

## BOOKING MANUAL

Valid from 1 October 2016

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## **1 APPLICABILITY AND DEFINITIONS**

### **1.1 Applicability**

This Booking Manual sets out details for;

- Determination of Qualified Need based on the DSRN
- Financial qualification of shipper
- Booking processes
- Bottleneck procedure
- Process for release of capacity due to revised Qualified Need figures

This Booking Manual is developed according to the process described in Section 59, 4<sup>th</sup> paragraph of the Petroleum Regulation.

Proposals for amendments to the Booking Manual shall be developed by the Operator and submitted to the shippers and the owners of the Transportation System in writing for consultation.

The shippers and the owners of the Transportation System shall submit their comments within 20 Business Days after receipt of such notice from the Operator. The Operator shall take due consideration of the shippers' and the owners of the Transportation System's comments.

If the Operator, in its sole opinion, after having received and reviewed the shippers' and the owners of the Transportation System comments decides to amend the Booking Manual, such changes shall be submitted to the shippers and owners of the Transportation System in writing in reasonable time before coming into force.

### **1.2 Definitions**

The definitions set out in the relevant Terms and Conditions shall also be valid for this Booking Manual. In addition, the following terms shall have the meaning ascribed to them below:

1. "Capacity Allocation Key" or "CAK" shall have the meaning set forth in article 4.3.
2. "Deadline" shall mean the time limit set by the Operator in accordance with article 4.2 for transfer of excess capacity.
3. "Duly Substantiated Reasonable Need" or "DSRN" shall have the meaning described in Petroleum Regulation sections 59 and 61.
4. "Expected Maximum Daily Delivery" or "EMDD" shall have the meaning described in article 2.
5. "First Come First Served" or "FCFS" shall in respect of allocation of capacity mean capacity made available based on the timing of the request.
6. "Gassco Main Data Collection" shall mean the collection of data as described in the Shipper Manual.

7. "Long Term Capacity" or "LT Capacity" shall mean capacity reserved for an Entry Point, a Processing Service, a Quality Service or an Exit Point for whole Year(s).
8. "Medium Term Capacity" or "MT Capacity" shall mean transportation capacity reserved for an Entry Point, a Processing Service, a Quality Service or an Exit Point for whole Month(s).
9. "PDO" shall mean a plan for development and operation prepared according to the Petroleum Act Section 4-2.
10. "Petroleum Regulation" shall mean FOR-1997-06-27-653.
11. "Primary Market" shall have the meaning described in Petroleum Regulation section 61.
12. "Rebooking" shall have the meaning described in article 4.6.
13. "Short Term Capacity" or "ST Capacity" shall mean capacity reserved for an Entry Point, a Processing Service, a Quality Service or an Exit Point for one or more Day(s).
14. "Terms and Condition" shall mean either:
  - a. Terms and Conditions for Transportation of Gas in Gassled,
  - b. Terms and Conditions for Transportation of Gas in Knarr Gas Pipeline, or
  - c. Terms and Conditions for Transportation of Gas in Valemon Rich Gas Pipeline, or
  - d. Terms and Conditions for Transportation of Gas in Utsira High Gas Pipeline, or
  - e. Terms and Conditions for Transportation of Gas in Haltenpipe.

The respective Terms and Condition is entered into between the owners of the relevant Transportation System and the shipper.

15. "Within Day Capacity" shall mean capacity reserved for an Entry Point, a Processing Service, a Quality Service or an Exit Point within a Day.

## **2 QUALIFIED NEED PROCEDURE**

The Operator will determine Qualified Need figures for each shipper for the relevant Years prior to April and September booking rounds.

A shipper cannot book capacity in the Transportation System in excess of its Qualified Need. At Exit Points in Gassled Area D the shipper can book Medium Term Capacity and Short Term Capacity above its Qualified Need in order to obtain flexibility between the various Exit Points.

### **2.1 Determination of Qualified Need**

Qualified Need is equal to Expected Maximum Daily Delivery adjusted for Bilateral Transactions and capacity rights outside the Transportation System.

The Qualified Need calculation is inter alia based on data from Gassco Main Data Collection.

The shippers are requested to submit all information relevant for determining Qualified Need such as Expected Maximum Daily Delivery, PDO processes, Bilateral Transactions and capacity rights outside the Transportation System according to a time schedule and a format as determined by the Operator. Relevant recovery-, shrinkage factors and GCV's will be communicated to shippers from the Operator.

