

Decision concerning reference price methodology for the gas transmission network

Decision

The Swedish Energy Markets Inspectorate (Ei) decides to:

1. approve the proposal from Swedegas AB, org.reg. no. 556181-1034, that an adjusted reference price methodology, the “postage stamp methodology” (PS methodology), shall be used as the reference price methodology for the gas transmission network in Sweden,
2. the charges *extra area capacity* (extra områdeskapacitet), *capacity allocation fee for summer and winter periods* (kapacitetstilldelningsavgift) and *capacity allocation fee for daily capacity products* (dygnsbokningsavgift) shall be classified as non-transmission services.

Ei informs Swedegas AB (Swedegas) that the company, pursuant to the Ei decision of 7 December 2017 (ref. no. 2017-102804), shall publish the information referred to in Article 30 and in the manner specified in Articles 31 and 32 of Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas.

This decision may be amended or annulled at the request of the European Commission.

Description of the matter

Integration of the gas markets in the EU

Work is currently taking place in Europe to connect the EU’s gas markets. The purpose of connecting these markets is to establish an internal energy market that is able to secure the energy supply, create economically optimal trade and flows between member states and provide consumers with the opportunity to purchase energy at an affordable price.

On 16 March 2017 the European Commission issued Regulation (EU) 2017/460, establishing a network code on harmonised transmission tariff structures for gas (the Regulation). The purpose of the Regulation is to contribute to market integration, enhance security of supply and promote the interconnection of European gas networks through binding common EU rules. One step towards achieving this is to bring greater

transparency to the structure of the transmission tariffs and how these are determined. Accordingly, information about the transmission tariffs shall be published so that network users are better able to understand how the tariffs are set and how these have and may be changed.

The Swedish transmission system

The Swedish gas transmission network stretches from Dragør in Denmark, along the west coast, to Stenungssund in Västra Götaland. The network is 601 kilometres long and contains a total of 41 metering and regulating stations. In addition to the trunk pipeline, there are a number of branch pipelines to surrounding towns along the network, as well as a longer branch pipeline that stretches from Halland up to Gnosjö. Six distribution network operators and five directly connected corporate customers are connected to the transmission network. Swedegas has divided the transmission network into four clusters: Southern Skåne, Northern Skåne, Halland and Västra Götaland.



The network's only entry point is at Dragør, where 99.5 per cent of all injection takes place (less than 0.5 per cent comes from domestic gas). There are also no exit points to other transmission networks. Entry tariffs for injection at Dragør are not applied in the Swedish market model. This means that the tariff paid by the customer includes the entire transportation through the transmission system and that capacity accompanies customers. The Swedish transmission system is therefore unique when compared to others in Europe.

Swedegas currently applies an equalised pricing methodology, the postage stamp methodology (PS methodology), which means that the customers have the same tariff regardless of their geographical location in the network.

Responsibility for the consultation process

In accordance with the Regulation, the national regulatory authority or the transmission system operator shall conduct cost allocation assessments. A comparison between different reference price methodologies shall take place as part of these assessments. In this comparison, one of the methodologies shall be capacity weighted distance (CWD). The reference price methodology that is applied shall be subject to the findings of periodic consultation.

Under the Regulation, one or more consultations regarding the suggested reference price methodology shall be conducted by the national regulatory authority or the transmission system operators, in accordance with that which has been decided by the national regulatory authority.

In December 2017, Ei decided, ref. no. 2017–102804, that the system operator (Swedegas) would be responsible for the consultation process. This included the implementation and publication of cost allocations and the proposed reference price methodology, carrying out consultation, submitting consultation documents to the Agency for the Cooperation of Energy Regulators (ACER), receiving analyses and conclusions from ACER and the publication of information.

Swedegas conducted the consultation between 1 May and 30 June 2018. Swedegas has subsequently published the consultation documents, consultation responses from stakeholders and a summary of the consultation responses on its website¹. Swedegas has also sent the consultation documents to ACER.

Swedegas' proposal to a reference price methodology

As part of the consultation process, Swedegas presented its proposal for a reference price methodology. Swedegas proposes that an equalised reference price methodology, the “postage stamp methodology” (PS methodology), shall be applied. Swedegas' proposal includes the following. The parameters used for calculating the PS methodology are allowed revenue, forecasted capacity and entry/exit split. In the mandatory comparison with the CWD methodology, the distance parameter is also used. The proposed PS methodology is easy to reproduce and understand as well as to forecast as it consists of only three parameters. The allowed revenue used in the calculation corresponds to the revenue cap Ei decided on for the regulatory period 2015–2018 (ref. no. 2018-101618). The forecasted capacity for the entire system is available at an aggregate level. The entry/exit split is 0/100, which is the result of there being only one entry point available where capacity booking is not possible. The reported indicative reference price is SEK 3 075/Nm³/h/y. In the consultation document, Swedegas also reports that it intends to recover approximately 85 per cent of the allowed revenue for the regulatory period 2015–2018.

Swedegas has compared the PS methodology with the, according to the Regulation, alternative CWD methodology with the entry/exit split 50/50. This comparison indicates a price differential of 2.1 times between Västra Götaland and Södra Skåne. Swedegas has also conducted comparison with the split 0/100, which is the methodology that is actually applied as entry tariffs are not applied in the Swedish transmission system. The comparison with the 0/100 split indicates a price differential of six times between Västra Götaland and Södra Skåne. The comparison with 0/100 also shows that the tariffs would increase by 50 per cent in Västra Götaland and decrease by 75 per cent in Södra Skåne if the CWD methodology was applied instead of the PS methodology. Swedegas is of the opinion that the large price differences that emerge in the comparison entail a high risk of negative volume effects in the northern section of the Swedish transmission network in the event of any transition to a capacity weighted distance methodology. Swedegas is also of the opinion that the CWD methodology is difficult to reproduce as the distance

¹ The consultation documents are available on the Swedegas website:
https://www.swedegas.com/Our_services/services/transmission/TAR-NC-Consultation

parameter must be adjusted to the network's topography. According to Swedegas, the equalised reference price methodology – the PS methodology – should therefore be used.

Opinions from the consultation

As stated above, Swedegas' proposed reference price methodology has been subject to consultation. Consultation responses have been submitted by distribution system operators (DSOs), gas suppliers with balance responsibility, directly connected industrial customers and one power producer; a total of twelve stakeholders².

All industrial customers that submitted opinions maintain that the tariffs should be non-discriminatory, which they argue is a requirement that the PS methodology fulfils. Göteborg Energi Gasnät, which is a DSO in the northern part of the network also stresses the requirement for non-discriminatory tariffs, which it argues is met by the PS methodology, but not by the CWD methodology.

Two industrial customers and one gas supplier with balance responsibility emphasise that one intention of the code is to harmonise tariff structures within the EU. This is best achieved using the PS methodology, which is the tariff methodology used most commonly in the European gas system. Four of the consultation responses also emphasise the fact that the PS methodology is used for electricity distribution. It is therefore reasonable to use the same tariff methodology for other energy carriers.

The industrial customers and gas suppliers with balance responsibility and one DSO – a total of eight stakeholders – make the assessment that the CWD methodology would result negative market effects because the conditions will not be the same for everyone. For example, they emphasise that the trading conditions will be different depending on where the facility is located, that there is a risk of users switching to other energy sources and that district heating production using natural gas in the northern section of the network is threatened if tariffs rise sharply.

Uniper, which is an energy producer with a combined heat and power (CHP) plant in Malmö, is of the opinion that distance should be a cost driver and that if the CWD methodology is applied, this would lead to more cost reflective tariffs. This could contribute to improving the market situation for the facility, which is currently not operating, given the negative difference between the spot prices for gas and electricity (spark spread). In addition, Uniper highlights how the additional tariff components – *extra area capacity* (extra områdeskapacitet), *capacity allocation fee for summer and winter periods* (kapacitetstilldelningsavgift) and *capacity allocation fee for daily capacity products* (dygnsbokningsavgift)– are not mentioned in the consultation document.

