ACER

Agency for the Cooperation of Energy Regulators

Publishing date: 30/06/2014

Document title:

We appreciate your feedback

Please click on the icon to take a 5' online survey and provide your feedback about this document

ACER

Agency for the Cooperation of Energy Regulators

Document title:

Publishing date: 30/06/2014

We appreciate your feedback

Please click on the icon to take a 5' online survey and provide your feedback about this document

ACER
Agency for the Cooperation of Energy Regulators

RECOMMENDATION OF THE AGENCY FOR THE COOPERATION OF ENERGY REGULATORS No 03/2014

of 27 June 2014

ON INCENTIVES FOR PROJECTS OF COMMON INTEREST AND ON A COMMON METHODOLOGY FOR RISK EVALUATION

THE AGENCY FOR THE COOPERATION OF ENERGY REGULATORS,

HAVING REGARD to 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[1] ("Agency"), and, in particular, Article 7(2) thereof,

HAVING REGARD to 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 Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009[2], and, in particular, Article 13(5) thereof,

HAVING REGARD to the favourable opinion of the Board of Regulators of 11 June 2014, delivered pursuant to Article 15(1) of Regulation (EC) No 713/2009,

WHEREAS:

(1) Pursuant to Article 13(4) of Regulation (EU) No 347/2013, the National Regulatory Authorities ("NRAs") submitted to the Agency their methodologies and the criteria used to evaluate investments in electricity and gas infrastructure projects and the higher risks incurred by them, where available. Such information refers to the status as of July 2013, unless otherwise specified. Additional information was provided by NRAs to the Agency until 5 June 2014 through responses to a questionnaire on the national regulatory measures for mitigating risks in five main categories. This background information was taken into account for the preparation of this Recommendation (see Annex).

HAS ADOPTED THIS RECOMMENDATION:

1. Introduction

The objective of Regulation (EU) No 347/2013 is to facilitate the realisation of projects of common interest (PCIs). The Agency considers that NRAs have an important role to play in that respect and that, in line with Article 37(8) of Directive 2009/72/EC[3] and Article 41(8) of

[1] OJ L 211, 14.8.2009, p. 1.
[2] OJ L 115, 25.4.2013, p. 39.
[3] OJ L 211, 14.8.2009, p. 55.

Directive 2009/73/EC[4], incentives based on Article 13 of Regulation (EU) No 347/2013 might contribute to making these investments happen[5]. The Agency considers that incentives should aim at mitigating risk (or at providing adequate compensation for it), especially when such risk could cause project promoters and/or investors not to invest or to delay their investment decisions.

The Agency encourages an objective treatment of risk that is based on a sound evaluation of the probability of negative outcomes, when this is quantifiable, and of the damage resulting from their materialisation. Such an evaluation should primarily be addressed from the perspective of project promoters and network users with a view to determining who is best placed to bear the risk and what regulatory tool fits each kind of risk best.

The objective of this Recommendation is to develop a general framework for incentives for promoters of PCIs who are incurring higher risks than for comparable projects. For this purpose the following aspects are central for the Agency:

1. the information necessary to prove the existence of risk and to allow an assessment of its magnitude should be provided by project promoters. In particular, project promoters should indicate to NRAs the extent to which they are exposed to higher risks compared to the risks normally incurred by a comparable infrastructure project;

2. after evaluating the existence and the nature of the risks, NRAs should assess whether (or not) the risks are already addressed by the existing regulatory frameworks, whether (or not) the risks are under the control of the project promoters and whether (or not) mitigation instruments other than regulatory incentives could be used (such as diversification, insurance, hedging and investment guarantees from national or multilateral agencies, etc.);

3. the NRAs' decision on granting incentives should involve the selection of the best suited risk-handling tool(s) - e.g. monetary schemes or risk-mitigation regulatory measures - in order to promote the timely implementation of PCIs. It should consider the results of a cost-benefit analysis and in particular the regional or Union-wide positive externalities generated by the project. Incentives should be commensurate with the level of risk faced by the project promoters.

The Agency finds it important also to reflect on incentives in a broader context. From such a perspective, it could be relevant, in considering the need for and design of incentives, to better understand the extent to which existing (national) regulatory frameworks take the cross-border nature and expected greater economic benefits of PCIs into account and the extent to which these frameworks are or need to be consistent with each other. Consistency between the various national regulatory frameworks may be especially important for cross-border

[4] OJ L 211, 14.8.2009, p. 94.
[5] By incentives, the Agency means any regulatory measures, financial, coercive, moral, etc., which aim to motivate a project promoter to take a particular course of action (e.g. commissioning an infrastructure project by a defined deadline). In this recommendation, regulatory incentives comprise risk mitigation regulatory measures and monetary reward or penalty schemes to achieve such purpose.

PCIs, in order to align the project promoters' incentives as much as possible, and also where Transmission System Operators (TSOs) contribute to the costs of a national PCI in another jurisdiction which applies for a cross-border cost allocation decision. These aspects are not further discussed in this Recommendation, but left for separate future investigation.

The Recommendation is structured as follows: Section 2 summarises the current national practices of risk evaluation and provides recommendations regarding a common methodology for risk identification and assessment; Section 3 focuses on the benchmarking of practices regarding risk-related incentives and provides recommendations. The Annex presents complementary background evidence and information for ease of reference.

2. Risk evaluation methodology

2.1 Summary of national practices regarding risk evaluation

According to the information submitted by NRAs, the methodologies to evaluate the higher risks faced by project promoters are generally applied in the Member States (MSs) in the context of a portfolio risk profile of a TSO or other project promoters.

The Agency notes that in the large majority of MSs (23 for electricity, 24 for gas) the allowed cost of capital for regulated infrastructure is determined on the basis of the capital asset pricing model (CAPM). This very common risk evaluation approach focuses on the identification of the level of systematic risk for the overall transmission activity through the "beta" coefficient, which is usually included in the formula for the weighted average cost of capital (WACC). Background evidence about the use of CAPM and the quantification of systematic risk is provided in Table 1 and Table 2 in the Annex to this Recommendation.

Based on the information provided by NRAs (see the Annex to this Recommendation), the Agency does not identify particular differences between the beta coefficients and the market risk premia used in implementing the CAPM approach in the electricity sector and in the gas sector[6]. Moreover, with the exception of a few outliers, the market risk premium in the countries using the CAPM approach is within the range between 4% and 5.25% and the levered beta is in the range between 0.5 and 0.88.