The Qualified Need determination is based on;

- a. Expected Maximum Daily Delivery forecasts from fields in production.
- b. Expected Maximum Daily Delivery forecasts from fields in the process of being developed.
- c. Expected Maximum Daily Delivery forecasts from fields where PDOs are being prepared, but not approved. The Operator will assess the PDO information and make a decision as to which volumes are to be included in the Qualified Need determination.
- d. Bilateral Transactions. All shippers involved are obligated to submit information regarding Bilateral Transactions.
- e. Capacity rights outside the Transportation System:
  - i. Shipper shall report any alternative capacity rights outside the Transportation System.
  - ii. Shipper shall further report if Gas with capacity rights outside the Transportation System should be included. In such case the shipper must demonstrate that the Gas most likely will be transported in the Transportation System.

When Gas can be routed to different Areas within a Transportation System or to different Transportation Systems, the Shipper must advise the Operator how to apportion the Gas between the different Areas or different Transportation Systems. The shipper cannot have Qualified Need for the same Gas in more than one direction.

Inclusion of Gas in the Qualified Need determination pursuant to item e above will for a shipper be limited to the total spare capacity offered for booking in the relevant Area of the Transportation System. If a shipper is awarded Qualified Need pursuant to item e, such Qualified Need must be confirmed by a Transportation Request. If the shipper does not issue a Transportation Request commensurate with the volume included in the Qualified Need determination, the Qualified Need will be reduced accordingly.

Qualified Need for Quality Services will only be offered to shippers that have exploited all reasonable possibilities to deliver Gas within Specification at the Entry Point. Qualified Need for Quality Services will be calculated in the first Transportation System or first Area of a Transportation System where the Gas is transported and such service is provided.

## 2.2 Expected Maximum Daily Deliveries

Expected Maximum Daily Delivery is the expected maximum volume of Gas that could be produced from Shipper's Field over a longer period of time (not peak values). For Shipper's Field with varying profile over the Year the Expected Maximum Daily Delivery is determined based on the period of the Year when it is anticipated that the Shipper's Field will have its highest Expected Maximum Daily Delivery.

Notwithstanding the above, Expected Maximum Daily Delivery, should not exceed:

- "Field's ability to deliver Gas" which is the expected daily maximum volume of Gas that can be delivered taking reservoir limitations, well constraints, pipeline limitations etc. into account, or
- "Expected maximum Gas processing capacity of Shipper's Field" which is the expected daily maximum volume of Gas that can be handled by the processing facilities at the Shipper's Field, or
- "Expected maximum Gas export capacity" which is the expected daily maximum volume of Gas that installations on Shipper's Field is able to export to an Entry Point, or
- "Expected maximum entitlement to external gas processing capacity" which is the expected daily maximum right of processing capacity in external processing facilities used by the shipper, or
- "Expected maximum entitlement to gas transportation capacity" which is the shipper's daily ability to deliver Gas to the relevant Transportation System based on capacity rights and spare capacity in upstream Transportation System(s), or
- "Shipper's ability to deliver Gas to the relevant Area" which is the shipper's daily ability to deliver Gas to the relevant Area in the Transportation System based on capacity rights and spare capacity upstream the relevant Area.

## 3 QUALIFICATION OF SHIPPER PROCEDURE

This article covers the detailed rules for financial qualification of a shipper and the requirement for access to Gassco Booking System.

### 3.1 Financial qualification

- a. The Operator will call for a credit rating of the potential shipper from a credit rating company. The credit rating company has to be recognised as a Nationally Recognized Statistical Rating Organisations (USA).
- b. If the credit rating of a potential shipper is BBB or higher, the applicant is normally considered qualified.
- c. If the potential shipper do not have any credit rating, or the credit rating is below BBB, a credit rating of the potential shipper parent company will be called. If the credit rating of the parent company of a shipper is BBB or higher, the applicant is normally considered qualified provided that a parent company guarantee covering

24 months tariff is issued by the parent company in respect of the potential shipper.

- d. If there is no credit rating of either the potential shipper or its parent company or the rating is below BBB – a bank guarantee is required from an A-rated bank covering 24 months tariff.