A joint consultation response has been submitted by three of the DSOs: E.ON Gas Sverige AB, Krafrtingen Nät AB and Öresundskraft AB. These three stakeholders point out that

² The consultation documents are available on the Swedegas website:
https://www.swedegas.com/Our_services/services/transmission/TAR-NC-Consultation

the PS methodology is easy to understand and calculate, but that the allowed revenue and forecasted capacity parameters in the model are difficult to reproduce and predict.

For the allowed revenue parameter, the issues mentioned are the lack of clarity resulting from court proceedings, the final reconciliation with index revaluation, that the tariff periods do not follow the calendar year and that Swedegas does not recover all of the allowed revenue. This means that the calculated reference price will not reflect the actual tariff.

For the forecasted capacity parameter, it is pointed out that the forecast information Swedegas provides does not allow a DSO to assess trends and expected changes in the gas market as a whole.

In their statement, the DSOs state that the indicative capacity tariffs differ from the chosen reference price methodology and that the reference price is therefore considered deficient.

The DSOs also highlight the fact that the customers entry tariff is allocated an administrative cost and that this leads to a counterfactual comparison with the wrong entry/exit split, which is deemed to ignore the balancing function of the customers entry tariff and to dramatise the market impact in the counterfactual comparison. The DSOs are of the opinion that the desired cost allocation of the correct counterfactual reference price can easily be maintained without introducing an entry charge in Dragør.

In their consultation response, the three DSOs propose an alternative reference price methodology that they argue incorporates distance as a fundamental cost component. They reject the notion that the CWD methodology would have a negative impact on the market as a whole. They argue that areas affected by negative market effects would be balanced by positive market effects in the southern section of the network. Accordingly, they propose an alternative reference price methodology that corresponds to the CWD methodology with a 50/50 split. In the calculation of the alternative reference price methodology, it is suggested that the PS methodology shall be added to the CWD methodology at the split 0/100 after which the sum is multiplied by 50 per cent. The outcome then equates to a reference price calculated using the CWD methodology with a 50/50 split. This would mean that the price in Västra Götaland rises by approximately 25 per cent and that the prices in Skåne would be reduced by approximately 37 per cent.

In their statement, the DSOs Eon, Krafringen and Öresundskraft state that a distance component added to the proposed reference price methodology would make it more cost reflective. It would also improve the market functionality and create a balance in the cost allocation between the different clusters. The DSOs are of the opinion that the current pricing model creates skewed market conditions that benefit the northern section at the expense of the southern section, resulting in negative total volume effects.

ACER's conclusions

ACER has analysed Swedegas' consultation document and has provided its comments on the consultation document in the report *Analysis of the Consultation Document on the Gas Transmission Tariff Structure for Sweden*³. A summary of ACER's statement is presented below.

Demonstrate the cost-reflectivity of the reference price methodology

ACER does not consider the cost-reflectivity to be sufficiently established with the proposed reference price methodology and is of the opinion that there must be more evidence presented to prove that negative market effects may arise if distance is added as a parameter in the reference price methodology. According to ACER, the chosen reference price methodology is also only partly justified by quantitative evidence (Article 13 of Regulation [EC] No 715/2009). ACER therefore recommends that clarification be made as to why a methodology that does not take distance into consideration is appropriate, alternatively there should be a switch to a methodology that uses distance as a cost driver.

The planned LNG terminal's impact on the tariff structure

ACER has noted that an LNG terminal in Gothenburg is planned for 2020. This could mean there is a new entry point into the Swedish transmission network. ACER therefore recommends that Ei takes the impact of the LNG terminal on the tariff structure into account in its final decision.

Assess the charges: extra area capacity, capacity allocation fee for summer and winter periods and capacity allocation fee for daily capacity products

ACER is of the opinion that classification of the three services *extra area capacity*, *capacity allocation fee for summer and winter periods* and *capacity allocation fee for daily capacity products* shall take place in accordance with the Regulation and that these should have been included in the consultation documents. ACER is therefore of the opinion that Ei must assess whether these services are to be classified as transmission services or non-transmission services. If the services are classified as transmission services, Articles 3(2), 6(2), 3(1) 3(6), 3(7) of the Regulation shall be taken into account, otherwise Article 4(4) of the regulation shall be taken into account.

Information requirement concerning target revenue, forecasted capacity and improvement of simplified tariff model

ACER has noted that the reference price that results from the calculation does not show network users a correct price for a standard capacity product, which is due to the entire allowed revenue being used in the calculation. ACER therefore recommends that Swedegas uses target revenue, which is that portion of the allowed revenue that Swedegas intends to recover, when calculating the reference price.

³ [https://acer.europa.eu/en/Gas/Framework%20guidelines and network%20codes/Pages/Harmonised-transmission-tariff-structures.aspx](https://acer.europa.eu/en/Gas/Framework%20guidelines%20and%20network%20codes/Pages/Harmonised-transmission-tariff-structures.aspx)

ACER is of the opinion that Swedegas does not provide sufficient information about how forecasted capacity is calculated and recommends that Ei clarify in its final decision how the forecasts are produced.

ACER is of the opinion that the simplified tariff calculator that is available on the Swedegas website does not provide sufficient assistance in calculating prices for future tariff periods. The tariff calculator must therefore be developed so that network users are able to obtain information concerning indicative tariffs for future tariff periods.

Swedegas' supplementary investigation as a result of ACER's opinions.

As a result of the opinions provided by ACER, Swedegas has conducted a supplementary investigation in order to support the chosen reference price methodology. The analysis focuses specifically on the issues of cost-reflectivity and market impact. Swedegas' findings in the supplementary analysis include the following.

Cost-reflectivity – cross-subsidisation

Swedegas has conducted a more detailed analysis of whether cross-subsidisation is taking place in the network. In this analysis, the network has been divided into a trunk network and a branch network. The trunk network denotes the pipelines that transport gas from Dragør through the three clusters Skåne, Halland and Västra Götaland. The branch network denotes the pipelines used in the each of the clusters for connections to different customers/locations and which have no common transit function. That is why the costs of the branch network are not allocated among all clusters in the analysis. Tables 1–8 below show how Swedegas has conducted the analysis. Table 9 is a summary of Swedegas' analysis.

Table 1 shows Swedegas' assessment of the percentage allocation of the regulatory capital base between each cluster with respect to the trunk network and branch network, respectively.

Table 1 – Percentage of capital base allocated by cluster and type of network

Stage	Description	Skåne	Halland	Västra Götaland
Percentage trunk network	Pipeline (% of capital base)	43.6 %	11.4 %	15.7 %
Percentage branch network	Pipeline (% of capital base)	17.0 %	10.7 %	1.5 %
		60.6 %	22.1 %	17.2 %

Swedegas has performed calculations of the capacity utilisation in the network in order for the analysis to take into account the utilisation of the capacity of the trunk network by each cluster. The capacity utilisation by each cluster is shown in Table 2.

Table 2 – Capacity utilisation by each cluster

Forecasted capacity bookings 2019/2020	Nm3/h/y Skåne	Percentage	Nm3/h/y Halland	Percentage	Nm3/h/y Götaland	Percentage Västra
Skåne	58 481	39.4 %				
Halland	10 990	7.4 %	10 990	11.4 %		
Västra Götaland	78 828	53.2 %	78 828	87.8 %	78 828	100 %
Total	148 299	100 %	89 718	100 %	78 828	100 %

In its analysis, Swedegas has also allocated capital expenditures and operational expenditures based on the allowed revenue for the regulatory period 2015–2018, which is reported in Table 3.