The Agency notes that, currently, NRAs do not generally assess the specific risk of individual investment projects. The general approach adopted by NRAs is consistent with the hypothesis that different projects belonging to the transmission activity have the level of systematic risk of the overall transmission activity and that the non-systematic (diversifiable) risk can be eliminated or significantly reduced by the TSO or project promoter through diversification.

[6] However, all parameters included in the WACC formula and other regulatory processes impact on the promoters' decisions to plan and to implement investments.

2.2 *Recommendation on a common methodology for risk identification and risk assessment*

Article 13(2) of Regulation (EU) No 347/2013 implies a step-wise risk-evaluation approach under which NRAs shall (further) "analyse the specific risk incurred by the project promoters, the risk mitigation measures taken and the justification of this risk profile in view of the net positive benefit provided by the project, when compared to a lower-risk alternative".

The Agency notes that, given the specific features of the regulatory system in place in each MS, the available measures for mitigating the risk faced by project promoters may be different, as discussed in more detail in Section 3 of this Recommendation. The Agency therefore considers that a "common methodology to evaluate the incurred higher risks of investments in electricity and gas infrastructure projects" based on Article 13(5)(b) of Regulation (EU) No 347/2013 should consider the distinctive features of and the measures taken in the different national regulatory systems. Furthermore, a common methodology should encourage reasonable and transparent evaluation of risks, when NRAs decide on granting incentives for projects eligible according to Article 13(1)[7].

Based on the above considerations, the Agency recommends the following common risk evaluation methodology:

Step 1: Availability of information on project risks

The Agency considers that, since project promoters are best informed about the project's features and aspects, risk evaluation shall be primarily carried out by them. Project promoters should submit to the concerned NRAs all the necessary information for the proper assessment of the actual risk exposure. Specifically, project promoters should provide NRAs with all the elements required to assess whether the incurred risks are higher than those of a comparable project, as well as substantiate how and to what extent the alleged risk could negatively impact the project promoters. NRAs may request additional information from project promoters when they consider it necessary for properly assessing their risk exposure.

The results of the cost-benefit analysis (CBA) (for example, sensitivity analyses) can be used in risk assessments. The Agency notes that the CBA and the risk analysis should use consistent assumptions and data sets. In this sense, the risk assessment should rely on the same data and on the same assumptions used to evaluate the financial sustainability and the socio-economic net benefit in the context of the PCI selection process, in accordance with Annex III.2(1) of Regulation (EU) No 347/2013, and, when applicable, in the context of cross-border cost allocation, in accordance with Article 12(3) of Regulation (EU) No 347/2013.

Step 2: Identification of the nature of the risk from a regulatory point of view

The Agency recommends the evaluation of the risk of the project:

[7] The decision on granting incentives does not apply when the PCI has received one of the exemptions listed in Article 13(1) of Regulation (EU) No 347/2013.

i) by each concerned NRA, in relation to the respective national regulatory framework and,
ii) jointly by all the concerned NRAs, with regards to risks linked to any necessary cross-border coordination.

The Agency considers that all project risks can, in general, be subsumed under five categories of risks from the perspective of project promoters. The Agency recommends using the following categorisation for the assessment of risks:

a) The risk of cost overruns

The risk that during development, construction, operation or maintenance of a project, the actual costs turns out to be higher than the expected project costs approved ex-ante by NRAs. For example, higher costs (due to more uncertain cost estimates compared to other investments) can result from[8]:

- new transmission technologies, both onshore and offshore, and development risks;
- innovative transmission technologies for electricity allowing for large-scale integration of renewable energy, of distributed energy resources or of demand response in interconnected networks; and
- gas transmission infrastructure offering advanced capacity or additional flexibility to the market to allow for short-term trading or back-up supply in case of supply disruptions.

b) The risk of time overruns

The risk that development and construction of a project takes longer than anticipated by the project promoters and approved by the NRA. This risk can translate into non-timely compensated costs for project promoters.

c) The risk of stranded assets

The risk that the demand for the services of the PCI will unexpectedly decline (or will not rise to projected levels), due to reasons which are not under the control of the project promoters. This includes volume risk.

d) Risks related to the identification of efficiently incurred costs

The risk that costs are not considered as being efficiently incurred based on benchmarking or other measures used by NRAs.

[8] Article 13(2) and Recital 38 of Regulation (EU) No 347/2013.

e) Liquidity risk

The risk that the project promoter will be temporarily faced with insufficient cash and/or cash equivalents to meet its financial commitments, for example because allowed revenues and expenditures are significantly not aligned in time. Liquidity risks may especially be a problem where projects have high expenditures compared to the allowed overall revenues of a project promoter.

Step 3: Risk-mitigation measures by the project promoters

In all cases, and regardless of the nature of the risk, the Agency recommends that NRAs assess to what extent the risk can be reduced by the project promoters with reasonable effort through appropriate measures (e.g. penalty agreements with project partners and commercial instruments, such as insurance and hedging), including diversification.

Step 4: Assessment of systematic risk and definition of cost of capital

The Agency recommends NRAs to assess - also based on the information which is to be provided by project promoters - to what extent the risk is already reflected in the cost of capital that the project promoter is allowed to recover via tariffs. If the allowed cost of capital has been determined based on the CAPM approach, NRAs should examine to what extent the risk constitutes a systematic risk that is already covered by the allowed cost of capital, taking into account that - in the CAPM approach - the non-systematic risk should not be rewarded, as it can be diversified away by the project promoter (see step 3).

Step 5: Risk-mitigation measures already applied by NRAs

The Agency recommends NRAs to assess if there is a regulatory instrument that is already in place that mitigates the risk fully or partially.

Step 6: Risk quantification

The Agency recommends that NRAs, as far as possible, assess the information provided by the project promoters and the risk exposure in terms of (potential) higher costs or lower revenue for the project promoters. The consolidated risk approach of investigating the potential impact of an event and the probability of its occurrence, as well as the assessment of the magnitude of the risk by multiplying the former two parameters, should be pursued. When quantification is not possible or appropriate, a qualitative comparison of risk level compared to another comparable project should be carried out.

