 2010 to 4.6 bcm in 2014.

51 Agreement reached in November 2014 between the prime ministers of Finland and Estonia foresees construction of a larger regional LNG terminal to Finland and a smaller one for local use in Estonia. If the Finnish project does not progress according to the schedule, Estonia retains an option to construct the regional terminal.

86
Although they provide overviews on investments planned by national electricity and gas TSOs, TYNDPs do not present the complete picture of investments, in terms of EU-level policy and market development needs, because:

- they are not based on an overall EU assessment taking into account a range of EU policy objectives;
- they do not take due account of the future infrastructure investments planned by private entities and future energy generation;
- the national regulators do not play a strong role in the evaluation of proposals to the TYNDP;
- they are not always coherent with national energy infrastructure investment plans. ACER has identified 51 national projects in ENTSO-E TYNDP 2012 which were not included in national development plans[52].

87
The Commission recognises that the Member States' notifications to the Commission about existing and planned electricity transmission capacity are often not in line with the TYNDPs. Thus, the Commission is not in a position to draw definitive conclusions and make an adequate assessment of future gaps between energy infrastructure and its potential to meet demand[53]. ACER, which monitors their implementation, has also expressed concerns on a range of practical matters concerning TYNDPs[54].

Developing cross-border infrastructure requires cooperation amongst neighbouring Member States

88
A functioning regional cooperation and mutual perception of development needs are necessary preconditions for any cross-border infrastructure project to happen. However, in practice, cross-border project initiatives can face a range of challenges, including lack of perceived need for the projects on one or both sides, difficulties in obtaining all planning permits, as well as equitably financing energy infrastructure projects and allocating the often high costs between parties. Nevertheless, there are some examples of effective cooperation in the EU that have laid the ground for the development of common infrastructure and market development.

Regional cooperation in the energy sector is emerging

89
In the field of energy, regional cooperation involving two or more Member States is the result of either political or technical initiatives.

52 ACER Opinion 8/2014.

53 Commission Staff Working Document 'Investment Projects in Energy Infrastructure' accompanying the document Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: 'Progress towards completing the Internal Energy Market' (SWD(2014) 313 final of 13.10.2014, p. 4).

54 In its Opinion No 16/2014, ACER expressed concerns about the TYNDPs, especially regarding the limited availability of data, presentation of grid transfer capacities, use of Cost-Benefit Analysis for all transmission investments and lack of sufficient clarity on some investment descriptions.

90

Amongst ***political initiatives***, a notable current example is the Baltic Energy Market Interconnection Plan (BEMIP), see ***Box 9***. Another regional initiative is emerging in the form of a South-Eastern and Central European Energy forum. There have also been joint political commitments for infrastructure development such as the Madrid Declaration[55], regional cooperation initiatives, such as CORESO[56], and security of energy supply groups such as the Baltic and Finnish Gas Coordination Group. These groupings, often initiated with involvement of the Commission, are often formalised through agreements at a high political level between Member States. They sometimes extend to specific project agreements, for example the recently opened Spain–France electricity link (see ***Box 10*** and paragraph 93).

91

Technical cooperation initiatives are mostly those launched in the framework of CEER[57] and ACER, such as the groups considering the development of network codes (see also ***Annex III***). These groupings can also lead to the creation of new forms of regional cooperation, such as regional security coordination initiatives[58].

55 A joint declaration signed on 4 March 2015 by the European Commission President Jean-Claude Juncker, President of France François Hollande, the Prime Minister of Spain Mariano Rajoy and the Prime Minister of Portugal Pedro Passos Coelho to agree on ways to strengthen the connections between the Iberian Peninsula and the rest of the EU energy market.

56 Coreso (Coordination of Electricity System Operators), the first regional technical coordination centre for electricity bringing together several TSOs from France, Belgium, Germany, Italy and United Kingdom.

57 CEER — Council of European Energy Regulators: a Brussels-based NGO that seeks to present the interest of NRAs in the process of developing the internal energy market.

58 Participation of Member States' organisations in the regional cooperation initiatives varies greatly. For example the Swedish NRA participated in all ACER working groups and early adoption initiatives. Also, the Swedish electricity TSO is involved in a variety of the regional cooperation initiatives and participates in the early implementation groups of the Network Codes. By contrast, at the time of the audit, the two TSOs of Bulgaria did not participate in any regional cooperation or early implementation groups.

Box 9

What is the Baltic Energy Market Interconnection Plan (BEMIP)?

The **Baltic Energy Market Interconnection Plan (BEMIP)** was endorsed by the Heads of State of Lithuania, Poland, Latvia, Denmark, Estonia, Sweden, Finland and Germany and the President of the European Commission on 17 June 2009.

The objective of the BEMIP plan is the integration of Estonia, Latvia and Lithuania to the European Energy markets, to end their status as energy islands and to liberalise their energy markets to prepare them for joining the common electricity exchange. The plan also includes a number of infrastructure projects, ranging from Danish North Sea wind parks to gas Network development in Estonia. The EstLink2 electricity interconnector between Estonia and Finland, which was included in BEMIP, has been built with EU financial support and has already had an impact on the electricity market in Estonia (see ***Box 13***).

BEMIP is still in the process of being implemented. For example, retail prices of gas and electricity are still regulated in Lithuania and certain infrastructure projects have not been realised, such as the Regional Baltic LNG terminal that is foreseen to be constructed in Finland or Estonia.

92
The Commission is promoting infrastructure cooperation between Member States, and is seeking to spread what it considers as good practice under BEMIP to other regions such as in central and south-eastern Europe and with the Iberian Peninsula. In the latter case, energy sector cooperation between France, Portugal and Spain has recently been declared and agreed at the highest political level.

93
In the period 2007–2013, the Commission also designated four coordinators with the aim of facilitating the agreements between Member States for constructing specific elements of cross-border infrastructure[59]. The work of the coordinator to enhance energy interconnection between France and Spain involved interacting with both national and local politicians and stakeholders and identifying the need for technical solutions. This contributed to defining an electricity interconnector project that was subsequently constructed with support from EU funds[60] (see ***Box 10***).

Cross-border cost allocation is complex

94
Cross-border energy projects involve infrastructure being constructed in at least two Member States. Allocating the costs of constructing such projects is a complex process, with the Member States involved seeking to make sure that the costs they incur are commensurate with the future benefits that are expected to accrue. Complexities arise in particular for projects where there are more than two Member States involved and/or where it is not obvious how and to whom future benefits are expected to accrue.

59 The other projects for which the coordinators were appointed were: 'Poland–Lithuania link', 'Nabucco' and 'Connection of offshore wind power in Denmark, Germany and Poland'.

60 Rapport du Coordonnateur Europeen, Mario Monti, Projet d'Interet Europeen EI 3, 'Interconnexion électrique France–Espagne', Bruxelles, Septembre 2008.

Box 10

The Spain–France electricity interconnection project

The **France–Spain electricity interconnection** project involved the construction of a 2 000 MW high voltage direct current connection between the two countries. The 64.5 km interconnector includes 33.5 km in France, 31 km in Spain and crosses the Pyrenees via a 8.5 km tunnel.

The need for this interconnection was identified in 1978 and technical studies were done between 1998 and 2006. Facilitated by the European coordinator in 2007 and 2008, the decision about the project design was taken in June 2008 when the French and the Spanish governments signed an agreement. The costs of the project were shared equally between France and Spain, with a contribution made by the EU. Construction commenced in September 2011, and technical delivery was completed in December 2014. The interconnector was due to come into service in June 2015, but as of 30 June 2015, had not yet done so.

The total project cost was 721 million euro, of which 225 million euro was provided from the EEPR. Running the interconnector underground through the Pyrenees increased cost by 10 times more than the estimated cost of an overground cable. This was deemed necessary due largely to specific environmental considerations and was defined as an exceptional solution to an exceptional set of problems at the location. The link has doubled the Spanish electricity interconnection ratio from 3 % to 6 % and increased the French interconnection rate from 10 % to 11 %.

Photo 2 — Section of high voltage direct current interconnector cable being installed in the tunnel under the Pyrenees

95

Cross-border cost allocation is relevant in the framework of allocations of EU funds under the Connecting Europe Facility. The TEN-E regulation requires that decisions about the cross-border cost allocations be taken by the NRAs of the concerned Member States. If project promoters from the Member States wish to apply for CEF funding but the NRAs cannot agree within 6 months, then they can refer the case to ACER in order to obtain a decision to settle the matter (see example in ***Box 11***). This process has the following drawbacks:

(a) seeking agreement between NRAs and then obtaining a decision from ACER is time-consuming, taking up to a year;

(b) some parties are critical of the methodology used.

Obtaining permits can be problematic and lead to delays

96

Cross-border projects often face local opposition as such projects can be perceived as causing disruption to local activities whilst bringing little or no local benefits. In such a context, obtaining local planning permits is often a long and complex process, and was highlighted during the audit by TSOs and regulators as an important reason for delays in implementing infrastructure projects. The Commission reports that the resulting delays prevent about 50 % of commercially viable electricity projects from being realised by 2020[61].

61 2020 COM (2010) 677.

Box 11

Allocating costs for the LitPol cross border interconnector project

The **Litpol project** involves the construction of an electricity interconnector between Poland and Lithuania in order to reduce the isolation of the three Baltic countries from the European Union energy market. For the works on the project in the territory of Lithuania, the Lithuanian NRA claimed that Sweden should contribute 47 million euro because of the benefits that it claimed would accrue to Sweden as a result of the project. Neither the Swedish NRA nor TSO agree with the Lithuanian NRA's claim for contribution, setting out their reasons to ACER when ACER was called upon to decide on the matter. ACER agreed with Sweden, ruling, for the purposes of CEF funding, that Lithuania was the only benefiting country of the project and that Sweden should not have to contribute to the project. This decision subsequently allowed Lithuanian TSO to apply for CEF funding (see ***Table 6***). The decision process took almost 1 year to complete.