Notwithstanding the above, the Operator reserves the right to approve or deny credit or to request additional security based on its own reasonable assessment of the creditworthiness of the potential shipper.

If the Shipper's obligation under the Transportation Agreement at any time exceed the credit limit in the parent company guarantee or bank guarantee, the Operator shall have the right to require an increase of the guarantee.

Credit ratings will be reviewed every year or whenever deemed necessary.

### **3.2 Issue of digital certificate – Bypass Card**

To be able to access the Gassco Booking System the user of the system will need a Bypass Card. The Bypass Card will allow the holder to log on to the system and to create the necessary digital signatures when reserving capacity in the Gassco Booking System. The Bypass Card is personal and is issued to one or more designated persons.

Issuance of the Bypass Cards require the following agreements:

- The company agreement (signed by company).
- The individual user agreement (signed by individual user and company representative)

Every user that need Bypass Card can order cards on url:  
[www.bypass.no/reg/gassco](http://www.bypass.no/reg/gassco).

Having received signed company agreement and individual user agreement, the Operator will approve the user application of Bypass Card.

## **4 BOOKING CONCEPT**

Schedule for booking windows and periods are described in article 4.2.

A plan for the booking process will be prepared and communicated by the Operator prior to each booking round. The plan will describe dates for communication related to the determination of Qualified Need figures, booking windows etc.

All capacity reservations in the Transportation System are registered in the Gassco Booking System.

### **4.1 Booking points**

Shippers need to reserve capacity, as applicable:

- At Entry Point to take Gas into the system,
- At Exit Point to take Gas out of the system,
- For Processing Capacity at processing plants,
- For Quality Service

The shippers have to make bookings at relevant booking points throughout the Transportation System for the relevant periods. A shipper cannot choose a specific physical routing of its Gas between Entry Point and Exit Point.

#### 4.2 April and September booking round

The Operator will arrange booking rounds in April and September. In the booking round shippers can request capacity on relevant booking points.

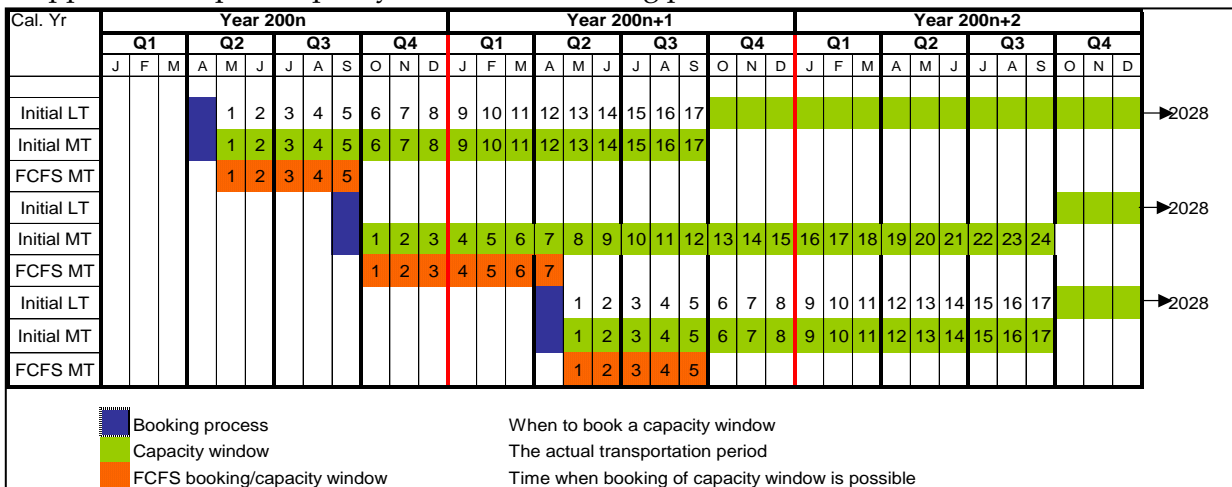


Figure 1: Schedule of booking windows and periods.