Table 3 – Allocation of capital expenditures and operational expenditures for full utilisation of allowed revenue

Allocation of costs (MSEK)	Capital expenditures (CAPEX)	Operational expenditures (OPEX)
Total	1 577	437

When allocating the capital expenditures for network utilisation, Swedegas has taken into account the proportion of capital expenditures (see Table 1) and capacity utilisation (see Table 2). This has been done by multiplying total capital expenditures (CAPEX) (see Table 3) by the proportion of the trunk network and branch network, respectively, and by multiplying the proportion of capacity utilisation of the trunk network and branch network (see Table 4).

Table 4 – Calculating capital expenditures for utilisation of the trunk network and branch network

Costs (MSEK)	Skåne	Halland	Västra Götaland
Trunk network Skåne	271 (1 577*43.6%*39.4%)		
Trunk network Halland	51 (1 577*43.6%*7.4%)	22 (1 577*11.4%*12.2%)	
Trunk network Västra Götaland	365 (1 577*43.6%*53.2%)	158 (1 577*11.4%*87.8%)	248 (1 577*15.7%)
Total trunk network	687	181	248
Branch network	269 (1 577*17.0%)	169 (1 577*10.7%)	24 (1 577*1.5%)
Total branch network	269	169	24

When allocating operational expenditures (OPEX), Swedegas has based the calculation on allowed operational expenditures (see Table 3) and allocated this in proportion to each cluster's percentage of the capital base (see Table 1). This allocation has taken place on the trunk network and branch network (see Table 5 below).

Table 5 – Calculation of operational expenditures for the trunk network and branch network

Operational expenditures (MSEK)	Operational expenditures trunk network	Operational expenditures branch network
Skåne	190 (437*43.6%)	74 (437*17.0%)
Halland	50 (437*11.4%)	47 (437*10.7%)
Västra Götaland	69 (437*15.7%)	7 (437*1.5%)
Total	309	128

Swedegas has reported a forecast for the tariff period 2019–2022 in which revenue is stated as SEK 1 889 million. This corresponds to 94 per cent of allowed revenue for the regulatory period 2015–2018. Swedegas states that this level corresponds to the forecasted capacity bookings for the years 2019/2020, which have then been indexed to the same price level as allowed revenue. In its analysis, Swedegas has distributed the revenues from the clusters using both the PS and CWD methodologies, respectively. The entry/exit split 0/100 was used for both methodologies. The allocation of revenue from the clusters has been done using the allocation figures reported in Table 6, below. The allocation figures for the PS methodology are calculated taking into account the forecasted capacity bookings for each cluster. For the CWD methodology, the average distance to the entry point in Dragør, which is weighted in relation to forecasted capacity, is also added.

The allocation figures as per the CWD methodology for each cluster are calculated with the following relationship: $(Average\ distance\ (km) * Forecasted\ capacity\ (Nm3) / Total\ all\ clusters\ (Average\ distance\ (km) * Forecasted\ capacity\ (Nm3))$. The calculated allocation figures are reported in Table 6. A more detailed account of the calculations can be found in the consultation documents⁴.

Table 6 – Allocation figures for revenues with the PS methodology and CWD methodology, respectively

	Allocation PS methodology	Allocation CWD methodology
Skåne	42.4 %	13.0 %
Halland	7.7 %	7.0 %
Västra Götaland	49.9 %	80.0 %

The allocation figures calculated using the CWD methodology show that Västra Götaland's proportion increases sharply compared to the PS methodology. The explanation for this is the large average distance from the entry point, combined with a relatively large withdrawal of capacity. For the other two clusters, the CWD methodology results in lower allocation figures when the distance is weighted with

⁴ Article 8(2) of the Regulation specifies how capacity weighted distance is calculated. The calculation is reported in the consultation document; Consultation document Appendix III CWD:
https://www.swedegas.com/Our_services/services/transmission/TAR-NC-Consultation

capacity. The allocation of revenue under each methodology is reported in Table 7, below.

Table 7 Allocation of revenue from the PS methodology and CWD methodology respectively

Revenue (MSEK)	PS methodology, 94 per cent recovery	CWD methodology, 94 per cent recovery
Skåne	801 (1 889*42.4 %)	246 (1 889*13 %)
Halland	145 (1 889*7.7 %)	132 (1 889*7 %)
Västra Götaland	942 (1 889*49.9 %)	1,511 (1 889*80 %)

The costs for the trunk network incurred by each cluster are reported in Table 8. Swedegas has allocated the capital expenditure for the trunk network (Table 5) in relation to the capacity utilisation (Table 3). The operational expenditures (Table 6) for the trunk network for each cluster have been added to this.

Table 8 - Costs for the trunk network (capital expenditure x capacity utilisation + operational expenditures for the trunk network)

Costs for the trunk network (MSEK)	Skåne	Halland	Västra Götaland
Skåne	461 (687*39.4 %)+190	51 (687*7.4 %)	365 (687*53.2 %)
Halland		71 (181*11.4 %)+50	160 (181*88.6 %)
Västra Götaland			317 (248*100 %)+69
Total	461	122	842

Swedegas' analysis of the cross-subsidisation is summarised in Table 9.

Table 9 - Summary of Swedegas' analysis regarding cross-subsidisation

Stage	Description	Skåne	Halland	Västra Götaland
A – capital expenditures trunk network	(MSEK)	687	181	248
B – operational expenditures trunk network	(MSEK)	190	50	69
C – capital expenditures branch network	(MSEK)	269	169	24
D – operational expenditures branch network	(MSEK)	74	47	7
E1 (PS) Allowed revenue 94 %	(MSEK)	801	145	942
E2 (CWD) Allowed revenue 94 %	(MSEK)	246	132	1 511
Cost for trunk network	Capital expenditures for trunk network allocated by capacity + B	461	123	840
Contribution to the trunk network (PS)	E1 - (C+D)	451	-66	1 041
Contribution to the trunk network (CWD)	E2 - (C+D)	-81	-74	1 582
Cross-subsidisation (PS) (net contribution)	Contribution to trunk network - cost of trunk network	-10	-189	200
Cross-subsidisation (CWD) (net contribution)	Contribution to trunk network - cost of trunk network	-543	-197	741

Swedegas argues that the analysis shows that both the PS and CWD methodologies lead to cross-subsidisation under the assumptions that were made. According to the analysis, if the PS methodology is used, there will be a cross-subsidisation from Västra Götaland to Halland (SEK 189 million). The cross-subsidisation to Skåne is only marginal. Swedegas also states that the analysis shows that a transition to the CWD methodology would entail increased cross-subsidisation between the clusters. This would involve the net contribution from Västra Götaland increasing and subsidising the customers in both Halland and Skåne. This applies especially to Skåne, which, according to Swedegas will be subsidised by SEK 543 million if there was to be a transition to the CWD methodology.

Swedegas' analysis of the market risk

The circumstances of the Swedish network mean that the comparison between the different methodologies must take place using the 0/100 split. This is because it is not possible to book capacity at the only entry point in Dragør. It is evident in the analysis that Swedegas has reported that a transition from the PS methodology to the CWD methodology will result in a price increase of about 50 per cent in Västra Götaland. This transition would simultaneously lead to a price reduction in Skåne of about 75 per cent. According to Swedegas this would have a negative impact on demand in the northern part of the network, with a significant risk that new connections would not occur.

According to Swedegas, it could ultimately also lead to existing customers switching to other energy solutions. This will lead to decreased demand and further increases to the network tariff. Swedegas says that such a situation risks jeopardising the entire Swedish gas market.