97

The 2013 TEN-E regulation sought to address these problems by:

(a) introducing an overall time limit of 3.5 years for permitting procedures;

(b) requiring Member States to streamline their environmental authorisation procedures;

(c) requiring Member States to consolidate permit-granting powers or coordination into one single authority, a one-stop-shop, by November 2013. As at June 2015, all Member States have established one-stop-shops and all but one have published manuals on permit granting[62]. The one-stop-shops are still recent initiatives, however, and it is too soon to assess whether they are proving effective.

98

The European coordinator who worked on the France–Spain interconnector (see ***Box 10)*** observed that opposition to infrastructure projects from local communities is best addressed through direct, local communication that points out the benefits of additional interconnections especially for consumers. In general, increasing consumer knowledge about the way energy markets work, could also lead to intelligent consumption behaviours, and greater acceptability of such interconnection projects.

Financial support from the EU budget in the field of energy infrastructure has made only a limited contribution to the internal energy market and security of energy supply

99

The EU has allocated 3.7 billion euro to energy infrastructure investments through several instruments in the 2007-2013 period, and a further 7.35 billion is envisaged for the 2014-2020 period[63]. Although this is a significant amount of funding, it only covers approximately 5 % of the estimated infrastructure investment needs identified in the TYNDPs for electricity and gas. So the available EU funds need to be used strategically, for the most important projects, based on a strategic needs assessment (see paragraph 83).

62 According to information provided by the Member States to the European Commission.

63 This figure excludes any potential future support to energy infrastructure from the European Fund for Strategic Investments, which envisages 16 billion euro guarantees from the EU budget.

The EU has several funding instruments to support energy infrastructure projects, but none have the internal energy market as a primary objective

Insufficient prioritisation of projects has reduced the effectiveness of EU funding for energy infrastructure

100

Since EU resources for financing energy infrastructure are limited, having some means of prioritising projects is important. Although there is no EU-level needs assessment, the Commission has used several lists of specific projects as a way to seek to prioritise investments from the EU budget and to identify projects that are eligible for financing:

- list of PCIs under the TEN-E regulations;
- list of critical projects of common interest, presented in the 2014 Energy Security Strategy;
- list of projects applicable for support from the European Energy Programme for Recovery (EEPR);
- List of projects applicable for support from the European Fund for Strategic Investments.

101

The list of PCIs under the TEN-E regulation has been developed in two stages:

(a) the original PCI list was developed in 2006. It included 550 projects of European interest in all of the Member States at the time, but no clear guidance on which projects should be prioritised for EU funding (see ***Box 12);***

Box 12

How can an energy infrastructure project obtain PCI status?

The concept of PCIs has existed since the start of the trans-European Networks programme. PCIs should be able to benefit from faster and more efficient permit-granting procedures and improved regulatory treatment.

Under the current TEN-E regulation, PCIs are identified within 'priority corridors'. The process of selecting projects to be included in the PCI list is built upon the TYNDPs developed by ENTSOG and ENTSO-E. To be included on the list, a project has to present significant benefits for at least two Member States, contribute to market integration and further competition, enhance security of supply, and reduce CO_2 emissions.

(b) the 2013 TEN-E regulation[64] established a framework for prioritisation of energy infrastructure investments through the identification of 12 priority corridors[65]. The regulation also provided guidance concerning the identification and implementation of PCIs. The PCI list under this regulation included 248 projects, of which 132 were for electricity infrastructure and 107 for gas infrastructure[66]. The PCI list under this regulation contains fewer projects than the 2006 PCI list. However, according to Article 4(4) of the TEN-E regulation, the Commission is not entitled to rank the projects within each priority corridor;

(c) the list of PCIs is updated every 2 years, and the next update is due in November 2015.

102

In 2014, a subsequent list of 33 projects was developed in the European Energy Security Strategy[67] which referred to these projects as 'critical PCIs'. This included some 27 projects in gas and only six in electricity, with an estimated cost of around 17 billion euro. The Commission considered these projects to be essential for improving security of supply and to connect better energy markets in the short and medium terms.

103

All of these lists have been developed without a clear, underlying, analytical assessment of which projects should be prioritised to enable the EU to achieve its energy policy objectives (see paragraph 82). Using such lists as a basis for making decisions about EU financing entails a range of risks, and if the Commission intends to continue to use such lists as a means to define investment priorities, it should bear such risks in mind:

(a) A list may include so many projects that the concept of the list representing priority projects is severely undermined, as the list therefore does not focus on the small number of projects addressing the most pressing EU needs. The initial TEN-E PCI included 550 projects, and after being rationalised in 2006, still included 248 projects;

(b) Because they are compiled based on proposals from Member States, rather than being a list of projects that address demonstrably EU-level needs, a list may, in practice, be only an amalgamation of projects which project promoters from Member States would like funding for domestic reasons, and;

(c) Some projects on such lists may already be in progress, or already completed using finance from other national or private sources[68].

64 Regulation (EU) No 347/2013.

65 Energy infrastructure: Priorities for 2020 and beyond, 2011, page 14. Electricity: Northern Seas offshore grid, North–South interconnections in western Europe, North–South interconnections in central eastern and south-eastern Europe, Baltic Energy Market Interconnection Plan, Smart grids deployment, long-term electricity highways Gas: North–South gas interconnections in western Europe, North–South gas interconnections in central eastern and south-eastern Europe, Southern Gas Corridor, Baltic Energy Market Interconnection Plan.

66 The remaining nine consisted of seven oil projects and two smart grid projects.

67 COM(2014) 330 final, p. 10.

68 In October 2014 the 400 kV power line between Bescanó and Santa Llogaia in Spain was completed, which was a step further towards the new electricity interconnection between France and Spain. This project is still included in the list of the PCIs and EFSI.

EEPR, CEF and ESIF are not designed primarily to enhance the internal energy market

104

The initial objective of the EEPR programme for Energy was to finance mature energy infrastructure projects that could deliver economic growth within a short period of time. Therefore developing an internal energy market and providing security of energy supply benefits were not the primary objectives of the programme. All Member States were allocated some funding for energy infrastructure projects. The programme has largely failed to achieve its initial objective of delivering economic growth within a short period of time, as:

(a) some of the projects to which funds were allocated were not sufficiently mature. Projects worth 422 million euro, or 18.6 % of the total EEPR grants awarded, have been terminated. For example, the Nabucco gas pipeline, the ITGI–Poseidon gas interconnector, the GALSI pipelines and the Romanian gas reverse flow projects;

(b) there have been significant delays to the implementation of projects and, as a result, only 1.1 billion euro of payments under the EEPR have been executed as of 28 February 2015. This represents 48 % of the amounts initially allocated.

105

The objective of the **Connecting Europe Facility** (CEF) in the energy field is to provide support to the implementation of the PCIs. Only PCIs which are not commercially viable under the existing regulatory framework, complemented by cross-border cost allocations, are eligible for funding from CEF. It provides grants and other financial instruments for works and necessary technical studies through calls for proposals.

106

Aspects of the design of the CEF limit its potential to support the development of the internal energy market:

(a) the Commission can only finance projects that are submitted in the calls for proposals. This means that the Commission has only limited possibilities to target specific PCIs;

(b) because maturity is an important award criterion for grants, the more mature actions are more likely to be funded. Such projects do not necessarily have the highest impact on the development of the internal energy market;

(c) as the state of internal energy market implementation in the Member States is not one of the criteria used for project selection, the Commission has only limited scope to use the CEF instrument to incentivise internal energy market-related reforms.

107

Between 2007 and 2013, approximately 1.3 billion euro was allocated from the **European Structural and Investment Funds** (ESIF) to finance electricity and gas infrastructure. Between 2014 and 2020, this figure should rise to approximately 2 billion euro. Eleven Member States received funding between 2007 and 2013, Poland was the largest recipient with 63 % of all ESIF allocations to energy infrastructure.

108

Most of these allocations have been used for regional level interconnections and upgrading existing energy infrastructure within a Member State. Some has also been used for constructing cross-border interconnections, LNG terminals and underground gas storage. Between 2014 and 2020, six Member States — Bulgaria, Czech Republic, Greece, Lithuania, Poland and Romania — plan to use ESIF allocations for energy infrastructure investments.

109

The project selection under the ESIF is up to the Member States. The Commission only approves the major projects[69]. When negotiating the Member States' Partnership Agreements and Operational Programmes for the 2014 to 2020 funding period, the Commission had the opportunity to seek to include internal energy market development-related performance indicators, but this did not happen. Investments in energy infrastructure are not a priority of the ESIF funds. They represent about 0.5 % of the total allocation of the ERDF, Cohesion Fund and ESF allocations both in the period of 2007 to 2013 and 2014 to 2020.

Many EU co-financed energy infrastructures have yet to have impact on the internal energy market

110

As part of the audit 15 energy infrastructure projects which benefited from EU co-financing were reviewed, 10 concerning gas and 5 concerning electricity (see ***Table 6***). We analysed the projects' potential impact on the functioning of the internal energy market.

69 For energy infrastructure investments falling under the thematic objective for promoting sustainable transport and removing bottlenecks in key network infrastructures, projects with a total eligible cost over 75 million euro, for other ESIF energy infrastructure investments, mainly falling outside the scope of this report, the threshold is 50 million euro.