The Operator will submit a detailed plan for the booking round which describes activities to be performed prior to and during the booking round. The plan will describe details on:

- Dates when the Operator submit relevant information to shippers for the booking round (i.e. field profiles, recovery factors, shrinkage factors, GCV, provisional and final Qualified Need figures, capacity figures, CAK`s etc)
- Dates when shippers have to provide information to the Operator
- Dates for opening and closing of booking windows
- Dates for when the results from the booking round is published
- List of shippers with capacity in excess of their Qualified Need in a Transportation System, Area in a Transportation System or service in an Area, if the Transportation System, Area or service have no spare capacity, and how much capacity above Qualified Need the shipper have
- Deadline for transfer of capacity from shippers having capacity in excess of their Qualified Need.

Operator's considerations for deciding that there is no spare capacity in the Transportation System, Area in a Transportation System or service.

Normally, capacity will be offered in the following sequence:



April booking round will start first week of April, while September booking round will start last week of September.

- First week of April and last week of September for Gassled Area A, Area B, Area C, Area E, Area F, Area G, Area H and Area I, Knarr Gas Pipeline, Valemon Rich Gas Pipeline, Utsira High Gas Pipeline and Haltenpipe – 1<sup>st</sup> and 2<sup>nd</sup> round
- Second week of April and first week of October – 1<sup>st</sup> round for Exit Point Gassled Area D
- Immediately thereafter - 2<sup>nd</sup> and 3<sup>rd</sup> round for Exit Point Gassled Area D (3<sup>rd</sup> round only for LT)
- Immediately thereafter - Entry Points Gassled Area D

The result of the allocation is published on the Gassco Booking System immediately after the allocation have been performed.

Long Term Capacity will be sold in April for the Years starting 17 Months ahead, and in September for the Years starting 23 Months ahead.

Shippers are allowed to make Long Term Capacity Rebooking during the 1 week period following the Long Term Capacity booking process.

Medium Term Capacity will be sold in April for the subsequent 17 Months and in September for the subsequent 23 Months.

After the September window is closed the subsequent 7 Months will be available for FCFS Medium Term Capacity booking and after the April window is closed the subsequent 5 Months will be open for FCFS Medium Term Capacity booking.

Shippers are allowed to make Medium Term Capacity Rebooking during a 1 week period following the Long Term Capacity booking process.

Immediately after the last Medium Term Capacity allocation for Exit Points in Gassled Area D there will be a 1 week period where the shippers must make Entry Points Gassled Area D bookings in order to have sufficient Entry Booking as required in article 4.5.

Every Thursday, if requested by a shipper, the week starting 39 days ahead are made available for Short Term Capacity booking.

FCFS Short Term Capacity booking window is open for the current Day and the next 34 Days.

An Interruptible Capacity booking window is open in the same period as the FCFS Short Term Capacity booking window. Interruptible Capacity will be allocated every Day at 16:00 for the following Day. Following this allocation any remaining Interruptible Capacity for that Day will be available on FCFS basis.

### **4.3 Capacity Allocation Key**

Shipper's Transportation Requests in each Transportation System, Area in a Transportation System or service in an Area are checked against Qualified Need. If Transportation Request and existing booking is above the Qualified Need, the request will not be further processed until the shipper amends the request to be within the Qualified Need.

If all Transportation Requests exceed available capacity, the capacity will be allocated pro rata according to the Capacity Allocation Key. The Capacity Allocation Key is a mechanism for allocation of scarce capacity. The CAK within a Transportation System for shipper  $s$ , in Area  $a$ , in period  $p$  is calculated in the following way:

$$CAK_{a,p,s} = \frac{(QN_{a,p,s} - \sum bookings_{a,p,s})}{\sum_{all\_shippers\_n} (QN_{a,p,n} - \sum bookings_{a,p,n})}$$

Where:

- $QN_{a,p,s}$  = Qualified Need for shipper  $s$ , in area  $a$  for period  $p$ . For the Short Term Capacity Allocation Key the Qualified Need will be represented by daily availability as reported by the Shipper's Field Operator on behalf of the Shipper
- $\Sigma booking_{a,p,s}$  = Sum of bookings for shipper  $s$ , in area  $a$ , for period  $p$ . For shippers where the aggregated bookings in sub periods varies, the maximum booking in sub periods will be applied
- $QN_{a,p,n}$  = Qualified Need for shipper  $n$ , in area  $a$  for period  $p$ . For the Short Term Capacity Allocation Key the Qualified Need will be represented by daily availability as reported by the Shipper's Field Operator on behalf of the Shipper
- $\Sigma booking_{a,p,n}$  = Sum of bookings for any shipper  $n$ , in area  $a$  for period  $p$
- The Operator will calculate a Long Term Capacity Allocation Key per shipper for relevant Years in the Long Term period, and Medium Term Capacity Allocation Key per shipper for relevant Medium Term period and Short Term Capacity Allocation Key per shipper for relevant periods in the Short Term period.
- The Medium Term Capacity Allocation Keys will be applied in Medium Term Capacity booking rounds.
- The Short Term Capacity Allocation Keys will be applied in Short Term Capacity booking rounds.
- The Operator will calculate separate Capacity Allocation Keys for each service in Gassled Area C, Area D and Area E.
- Calculation of Capacity Allocation Keys will be performed prior to April and September booking rounds. The Operator will inform when Capacity Allocation Keys are updated prior to each booking round.
- After the booking round the Operator will recalculate relevant Capacity Allocation Keys.

