



**ENERGINET**

# INFORMATION PACKAGE: USER INVOLVEMENT IN NETWORK DEVELOPMENT PLANNING

Energinet Gas TSO

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## KEY MESSAGES

As a user of the Danish gas system, you now have an opportunity to influence the development of the system.

The Incremental Capacity process defined in the EU Network Code will start summer 2019.

As a user, you should pay extra attention to the process this year.

Baltic Pipe will increase utilization of the system from 2022, and thereby lead to lower tariffs for all.

At the same time, Baltic Pipe will lead to less spare capacity in the system.

You should make yourself familiar with the information exchange and deadlines in the Incremental Capacity process, as outlined in this information package.

## THE DANISH GAS SYSTEM WILL BE MUCH BETTER UTILIZED WITH BALTIC PIPE

The Danish gas system has for the past many years observed a decreasing need for transportation, both for end-consumption in Denmark, and for transit to Germany and Sweden. The low utilization of the Danish gas system is set to change with Baltic Pipe.

With the income from transportation of gas from Norway to Poland via Denmark from 2022, tariffs for all users will be lower than they would otherwise have been. For a user, the improved system utilization is therefore a good thing.

Energinet Gas TSO is the operator of the transmission part of the Danish gas system. We welcome all current and future users to our system, and we want to be able to cater for users' needs for capacity products in the future. Simply put, where there is a need for capacity products, we see it as both our duty and our interest to ensure enough capacity is available for users to book.

Thus, the question becomes, when looking at our future with Baltic Pipe: Is there indeed enough capacity for all users at our entry and exit points? Or is the flipside of high utilization that we are looking at potential bottlenecks, and a need for investment?

*In short, Energinet expects the gas system with Baltic Pipe will be in a "sweet spot" of high flows, without bottlenecks.*

This hypothesis will in 2019 be tested with all system users. Indeed, under the EU network code on Capacity Allocation Mechanisms (NC CAM), under the so called Incremental Capacity process, we are *obliged* to assess demand for so-

called Interconnection Points (IP's), by following a structured process leading from demand assessment to offers and ultimately contracts for incremental capacities with interested users.

Thus, interests are aligned: We want to make sure user needs are met, users want to make sure their voices are heard and they are able to book the capacities they need, possibly as newly-formed incremental capacities, and the EU and regulators want to make sure there is an open, inclusive, and transparent process, and that all user voices are heard.

Although only our border point with Germany (Ellund) is a current IP in a EU-legal sense, we would like to treat also future "IP Faxe" (future export to Poland) and our other points to the NC CAM process to a wide extent, however recognizing unique characteristics of each point.

At entry point Nybro, used by Danish gas production (as well as, in the future, by Norwegian imports as part of the combined "Entry Europipe 2" point), it is relevant to consider long-term capacity contracts having conditions precedent on e.g. gas field development milestones.

With the new Joint Balancing Zone with Sweden, there are no dedicated capacity products for transportation between Denmark and Sweden. The robustness of the system is secured via an Interconnection Agreement between Energinet and the Swedish TSO, Swedegas.



## THE SYSTEM IS ROBUST, ALSO WITH BALTIC PIPE

With the current understanding of future user needs for capacities, the system – as expanded with Baltic Pipe investments – is capable of meeting combined needs with a very low risk of interruptions

The gas system is flexible and will support various flow scenarios. Capacity in a specific point depends on flow scenarios in the rest of the system – and a high demand in one point can to some extent be supported by redirecting unused capacity from another point. Management of the system is the responsibility of Energinet, with the aim to fulfill capacity contracts with users.

In general, flexibility is a result of such things as operational flow patterns, market model features, and pressure service agreements with connected systems; in addition to the more obvious physical dimensions of the system. Physical expansions are not always the most cost-effective way to create flexibility.

The main “transportation task” of the Danish gas system with Baltic Pipe, and therefore the most important measure of performance, is the ability to transport from west (Danish gas production plus Norwegian gas) to east (center of gravity of Danish and Swedish gas consumption plus transit Poland); subject to pressure limits.