Swedegas has also reported the assessment that 77 per cent of the allowed revenue for the regulatory period 2015–2018 will be recovered. Swedegas' assessment is that higher tariffs would counteract a successful maintenance of volumes. If the CWD methodology was to be applied, this would entail increases of 50 per cent in the northern section of the network. Swedegas states that it will not be possible to implement these increases without risking a significant drop in volume. A switch to the CWD methodology could therefore entail a total decrease in revenue of 27 per cent.

The supplementary investigation contains a market analysis that, according to Swedegas, shows that there is significant growth potential within the industrial segment in Västra Götaland. This growth is assessed at 235 Nm³/h/y within a three-year period and entails an increase of approximately 67 per cent compared to the current level. For the network as a whole, Västra Götaland's proportion of the industrial segment would thus amount to 64 per cent.

According to Swedegas, there are no significant industries in Skåne that are not already connected to the system. The largest potential customer is the combined heat and power producer Öresundsverket, which has not been operating since March 2016, when the latest heating contract ran out. The negative spark spread (the difference between the spot price for electricity and the spot price for natural gas) that has been in place since 2012 also indicates that the probability of Öresundsverket's electricity production resuming is relatively low. Swedegas points out that this is not a situation that is unique to Sweden; the same circumstances apply to other countries in Europe, where several facilities have been taken offline since 2011. All in all, Swedegas' assessment is that the gas market in Skåne is mature with limited potential to increase volumes.

The LNG terminal's impact on the transmission network

Swedegas has stated in its analysis that the LNG terminal that is estimated to be operational in 2020 is intended for the shipping sector, land transport and industrial users that do not have access to the western Swedish gas network. In an international comparison, the planned LNG terminal is to be considered as small-scale and no significant injection of gas into the transmission network is expected to take place from the LNG terminal. The injection that is predicted will only constitute the gasification required to deal with boil-off-gas, which must be fed into the transmission network for technical operational reasons. This injection is expected to amount to approximately one per cent of the total gas volume at the LNG terminal. The LNG terminal could also be used to increase security of supply in the gas system. The value chain for LNG gas includes loading, port charges, ship transport, storage, gasification etc. The total cost for the entire chain depends on the size of transport vessels, LNG terminal and degree of utilisation. Consequently, LNG is unable to compete with gas transported via pipeline, as

the cost of transporting LNG gas is much higher than the cost of transporting gas in the transmission system, regardless of the reference price methodology chosen.

Swedegas' overall assessment

Overall, Swedegas is of the opinion that the supplementary analysis shows that the CWD methodology would increase cross-subsidisation in the Swedish gas market and that cost-reflectivity would decrease. Furthermore, a switch to the CWD methodology would lead to a significant increase in market risk. A comparison of pipeline transmission and LNG gas, the difference in value for transmission indicates a significant difference to the disadvantage of LNG gas. LNG is not a competitive alternative for those customers who are already connected to the transmission network. LNG will therefore only be supplied to customers outside of the transmission network and will thus not have any impact on transmissions via the transmission network. Swedegas stresses that the requirements that are to be met when deciding on a reference price methodology must correspond to the overarching principles set out in Article 13 of Regulation (EC) No 715/2009 of the European Parliament and of the Council on conditions for access to the natural gas transmission networks (the Gas Regulation). This article states that tariffs for accessing a network shall contribute to the efficient utilisation of infrastructure and provide incentives for investment as well as providing the transmission network operator with reasonable returns on its investments. Furthermore, it is emphasised that investments in the gas market are long-term and that customers should therefore not have to face dramatic price changes without there being strong justifications for these and that the Swedish transmission network is considered indivisible and shall therefore be considered one unit with the same tariff. Consequently, the analyses conducted by Swedegas show that the PS methodology, which is both currently applied and proposed to Ei, is more cost reflective and is thus a better choice for the Swedish gas market than the CWD methodology.

Swedegas' charges for additional capacity services

In the supplementary analysis, Swedegas has stated that it is of the opinion that the charges *extra area capacity*, *capacity allocation fee for summer and winter periods* and *capacity allocation fee for daily capacity products* should be classified as non-transmission services. Swedegas has justified this by pointing out that the criteria for classifying these as transmission services in Article 4(1) of the Regulation are not met. Swedegas' assessment is therefore that the Regulation allows these services to be classified as non-transmission services.

Provisions that form the basis of the decision

Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas (the Regulation)

The reference price methodology shall be set or approved by the national regulatory authority as set out in Article 27. The reference price methodology to be applied shall be subject to the findings of the periodic consultations carried out in accordance with Article 26 – Article 6(1).

The application of the reference price methodology shall provide a reference price – *Article 6(2)*.

One or more consultations shall be carried out by the national regulatory authority or the transmission system operator(s), as decided by the national regulatory authority. The final consultation prior to the decision referred to in Article 27(4) shall comply with the requirements set out in this Articles 26 and 27 – *Article 26(1)*.

The final consultation as per Article 26(1) shall contain a description of the proposed reference price methodology along with indicative information set out in Article 30(1)(a), the indicative information set out in Article 30(1)(b) and the indicative information set out in Article 30(2) – *Article 26(1)(a), (b), (c) and (d)*.

Upon launching the final consultation pursuant to Article 26 prior to the decision referred to in Article 27(4), the national regulatory authority or the transmission system operator(s), as decided by the national regulatory authority, shall forward the consultation documents to ACER – *Article 27(1)*.

ACER shall analyse whether all the information referred to in Article 26(1) has been published, whether the proposed reference price methodology complies with the requirements set out in Article 7, whether the criteria for setting commodity-based transmission tariffs as set out in Article 4(3) are met and whether the criteria for setting non-transmission tariffs as set out in Article 4(4) are met – *Article 27(2)*.

Within five months following the end of the final consultation, the national regulatory authority shall take and publish a motivated decision on all items set out in Article 26(1). Upon publication, the national regulatory authority shall send to ACER and the Commission its decision – *Article 27(4)*.

The reference price methodology shall comply with Article 13 of Regulation (EC) No 715/2009. It shall aim to enable network users to reproduce the calculation of reference prices and their accurate forecast, take into account the actual costs incurred for the provision of transmission services considering the level of complexity of the transmission network and ensure non-discrimination and prevent undue cross-subsidisation including by taking into account the cost allocation assessments set out in Article 5 – *Article 7(a)-(c)*.

The national regulatory authority or the transmission system operator, as decided by the national regulatory authority, shall perform a cost allocation assessment relating to the transmission services revenue to be recovered by capacity-based transmission tariffs and based exclusively on the cost drivers of technical capacity, or forecasted contracted capacity, or technical capacity and distance, or forecasted contracted capacity and distance – *Article 5(1)(a)*.

The cost allocation assessments shall indicate the degree of cross-subsidisation between intra-system and cross-system network use based on the proposed reference price methodology – *Article 5(2)*.

The national regulatory authority or the transmission system operator, as decided by the national regulatory authority shall perform the assessments set out in Article 5(1)(a) and Article 5(1)(b) and shall publish them as part of the final consultation referred to in Article 26 – *Article 5(1)*.

Assessment of non-transmission services shall take place. A service shall be considered a transmission service where both of the following criteria are met:

- a) The costs of such services are caused by the cost drivers of both technical or forecasted contracted capacity and distance.
- b) The costs of such services are related to the investment in and operation of the infrastructure which is part of the regulated asset base for the provision of transmission services.

Where any of these criteria are not complied with, a given service may be attributed to either transmission or non-transmission services subject to the findings of the periodic consultation – *Article 4(1)*.

Prior to the tariff period, the national regulatory authority or the transmission system operator(s), as decided by the national regulatory authority, shall publish information about the parameters used in the applied reference price methodology that are related to the technical characteristics of the transmission system – *Article 30(1)(a)*, information about the allowed or target revenue, or both – *Article 30(1)(b)*, information about the difference in the level of transmission tariffs for the same type of transmission service applicable for the prevailing tariff period and for the tariff period for which the information is published – *Article 30(2)(a)*, and information about a simplified tariff model that is updated regularly – *Article 30(2)(b)*.