Step 7: Comparable project

The Agency recommends NRAs to assess to what extent the risk is higher for the project promoters than the risk of a comparable project and to what extent it is justifiable when compared to a lower-risk alternative in view of the net positive impact provided by the project. Among other things, higher risks may result from technical specificities (in terms of technology, capacity or design of the project) or from the cross-border nature of a project.

Symmetrically, it may be the case that certain risks for a PCI are lower than the risks of a non-PCI (and non cross-border) comparable project. For example, this may be the case in instances where the PCI status (and the streamlined permitting procedure introduced by Regulation (EU) No 347/2013) increases the social acceptance of the project and (consequently) the project planning and permitting procedures are facilitated.

The identification of a comparable project should be conducted on a case-by-case basis considering projects with comparable features (for instance regarding the technology, capacity, voltage level, structure of capital and operational expenditures, etc.) that are implemented in the countries where the project under analysis is located. In general, the risk of the project component located in one country should be compared to projects in the same country, as the risk for the project promoter also depends on the regulatory system of the country. This should not preclude NRAs from taking into account relevant experience from other MSs, especially where projects with comparable features do not exist in the same country. In such cases, projects should always be reviewed in the light of the regulatory system of the country in which the project promoter plans to invest.

3. Incentives

3.1 Summary of national practices regarding risk mitigation regulatory measures and monetary reward or penalty schemes

3.1.1 Risk mitigation through the overall national regulatory framework

In the Agency's view, regulatory frameworks can be split into two main categories:

- Cost-of-service regulation (cost-plus or rate-of-return);
- Incentive-based regulation (revenue cap or price cap).

The pass-through of costs to network users is a common regulatory measure for mitigating risk for promoters. The Agency notes that the pass-through of (efficiently incurred) costs is a risk mitigation measure inherent in systems based on cost-of-service regulation. Higher costs are usually already covered both in cost-of-service systems and in incentive-based systems if the costs are efficiently incurred. NRAs adopting incentive regulation schemes often apply the pass-through principle for certain cost categories.

In electricity, the following regulatory systems (or a combination thereof) are applied:

- revenue-cap regulation in thirteen jurisdictions (Estonia, Finland, Germany, Great Britain, Hungary, Ireland, Lithuania, Luxembourg, the Netherlands, Romania, Spain for investments before 1998, Slovenia, Sweden);
- price-cap regulation in one jurisdiction (Slovakia);
- cost-plus regulation in five jurisdictions (Austria, Croatia, Cyprus, Denmark and Malta);
- rate-of-return regulation in four jurisdictions (Bulgaria, Greece, Latvia and Spain for investment after 1998);

- hybrid solutions, including cost-plus regulation or rate-of-return for Capital Expenditures (CAPEX) and revenue- or price-cap regulation for Operational Expenditures (OPEX) or for some OPEX elements in six jurisdictions (Belgium, Czech Republic, France, Italy, Poland and Portugal);
- other solutions, such as competitively tendered revenue cap in one jurisdiction (Great Britain, offshore).

In gas, the following regulatory systems (or a combination thereof) are applied:

- revenue-cap regulation in fifteen jurisdictions (Austria, Croatia, Czech Republic, Finland, Germany, Great Britain, Greece, Hungary, Ireland, Luxembourg, the Netherlands, Northern Ireland, Romania, Slovenia, Sweden);
- price-cap regulation in two jurisdictions (Lithuania, Slovakia);
- cost-plus regulation in one jurisdiction (Denmark);
- rate-of-return regulation in four jurisdictions (Bulgaria, Latvia, Poland, Spain);
- hybrid solutions including rate-of-return regulation for CAPEX and revenue- or price-cap regulation for OPEX or for some OPEX elements in four jurisdictions (Belgium, France, Italy, Portugal).

3.1.2 Risk mitigation through specific regulatory measures

Specific risk mitigation measures are already defined in Regulation (EU) No 347/2013, namely rules for anticipatory investment, rules for recognition of efficiently incurred costs before commissioning of the project and any other measure deemed necessary and appropriate.

Practices regarding rules for Anticipatory Investment

Practices regarding rules for anticipatory investment have been reported for Austria (electricity and gas), Germany (electricity and gas), Ireland (electricity) and the Netherlands (electricity and gas), see Annex for more details. In general, according to NRAs' contributions, a slight majority of the regulatory frameworks include anticipatory investments in the Regulatory Asset Base (see Table 3 and Table 4 in the Annex).

Rules for recognition of efficiently incurred costs before commissioning of the project

Rules for the recognition of efficiently incurred costs before commissioning of the project have been reported for Austria (for electricity and gas), Germany (for electricity), Great Britain (for electricity and gas), Hungary (for gas), Ireland (for electricity) and the Netherlands (for electricity and gas), see Annex for more details. In general, according to NRAs' contributions, about half of the regulatory frameworks in electricity recognise costs when the expenditures are incurred, while slightly less than half of the regulatory frameworks do so in the gas sector.

Other Regulatory Measures for Risk Mitigation

Regarding CAPEX, several NRAs emphasise that once an investment is part of the national development plan, the CAPEX will be approved and fully covered by national tariffs. This also holds true for revenue-cap systems such as in Spain in gas. In these cases, there is no risk of stranded assets from the perspective of the TSO (however, it should be kept in mind that from the perspective of the network user the risk does exist as it is transferred from the TSO to the user). Furthermore, if an innovative technology is used, the lifetime of the assets might turn out to be shorter than initially expected. In one such case, the German NRA has reduced the depreciation period of the asset class.

Regarding OPEX, revenue-cap and price-cap systems may in some cases take account of a risk of OPEX deviation as well. For example, to mitigate the risk of overspending or underspending, as part of its onshore price controls the British NRA applies an annual sharing factor ensuring that what is underspent or overspent is shared between the promoter and the consumers. In Germany, higher allowed OPEX has been approved where expert reports proved that the OPEX for certain technologies exceed the OPEX allowance.

Regardless of whether cost-of-service or incentive-based systems are applied, or whether costs are classified as CAPEX or OPEX, pass-through is in many countries only approved after a thorough evaluation of the adequacy of costs.

Practices differ regarding whether cost elements are approved with a time lag or if planned values with an ex-post adjustment are applied.