111

Out of these projects, as at July 2015:

(a) one project has had a significant impact on the internal energy market — the **EstLink 2** electricity interconnector between Finland and Estonia, which was completed and is fully in service (see ***Box 13***).

(b) one other significant project has been completed and has recently become available for use, namely, the **France–Spain electricity interconnector** (see also ***Box 10***).

Box 13

EstLink 2 project changed the electricity market in the region

The **EstLink 2** received 100 million euro from the EEPR. The aim of the project was to construct a second electricity interconnector between Finland and Estonia with a transmission capacity of 650 MW. This project has proved successful insofar as having overcome the technical and other challenges to being completed and brought into service. It is having a positive effect on the electricity market, particularly in Estonia, where electricity prices have become less volatile and converged with those in Finland.

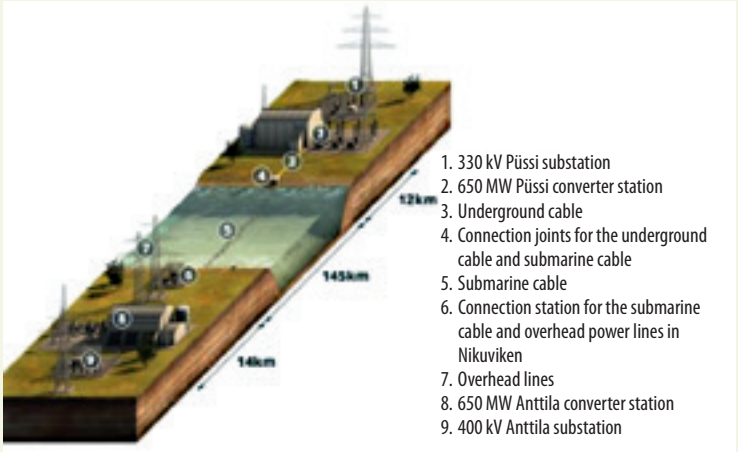


Table 6

List of projects reviewed for the audit

	Project	Status (as at June 2015)	Member States	Project cost (million euro)	EU co-financing (million euro)	EU funding instrument
Gas	Bulgaria–Greece interconnector	Expected 2018	Bulgaria, Greece	220	45	EEPR
	Bulgaria–Romania interconnector	Expected 2015	Bulgaria, Romania	24	9	EEPR
	Nabucco pipeline	Terminated	Austria, Bulgaria, Hungary, Germany, Romania	7 900 (planned)	200 (allocated)	EEPR
	Latvia–Lithuania interconnector	Completed 2013	Lithuania, Latvia	33	13	EEPR
	Jurbarkas–Klaipeda pipeline	Completed 2013	Lithuania	46	21	ESIF
	Klaipeda–Kiemenai capacity enhancement	Ongoing	Lithuania	64	28	CEF
	Swinuojscie LNG terminal	Expected 2015	Poland	657	55	EEPR
					199	ESIF
	Gustorzyn–Odolanow pipeline	Completed 2014	Poland	102	49	ESIF
	GIPL interconnector	Ongoing	Poland, Lithuania	558	306	CEF
	France–Spain interconnector	Completed 2012	France, Spain	617	45	EEPR
			Sub-total	**2 321**	**970**	
Electricity	France–Spain interconnector	Entered service June 2015	France, Spain	721	225	EEPR
	Portugal–Spain reinforcement	Completed 2011	Portugal, Spain	136	46	EEPR
	EstLink 2 interconnector	Entered service 2014	Estonia, Finland	320	100	EEPR
	Nordbalt interconnector	Expected 2015	Sweden, Lithuania	366	175	EEPR
	LitPol interconnector	Expected 2015	Poland	528	207	ESIF
					2	TEN-E
			Lithuania	132	2	TEN-E
					58	CEF (application)
			Sub-total	**1 543**	**815**	
			Total	**3 864**	**1 785**	

112

The other projects have not yet had an impact on the internal energy market to the same extent, because:

(a) one of the 10 gas projects is opening new market perspectives, namely the ***GIPL*** project between Poland and Lithuania will allow gas trade between countries that currently have no interconnections. The other nine were focussed mainly on increasing the existing capacities or addressing security of energy supply concerns directly;

(b) five of the 15 projects had been completed. The sooner projects are completed and enter into service the greater their impact on the internal market. However, projects which were not fully mature when financing decisions were made can take longer to complete than planned. Having said that, large-scale infrastructure projects are technically complex and planned works often take longer than expected, in part due to unforeseen circumstances (see example in ***Box 14***).

Box 14

NordBalt project

The **NordBalt project** involves the construction of an electricity interconnector between Sweden and Lithuania. It has the potential to have a significant impact on the functioning of the electricity market in the Member States which are cooperating under the BEMIP plan because it could increase trading in the common Nordic and Baltic power exchange. However, laying a cable through the Baltic Sea has proved to be a complex process and the project is planned to be completed only in June 2016, six and half years after its inclusion on the list of projects financed from the EEPR instrument.

© Litgrid

Photo 3 — NordBalt ground station in Klaipeda, Lithuania

(c) the potential of interconnectors to facilitate the flow of energy between neighbouring markets depends on the capacity of the energy transmission systems within Member States (see paragraph 73). This problem was observed in two of the projects reviewed for the audit (see ***Box 15***).

(d) the efficiency of two of the gas interconnector projects is likely to be limited as they involve the construction of new transmission capacity alongside existing capacity, see examples in ***Box 16***.

Box 15

Examples of interconnectors not supported by domestic networks

The **LitPol project** involves the construction of an electricity interconnector between Poland and Lithuania in order to reduce the isolation of the three Baltic countries from the European Union energy market. However, its potential use to import electricity to Lithuania from Poland is limited due to the lack of generation capacity in Poland close to the border with Lithuania and insufficient interconnection to other Polish regions where there is higher electricity generation capacity. The bi-directional energy flows will only be possible if the Polish network is enhanced, but this is not foreseen before 2020.

The **Bulgaria–Romania gas interconnector** will allow for 1.3 mcm/day natural gas supplies to flow from Romania to Bulgaria. However, under current conditions, low pressure in the Romanian gas system would prevent cross-border flows to Bulgaria in this volume. Potential flows of gas to and from Hungary would also currently face such constraints. Additional investments are needed in the Romanian gas transmission network to connect the internal transmission system with the transmission transit pipeline that crosses Romania. Romania would also need to repeal a domestic law forbidding such gas exports.

Box 16

New gas pipelines being built alongside existing pipelines

The **gas interconnector projects between Romania, Bulgaria and Greece** are constructing new gas pipelines in addition to existing pipelines. This is because the capacity of the existing gas transit network through Romania and Bulgaria to Greece has been reserved by a supplier from a third country under a long-term contract.

Conclusions and recommendations

113
The EU's objective of completing the internal energy market by 2014 was not achieved. Energy infrastructure in Europe is generally not yet designed for fully integrated markets and therefore does not currently provide effective security of energy supply. Financial support from the EU budget in the field of energy infrastructure has made only a limited contribution to the internal energy market and security of energy supply (see paragraph 27).

The objective of completing the internal energy market by 2014 was not achieved

114
Since 2007, the internal energy market has been at the centre of EU energy policy development. The Third Energy Package, adopted in 2009, required the transposition of the gas and electricity directives by 3 March 2011. However, this objective was not achieved in that year. In 2011, the Council restated its commitment to the internal energy market, stating that it should be completed by 2014. However, even this later objective was not achieved due to a range of problems (see paragraph 29).

115
There remains a long way to go before the Third Energy Package could be deemed to be fully implemented. The Commission's monitoring of implementation of its provisions in the Member States is still ongoing after the 2014 deadline passed (see paragraphs 30 to 33).

Recommendation 1: Completing non-conformity checks

With the internal energy market not yet having been completed, the Commission should complete its assessments and open any necessary infringement procedures against Member States by the end of 2016.

116

National regulatory authorities (NRAs) around the EU continue to face challenges related to their independence and their freedom to exercise professional judgement. Not all NRAs have resources available to them which are commensurate with the tasks they need to undertake, including cooperating in EU-level activities, such as those led by Agency for the Cooperation of Energy Regulators (ACER). ACER does not have powers to compel NRAs in all Member States to provide it with relevant energy market data (paragraphs 35 to 36).

Recommendation 2: NRAs and ACER

(a) The Member States should make sure that NRAs are independent and do not face restrictions to the scope of their role. The NRAs should have sufficient resources available for their activities, including allowing them to participate fully in EU-level cooperation activities;

(b) The Commission should assure that ACER has the necessary powers to obtain from key institutions in the Member States the information it needs to carry out the tasks assigned to it.

117

Important differences in how Member States organise their energy markets hold back the further development of the internal energy market. There are, in fact, 28 national legal frameworks, which, in practice form a patchwork of local, national and regional markets rather than an internal energy market. While the aim of unbundling and other measures was to create the regulatory conditions for an internal energy market, a liberalised and competitive market has often not emerged. Further developing the EU internal energy market, by finding practical ways for these markets to operate together, remains a significant challenge. This is because there are several different trading mechanisms used in the EU and energy markets are influenced by various interventions (paragraphs 39 and 43 to 46).

Recommendation 3: Transparent trading

The Commission should promote widespread development of transparent trading mechanisms for both gas and electricity. This should include facilitating and supporting the establishment of exchanges in Member States where they do not currently exist or where B2B trading mechanisms dominate.