The limitations in this west-to-east transportation is what defines both entry capacity in Nybro and exit to customers in the eastern part of Denmark and in Sweden and towards Poland (Faxe). Withdrawal from Stenlille Storage is necessary to secure firm transportation capacity west to east under given dimension criteria (e.g. -13 degrees Celsius temperature).

The net gas consumption in Sweden (i.e. net of local sources such as Swedish green gases and regasified LNG) is of particular interest. With our understanding of expected future net gas consumption, there is enough capacity in the system to meet this, at the same time as a potential user demand for up to 13.4 GWh/h export to Poland.

As there is no signal from the market regarding the future need for transportation to Sweden, we have a requirement to get information on this in other ways. For the purpose of analysis on expected capacities on entry and exit points, a maximum Swedish demand of 3.0 GWh/h has been assumed.

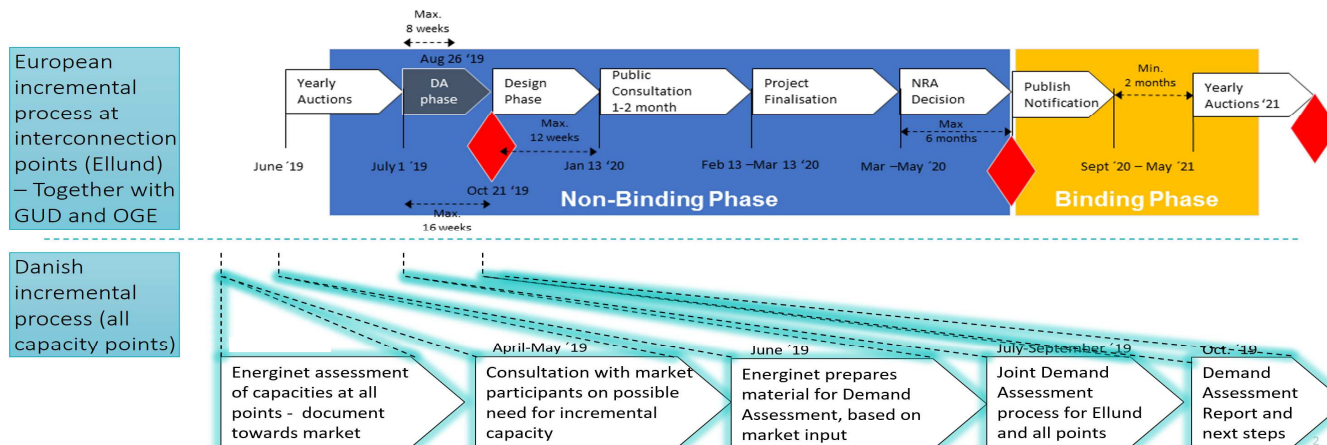
Entry capacity in Nybro will in the future be utilized both by users from Danish North Sea gas production and by users importing gas from Norway. An important fact in this regard is the decision by the Tyra operator, Total, to limit the new Tyra platform’s flow capacity (incl. third-party volumes) to 4.1 GWh/h. This, in addition to limited prospects for flow outside Tyra has been taken into account in the expectation for entry flows in the western part of the system. Entry Nybro can be “disrupted” in case of a major new development in the Danish North Sea – this is, however, expected to take upwards of 10 years from inception to reality.

Regarding imports from, and exports to, Germany, the capacity on the Danish side exceeds the capacity on the German side. Ellund users are in this regard referred to the corresponding capacity process at our German neighboring TSO’s, Gasunie Deutschland and Open Grid Europe.

*Table of expected possible capacities – meaning our expectation for what is possible to transport (across the totality of points) with the integrated system. It does not mean, however, that all those capacities in individual points necessarily will be offered to the market in the future – that depends on market interest in the individual points:*

Point	Explanation	Expected possible capacity (GWh/h)
Entry Europipe 2	Imports from Norway	13.4
Entry Nybro	Imports from Norway + Danish North Sea	20.3
Entry Faxe	Imports from Poland	3.8
Entry Ellund	Imports from Germany	7.7
Entry RES	Biomethane injection	According to socioeconomic valuation
Entry storage	Withdrawal from Danish storage	8.2
Exit Faxe	Exports to Poland	13.4
Exit Ellund	Exports to Germany	10.0
Exit storage	Injection to Danish storage	4.2

# USERS DRIVE NETWORK DEVELOPMENT



Users of the system know their own businesses best, and are the best positioned to look into the “crystal ball” regarding future need for capacities. In case the aggregation of user demands exceeds capacity in a point, the Incremental Capacity process gives users the opportunity to enter into contracts for such extra capacity, steering Energinet to develop the network further.