The Agency notes that volume risk is mostly carried by the network user.

3.1.3 Monetary reward or penalty schemes

The monetary schemes applied in national practices typically consist of rules for providing additional return on the capital invested. They have been reported by Austria (gas), Croatia (electricity), France (electricity and gas), Ireland (electricity), Italy (electricity and gas), Luxembourg (electricity and gas), Portugal (electricity) and Slovenia (electricity), see Annex for more details.

Another approach to addressing risks left on project promoters is present in Great Britain: a competitively tendered revenue cap-regime applies to the offshore electricity transmission network. Under this approach, bidders can price the level of risk pertinent to each offshore transmission project into their bid, the licence being awarded to the successful bidder. As a result, the market establishes the appropriate balance of risk and reward directly.

3.2 Recommendation (Incentives)

The Agency emphasises that an important regulatory tool to ensure an appropriate risk-reward ratio is the determination of the allowed cost of capital. Many NRAs apply the CAPM approach to determine the allowed cost of capital. The application of the CAPM approach should ensure that the remuneration of the project promoter includes a premium that covers

the market-related risks (business risk/systematic risk) of the project promoter. Regulatory systems also provide other risk-mitigation measures. Therefore NRAs, when calculating the market-related risk (*beta* calculation), should consider the other measures adopted to mitigate risk, in order to avoid double-counting problems.

The Agency is aware that the WACC usually reflects the average systematic risk of the portfolio of projects of a project promoter. If individual PCIs are more risky than this average, project promoters may prefer to focus on less risky projects. If individual PCIs are indeed more risky, Article 13 of Regulation (EU) No 347/2013 requires NRAs to ensure that appropriate incentives are granted to these projects. It follows that the proper application of Article 13 of Regulation (EU) No 347/2013 (and of a project-specific risk evaluation methodology and particular risk mitigation measures as proposed in this Recommendation) will ensure that PCIs are not discarded by project promoters if their risk is higher than average.

In the Agency's view, NRAs should follow the following general principles when considering incentives:

- Additional incentives should be granted only to projects that are eligible according to Article 13 of Regulation (EU) No 347/2013.

- Based on national legislation and in accordance with Article 37(8) of Directive 2009/72/EC and Article 41(8) of Directive 2009/73/EC[9], NRAs may also grant incentives to non-PCI projects with particular risk profiles and, where appropriate, to all infrastructure projects (for example benefit-related incentives that are independent of the risk profile of a project).

- Incentives should not be granted to project promoters who do not disclose in a timely manner to NRAs the information necessary to apply the common risk methodology and do not, in particular, substantiate the existence of relevant, higher risks, along with the provision of reliable estimates of the net positive impact and the benefit/cost ratio(s) of the project[10].

- Monetary compensations in the framework of Article 13 of Regulation (EU) No 347/2013 should not be granted for risks that are already reflected in the allowed cost of capital or where appropriate risk-mitigation measures are already in place (i.e. no "double counting").

- The incentives should be commensurate with the project's specific risk level as borne by the project promoters.

[9] NRAs ensure that transmission and distribution system operators are granted appropriate incentives, over both the short and long term, to increase efficiencies, foster market integration and security of supply and support related research activities.
[10] The Agency identified the features of a project-specific CBA in its Recommendation No 07/2013 of 25 September 2013.

- NRAs should assess to what extent a project already benefits from subsidies, grants or from cross-border cost allocation contribution, for example based on Article 12 of Regulation (EU) No 347/2013. Subsidies, grants and cost allocation contributions should be considered when deciding on incentives to avoid over-compensation of project promoters. In the case of projects benefitting two or more MSs, the relevant NRAs should cooperate to guard against overcompensation.

- NRAs should assess the justification of the risk profile in view of the net positive impact provided by the project. The CBA methodology according to Article 11 of Regulation (EU) No 347/2013 should be used to quantify the net positive impact.

- The monetary value of the incentive should not result in project promoters receiving an overall compensation which exceeds the monetary value of the project's net benefits. This implies that project promoters need to monetise potential risks as well as the net positive impact of a project, and, as far as possible, NRAs should quantify in monetary terms the value of the (potential) incentives to the project promoter and the resulting overall compensation, and compare it to the positive benefit of the project as identified by the CBA. Furthermore, profit-sharing with network users should be considered: any incentive(s) should lead to a reasonable split of the welfare gain between project promoters and network users.

The Agency is of the view that NRAs should be free to decide on the combination of regulatory measures and monetary reward/penalty schemes, taking into account the relevant national regulatory systems. Risk premia (additional return on capital) are a possible instrument, in line with Article 13(3)(c) of Regulation (EU) No 347/2013, in particular if the NRA decides to leave a specific risk (e.g. the volume risk) fully with the project promoter.

The Agency is of the opinion that, as indicated in Section 3.1 and in the Annex to this Recommendation, the existing national frameworks already offer a wide span of regulatory measures that protect project promoters from many risks. On this basis, the Agency's recommendations for particular risk mitigation measures are as follows:

- <u>Measures regarding the Risk of Cost-Overruns</u>

  The risk of cost-overruns does not apply to project promoters in cost-of-service and in incentive regulation systems as long as costs for CAPEX are incurred efficiently. In the cases of incentive regulation systems, the Agency also notes that caps may ensure that an appropriate risk-reward ratio is achieved. Specifically, price and revenue caps have an incentivising function where additional returns can be kept by the project promoter. This may increase the attractiveness of the PCI. The Agency recommends that, where appropriate, the adjustment for caps (ex-ante or ex-post) for OPEX should be considered for cases where it is proven that an innovative transmission technology, either onshore or offshore, has higher costs for operation and maintenance that cannot be covered by the existing caps. The adjustment of caps for OPEX should also be considered where higher costs are incurred due to unforeseen events beyond the control of the project promoters, which due diligence could not reasonably be expected to reveal a priori. The adjustments should be set carefully (e.g. after evaluation of adequacy of costs) as network users should

not automatically be burdened with the risk of inaccurate cost forecasts, especially concerning proven technology.

- Measures regarding the Risk of Time-Overruns

  The risk of time-overruns does not apply in regulatory systems where higher costs due to longer development or construction times are approved by the regulator or expenditures incurred before the commissioning of the project are included in the Regulatory Asset Base. For other systems, the Agency recommends that NRAs should consider the recognition of efficient costs that may result from time overruns beyond the control of the project promoters.