118
Network codes are technical rules that seek to provide a basis for technical interoperability within electricity and gas transmission systems in the EU. The codes set out common technical standards that should ensure the free flow of energy across borders. Although recently progress has been made with approval of the network codes for gas, none of the electricity network codes have yet been finally approved via the comitology process. Some network codes are being adopted by Member States before being finally approved in a framework of early implementation regional initiatives (paragraphs 47 to 51).

Recommendation 4: Approving and implementing network codes

The Commission should expedite the process of comitology, with a view to securing approval of the electricity network codes by the end of 2015. It should also encourage ACER and the ENTSOs to support early implementation of network codes by the Member States in the framework of regional cooperation initiatives.

119
Although progress has been made, the full price effects of the internal energy markets have not yet been realised, and there remain significant energy price differences between Member States.

120
Electricity wholesale prices have not converged in the EU, with substantial differences evident even between some neighbouring Member States. In order to stimulate cross-border electricity trade, the EU set a target that a Member States' cross-border electricity interconnections should be at least 10 % of its installed production capacity. However, this target lacks relevance because it focuses on infrastructure development rather than being based on demand dynamic with a view to achieving price convergence (paragraphs 59 to 64).

121
Even if the current gas target model, based on hub trading, were to be implemented, it may only have limited effect on average wholesale gas prices. Constructing significant gas pipelines across the EU as a way to facilitate the development of competitive hub-based trading all over Europe would require significant investment. However, the economic case for seeking to do so may not exist in some cases. There are alternative ways to introduce competition into gas markets, for example, by installing strategically placed LNG terminals to serve one or more national markets (paragraphs 65 to 71).

Recommendation 5: Market and infrastructure development models for electricity and gas

The Commission should:

(a) consider establishing **electricity** interconnection objectives based on market needs, rather than on fixed national production capacity;

(b) reassess the potential costs and benefits of the **gas** target model, and consider, in the light of uncertain demand, whether there are alternatives to the extensive construction of gas pipelines, such as the installation of strategically placed LNG terminals to serve one or more national markets using internal energy market-compatible solutions. This should be based on a comprehensive EU-level needs assessment (see ***Recommendation 7***).

Recommendation 6: Optimal use of the existing infrastructure

The Commission should:

(a) identify cross-border energy infrastructure that is not being used to its full potential to support the internal energy market, either because it is tied up in long-term bilateral contracts not allowing third party access, or because its technical capacities, such as reverse flows, are not being used;

(b) work with stakeholders in the Member States in order to improve the extent to which such infrastructure is actually used continuously for the benefit of the internal energy market;

(c) explore the benefits for setting up regional TSOs as a means to encourage and manage efficiently energy flows across borders, making the most of existing infrastructure.

Energy infrastructure in Europe is not yet suited for fully integrated markets and therefore does not currently provide effective security of energy supply

122

The energy infrastructure within and between Member States is not yet suited for the internal energy market. In practice, insufficient infrastructure capacity within a Member State can hold back potential imports and exports and the extent to which a Member State can act as a transit country. Gaps also remain in the cross-border gas and electricity transmission infrastructure between Member States (paragraphs 73 to 81).

123

A comprehensive EU-level energy infrastructure needs assessment is necessary to inform decisions about the development of the internal energy market and the security of energy supply (paragraph 82). With significant energy investments needed across the EU, such a comprehensive analysis is a crucial tool for targeting EU and other funds in the sector (paragraphs 82, 84 and 99). At present, the planning tools used by the Commission, mainly the lists of projects of common interest and the 10-year network development plans, have important limitations (paragraphs 85 to 87). The Commission also does not have an advanced market development model to support the necessary needs analysis (paragraph 83).

Recommendation 7: Drawing up a comprehensive EU-level infrastructure needs assessment

The Commission should:

(a) draw up a comprehensive EU level energy infrastructure needs assessment for the development of the internal energy market, this should function as a reference for the other documents such as TYNDPs;

(b) put in place, to support the needs assessment, a capacity to model energy markets including a broad range of demand projections, either in-house or in the Agency for the Cooperation of Energy Regulators (ACER);

(c) work with ENTSO-E and ENTSO-G so that the needs assessment functions as an input for internal energy market-related infrastructure planning in the EU, including ten-year network development plans (TYNDPs).

124

Developing cross-border energy infrastructure requires cooperation amongst neighbouring Member States. In this context, project financing, the allocation of costs and obtaining planning permits can be challenging. There have been good experiences across the EU of regional cooperation in the energy sector, emerging in the form of both political and technical initiatives. Some of the Commission's coordination activities have seen positive results (see paragraphs 88 to 93).

European Union financial support in the field of energy infrastructure has made only a limited contribution to the development of the internal energy market and security of energy supply

125

Insufficient prioritisation of projects has reduced the effectiveness of EU funding for energy infrastructure. The Commission has used several lists of specific projects as a way to prioritise investments from the EU budget and to identify projects that are eligible for financing. However, the Commission has not defined these lists on the basis of a comprehensive assessment of EU-level infrastructure development needs. This entails risks that undermine the usefulness of such lists as tools for prioritising investments and targeting EU funds (paragraphs 100 to 103).

Recommendation 8: Refine the use of lists of PCIs

The Commission should refine its planning procedures and in particular the prioritisation and funding of projects of common interest (PCIs), in the light of a comprehensive EU-level energy infrastructure needs assessment (see ***Recommendation 7***).

Recommendation 9: Proper and continuous functioning of IEM as a condition for EU energy infrastructure project financing

The Commission should make legislative proposals on how to make its decisions to select energy infrastructure projects for funding subject to the proper and continuous functioning of the energy market in the Member States.

126

The main EU funding instruments for financing energy infrastructure projects, the EEPR, the Connecting Europe Facility and the European Structural and Investment Funds, are not designed primarily to enhance the internal energy market, and this is evident in aspects of the way they are implemented. CEF financing is not linked to energy market reforms, and the conditions concerning energy market development have not been included in the ESIF partnership agreements for the 2014 to 2020 period (paragraphs 104 to 109).

127

There are examples of energy infrastructure projects financed by the EU that have had a positive effect on the internal energy market and the security of supply. However, the impact of many other projects has been limited so far. This is because some have lacked a focus on internal market development needs; few have been completed and entered into service; for some, capacity problems in neighbouring Member States have held back their use; and the efficiency of some projects is limited because they seek to develop additional infrastructure alongside existing infrastructure (paragraphs 110 to 112).

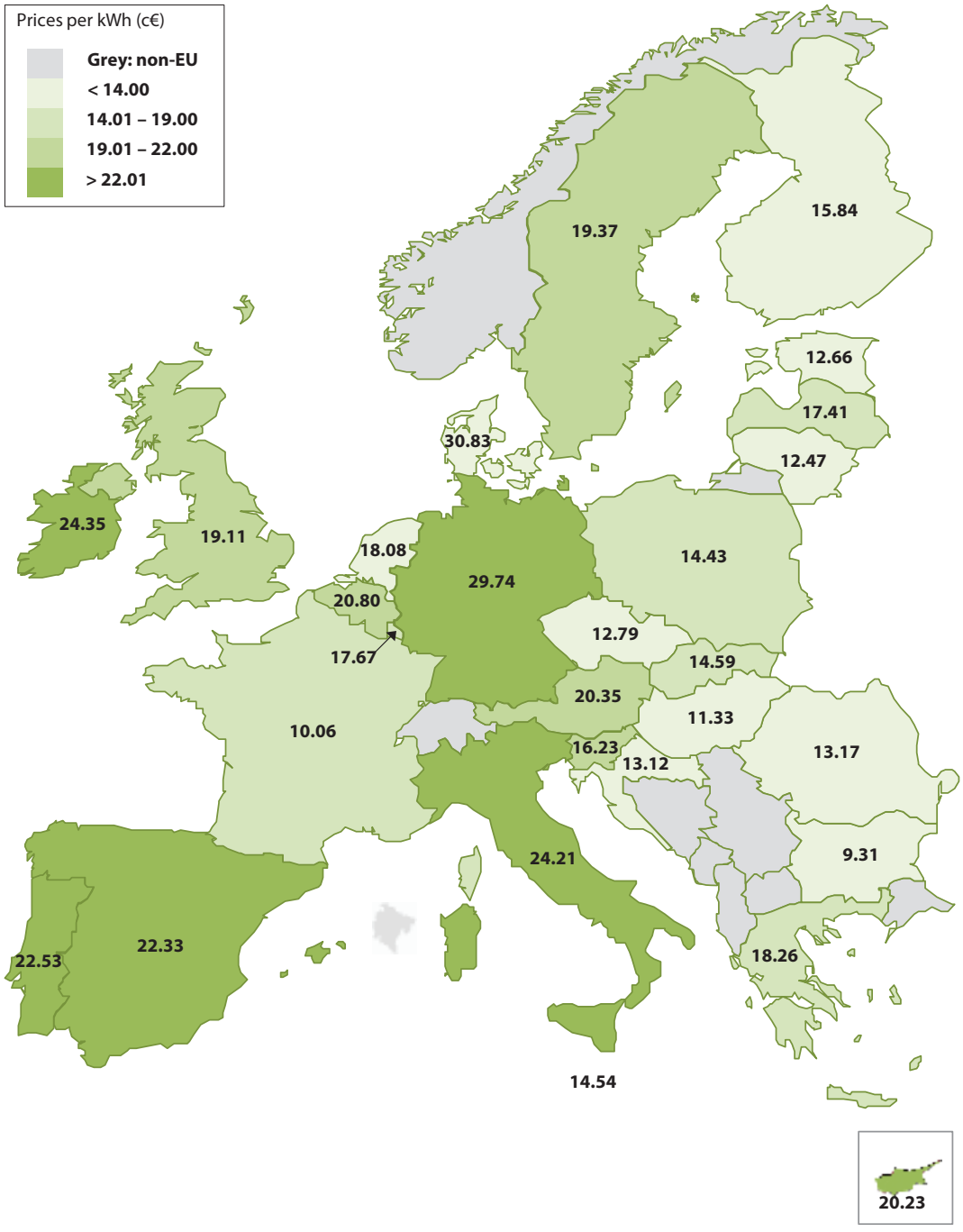
This report was adopted by Chamber II, headed by Mr Henri GRETHEN, Member of the Court of Auditors, in Luxembourg at its meeting of 21 October 2015.