Regulation (EC) No 715/2009 of the European Parliament and of the Council on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005 (the Gas Regulation).

The aim of the Gas Regulation includes setting non-discriminatory rules for access conditions to natural gas transmission systems taking into account the special characteristics of national and regional markets with a view to ensuring the proper functioning of the internal market in gas and to facilitate the emergence of a well-functioning and transparent wholesale market with a high level of security of supply in gas and providing mechanisms to harmonise the network access rules for cross-border exchanges in gas – *Article 1(1)*.

The tariffs, or the methodologies used to calculate them shall be transparent, take into account the need for system integrity and its improvement and reflect the actual costs incurred, insofar as such costs correspond to those of an efficient and structurally comparable network operator and are transparent, whilst including an appropriate return on investments, and, where appropriate, taking account of the benchmarking of tariffs by the regulatory authorities. Tariffs, or the methodologies used to calculate them, shall be applied in a non-discriminatory manner – *Article 13(1), first paragraph*.

Tariffs, or the methodologies used to calculate them, shall facilitate efficient gas trade and competition, while at the same time avoiding cross-subsidies between network users and providing incentives for investment and maintaining or creating interoperability for transmission networks – *Article 13(1), third paragraph.*

Tariffs for network users shall be non-discriminatory and set separately for every entry point into or exit point out of the transmission system. Cost-allocation mechanisms and rate setting methodology regarding entry points and exit points shall be approved by the national regulatory authorities. Network charges shall not be calculated on the basis of contract paths – *Article 13(1), fourth paragraph.*

Directive 2009/73/EC of the European Parliament and of the Council concerning common rules for the internal market in natural gas (the Gas Market Directive)

In carrying out the regulatory tasks specified in this Directive, the regulatory authority shall e.g. in close cooperation with the Agency, regulatory authorities of other Member States and the Commission, promote a competitive, secure and environmentally sustainable internal market in natural gas within the community, and effective market opening for all customers and suppliers in the community, and ensuring appropriate conditions for the effective and reliable operation of gas networks, taking into account long-term objectives – *Article 40, first paragraph (a).*

The regulatory authority shall also help to achieve, in the most cost-effective way, the development of secure, reliable and efficient non-discriminatory systems that are consumer oriented, and promoting system adequacy and, in line with general energy policy objectives, energy efficiency as well as the integration of large- and small-scale production of gas from renewable energy sources and distributed production in both transmission and distribution networks – *Article 40, first paragraph (d).*

Swedish Natural Gas Act (2005:403)

Charges and other terms and conditions for the transmission and storage of natural gas and for access to a gasification plant shall be reasonable, unbiased and non-discriminatory (Chapter 6, Section 2).

When formulating terms and conditions for the transmission of natural gas, specific consideration shall be given to the number of customers connected, the customers' geographical location, the quantity of energy transmitted and the subscribed capacity, the costs of upstream pipelines, security of supply and the pressure in the pipelines. The terms and conditions for transmission of natural gas shall be formulated in such a way that the charge a customer pays for transmission to their connection point includes a charge for transmission in all of the pipelines through which transmission occurs (Chapter 6, Section 3).

Ei's grounds for its decision

The formal requirements of the decision-making process

On 7 December 2017 (ref. no. 2017–102804), Ei decided that Swedegas shall perform and publish cost allocation assessments in the manner stipulated in Article 5 of the Regulation. Ei also decided that Swedegas shall carry out a consultation in the manner stipulated in Article 26, that it shall submit consultation documents to ACER in the manner stipulated in Article 27(1) and that it shall receive analyses and conclusions from ACER in the manner stipulated in Article 27(3) of the Regulation.

Swedegas has drawn up a proposal for reference price methodology and suggests that an equalised reference price methodology, the “postage stamp methodology” (PS methodology) shall be applied. Swedegas’ proposal for a reference price methodology has been subject to consultation. Swedegas carried out the consultation between 1 May and 30 June 2018. Swedegas has sent the consultation documents to ACER. Swedegas has also published the consultation documents⁵, consultation responses from stakeholders and a summary of the consultation responses on its website.

ACER has analysed and provided its opinions concerning Swedegas’ consultation documents. Responses to the consultation have also been submitted by twelve other stakeholders, which are distribution system operators, gas suppliers with balance responsibility, directly connected industrial customers and one power producer.

In its statement, ACER concludes that, overall, Swedegas has published all the information specified in Article 26 of the Regulation. None of the twelve other stakeholders that have provided opinions on the consultation have stated that Swedegas has not published all the information specified in Article 26 of the Regulation.

In light of the above, and as nothing else has emerged that provides grounds to question whether the consultation process has met the requirements in the Regulation, the formal requirements of the decision-making process are met.

Scrutiny of the proposed reference price methodology

The Swedish gas transmission network is unique in several ways, which is of significance when assessing whether the requirements of the Regulation have been met. The network, which is 601 km long, runs from Dragør in Denmark, through Skåne and onwards along the west coast to Stenungssund in Västra Götaland. In addition to the trunk pipeline, there are a number of branch pipelines to surrounding towns along the network. The network’s only entry point is in Dragør, where 99.5 per cent of all injection takes place. There are also no exit points to other transmission networks. Entry tariffs for injection at Dragør are not applied in the Swedish market model. This means that the customer tariff includes transportation through the entire transmission system.

⁵ The consultation documents are available on the Swedegas website:
https://www.swedegas.com/Our_services/services/transmission/TAR-NC-Consultation

Ei has to decide whether Swedegas' proposed reference price methodology, an equalised reference price methodology known as the "postage stamp methodology" (PS methodology), can be approved. If the proposed reference price methodology is to be approved, the reference price methodology must allow network users to reproduce the calculations of the reference prices and exact forecasts of the reference prices. The reference price methodology also has to take into account the costs incurred for the provision of transmission services considering the level of complexity of the transmission network and ensure non-discrimination and prevent undue cross-subsidisation. In this assessment, consideration shall also be given to the proposed cost allocation relating to transmission services that has been produced and was included in the consultation that has been conducted.

Does the proposed reference price methodology prevent undue cross-subsidisation?

In order to prevent cross-subsidisation in a natural monopoly market, two criteria should be met (see, e.g. Curien, 1991, or Faulhaber, 1975)⁶.

- All customers must pay at least the average marginal cost that arises through their connection to the network.
- No customer shall pay more than what it would cost if they alone were to pay all the fixed costs associated with their activities (stand-alone cost).

The criteria above provide for a floor (marginal cost) and a ceiling (stand-alone cost) for what stakeholders should pay to participate in the market. A new customer who connects to the transmission network shall pay at least the resultant marginal cost to the network, as the existing customer collective should not have to pay for this. As long as this is the case, connecting additional customers contributes towards the fixed costs being shared among more customers, thereby reducing the average costs per customer. An individual customer should also not pay more than its stand-alone cost, namely the cost that would arise if the customer alone should stand for all of the costs incurred in the operation of the network. Consequently, the cost to the customer should fall between the costs they themselves cause to the network (the marginal cost) and the total cost of operating its network independently (the stand-alone cost). Ei's analysis defines the customer/stakeholder at an aggregate level through the three clusters Skåne, Halland and Västra Götaland.

In order to assess the size of any cross-subsidisation, a theoretical assumption of divisibility in the network is necessary. When assessing cross-subsidisation, the assumptions made regarding the divisibility of the network have an impact on the outcome. The transmission network can therefore be assumed to be divisible with respect to distance by dividing it into the three clusters. The network can also be assumed to be

⁶Faulhaber (1975), Cross-subsidization: Pricing in public enterprises, *American Economic Review*, 65, 966-77.