- Measures regarding the Risk of Stranded Assets

  Considering that PCIs are supposed to correspond to the most valuable projects in terms of net benefit for the European system[11], the Agency considers that PCI promoters are rarely exposed to the risk of stranded assets and recommends that the efficiently incurred CAPEX from PCIs should be approved and covered by tariffs, as appropriate under the national regulatory arrangements. In gas, in case a PCI has been decided according to a market test (minimum bookings from future users), the Agency recommends that the volume risk resulting from potential cancellation of some users' commitments is also addressed through TSOs' tariff structures, meaning that missing revenues are recovered from tariffs at other points of the system via a "regulatory account" recording the difference between the revenues which the TSO is entitled to obtain on the basis of the applied regulatory regime and the revenues actually obtained. For electricity, the Agency recommends that NRAs should consider the mitigation of the volume risk through a regulatory account.

- Measures regarding risks related to identification of efficiently incurred costs

  Benchmarking and similar measures for the identification of efficiently incurred cost are important regulatory tools that may be applied to PCIs. However, the Agency recommends that NRAs should aim at ensuring that the specific features of a PCI are reflected in the design of the benchmarking scheme. This should also apply where anticipatory investments have been included into the RAB and the connected assets (e.g. power plants) unexpectedly are not built, for a reason beyond the control of the project promoters.

---

[11] The Agency's views on selection of PCIs (including the difficulties encountered during the preparation of the first list of PCIs and recommendations for the future lists) are available in the Agency's Opinions no. 15/2013 and no. 16/2013 on gas and electricity draft regional lists of proposed projects of common interest 2013. http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Opinions/Opinions/ACER%20Opinion%2015-2013.pdf
http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Opinions/Opinions/ACER%20Opinion%2016-2013.pdf

- Measures regarding Liquidity Risk

  In order to mitigate liquidity risks as far as possible from a regulatory perspective, the Agency recommends that NRAs consider allowing revenues based on planned (stages of) expenditure, combined with an ex-post adjustment based on economically efficient real values. Where efficiently incurred expenditures before commissioning of the project are very large compared to the size of the TSO or of the project promoter, the Agency recommends that NRAs consider approving them and their inclusion in the Regulatory Asset Base when the expenditure is incurred.

This Recommendation is addressed to National Regulatory Authorities.

Done at Ljubljana on 27 June 2014.

For the Agency:

Alberto Pototschnig
Director

Annex:

This Annex is based on the submissions of NRAs to the Agency pursuant to Article 13(4) of Regulation (EU) No 347/2013 and on additional information provided by NRAs to the Agency until 5 June 2014 through responses to a questionnaire on the national regulatory measures for mitigating risks in five main categories.

In electricity, submissions were provided by NRAs for Austria, Belgium, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway[12], Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden. The Bulgarian NRA informed the Agency about the absence of methodologies, while no submission was received for Northern Ireland.

In gas, submissions were provided by NRAs for Austria, Belgium, Croatia, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Northern Ireland, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden. The Bulgarian and Estonian NRAs informed the Agency about the absence of methodologies, while no submission was received for Cyprus[13].

In electricity, responses to the additional questionnaire were provided for Austria[14], Bulgaria, Croatia, Cyprus, Czech Republic, Denmark[15], Estonia, Finland, France, Germany, Great Britain[16], Greece, Hungary, Ireland, Italy, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Slovenia, Spain and Sweden.

In gas, responses to the additional questionnaire were provided for Austria, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Lithuania, Luxembourg, the Netherlands, Portugal, Romania, Slovenia, Spain and Sweden.

---

[12] The Norwegian NRA voluntary participated in the activity.
[13] Cyprus has no natural gas supply infrastructure.
[14] References to the submission pursuant to Article 13(4).
[15] References to the submission pursuant to Article 13(4).
[16] Information covers the national regulatory framework which applies to gas and electricity onshore transmission networks in Great Britain. The situation with cross-border infrastructure is different to the main national transmission system. The updated proposals for electricity interconnectors can be found at: https://www.ofgem.gov.uk/publications-and-updates/regulation-future-electricity-interconnection-proposal-roll-out-cap-and-floor-regime-near-term-projects. There are no new gas interconnector projects at present.

ACER
Agency for the Cooperation of Energy Regulators

Regulatory frameworks and evaluation of systematic risk for the transmission activity

Table 1: Electricity

	Regulatory framework	Regulatory period	CAPM	Levered beta	Market risk premium
Austria	Cost-plus	1 year	Yes	0.691 (D=60%)	5%
Belgium	Rate-of-return, except for revenue cap on some OPEX elements	2012-2015	Yes	0.17	3.5%
Bulgaria	Rate-of-return	1 year	Yes	-	-
Croatia	Cost-plus	1 year	Yes	0.78	5%
Cyprus	Cost-plus	5 years	No	-	-
Czech Republic	CAPEX cost-plus OPEX rev. cap	2010-2015	Yes	0.404	5.85%
Denmark	Cost-plus	No answer	No	-	-
Estonia	Revenue cap	1 year	Yes	0.72	5%
Finland	Revenue cap	2012-2015	Yes	0.853	5%
France	CAPEX cost-plus OPEX (except losses) rev. cap	August 2013 (4 years)	Yes	0.66	5%
Germany	Revenue cap	2013-2017	Yes	0.79	4.55%
Great Britain	Revenue cap (onshore)	2013-2021	Yes	0.95	5.25%
Greece	Rate-of-return	2014	No	-	-
Hungary	Revenue cap (limited to specific elements)	2013-2016	Yes	0.55	4%
Ireland	Revenue cap	2011-2015	Yes	0.67	5.2%
Italy	CAPEX cost-plus OPEX price cap	2012-2015	Yes	0.575	4%
Latvia	Rate-of-return	No answer	Yes	No answer	No answer
Lithuania	Revenue cap	2010-2014 (WACC in 2013-2014)	Yes	0.73	4.62%
Luxembourg	Revenue cap	2013-2016	Yes	0.6954	4.6%
Malta	Cost-plus	No answer	No	-	-
The Netherlands	Revenue cap	2014-2016	Yes	0.61 (D=50%)	5%
Northern Ireland	No answer	No answer	No answer	No answer	No answer
Norway	Revenue cap	2007 onwards From 2013 for WACC	Yes	0.88	5%
Poland	CAPEX cost-plus OPEX rev. cap	2011 2012 2013 2014 2015	Yes	0.606 (D=0.34) 0.645 (D=0.38) 0.690 (D=0.42) 0.741 (D=0.46) 0.800 (D=0.50)	5.0% 4.9% 4.8% 4.7% 4.6%
Portugal	CAPEX cost-plus OPEX rev. cap	2012-2014	Yes	0.56	6.5%
Romania	Revenue cap	2013 - June 2019	Yes	0.43	5%
Slovakia	Price cap	2012-2016	Yes	0.80	3.28%
Slovenia	Revenue cap	2013-2015	Yes	1.13	4.66%
Spain	Revenue cap (before 1998) Rate-of-return (after 1998)	5 years	No	-	-
Sweden	Revenue cap	2012-2015	Yes	0.63	4.7%