For the Court of Auditors

Vítor Manuel da SILVA CALDEIRA
President

Annex I

(a) Average retail electricity prices with taxes for household consumers: 1st quarter of 2015 in euro cents per 1 KWh

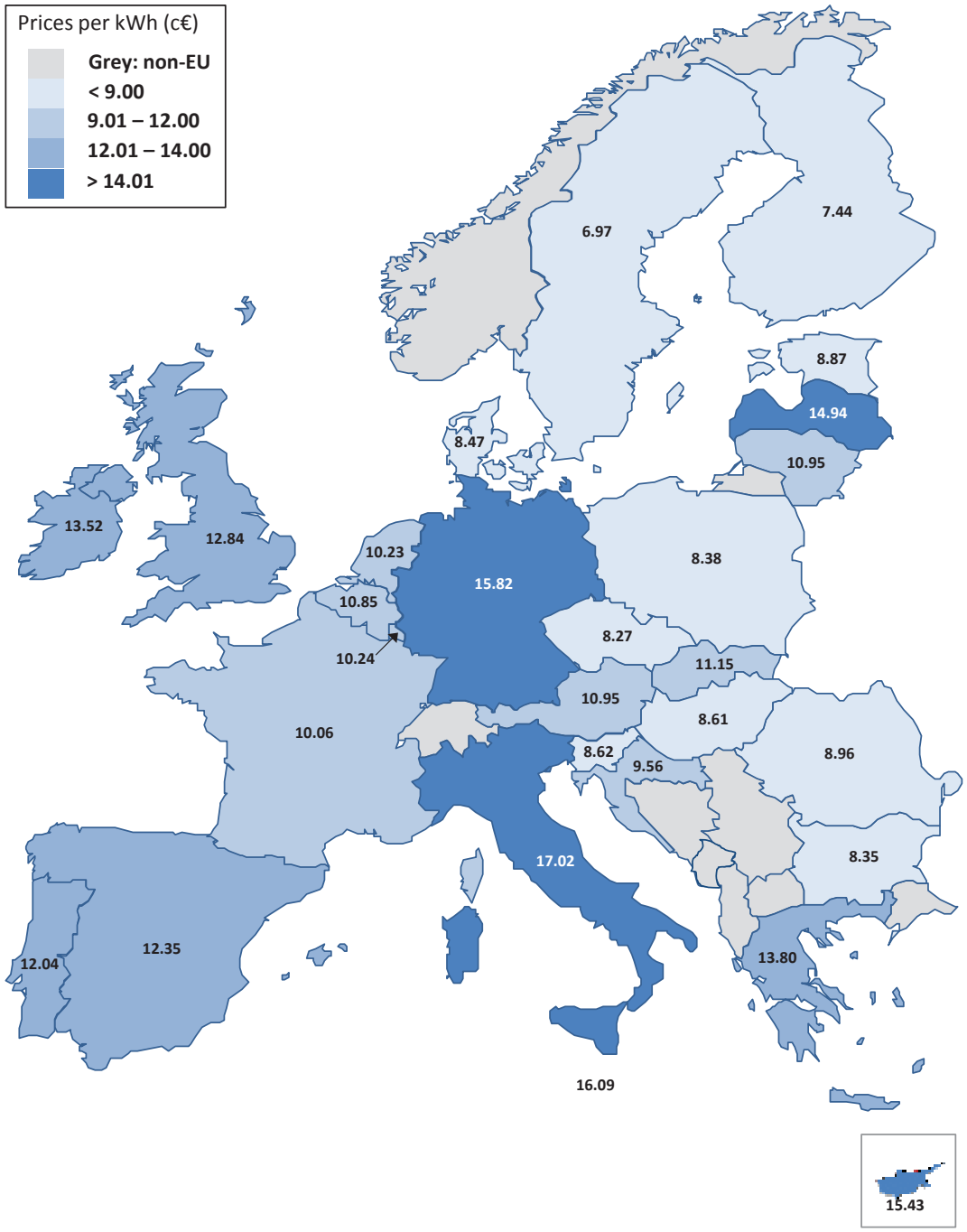


Note: The affordability of consumer prices is a separate issue, which should be considered in the context of the level of net disposable incomes in each Member State. As stated in paragraph 23, this audit did not cover energy poverty.

Source: European Commission.

Annex I

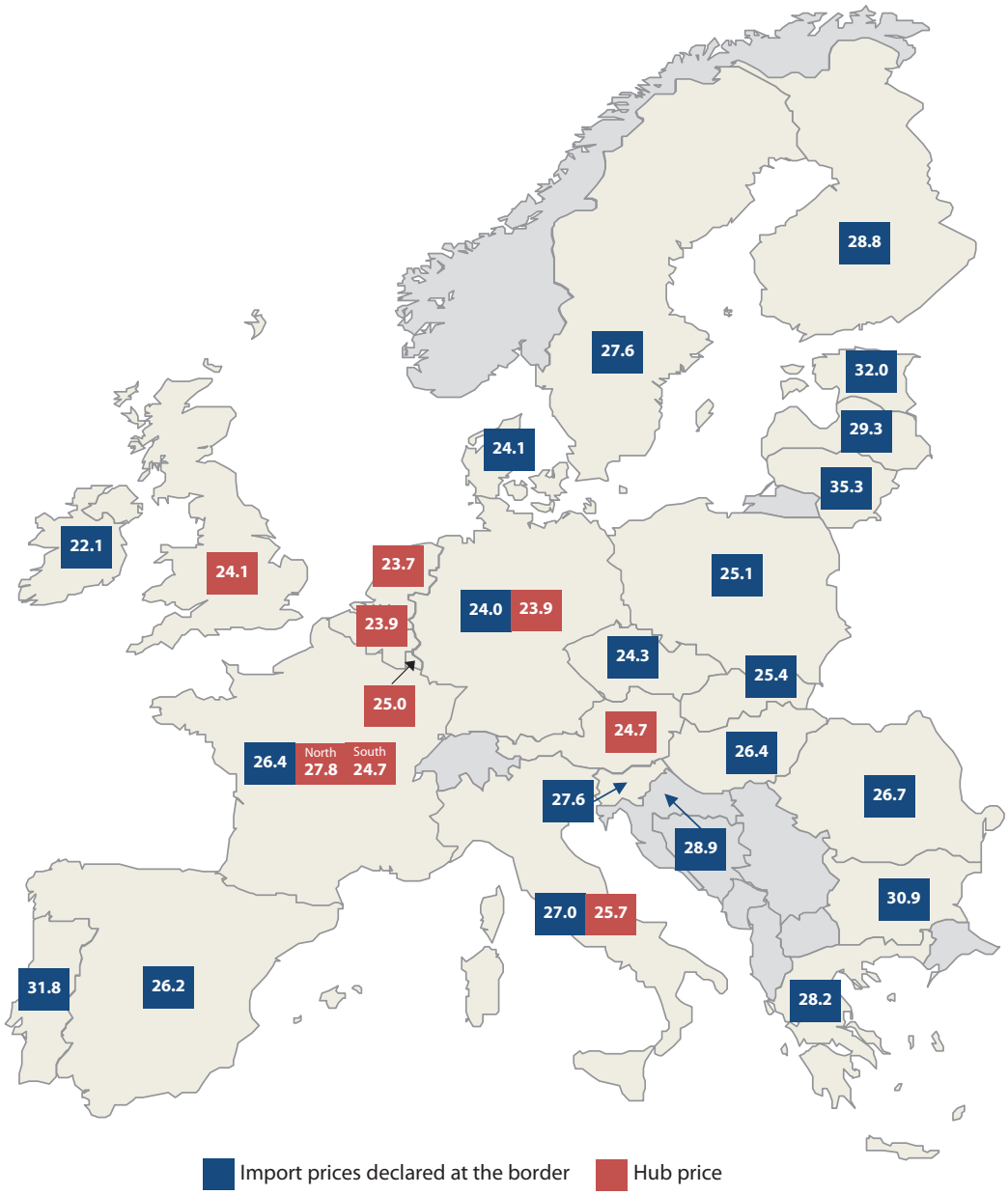
(b) Average electricity prices without VAT and non-recoverable taxes for industrial consumers: 1st quarter of 2015, euro cents per 1 kWh



Source: European Commission.

Annex II

Assessed gas sourcing prices paid by suppliers in the EU Member States — 2014 yearly average (euro per MWh)



Source: ECA based on information provided by ACER. Cyprus and Malta do not currently have gas markets and are therefore not included.