#### **4.4 Unbalanced allocation of capacity in Gassled Area A, Area B and Area C**

If a shipper is allocated relatively more capacity in one or several of the services in Area C than the shipper was allocated in the Area A and / or Area B and / or other services in Area C, then the shipper can request to reduce its bookings in the other Area C services accordingly.

The allocated capacity may be reduced down to a level that represents the shipper's actual need based on the allocation in the restricted service. If a shipper wants to reduce the allocated booking the shipper must notify the Operator within 3 Business Days after the result of the allocation have been published on the Gassco Booking System.

The same applies in cases where a shipper is allocated relatively more capacity in Area A and / or Area B than services in Area C.

#### **4.5 Balancing of Entry Point booking in Gassled Area D**

In the 17 Months period following the April booking round and in the 23 Months period following the September booking round, the sum of a shipper's Entry Point bookings must always be greater than or equal to the sum of its Exit Point bookings in Area D. However, for Exit Point bookings made after 1 July 2013, for the period after 1 October 2016, this requirement shall no longer apply.

#### **4.6 Rebooking within Gassled**

Shippers are allowed to move bookings on a FCFS basis from one booking point to another booking point in accordance with this article 4.6 ("Rebooking").

If Rebooking is performed between booking points with different tariffs, the shippers will be charged the highest tariff.

A Rebooking from Exit Point A2 or Exit Point A3 will not release the Shipper from payment obligations for transit capacity included in the O-element of the tariff at these Exit Points.

Rebooking can be performed between:

- Exit Points in Area A
- Area A and Area B
- Extraction A/B in Area C and Extraction S in Area C
- Entry Points in Area D
- Exit Points in Area D
- Entry Points in Area F
- Exit Points in Area H

## **5 GASSLED AREA D QUALITY NOMINATION PROCESS PROCEDURE**

The Operator shall coordinate the nomination of Gas quality at each Exit Point.

The Operator will each year submit a detailed plan for the quality nomination process which describes activities to be performed.

Based on operational experience, forecast according to Operations Manual article 2 and other information submitted by the shippers, the Operator will establish the following;

- Recommendation for changes in GCV band within 15<sup>th</sup> June
- A 5-years mean value prognosis at Exit Points in Emden and Dornum within 15<sup>th</sup> June

## **6 SECONDARY MARKET PROCEDURE**

The secondary capacity market comprises both the marketplace for transactions of capacity as facilitated by the Operator and the capacity transactions between shippers. This procedure covers the marketplace facilitated by the Operator.

1. Only qualified shippers can participate in the secondary capacity market.
2. The shipper requiring capacity must demonstrate Qualified Need.
3. Bids and offers posted on the marketplace are valid until acceptance or withdrawal.
4. All trades in the secondary market are subject to the "Standard Agreement for Trading of Capacity in the Secondary Market".
5. An offer to sell or a bid to buy is accepted at the moment they are accepted by the counterparty in the Gassco Booking System.
6. Transfer of capacity rights take effect from such point in time when the transfer is registered on the Gassco Booking System.

Capacity transactions entered into outside the marketplace must be recorded in the Gassco Booking System in order to take effect. Item 1, 2 and 6 is applicable for such transactions.

## **7 BACKUP SOLUTION**

If a shipper is unable to access the Gassco Booking System, the shipper must send a signed request for capacity by telefax or by e-mail. The telefax or e-mail should include all information that is normally needed in order to make a Transportation Request in the Gassco Booking System. The telefax or e-mail must be signed by a registered user in Gassco Booking System.