Table 2: Gas

	Regulatory framework	Regulatory period	CAPM	Levered beta	Market risk premium
Austria	Revenue cap	2013-2016	Yes	0.691 (D=60%)	5%
Belgium	Rate-of-return, except for revenue cap on some OPEX elements	2012-2015	Yes	No answer	3.5% transm. 4.3% storage and LNG
Bulgaria	Rate-of-return	10 years	Yes	-	-
Croatia	Revenue cap	2014-2016	Yes	0.54	5.80%
Cyprus	No gas supply infrastructure		No		
Czech Republic	Revenue cap	2010-2014	Yes	0.472	5.85%
Denmark	Cost-plus	No answer	No	-	-
Estonia	No answer	No answer	Yes	0.72	5%
Finland	Revenue cap	2010-2015	Yes	0.357	5%
France	CAPEX return OPEX incentive	Apr 2013 (4y)	Yes	0.96	5%
Germany	Revenue cap	2012-2016	Yes	0.79	4.55%
Great Britain	Revenue cap	2013-2021	Yes	0.91	5.25%
Greece	Revenue cap	Feb. 2013 (1y)	Yes	0.5	5.9% (+ country risk premium)
Hungary	Revenue cap	2010-2016	Yes	0.74	4.88%
Ireland	Revenue cap	Oct. 2012 (5y)	Yes	0.78	4.5% - 5%
Italy	CAPEX return OPEX price cap	2014-2017 T 2014-2017 L 2011-2014 S	Yes	0.575 transm. 0.8 LNG Regas. 0.828 storage	4%
Latvia	Rate-of-return	not prescribed	Yes	No answer	No answer
Lithuania	Price cap	2014-2018	Yes	1.263	5.63%
Luxembourg	Revenue cap	2013-2016	Yes	0.6954	4.6%
Malta	No gas infrastructure				
The Netherlands	Revenue cap	2014-2016	Yes	0.61 (D=50%)	5%
Northern Ireland	Revenue cap (for BGE-NI)	5 years	Yes	No answer	No answer
Poland	Rate-of-return	12 month period	Yes	No answer	No answer
Portugal	CAPEX return OPEX price cap	July 2013 (3y)	Yes	0.60	3.75% - 4%
Romania	Revenue cap	July 12 – Sep 17	Yes	0.64	6.42%
Slovakia	Price cap	No answer	Yes	0.80	3.28%
Slovenia	Revenue cap	2014-2016	Yes	1.13	4.66%
Spain	Rate-of-return	4 years	No	-	-
Sweden	Revenue cap	2011	Yes	0.63	5.25%

Project-specific risk evaluation

In Austria (for gas), apart from a general compensation of capacity risk as part of the cost of equity, additional individual risk premia apply based on the calculated capacity risk. For each TSO a risk profile is calculated based on individual investments which may lead to additional cost/allowed revenues considered.

Specific regulatory measures affecting the risk level for project promoters

Table 3: Electricity

	Inclusion of anticipatory investments in the RAB	Inclusion of costs when expenditures are incurred	Presence of a benchmarking or efficiency scheme
Austria	Yes	Yes	No
Belgium	No answer	No answer	No answer
Bulgaria	No	Yes	Yes
Croatia	No	No	No
Cyprus	No	Yes	No
Czech Republic	Yes	No	No
Denmark	No answer	No answer	No answer
Estonia	No answer	No answer	No answer
Finland	No	No	Yes, on controllable OPEX
France	Yes	No. However, assets under construction are remunerated at the cost of debt	Yes (cost, delay and operational efficiency incentives)
Germany	Yes	Yes (planned values)	Yes
Great Britain	Yes	Yes (in the year)	Yes (during cost assessment)
Greece	No	Yes	No
Hungary	No	No	No
Ireland	Yes	Ad-hoc (see description)	Yes
Italy	Yes	Yes	Yes for OPEX (price cap)
Latvia	No answer	No answer	No answer
Lithuania	No	Yes	Yes for OPEX
Luxembourg	No	No	No
Malta	No answer	No answer	No answer
The Netherlands	Yes (no specific label)	No (see description)	Yes
Northern Ireland	No answer	No answer	No answer
Norway	Yes	No	Yes
Poland	No	Yes	No
Portugal	Yes	No	Yes, for CAPEX (standard costs) and OPEX
Romania	Yes	Yes (forecasted costs)	Yes
Slovakia	No answer	No answer	No answer
Slovenia	Yes	No	No
Spain	No (facilities paid from commissioning)	Yes	Yes, as reference for unit cost calculation
Sweden	Yes	No	No