Annex III

Member States participation in the ACER working groups, January 2013 to May 2015

	Board of Regulators	Electricity Working Group	Gas Working Group	Implementation, Monitoring and Benchmarking Working Group	Market Integrity and Transparency Working Group
No of meetings held	**22**	**24**	**25**	**24**	**20**
Austria	22	24	25	19	20
Germany	22	23	25	17	19
United Kingdom	22	24	24	15	20
France	20	23	24	17	20
Belgium	22	21	25	24	11
Spain	22	19	25	19	17
Sweden	22	23	21	17	19
Portugal	22	24	25	5	16
Italy	22	20	21	11	16
Netherlands	22	24	22	6	16
Poland	21	22	25	2	16
Hungary	22	18	22	0	19
Denmark	22	21	16	6	11
Finland	22	21	15	0	16
Czech republic	22	13	9	4	19
Ireland	22	14	14	0	12
Luxembourg	19	8	9	0	14
Slovenia	18	0	8	0	7
Croatia	15	3	5	1	4
Greece	20	1	5	0	2
Lithuania	18	1	3	0	2
Latvia	16	0	6	0	1
Malta	22	0	0	0	0
Romania	18	1	2	0	1
Estonia	18	0	0	0	0
Cyprus	14	0	0	0	0
Bulgaria	2	0	0	0	0
Slovakia	1	0	0	0	0

Reply of the Commission

Executive summary

IV
The Commission underlines the importance of a well-functioning electricity and gas market for security of supply.

V
The communication 'Progress towards completing the Internal Energy Market' (COM(2014) 634 final) recognised that Europe was well underway towards completing the internal energy market. Cross-border trade is increasing, renewables are being successfully integrated in the system and work has begun on rolling out smart grids and facilitating distributed generation. But it was also clear that the work is not completed yet; obstacles prevent the market from functioning smoothly. The Energy Union project is designed to address these obstacles. The Commission has taken concrete steps to remove the remaining market barriers to the internal energy market, notably in its market design initiative.

With regard to energy infrastructure, it is important to note that:

— energy infrastructure is expected to be financed by the market — that is user tariffs approved by independent regulatory authorities; financial support from EU budget therefore should be the exception rather than the rule;

— where financial support has been allocated, the security of supply has been significantly improved for certain regions (see for instance the examples for EEPR under the Court's observation in paragraph 103 or several of the audited projects co-financed by CEF or ESIF mentioned in the Court's observation to paragraphs 109-111).

Recommendation 1
The Commission accepts the recommendation.

The Commission services have declared enforcement of Third Package rules a priority in 2015. The compliance checks on the Third Package implementation have been completed in all 28 Member States and all potential issues which are incompatible with internal market legislation with the authorities of the Member States concerned are being raised.

Recommendation 2 (a)
This recommendation is addressed to Member States. The Commission however agrees with the recommendation and will exert a particular scrutiny on the independence of NRAs during the compliance assessment of Third Internal Energy Market rules.

Recommendation 2 (b)
The Commission accepts the recommendation and is looking into possibilities to reinforce the existing powers of ACER, including vis-à-vis Member States, in order to adapt it to the realities of the more integrated internal market.

Recommendation 3
The Commission accepts the recommendation.

In order to address the problem of underdeveloped trading via exchanges, the Commission has adopted regulations in the field of gas and electricity which will make the installation of energy exchanges obligatory (e.g. 'CAM' and 'balancing' regulations in gas, 'CACM' regulation, establishing the rules for EU-wide market coupling, in electricity). In addition, the implementation of Regulation (EU) No 1227/2011 of the European Parliament and of the Council on wholesale energy market integrity and transparency (REMIT) is ongoing.

Recommendation 4
The Commission accepts the recommendation.

The Commissioner for Climate Action and Energy has declared the adoption of the network codes a priority. The Commission has worked intensively, in cooperation with regulators, TSOs and other stakeholders, to reformulate the proposed network codes in a manner that guarantees their neutrality and ensures effective implementation. Eight of ten proposed electricity network codes are expected to be voted by the Committee by the end of 2015.

The Commission actively promotes early implementation of the network codes in the framework of regional cooperation initiatives.

Recommendation 5 (a)
The Commission accepts the recommendation.

Whereas the current 10 % target for 2020 is based on production capacity, cost aspects and the potential of commercial exchanges will be taken into account and play an important role in modelling the 2030 interconnection target at the regional or country level. This will add the necessary flexibility to adjust the minimum 15 % interconnection target for electricity in 2030 to market needs.

Recommendation 5 (b)
The Commission accepts this recommendation.

The 2015 gas TYNDP already provides a good assessment of infrastructure needs under a wide variety of scenarios on future demand, prices, infrastructure development and other aspects. The analysis clearly shows that not all of the planned projects will be needed. The ongoing PCI process builds on this assessment. Furthermore, in order to arrive at an enhanced needs assessment for the EU gas market, preparatory work on an EU strategy for LNG and gas storage has started and the Commission will publish its LNG and storage strategy in January 2016.

VII
The Commission is of the view that trans-European infrastructure needs to be improved to deliver its full effect on the IEM. The Commission acknowledges that a comprehensive assessment of EU-level infrastructure needs is necessary, but also wishes to emphasise the extent to which infrastructure planning does already take place at large degree on EU level, and how this feeds into Commission policy. Although procedures and tools may need to be optimised, there is already a sound assessment of what is needed in terms of key European energy infrastructure. Please see Commission's reply to recommendation 7 and to paragraph 82.

Recommendation 6 (a)
The Commission accepts the recommendation. It has already started to implement actions in that sense. This is the case especially for the high-level group on gas connectivity in central and south-east Europe. The aim of the group is to coordinate efforts to facilitate cross-border and trans-European infrastructure that diversifies gas supplies to the region, as well as to implement harmonised rules.

Recommendation 6 (b)
The Commission accepts the recommendation. It is already acting in that direction in the framework of the regional initiatives: one of the main objectives of regional initiatives is to focus on the bottlenecks (physical or regulatory) in cross-border infrastructure.

Recommendation 6 (c)
The Commission accepts the recommendation.

TSO cooperation has already been made mandatory in many implementing rules ('Network Codes') concerning grid operation and energy trading.

In the context of the electricity market design initiative, it is exploring possibilities for enhanced cooperation and shared responsibilities between TSOs, based on the concept of regional security coordination initiatives (RSCIs), in particular in closely connected regions, as a first step towards more integration of TSOs at regional level.

Reply of the Commission

Recommendation 7 (a)
The Commission accepts the recommendation.

It has already acted in that direction. There has been continuous work to develop the TYNDPs and (since 2013) the accompanying cost-benefit analysis. In addition, Article 11(8) of the TEN-E regulation foresees an (interlinked) electricity and gas network model to be developed by the ENTSOs and submitted to the Commission and ACER by 31 December 2016. The Commission will ensure that this happens on time.

Recommendation 7 (b)
The Commission partially accepts the recommendation.

Having analytical and modelling capacities to be created in-house could have considerable resource implications either for the Commission or for ACER. Having this capacity sourced out to the ENTSOs with oversight and supervision by ACER and the Commission could be considered to be a relevant alternative.

Recommendation 7 (c)
The Commission accepts the recommendation.

The energy system-wide cost–benefit analysis underpinning the planning and needs assessment and the TYNDPs are established by the ENTSOs in close cooperation with both the Commission and ACER.

Recommendation 8
The Commission partially accepts the recommendation.

As regards the prioritisation, the Commission recalls that improving the planning procedures is part of the regular cooperation mechanism with all stakeholders involved.

For instance PCI project selection aims at identifying those projects that contribute most to achieving the EU energy policy objectives (affordability, security of supply, sustainability).

A more robust needs analysis combining both electricity and gas markets will be in place by the end of 2016. Please see the Commission's reply to recommendation 7(a).

As regards the funding, when selecting actions for financial support, for those projects where a need for public support has been identified, maturity as well as other evaluation criteria are also taken into account. The Commission is working closely with the EIB and other stakeholders to increase technical assistance for improving the pipeline of projects of strategic interest. Therefore, no further action is foreseen.

Recommendation 9
The Commission does not accept the recommendation.

The Commission strongly believes that equal progress is needed on infrastructure and market regulation for ensuring an effective internal energy market. However, a rigid conditionality would be too complex to implement in a legally enforceable manner and risks being detrimental to the development of needed infrastructure.

Introduction

03
The primary responsibility for application and enforcement of EU law lies with the Member States and their willingness to fully and correctly implement the legislation is of utmost importance. National governments currently remain responsible for developing energy legislation and policies that effect the internal market. Also as owners of energy supply and transmission companies they remain a key player in EU energy markets.

05
The Commission considers that a truly open, competitive and well-connected energy market is the best way to ensure security of energy supply and will allow Europe to make the necessary transition to a low-carbon energy sector in the most cost-efficient and secure way.

The Commission, endorsed by Council and Parliament, has therefore developed a Strategy for an Energy Union, and a key part of this strategy concerns the commitment to remove the main obstacles to more integrated energy markets in Europe.

As part of this strategy, it will reinforce its efforts to enforce the full implementation of existing energy- and related legislation. The Commission has also launched a comprehensive review of the existing EU energy legislation, notably in the field of electricity ('Market Design Initiative'), in order to adapt the existing 'Third Package' rules where necessary to promote market integration. In addition, it has started a comprehensive revision process of its legislation related to security of supply.

13
See Commission reply to paragraph 5.

The Commission considers that since Member States are obliged to take into account the effects of their national decisions on neighbouring countries under EU law, the organisation of an internal energy market requires close cooperation between the EU and Member States/national governments.

Common Commission reply to paragraphs 14 to 18
In energy infrastructure, the interconnectivity of the European electricity and gas transmission systems is increasing but significant infrastructure investments are still needed. By the end of 2015, 13 projects from the first Union list of projects of common interest (PCIs) for gas and electricity will be completed. Slightly more than 100 PCIs are in the permit granting phase and can be expected to enter the construction phase shortly. While most of the investments in energy infrastructure are made by the private sector, a set of dedicated EU tools is available to help overcome further financial challenges. Since the launch of the Connecting Europe Facility (CEF) in 2014, €796 million have been allocated in the form of grants to proposals for key energy infrastructure projects across Europe. Complementary support is also available from the European Structural and Investment Funds (ESIF). Furthermore, the European Fund for Strategic Investments will provide further support to energy projects of strategic significance.