Curien (1991), The theory and measure of cross-subsidies, *International Journal of Industrial Organization*, 9, 73-108.

divisible with respect to capacity utilisation. If the network is assumed to be divisible in both these dimensions, it is considered fully divisible.

Ei has chosen to calculate stand-alone cost on the basis of the transmission network being divisible with respect to distance. This means that it shall be possible for each cluster to pay for the section of the trunk network it requires in order to operate. Ei has also chosen to calculate cross-subsidisation in the network on the basis of a fully divisible network (distance and capacity). In both cases, Ei conducts a comparison with the two reference price methodologies.

In the calculation, Ei has also chosen to use the allocation of regulatory capital expenditures and operational expenditures that Swedegas presents in its analysis (see Table 5). Capital expenditures for the trunk network and branch network have been allocated between the three clusters. The trunk network denotes the section of the network that all clusters use for transmission. The branch network denotes the sections of the network that are used exclusively within each cluster. Swedegas does not provide a detailed account of how the division into trunk network and branch network has taken place. Nevertheless, it is Ei's assessment that Swedegas' allocation of costs between the clusters may form the basis of the assessment.

Cross-subsidisation in the network

On the basis of the two criteria specified (marginal cost and stand-alone cost), Ei has analysed whether either of the two reference price methodologies (PS or CWD) gives rise to cross-subsidisation. Cross-subsidisation is taking place if any cluster is not covering its marginal costs or if any cluster is paying more than its stand-alone cost.

In this analysis, Ei has chosen to use as a starting point the data pertaining to costs from Swedegas' supplementary investigation into possible cross-subsidisation in the network. However, Ei's analysis has been amended in accordance with that which is described in points 1–5 below. This is because Ei does not share Swedegas' opinion concerning the matching of regulatory costs and revenues and because Swedegas has restricted the divisibility of operational expenditures to distance alone.

- 1) In Swedegas' supplementary investigation into cross-subsidisation, the full regulatory allowed revenue has not been used. Swedegas has chosen to use a revenue level that corresponds to 94 per cent of the regulatory allowed revenue for the regulatory period 2015–2018. In Swedegas' analysis, however, the costs have been calculated using regulatory allowed capital expenditures (CAPEX) and operational expenditures (OPEX) as a basis. Ei is of the opinion that this difference leads to the outcome being incorrect. When the regulatory costs for the regulatory period 2015–2018 are used, the allowed regulatory revenue for the same period shall also be used to provide an accurate picture.
- 2) The analysis in Swedegas' supplementary investigation has been conducted on the basis that the capital expenditures are fully divisible, i.e. both distance and capacity have been taken into account. For the operational expenditures, however, Swedegas' analysis has only included divisibility with respect to

- distance because capacity has not been taken into account. Ei is of the opinion that this difference in allocation leads to an incorrect outcome and that the analysis, when full divisibility is assumed, must therefore take into account both distance and capacity for both capital expenditures and operational expenditures.
- 3) In Ei's analysis, revenue has been scaled up to 100 per cent of the regulatory allowed revenue for the regulatory period 2015–2018 in order to provide a more accurate picture. Ei has also chosen to analyse cross-subsidisation on the basis of the assumption of both full divisibility (capacity and distance) and also divisibility only with respect to distance. The assessment of cross-subsidisation has then been conducted on the basis of the two criteria marginal cost and stand-alone cost.
 - 4) In Ei's analysis, the stand-alone cost is calculated for each cluster, in the case of divisibility with respect to distance, as capital and operational expenditures for the trunk network from the entry point to each cluster plus cluster-specific capital and operational expenditures associated with the branch network. The marginal costs consist of cluster-specific capital and operational expenditures associated with the branch network. All underlying cost data in the calculation come from Swedegas and have previously been reported in Table 9.
 - 5) In Ei's analysis using a theoretical assumption of a fully divisible network, the expected capacity utilisation in the network is also taken into account. This is done by means of the costs for the trunk network being allocated between each cluster on the basis of capacity utilisation. The marginal costs in this analysis also consist of the cluster-specific capital and operational expenditures associated with the branch network. When using the case of a fully divisible network in this analysis, the stand-alone cost provides a good indication of how tariffs should be structured as the analysis is based on the different clusters paying for their actual capacity utilisation in the network.

Ei's analysis with reference to the points above is summarised in Table 10.

Table 10 – Ei's calculations of cross-subsidisation

Stage	Description	Skåne	Halland	Västra Götaland
(PS) Allowed revenue 100 %	(MSEK)	855	155	1005
(CWD) Allowed revenue 100 %	(MSEK)	262	141	1 612
Divisibility with respect to distance				
Stand-alone cost (A, B, C, D Table 9)	(MSEK)	1 220	1 324	1 456
Marginal cost (C+D Table 9)	(MSEK)	343	216	31
(PS) Cross-subsidisation	(MSEK)	Does not occur	-61	Does not occur
(CWD) Cross-subsidisation	(MSEK)	-81	-75	156
Fully divisible				
Stand-alone cost	(MSEK)	689	309	1 017
Marginal cost (C+D Table 9)	(MSEK)	343	216	31
Costs for the trunk network in relation to utilisation ⁷	(MSEK)	346	93	986
(PS) Cross-subsidisation	(MSEK)	166	-61	Does not occur
(CWD) Cross-subsidisation	(MSEK)	-81	-75	595

Ei's analysis shows that cross-subsidisation will become more extensive with the CWD methodology than with the PS methodology. This applies when assuming both a fully divisible network and a network only divisible with respect to distance.

The analysis of the PS methodology shows, in the case in which divisibility with respect to distance has been analysed, that there is only cross-subsidisation amounting to SEK 61 million to Halland, the revenue from which does not cover the marginal cost. Skåne and Västra Götaland end up within the interval between their stand-alone costs and marginal costs. Furthermore, the analysis shows that Skåne, when assuming a fully divisible network, would contribute SEK 166 million to the network and Halland would be subsidised to the tune of SEK 61 million when the PS methodology is applied.

The analysis of the CWD methodology shows, for divisibility with respect to distance, that neither Skåne nor Halland covers its marginal costs, while Västra Götaland will pay more than its stand-alone cost. When assuming a fully divisible network, the analysis shows that Skåne and Halland will be subsidised to the tune of SEK 81 million and SEK 75 million respectively, but that Västra Götaland will contribute SEK 595 million.

All in all, the analysis shows that cross-subsidisation will become more extensive using the CWD methodology than using the PS methodology. This applies when assuming

⁷ The capital and operational expenditures for the trunk network have been multiplied by capacity utilisation in each cluster. Underlying data can be found in Tables 3, 5 and 6.

both divisibility with respect to distance and full divisibility. While it may be true that the analysis shows Skåne’s stand-alone cost, assuming full divisibility, is lower than the tariffs resulting from the PS methodology (SEK 166 million), this analysis is based on the theoretical assumptions reported above and is a simplification. This is because it is not practicable to reduce the capacity in the trunk network in order to achieve these stand-alone costs for Skåne. Furthermore, the analysis is simplified in that economies of scale have not been taken into account in the trunk pipeline’s capacity in Skåne at the time of investment; instead, the relationship between investment cost and capacity has been assumed to be linear. This effects how capital expenditure is allocated in the analysis between end users. If returns to scale had been included in the analysis, the figures for cross-subsidisation of Västra Götaland and Skåne, respectively, would have decreased in absolute terms. However, these simplifications do not affect the relative comparison between the PS and the CWD methodologies.

Marginal cost and stand-alone cost in the case of divisibility with respect to distance are illustrated together in Figure 1 below, against the revenue figures for the two reference price methodologies. The stand-alone cost for a fully divisible network is also reported as this should theoretically constitute the fairest tariff, under which the different clusters pay for their use of the network with respect to both distance and capacity.