Table 4: Gas

	Inclusion of anticipatory investments in the RAB	Inclusion of costs when expenditures are incurred	Presence of a benchmarking or efficiency scheme
Austria	Yes	Yes	No
Belgium	No answer	No answer	No answer
Bulgaria	Yes	No	No
Croatia	Yes	No	No (foreseen for OPEX)
Cyprus			
Czech Republic	Yes	No	No
Denmark	No answer	No answer	No answer
Estonia	No answer	No answer	No answer
Finland	No	No	Yes (on controllable OPEX)
France	Yes	No. However, assets under construction are remunerated at the cost of debt	For some major projects
Germany	Yes	Yes (planned values)	Yes
Great Britain	No	Yes (in the year)	Yes
Greece	Yes	Yes	No
Hungary	No	No (except in extraordinary cases of large transmission or storage investments)	No (as a legislative rule but the NRA has the right to use benchmark for some of the cost elements)
Ireland	Yes	No	Yes
Italy	Yes	Yes	Yes for OPEX (price cap)
Latvia	No answer	No answer	Not applicable
Lithuania	No	Yes	Yes for OPEX
Luxembourg	No	No	No
Malta			
The Netherlands	Yes (no specific label)	No	No
Northern Ireland	No answer	No answer	No answer
Poland	No answer	No answer	No answer
Portugal	Yes	No	Yes for OPEX
Romania	No	Yes	Yes
Slovakia	No answer	No answer	No answer
Slovenia	Yes	No	No
Spain	No	No	Not applicable
Sweden	Yes	No	No

Practices regarding rules for Anticipatory Investment

In Austria, anticipatory investments according to the national development plans are treated as regular investments. After realisation, differences to the planned values are reconciled.

In Germany, anticipatory investments are treated as regular investments and can apply for cost approval through a so-called "investment measure". If approved (primarily based on the necessity), the same risk-mitigating measures as for regular investments apply.

For electricity in Ireland, anticipatory investment is proposed in the network development plan (NDP). The Irish NRA reviews the proposed investment, and if approved it is included in the RAB as expenditure is incurred.

In the Netherlands, anticipatory investment is treated exactly in the same way as a non-anticipatory investment.

Rules for recognition of efficiently incurred costs before commissioning of the project

In Austria, CAPEX (which includes depreciation) is considered ex ante on the basis of planned values according to the network development plan. Any appropriate CAPEX associated with the realisation of measures included in the network development plan, including cost of capital for preliminary financing, is allowed when setting the system charges. The Austrian method takes account of the capacity investments planned for the regulatory period (i.e. ex-ante consideration of investment projects). After the regulatory period, the regulatory authority checks for deviations between planned investments and appropriate investments that were actually carried out. Any such deviations in terms of capital costs are revised and taken into consideration when calculating the costs in the following regulatory period.

In Germany, if the investment is approved (as an "investment measure"), efficiently incurred costs before the commissioning of the project are recognised based on planned values without time delay. This includes remuneration of the capital employed. Delays in project kick-off are consequently not a risk for the project promoters.

In Hungary, as far as the rules for recognition of efficiently incurred costs before commissioning of the project are concerned, the main principle is that the costs of an investment are accepted after the investment is completed. However, there is an exception. In cases of very large investments which would raise the price drastically if added to the RAB after completion, the costs of the projects are included in the RAB after each completed project phase.

In Ireland, efficiently incurred costs prior to commissioning are included in the RAB. For electricity, the Irish NRA approves these costs and they are included in the RAB as expenditure is incurred. In areas where there is expenditure on projects before commissioning, generally the expenditure is added to the RAB in the middle of the year in which the costs were incurred, for the purposes of determining the return on the RAB for that year (therefore no Interest During Construction is allowed). Therefore, the expenditures added to the RAB will also attract a depreciation allowance in the year of expenditure and thereafter. For some expenditures, especially where they are exploratory, the expenditures may be placed in a side RAB, in the year they are expended. However, there is no WACC return on the side RAB. If the project finally receives approval, then the expenditures are transferred from the side RAB to the standard RAB. If the project does not proceed then the expenditure is written off and removed from the side RAB. The TSO is then compensated for the expenditure.

In the Netherlands, so-called "regular" expansion investments during the regulatory period are remunerated based on estimated costs for these investments. There is no ex-post correction for deviations between estimated and realised investments that occur during the same regulatory period. The RAB for the following regulatory period will be determined based on realised investments. However PCI are not likely to be "regular" expansion investments.

Rules for providing additional return on the capital invested

In Austria (for gas), the TSO is compensated for carrying the volume risk through an

increased equity rate of return. In addition, individual risk premia may apply based on the calculated capacity risk of each TSO.

In Croatia, an additional return on the capital invested in the project may be granted for new transmission technologies. The prerequisite is a proof of the lower costs and higher quality of service compared to the conventional technology.

In France, a premium may be granted to interconnection projects depending on the social welfare generated by the interconnector and on the TSO's performance on costs, delays and commercial power flows. Regarding the French gas transmission systems, only two major projects are eligible for a remuneration premium because they are necessary to merge the 3 French market zones which will improve the functioning of the French market and its integration within the European market.

In Ireland, the NRA has so far only provided a different WACC for one project (East West Inter Connector). In that case, the NRA adjusted the WACC for efficiencies in operating costs.

In Italy, the NRA has identified specific types of investments whose positive impact on the system (in terms, i.e., of security of supply or congestion reduction), in an *ex ante* evaluation, is considered particularly relevant. In order to provide an incentive to TSOs to make these types of investments, additional return on invested capital is provided to those specific types of investment.

In Luxembourg, the electricity and gas TSOs receive a premium which is higher depending on the "speed" of the investment decision in cross-border infrastructure with a significant impact on security of supply.

In Portugal, the investments in the transmission network have an incentive mechanism based on standard costs, aimed to induce efficient investments through the comparison of real investment costs with standard costs previously defined by the NRA for several network components. Examples include investments able to improve system security (electricity), strategic investments able to improve the transfer capacity and to reduce congestion within the national transmission grid or investments able to increase the NTC (net transfer capacity) at the borders with foreign countries (electricity) and increase regional network transport capacity (gas).

In Slovenia, incentives in the form of additional return on the capital invested in the project could be granted for new transmission technologies if the new technology contributes to lower costs and/or higher quality of services in relation to comparable projects.