To address more effectively specific infrastructure problems in some regions of Europe, enhanced regional cooperation between concerned Member States has been stepped up. It resulted in the creation of High-Level Groups for the gas and electricity interconnectivity of the Iberian Peninsula and Central East South Europe Gas Connectivity (CESEC) as well as a reform of the High-Level Group for the Baltic Sea region (BEMIP). The Groups are expected to propose concrete solutions to infrastructure problems and to ensure implementation of the relevant projects.

Observations

29 — First alinea
Member States hold the key to the creation of an internal market. See also Commission reply to paragraph 3. Their action determines whether barriers to cross-border trade of energy are actually removed and whether system operation is coordinated with neighbours. Only with Member States who work proactively towards removing barriers to cross-border trade can the Commission succeed in its task to create an internal energy market.

32 — Third alinea
The issues related to consumer protection in the Third Package are an additional important aspect which the Commission verifies in its transposition and conformity checks.

35
The Commission considers that solutions for contentious cross-border issues between Member States become increasingly important. The closer markets become integrated, the more there is a need for an independent authority to moderate and ultimately solve conflicts between Member States on regulatory issues.

The Commission continues to encourage all Member States to participate in working group meetings. To ensure transparency as regards their work, the meeting results are made accessible to all Member States.

40
The Commission's market design initiative launched on 15 July 2015 (COM (2015)340) aims precisely at strengthening the legal framework for the cooperation between TSOs.

44
The Commission also considers that in the current context, the existing mechanisms are heterogeneous. To overcome this situation, the Commission has adopted legislation to harmonise trading mechanisms for gas and electricity. The implementation of this legislation is ongoing (notably by the adoption of the Guideline on Capacity Allocation and Congestion Management (CACM) in electricity and the CAM/CMP and Balancing network codes/Guidelines in gas) and will significantly reduce the inefficiencies in the current regulatory framework concerning energy trading.

46
The Commission considers the issue of uncoordinated state interventions in energy markets as one of the major obstacles to an integrated market, and therefore of utmost importance for the functioning of the IEM — and security of supply. The Commission has outlined the main issues and its proposed measures in its communication 'Delivering the internal electricity market and making the most of public intervention' (C(2013) 7243 final) and puts a specific emphasis on the removal of unnecessary interventions in its ongoing market design initiative (see 'Communication launching the public consultation process on a new energy market design', (COM 2015(340))).

50 (a)
The Commission notes that national TSOs, NRAs and Member States have often been reluctant to agree to an adaptation of existing national or regional rules in favour of a compromise solution which would create a more integrated/larger regional or EU-wide market. The Commission is promoting further IEM integration even for markets which are adequately functioning so that European integration can fully materialise its potential benefits, such as more competition, liquidity-increased supply security.

50 (b)
Adopting EU legislation on technical rules requires changes to established national systems and therefore finding compromises between 28 Member States on often complex technical questions of system operation or energy trading, with significant distributive effects. This limits the ability to plan precisely how long it takes to find the necessary compromises.

The Commission has taken steps to provide for clear and transparent planning by regularly publishing the expected adoption process.

50 (c)
The Commission is looking at possible improvements for the network code adoption process in the framework of its market design initiative.

50 (d)
Network codes and guidelines are Commission documents aiming at removing trade barriers through an alignment of market and grid operation rules.

It is the Commission's task to ensure that the draft texts as proposed by ENTSO-E and ACER comply with EU law, are neutral towards all stakeholders and do not just confirm the status quo, but deliver actual progress for the internal energy market (see Commission's reply to paragraph 50(a)).

In the case of the proposed electricity codes, the Commission had to work intensively on the proposed texts before being able to adopt them as EU law. The adoption process therefore took longer than originally expected, also because of the significant economic relevance and the possible distributive effects of the adopted rules. The time spent to redraft the codes and to negotiate with Member States and stakeholders concerning the need for ambitious legislation was well invested, as the ultimately adopted codes will bring true harmonisation progress.

51
The Commission notes that in particular in the field of electricity TSOs and NRAs have been very active in early implementation projects of network codes (see e.g. the voluntary market coupling process, the balancing initiatives or the work on Regional Security Coordination Centres).

53
The Commission is actively working with Bulgaria to speed up the process of establishing an energy exchange in order to take part fully in EU-wide energy trading ('market coupling'), including with Energy Community countries (together forming the '8. Region').

54
The Commission notes that the REMIT monitoring framework created by the REMIT Implementing Regulation EU 1348/2014 has not yet entered into force as concerns 'B2B-trade' (so-called 'non-standard transactions'). The regulation so far only covers so-called 'standard transactions' (i.e. transaction at trading places). The provisions covering 'non-standard' transactions (i.e. bilateral transactions outside trading places) will enter into force in March 2016.

59
Price convergence is behind expectations, mainly due to largely differing state interventions, which favour very different forms of electricity supply. However, internal market initiatives such as market coupling have certainly aligned prices (see recent experience with flow-based market coupling) and have the potential to do so further — in particular, when Member States decide for a greater alignment of their state interventions.

61
The CACM regulation, becoming legally binding in all Member States in August 2015, has created harmonised trading mechanisms. The Commission agrees that full price convergence is still hampered by other factors (such as missing interconnection, uncoordinated state interventions in different Member States, etc.).

Reply of the Commission

64
The Commission agrees that price regulation leading to energy prices below cost should be forced out and has taken up this issue in discussions with Member States, as well as in infringement procedures. The European Court of Justice has recently endorsed the Commission's enforcement action against regulated prices (C-36/14).

70
The Commission has a department working on market monitoring and energy forecasts. The Commission acknowledges that its capacity on complex analysis is limited due to resource constraints. It would welcome the strengthening of its capacities.

In any case, the Commission may need to refer to external expertise.

75
The main instrument for helping Member States to achieve the 10 % target is identifying and supporting the implementation of relevant projects of common interest. For example, a substantial part of the action plan of the regional initiative in south-west Europe is dedicated to increase the interconnection rate between the Iberian Peninsula and the continental electricity market.

82
The Commission acknowledges that the comprehensive assessment of EU-level infrastructure needs is necessary, but also wishes to emphasise the extent to which infrastructure planning does already take place at EU level and how this feeds into Commission policy.

The ten-year network development plans (TYNDPs) prepared by the European Network of Transmission Systems Operators (ENTSO) are based on a thorough evaluation of infrastructure needs, which also factors in demand. The frequency with which they are updated, i.e. every 2 years, ensures that the change in both demand and generation patterns is reflected in the plan. Based on these plans and using the methodology from the energy system-wide cost–benefit analysis as prescribed in the TEN-E regulation projects are then selected for the Union list of projects of common interest (PCI). The process of selecting PCIs is done in a transparent and robust manner.

83
Taking into account restrictions on its staffing levels (and similar limitations at ACER), the Commission considers that infrastructure modelling as well as developing a range of scenarios could be done by the ENTSOs under close supervision of the Commission and ACER.

It should be noted that the 2014 version of the TYNDP in electricity already includes four scenarios. Methodology and scenario building can be refined and updated, and the Commission as well as ACER closely cooperate with the ENTSOs on this.

84
Funding is not only based on a predefined needs assessment (top down) but necessarily must be assessed and evaluated against specific requirements. When assessing specific projects, maturity is one of the key criteria, together with the benefits a project will deliver to the region it is located in. This goes for both financial instruments and grants.

86 — Fourth alinea
TYNDPs are not aiming at fully corresponding to national plans, as they are meant to be more than the listing of all national plans. They focus on trans-European infrastructure development serving the principal objectives of market integration, security of supply and sustainability.

87
Planning has to rely on sets of complete, reliable and robust data. Obtaining this data, notably from project promoters, but also from Member States, is indeed one of the key challenges for the next round of TYNDPs.

90
The Commission has declared regional market integration as a key instrument to achieve progress with the internal energy market. It will continue to actively support and further develop regional initiatives in all fields of the internal market (e.g. infrastructure, energy trading, system operation, generation adequacy, renewables support schemes), without losing the ultimate goal of an EU-wide integrated market.

100
In both gas and electricity the process of developing the ten-year network development plans by the respective ENTSOs gives a good oversight of where grid investments are required at a European level.

These feed into procedures such as the PCI list. However, it is important to recall that priority or strategically important projects do not necessarily require EU-level funding to proceed. Other non-financial barriers (e.g. permit granting) are often more important. The PCI process aims to allow these barriers to be addressed. If there are specific barriers related to finance, then support from the EU budget is considered (for example under the Connecting Europe Facility). This is why generally lists are not established with the sole aim of prioritising investments from the EU budget.

103
The list of projects of common interest is based on a thorough assessment which is being improved by refining various aspects of the cost–benefit analysis (for example, how to value the security of supply). According to the legislation in place on the Connecting Europe Facility being on the list is one prerequisite for obtaining financial support. However, the decision on giving support is taken, in line with the current legal framework, after having examined the application on the basis of a set of award criteria that take into account policy objectives as well as technical and financial aspects.

104
The Commission concedes that delays in project implementation have prevented the EEPR programme from rapidly delivering economic growth.

However, their long-term benefits are considerable, especially with regard to security of supply:

All but one of the reverse flow and interconnections projects in central and eastern Europe have been completed, thereby significantly improving the resilience of the EU gas grid in case of disruptions of supply similar to the one experienced in early 2009.