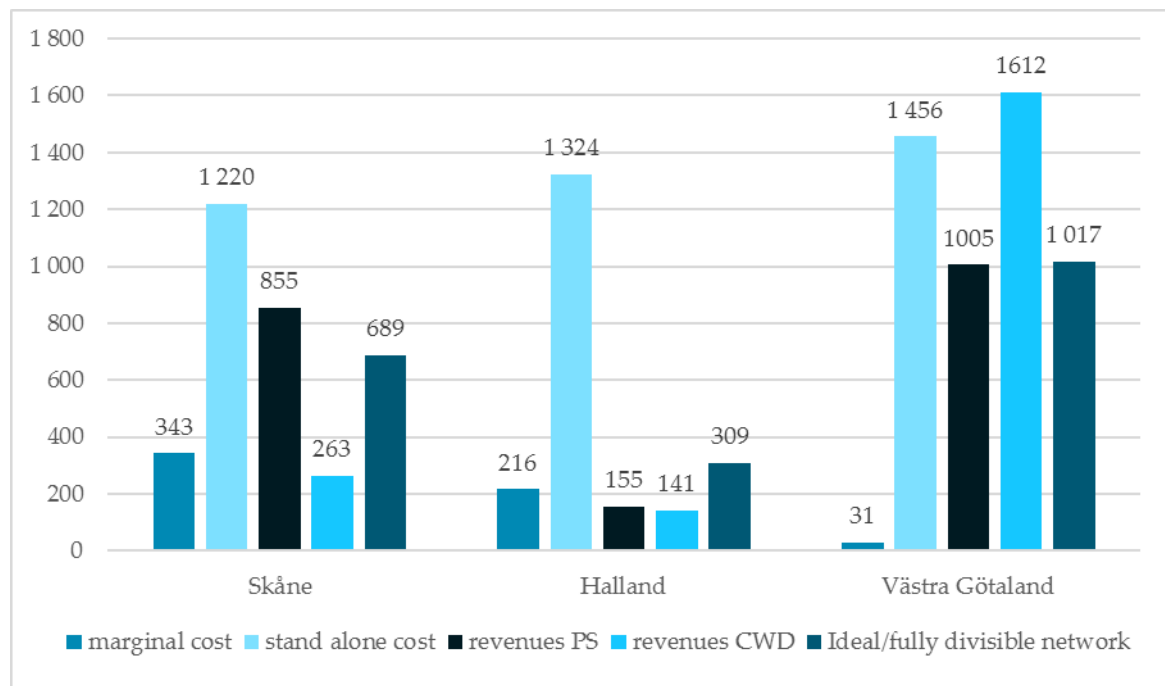


Figure 1 – Revenue allocation

Conclusions regarding the proposed reference price methodology

Ei's analysis shows that both reference price methodologies lead to some cross-subsidisation. Irrespective of the chosen reference price methodology and assumption regarding the network's divisibility, there is no case under which Halland will cover its own marginal costs. For Skåne, the analysis shows that the PS methodology does not result in cross-subsidisation in the case of divisibility with respect to distance. When the assumption is of a fully divisible network, however, Skåne would contribute to the network as a whole if the PS methodology was applied. Västra Götaland does not show any cross-subsidisation under the PS methodology, regardless of which assumption concerning the network's divisibility is applied. Nevertheless, the analysis does show that the CWD methodology would lead to a higher degree of cross-subsidisation of the rest of the network than the PS methodology. The analysis also indicates that all clusters benefit from the other parts of the network under the PS methodology. This is because none of the clusters pay more than its stand-alone cost when divisibility with respect to distance is assumed.

All in all, Ei's analysis shows that the PS methodology must be considered better than the CWD methodology in terms of cost-reflectivity and when the objective is to minimise cross-subsidisation. Ei's analysis also shows that using the PS methodology to only a smaller extent leads to one part of the network being cross-subsidised. Ei's assessment is therefore that it cannot be assumed that any undue cross-subsidisation will occur using the proposed reference price methodology – the PS methodology.

Furthermore, Ei assesses that the PS methodology enables network users to reproduce the calculation since it is easy to understand, takes into account actual costs considering the level of complexity of the network and ensures non-discrimination thanks to the PS methodology resulting in the same price for all customers.

Consideration of opinions from the consultation

When assessing the reference price methodology, Ei shall also consider the proposals received during the consultation and what has been put forward by ACER. One proposal that has been submitted by the three DSOs E.ON Gas Sverige AB, Kraftringen Nät AB and Öresundskraft AB is that the reference price be set using the CWD methodology with a split of 50/50. This suggestion presupposes that it is possible to book capacity at the transmission network's only entry point in Dragør. However, this is not possible under the Swedish Natural Gas Act because Chapter 6, Section 3 states that the charge a customer pays for transmission to its connection point shall include a fee for transmission in all of the pipelines through which transmission occurs. Accordingly, capacity in the Swedish system accompanies the customer and cannot be booked separately at Dragør. It is therefore not possible for Ei to use this proposal as a basis for the assessment of the reference price methodology and the assessment of cost-reflectivity and possible cross-subsidisation. Consequently, Ei has chosen to assess both the proposed PS methodology and the CWD methodology with a split of 0/100.

ACER has stated that Ei must assess whether a negative market effect may arise if distance is added as a parameter in the chosen reference price methodology. Ei's analysis, above, shows that the CWD methodology gives rise to more extensive cross-subsidisation than the PS methodology. The analysis conducted thus indicates that it now is not pertinent to approve the CWD methodology as a reference price methodology for the Swedish transmission system. In light of this, Ei is of the opinion that there are no grounds to produce data to demonstrate that a negative market effect would arise if distance is added as a parameter for the chosen reference price methodology.

Ei's assessment of extra capacity charges

Article 4 of the Regulation specifies criteria for the classification of services as transmission services or non-transmission services. It emerged during the consultation that the services *extra area capacity*, *capacity allocation fee for summer and winter periods* and *capacity allocation fee for daily capacity products* had not been discussed in the consultation document. In its statement, ACER has stated that Ei must assess whether these services shall be classified as transmission services or non-transmission services. If the services are classified as transmission services, Articles 3(2), 6(2), 3(1), 3(6) and 3(7) of the Regulation shall be taken into account, otherwise Article 4(4) of the Regulation shall be taken into account.

The transmission tariff includes fixed charges for *extra area capacity*, *capacity allocation fee for summer and winter periods* and *capacity allocation fee for daily capacity products*. *Extra area capacity* denotes a fixed annual charge that is determined on the basis of the number of connection points associated with the subscription. *Capacity allocation fee* denotes a fixed annual charge that confers the right to book additional capacity as needed for the summer or winter period. *Capacity allocation fixed fee for daily capacity products* denotes an annual charge that confers the right to book additional capacity for 24-hour periods.

Under the Regulation, a service shall be considered a transmission service where both of the following criteria are met – *Article 4(1)*:

- a) The costs of such services are caused by cost drivers in the form of both technical or forecasted contracted capacity and distance.
- b) The costs of such services are related to the investment in and operation of the infrastructure which is part of the regulated asset base for the provision of transmission services.

Extra area capacity

Customers with more than one connection point pay an additional charge for extra area capacity. This charge is justified by the storage effect that arises when a subscriber has more than one connection point. The storage effect means that the subscriber is able to avoid power peaks that could otherwise have arisen. The charge *extra area capacity* is 1.5 per cent of the maximum daily withdrawal per month multiplied by the number of connection points multiplied by a charge of SEK 218.

The charge is calculated as a fixed annual charge and does not result in the direct transfer of capacity. The service does not use distance as a cost driver and thus does not meet the criterion in Article 4(1)(a). Ei's assessment is therefore that the charge shall not be considered a transmission service. The charge shall therefore be treated as a non-transmission service and shall thus not be included in the calculation of the reference price.