The Operator will make sure that the Transportation Request get correct priority in a possible queue. Priority is determined by the time of arrival of the e-mail or the telefax requesting capacity.

## **8 GASSLED BOTTLENECK PROCEDURE**

### **8.1 General**

The shipper may book Exit Point capacity at any Exit Point in Area D independent of where the Gas enters Area D. However, within Area D there are not full flexibility to route the Gas to any Exit Point. If the aggregated Daily Nominations makes it impossible for the Operator

to honour the Daily Nominations the Operator have the right to instruct the shippers to re-nominate in accordance with this article 8.

When such situation occurs the following procedure will be applied:

## **8.2 Bottleneck due to restrictions in the Transportation System**

1. Identification of the restriction point/ pipeline and related Entry Points and Exit Points
  - a) The Transportation System will be divided into axes, one axis at each side of the restriction point/ pipeline
  - b) Entry Points and Exit Points on each side of the restriction point/ pipeline are identified
2. Identification of shippers' need for capacity in the restriction point/ pipeline:
  - a) Each shipper's need for capacity in the restriction point/ pipeline is determined as the difference between the shipper's Exit Point nominations in one axis and the Shipper's Entry Point nominations in the same axis
  - b) When each shipper's need for capacity in the restriction point/ pipeline is identified, the Operator will determine each shippers' capacity rights in the restriction point/ pipeline based on a pro-rata of need for capacity in the restriction point/ pipeline
3. Shippers' actions:

Following the calculation mentioned in item 2 above, each shipper will be instructed to reduce its use of the restriction point/ pipeline. The shipper's action to such instruction could be:

  - a) Move nomination from Exit Point(s) in one axis to Exit Point(s) in the other axis (points will be specified)
  - b) Move nomination from Entry Point(s) in one axis to Entry Point(s) in the other axis (points will be specified)
  - c) Perform a combination of a) and b)
  - d) Combine reduced Entry Point nominations on one side of the restriction point/ pipeline and reduced Exit Point nominations at the other side of the restriction point/ pipeline
4. Within Day considerations  
Re-nominations within Day that will create a restriction or adversely affect a restriction as described in this article 8 will not be accepted.

## **9 PROCESS FOR RELEASE OF CAPACITY WHEN SHIPPER HAS CAPACITY IN EXCESS OF ITS QUALIFIED NEED**

1. If after a booking round one or more shippers have capacity in excess of their Qualified Need in an Transportation System, Area in a Transportation System or service in an Area and other shipper(s) with Qualified Need in such Transportation System, Area in a Transportation System or service in an Area have requested such capacity, the relevant shippers should try to find a solution for transfer of capacity within the Deadline.
2. If after the Deadline one or more shippers still have capacity in excess of their Qualified Need the Operator will arrange a special booking round to redistribute capacity between the relevant shippers.

3. A shipper with capacity in excess of its Qualified Need must inform the Operator within Deadline which booking objects it makes available for sale (Entry Point, Exit point, service and price level).
4. Shipper that have bought bundled Gassled Area A, Area B and Area C services can decide to make a bundled product with the same Areas and services.
5. If a shipper do not give information to the Operator as described in item 3 above, the Operator will assume that the shipper has made available a pro rata capacity from the shipper's different booking objects.
6. Operator will make available booking objects as a pro rata of all booking objects from all shippers with more capacity than Qualified Need in the relevant Transportation System, Area in a Transportation System or service in an Area.
7. If available capacity is higher than requested capacity in the special booking round, the allocation amongst selling shippers will be made pro rata according to selling shippers capacity above Qualified Need in the relevant Transportation System, Area in a Transportation System or service in an Area.
8. If available capacity is lower than requested capacity in the special booking round the allocation will be made with normal CAK for the requesting shippers in the relevant Transportation System, Area in a Transportation System or service in an Area.

For some booking object there is a price level of 0 based on the shipper having invested in the capacity. For such booking objects the price level to be compensated for release of capacity in accordance with this article 9 will be based on standard tariffs for such services as stated below.

Area C EXT	10,0 øre/Sm <sup>3</sup>
Area C CSL	42,8 kroner/tonn
Area E EXT	4,5 øre/Sm <sup>3</sup>

The values above are in 2002 values and shall be escalated as described in Tarifforskriften.