The 'Nordbalt 02' project helped complete the necessary upgrade in the Lithuanian transmission grid to facilitate the flow of electricity through the interconnector. 'Estlink 2' connected the Estonian grid/Baltic grid to the Nordic power market by a sub-sea cable to Finland.

A new sub-sea cable connection between Italy and Malta put an end to the isolation of the Maltese grid from the rest of Europe.

109
For the Operational Programmes of the 2014-2020 period, only six Member States have chosen the ERDF Investment Priority linked, inter alia, with improving security of supply through the development of smart energy storage and transmission systems. A specific *ex ante* conditionality is foreseen in the legislation related to this investment priority, ensuring consistency with relevant parts of internal energy market legislation and the PCI framework. Result indicators are set in the relevant Operational Programmes (rather than Partnership Agreements) for each of the specific objectives agreed and include result indicators related to aspects of the internal energy market.

Supporting the shift towards a low-carbon economy, including investments in energy efficiency, renewable energy and smart distribution grids, is a priority for the ESIF in the 2014-2020 period, in particular with mandatory minimum allocations for the ERDF. Investments in other energy infrastructure such as removing bottlenecks in key network infrastructures is important for specific Member States. Such investments indeed represent on average about 0.5 % of the total allocation of the ERDF, CF and ESF, both in the period of 2007 to 2013 and 2014 to 2020, but in some Member States the share is higher (around 2 %), reflecting national needs and priorities.

112(b)

The implementation of all projects co-funded by the EU budget is closely monitored and requests by the project promoters to amend the grant decisions are carefully examined and also rejected in case the arguments brought forward are insufficient.

Conclusions and recommendations

113

It is important to note that:

— Energy infrastructure is expected to be financed by user tariffs and the market; financial support from the EU budget therefore should be the exception rather than the rule.

— Where financial support has been allocated, the security of supply has been significantly improved for certain regions (see for instance the examples for EEPR in the Court's observation in paragraph 103 or several of the audited projects co-financed by CEF or ESIF mentioned in the Court's observations in paragraphs 109-111).

Recommendation 1

The Commission accepts the recommendation.

The Commission services have declared enforcement of Third Package rules a priority in 2015. The compliance checks on the Third Package implementation have been completed in all 28 Member States and all potential issues which are incompatible with internal market legislation with the authorities of the Member States concerned are being raised.

Recommendation 2 (a)

This recommendation is addressed to Member States. The Commission, however, agrees with the recommendation and will exert a particular scrutiny on the independence of NRAs during the compliance assessment of Third Internal Energy Market rules.

Recommendation 2 (b)

The Commission accepts the recommendation and is looking into possibilities to reinforce the existing powers of ACER, including vis-à-vis Member States in order to adapt to the realities of the more integrated internal market.

Recommendation 3

The Commission accepts the recommendation.

In order to address the problem of underdeveloped trading via exchanges, the Commission has adopted regulations in the field of gas and electricity which will make the installation of energy exchanges obligatory (e.g. 'CAM' and 'Balancing' Regulations in gas, 'CACM Regulation, establishing the rules for EU-wide market coupling, in electricity. In addition, the implementation of Regulation (EU) No 1227/2011 of the European Parliament and of the Council on wholesale energy market integrity and transparency (REMIT) is ongoing.

Recommendation 4
The Commission accepts the recommendation.

The Commissioner for Climate action and energy has declared the adoption of the network codes a priority. The Commission has worked intensively, in cooperation with regulators, TSO and other stakeholders, to reformulate the proposed network codes in a manner that guarantees their neutrality and ensures effective implementation. 8 of 10 proposed electricity network codes are expected to be voted by the Committee by the end of 2015.

The Commission actively promotes early implementation of the network codes in the framework of regional cooperation initiatives.

120
Price convergence is behind expectations, mainly due to largely differing state interventions, which favour very different forms of electricity supply. However, internal market initiatives such as market coupling have certainly aligned prices (see recent experience with flow-based market coupling) and have the potential to do so further — in particular, when Member States decide for a greater alignment of their state interventions.

Recommendation 5 (a)
The Commission accepts the recommendation.

Whereas the current 10 % target for 2020 is based on production capacity, cost aspects and the potential of commercial exchanges will be taken into account and play an important role in modelling the 2030 interconnection target at the regional or country level. This will add the necessary flexibility to adjust the minimum 15 % interconnection target for electricity in 2030 to market needs.

Recommendation 5 (b)
The Commission accepts this recommendation.

The 2015 gas TYNDP already provides a good assessment of infrastructure needs under a wide variety of scenarios on future demand, prices, infrastructure development and other aspects. The analysis clearly shows that not all of the planned projects will be needed. The ongoing PCI process builds on this assessment. Furthermore, in order to arrive at an enhanced needs assessment for the EU gas market, preparatory work on an EU strategy for LNG and gas storage has started and the Commission will publish its LNG and storage strategy in January 2016.

Recommendation 6 (a)
The Commission accepts the recommendation.

It has already started to implement actions in that sense. This is the case especially for the high-level group on gas connectivity in central and south-east Europe. The aim of the group is to coordinate efforts to facilitate cross-border and trans-European infrastructure that diversifies gas supplies to the region, as well as to implement harmonised rules.

Recommendation 6 (b)
The Commission accepts the recommendation.

It is already acting in that direction in the framework of the regional initiatives: one of the main objectives of regional initiatives is to focus on the bottlenecks (physical or regulatory) in cross-border infrastructure.

Recommendation 6 (c)
The Commission accepts the recommendation.

TSO cooperation has already been made mandatory in many implementing rules ('Network Codes') concerning grid operation and energy trading.

In the context of the electricity market design initiative, it is exploring possibilities for enhanced cooperation and shared responsibilities between TSOs, based on the concept of Regional Security Coordination initiatives (RSCIs), in particular in closely connected regions, as a first step towards more integration of TSOs at regional level.

Reply of the Commission

Recommendation 7 (a)

The Commission accepts the recommendation.

It has already acted in that direction. There has been continuous work to develop the TYNDPs and (since 2013) the accompanying cost-benefit analysis. In addition, Article 11(8) of the TEN-E regulation foresees an (interlinked) electricity and gas network model to be developed by the ENTSOs and submitted to the Commission and ACER by 31 December 2016. The Commission will ensure that this happens on time.

Recommendation 7 (b)

The Commission partially accepts the recommendation.

Having analytical and modelling capacities to be created in-house could have considerable resource implications either for the Commission or for ACER. Having this capacity sourced out to the ENTSOs with oversight and supervision by ACER and the Commission could be considered to be a relevant alternative.

Recommendation 7 (c)

The Commission accepts the recommendation.

The energy system-wide cost–benefit analysis underpinning the planning and needs assessment and the TYNDPs are established by the ENTSOs in close cooperation with both the Commission and ACER.

125

In both gas and electricity the process of developing the ten-year network development plans by the respective ENTSOs gives a good oversight of where grid investments are required at a European level.

These feed into procedures such as the PCI list. However, it is important to recall that priority or strategically important projects do not necessarily require EU-level funding to proceed. Other non-financial barriers (e.g. permit granting) are often more important. The PCI process aims to allow these barriers to be addressed. If there are specific barriers related to finance, then support from the EU budget is considered (for example under the Connecting Europe Facility). This is why generally lists are not established with the sole aim of prioritising investments from the EU budget.

Recommendation 8

The Commission partially accepts the recommendation.

As regards, the prioritisation, the Commission recalls that improving the planning procedures is part of the regular cooperation mechanism with all stakeholders involved.

For instance PCI project selection aims at identifying those projects that contribute most to achieving the EU energy policy objectives (affordability, security of supply, sustainability).

A more robust needs analysis combining both electricity and gas markets will be in place by the end of 2016. Please see Commission's reply to recommendation 7(a).

As regards the funding, when selecting actions for financial support, for those projects where a need for public support has been identified, maturity as well as other evaluation criteria are also taken into account. The Commission is working closely with the EIB and other stakeholders to increase technical assistance for improving the pipeline of projects of strategic interest. Therefore, no further action is foreseen.

126
As regard the ESIF, ERDF under the thematic objective for promoting sustainable transport and removing bottlenecks in key network infrastructures is designed to improve energy security of supply for both domestic and neighbourhood countries. Security of supply is one of the internal market objectives. ESIF *ex ante* conditionalities, introduced in the 2014-2020 regulatory framework to ensure the effectiveness and efficiency of the ESIF investments, contribute to deliver internal market reforms and to help in better implementation of the ESIF-funded projects.

The CEF clearly has internal energy market objectives as stated in Article 4 of the regulation. This is underlined as one of the priority objectives to be addressed by the first two work programmes in Article 17 (6).

However, it is not feasible to link CEF funding to the absence/presence of internal energy market reforms as explained in the Commission's reply to recommendation 9.

Recommendation 9
The Commission does not accept the recommendation.

The Commission strongly believes that equal progress is needed on infrastructure and market regulation for ensuring an effective internal energy market. However, a rigid conditionality would be too complex to implement in a legally enforceable manner and risks being detrimental to the development of needed infrastructure.

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This audit sought to determine whether implementation of internal energy market policy measures and EU spending on energy infrastructure have provided security of energy supply benefits effectively. The EU's objective of completing the internal energy market by 2014 was not reached. Energy infrastructure in Europe is generally not yet designed for fully integrated markets and therefore does not currently provide effective security of energy supply. Financial support from the EU budget in the field of energy infrastructure has made only a limited contribution to the internal energy market and security of energy supply.

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