Capacity allocation fee

Capacity allocation fee denotes a fixed charge that confers the right to book additional capacity for the summer or winter period. The potential capacity is limited to a given maximum capacity requirement at the start of the tariff period. The basis on which the *Capacity allocation fee* is calculated is produced by multiplying the number of connection points by the ratio of maximum capacity requirement to the number of connection points. The resultant figure is then multiplied by a charge of SEK 704 for the summer period and SEK 2 816 for the winter period. The charge confers the right to book extra capacity when needed. The cost drivers in the calculation are the maximum capacity requirement and the number of connection points.

The charge is calculated as a fixed annual charge and does not result in the direct transfer of capacity. The service does not use distance as a cost driver and thus does not meet the criterion in Article 4(1)(a). Ei therefore makes the assessment that the charge shall not be considered a transmission service. Consequently, the charge shall be treated as a non-transmission service and not be included in the calculation of the reference price.

Capacity allocation fee for daily capacity products

Capacity allocation fee for daily capacity products denotes a fixed annual charge for the right to book additional capacity for specific 24-hour periods. The potential capacity is limited to a given maximum capacity requirement at the start of the tariff period. The basis on which *Capacity allocation fee for daily capacity products* is calculated is arrived at by multiplying maximum capacity requirement by the charge SEK 16.

The charge is calculated as a fixed annual charge and does not result in the direct transfer of capacity. The service does not use distance as a cost driver and thus does not meet the criterion in Article 4(1)(a). Ei therefore makes the assessment that the charge shall not be considered a transmission service. Consequently, the charge shall be treated as a non-transmission service and not be included in the calculation of the reference price.

In summary, Ei's assessment is that the extra services reported above – *extra area capacity*, *capacity allocation fee for summer and winter periods* and *capacity allocation fee for daily capacity products* shall be classified as non-transmission services. These services are deemed to reflect actual costs and they are non-discriminatory, unbiased and transparent. The services benefit the network users that utilise them and the criteria in Article 4(4) are therefore met.

Overall assessment

In summary, Ei makes the assessment that the PS methodology shall be used as the reference price methodology for the gas transmission network in Sweden. Ei's assessment is that the requirement to take into account the special characteristics of the national market and the requirements for cost-reflectivity, non-discrimination and obstacles to undue cross-subsidisation are best observed using the PS methodology. Ei's assessment of compliance with the articles of Regulation (EC) No 715/2009, Directive 2009/73/EC and Regulation (EU) 2017/460 is summarised in Tables 11 and 12 below. Ei also assesses that the charges *extra area capacity*, *capacity allocation fee for summer and winter periods* and *capacity allocation fee for daily capacity products* shall be classified as non-transmission services.

Table 11 – Compliance with the requirements of the Gas Regulation ([EC] No. 715/2009) and the Gas Market Directive (2009/73/EC)

Regulation/Directive Article	Information	Criteria fulfilled
(EC) No 715/2009		
1(a)	Non-discriminatory rules for access conditions to natural gas transmission systems taking into account the special characteristics of national and regional markets with a view to ensuring the proper functioning of the internal market in gas.	Yes
13(1)	Tariffs shall be applied in a non-discriminatory manner. Tariffs shall facilitate efficient gas trade and competition, while at the same time avoiding cross-subsidies between network users and providing incentives for investment and maintaining or creating interoperability for transmission networks. Cost-allocation mechanisms and rate setting methodology regarding entry points and exit points shall be approved by the national regulatory authorities.	Yes
2009/73/EC		
40(d)	Helping to achieve, in the most cost-effective way, the development of secure, reliable and efficient non-discriminatory systems that are consumer oriented. Promoting system adequacy and energy efficiency as well as the integration of large- and small-scale production of gas from renewable energy sources and distributed production in both transmission and distribution networks.	Yes

Table 12 – Compliance with Regulation (EU) 2017/460

Article	Information	Criteria fulfilled
(EU) 2017/460		
6(1)	A reference price methodology shall be established and shall be subject to the findings of the periodic consultations carried out in accordance with Article 26. 26(1)(a)	Yes
6(2)	The application of the reference price methodology shall provide a reference price. 26(1)(a)(iii)	Yes, to be published by Swedegas
5(1)(a) 5(2) 5(3)(a)	Cost allocation assessment relating to revenue from capacity-based transmission tariffs, cost drivers, cost allocation assessment as well as degree of cross-subsidisation, calculation of cost allocation. 26(1)(a)(iv)	Yes
7(a)-(c)	The reference price methodology shall correspond with Article 13 of Regulation (EC) No 715/2009, enable network users to reproduce the calculation, take into account the actual costs considering the level of complexity of the network, ensure non-discrimination and prevent undue cross-subsidisation. 26(1)(a)(v)	Yes, the recommendations from ACER regarding evidence for the cost-reflectivity of the PS methodology as well as the justification of why the full allowed revenue is not recovered are now deemed to be fulfilled.
4(4)	The non-transmission services revenue shall be cost reflective, non-discriminatory, objective and transparent and charged to the beneficiaries of these service with the aim of minimising cross-subsidisation between network users.	Yes
26(1)(a)(i) 26(1)(a)(i)(1) 26(1)(a)(i)(2)	Indicative information set out in Article 30(1)(a), which contains the justification of the parameters used that are related to technical characteristics of the network, the corresponding information about these parameters and the assumptions applied.	Yes, however, Swedegas is being informed of the need to explain/inform about the methodology for forecasted booked capacity.
26(1)(a)(ii)	The value of proposed adjustments of capacity-based transmission tariffs pursuant to Article 9.	Yes, pertains to storage and LNG, which does not affect the analysis but has been commented on in the consultation document.
26(1)(a)(vi)	Where the proposed reference price methodology is other than the capacity weighted distance reference price methodology detailed in Article 8, its comparison against the latter accompanied by the information set out in point (iii).	Yes, has been reported during the consultation.
26(1)(b)	The indicative information set out in Article 30(1)(b)(i), (iv) and (v).	Yes, Swedegas is being informed of the obligation to publish information.
26(1)(c)(ii) 26(1)(c)(ii)(1) 26(1)(c)(ii)(2) 26(1)(c)(ii)(3) 26(1)(c)(ii)(4)	Where non-transmission services provided to network users are proposed: the tariff methodology for these non-transmission service; the share of the allowed or target revenue forecasted to be recovered from such tariffs; the manner in which the associated non-transmission services revenue is reconciled as referred to in Article 17(3); the indicative non-transmission tariffs for non-transmission services provided to network users.	Yes, refers to the services that are classified a non-transmission services pursuant to Article 4(4). This revenue shall not be included when calculating the reference price. Swedegas is being informed of its information obligation pursuant to Article 30(1)(c)(ii).
26(1)(d)	The indicative information set out in Article 30(2)	Yes, but the simplified tariff model does not allow adjustment of allowed revenue or forecasted capacity. Swedegas is therefore being instructed to allow the calculation of forecasts for indicative tariffs

How to appeal

See Appendix 1, How to appeal against the decision.

This decision has been made by Director General Anne Vadasz Nilsson. Deputy Director General Tony Rosten, Head of Legal Department Göran Morén, Chief Economist Therese Hindman Persson, Head of Section Rebecka Thuresson, the analyst Bengt Gustavsson and the analyst Joachim Karlsson, who acted as rapporteur, were also involved in the final administration of this matter.

Anne Vadasz Nilsson

Joachim Karlsson

Appendices

Appendix 1 – How to appeal against the decision

To be sent to

European Commission

Agency for the Cooperation of Energy Regulators (ACER)

Swedegas AB, (for information)

Disclaimer

Please note that this translation is not an official translation. The translation is furnished for information purposes only and we refer to the original decision in Swedish.