Regulatory measures for mitigating (or specifically rewarding) main risk categories

Table 5: Electricity

	Mitigation of the Risk of cost overruns	Mitigation of the Risk of time overruns	Mitigation of the Risk of stranded assets	Mitigation of Risk related to efficient costs	Mitigation of the Liquidity risk
Austria	Yes	Yes	Yes	No	Yes (regulatory account)
Belgium	No answer	No answer	No answer	No answer	No answer
Bulgaria	Partly	No	No	Yes	Partly
Croatia	No	No	No	No	No
Cyprus	Yes (by monitoring performance)	No	No	No	No
Czech Republic	Partly, CAPEX	No	Yes (ex-post adjustment)	Yes (ex-ante approved infrastructure projects are included in the regulatory asset base)	Partly (extra revenue stream)
Denmark	Yes	Yes	Yes	No answer	No answer
Estonia	No answer	No answer	No answer	No answer	No answer
Finland	Yes	Partly	Yes	Yes	Yes / Rewarded (liquidity premium 0.5% cost of equity)
France	Yes (ex-post adjustment + regulatory accounts)	Yes (ex-post adjustment)	Yes	Yes	Rewarded
Germany	Yes	Yes	Yes	Yes	Yes (regulatory accounts, see rules before commissioning)
Great Britain	Partly (sharing factor)	Yes	Yes (assessment of needs+ user commitment)	Yes (ex-ante assessment + sharing factor)	Yes
Greece	Yes (ex-post adjustment)	Yes (approval "force majeure")	Yes	Yes (no use of benchmarking)	Yes
Hungary	Partly (ex-post approval)	Partly (ex-post approval)	Partly	No	No
Ireland	Partly (ex-post adjustment)	Partly (ex-post adjustment)	Partly	Yes	Partly
Italy	Partly (CAPEX)	Partly + rewarded	Yes	Yes	No
Latvia	No answer	No answer	No answer	No answer	No answer
Lithuania	Partly (ex-post approval)	Partly (ex-post approval)	No	Yes (ex-ante evaluation and checks)	Yes (ex-post adjustment / regulatory accounts)
Luxembourg	No (no ex-post)	No (no ex-post)	No	No	No
Malta	No answer	No answer	No answer	No answer	No answer
The Netherlands	Yes (no ex-ante)	Yes (no ex-ante)	Yes	Partly (shared)	No
Northern Ireland	No answer	No answer	No answer	No answer	No answer
Norway	Yes	Yes	Yes	Partly	No answer
Poland	Yes	Yes	No	No	No
Portugal	Yes	Partly	Yes	Partly (CAPEX)	Partly
Romania	Partly	Yes	Yes	Partly (non-approval is possible)	Yes
Slovakia	No answer	No answer	No answer	No answer	No answer

	Mitigation of the Risk of cost overruns	Mitigation of the Risk of time overruns	Mitigation of the Risk of stranded assets	Mitigation of Risk related to efficient costs	Mitigation of the Liquidity risk
Slovenia	Yes (ad-hoc approval)	Yes (ad-hoc approval)	Yes (ex-post adjustment)	Yes (no use of benchmarking)	Partly
Spain	Partly (half)	Yes	Yes	Yes	Yes
Sweden	No	No	No	No	No

Table 6: Gas

	Mitigation of the Risk of cost overruns	Mitigation of the Risk of time overruns	Mitigation of the Risk of stranded assets	Mitigation of Risk related to efficient costs	Mitigation of the Liquidity risk
Austria	Yes (ex-post adjustment)	Yes (ex-post adjustment)	Yes / Rewarded	No	Yes
Belgium	Yes (pass through)	Yes (pass through)	Yes (pass through)	No answer	No answer
Bulgaria	No	No	No	No	No
Croatia	Partly (ex-post adjust. CAPEX)	Partly (ex-post adjustment)	Yes (regulatory account)	No	No
Cyprus					
Czech Republic	Partly (CAPEX cost-plus)	No	Yes (ex-post adjustment)	Yes (ex-ante approved infrastructure projects are included in the regulatory asset base)	No
Denmark	Yes	Yes	Yes	No answer	No answer
Estonia	No answer	No answer	No answer	No answer	No answer
Finland	Yes	Partly	Yes	Yes	Yes / Rewarded (liquidity premium 0.2% cost of equity)
France	Yes (ex-post adjustment + regulatory accounts)	Yes (ex-post adjustment)	Yes	Yes	Rewarded
Germany	Yes	Yes	Yes	Yes	Yes (regulatory accounts, see rules before commissioning)
Great Britain	Partly (sharing factor)	Rewarded	Yes (financial commitment from users)	Yes (ex-ante assessment + sharing factor)	Yes
Greece	Yes	Yes	Yes	Yes (no benchm.)	Yes
Hungary	No	No	No	No	No
Ireland	Partly	Partly	Yes	Yes	No
Italy	Partly (CAPEX)	Partly + rewarded	Yes	Yes (CAPEX)	No
Latvia	No answer	No answer	No answer	No answer	No answer
Lithuania	Partly (ex-post approval)	Partly (ex-post approval)	No	Yes (ex-ante evaluation and checks)	Yes (ex-post adjustment / regulatory accounts)
Luxembourg	No (no deviations accepted ex-post)	No (no deviations accepted ex-post)	No	No	No
Malta					
The Netherlands	Yes (no ex-ante)	Yes (no ex-ante)	Yes	Yes	No
Northern Ireland	Partly (sharing factor)	No answer	No answer	No answer	No answer
Poland	Partly	Yes	Partly	Partly	Partly
Portugal	Yes	Partly	Yes	Partly	Partly
Romania	Yes (ex-post adjustment of total revenues)	Yes (ex-post adjustment of total revenues)	Yes (annual adjustment)	Partly (non-approval is possible)	Yes
Slovakia	No answer	No answer	No answer	No answer	No answer
Slovenia	Yes (ad-hoc	Yes (ad-hoc	Yes (ex-post	Yes (no use of	Partly

	Mitigation of the Risk of cost overruns	Mitigation of the Risk of time overruns	Mitigation of the Risk of stranded assets	Mitigation of Risk related to efficient costs	Mitigation of the Liquidity risk
	approval)	approval)	adjustment)	benchmarking)	
Spain	Partly (half)	Yes	Not applicable	Not applicable	Not applicable
Sweden	No	No	No	No	No

ACER

Agency for the Cooperation of Energy Regulators

Document title:

Publishing date: 30/06/2014

We appreciate your feedback

Please click on the icon to take a 5' online survey and provide your feedback about this document

ACER

Agency for the Cooperation of Energy Regulators

Publishing date: 30/06/2014

Document title:

We appreciate your feedback

Please click on the icon to take a 5' online survey and provide your feedback about this document