Network development planning is a balance between meeting demand in due time, and avoiding over-investment in infrastructure. As future business models, and thereby demand for capacities from users, is uncertain, it would – in case input for network development was a non-binding process for users – be in a user’s interest to signal a high demand. If Energinet developed the network following the aggregation of such non-binding signals, over-investment could be the consequence. This would then be to the detriment of all users, as tariffs would increase for all.

Therefore, just as the EU NC CAM protects the interest of an *individual user* (by ensuring the user’s voice is heard), it also protects the interest of the TSO (and by extension, the *sum of users*) by ensuring that network development for IP’s is done in tandem with binding commitments from users in the form of capacity contracts.

The incremental process executed by Energinet this year will include the following main steps:

1. Energinet will gather first demand signals via dialogue with the market (April-May 2019).
2. After the Annual auction on 1 July 2019, Energinet will forward Demand Assessment

Questionnaires for all capacity points in the Danish system.

3. Market participants may forward non-binding demand indications until 8 weeks after the annual auction (until 26 August 2019).
4. Energinet will publish a Demand Assessment Report, covering all points latest 16 weeks after the annual auction (until 21 October 2019). The report will conclude if the IC process will continue for one or more points – or, if no sufficient indications were received, the process may end.
5. If the process continues, next steps will be a design phase, market consultation and decision by DUR.
6. If incremental capacity is decided, the additional capacity will be offered in auctions at the respective point(s).

For Ellund, the IC process will be followed, whereas for other points, Energinet will apply the Incremental Capacity process to the extent reasonable, but with freedom to take unique characteristics of the points and its users as a basis for adjustments, should demand assessments indicate an interest in network development.

Energinet also invites the market to inform us, in case a need is seen for new or expanded capacity in specific locations in the Danish gas system, towards the Joint Exit Zone (i.e. for new end-user demand in Denmark).

## DEMAND ASSESSMENT QUESTIONNAIRE TO USERS

Energinet will forward a Demand Assessment Questionnaire to the market, to gather non-binding demand indications from market participants

The questionnaire will be used to gather information on:

- Relevant point
- Relevant systems/TSO's
- Capacity duration (gas years)
- Amount
- Possible conditions

Some points might require more information, in order to perform a sufficient assessment. Any additional data requirements will be explained in detail, when the questionnaire is forwarded to the market.

For IP Ellund, the incremental capacity process is a joint task between Energinet and the two adjacent systems in Germany (Gasunie Deutschland and Open Grid Europe).

For other points, the incremental capacity process is solely performed by Energinet, but any demand indications will obviously be subject for discussion with the respective adjacent systems.

Information from users will be treated as confidential, except in the aggregate form of total demands at points.

### Non-binding demand indications

For submitting non-binding demand indications for incremental capacity according to the process described in Article 26.8 of CAM NC, please provide the following information:

1. The adjacent entry-exit systems between which your company expresses demand for incremental capacity.
2. Your company's incremental capacity demand per gas year(s) between the adjacent entry-exit systems (one row = one amount of requested capacity).
3. Any demand indications which have been or will also be submitted to other transmission system operators, in case such indications are linked to your indication here.
4. In detail any conditions with respect to your demand indications above, if applicable (like e. g. demand for incremental capacity along a route with more than two adjacent entry-exit systems involved, demand for removal of existing restrictions, etc.).

Please fill in all information requested under the points (1) to (4) in the table below.

1		2		3	4
From	To	Gas year/s	Amount	Request is submitted to other TSOs	Conditions
[entry-exit system name]	[entry-exit system name]	[yyyy/yyyy+1]	[(kWh/h)/y]	[yes, TSO] or [no]	
"EXIT CAPACITY"	"ENTRY CAPACITY"				

Link to Energinet's webpage on Incremental Capacity, with 2017 results:

- <https://en.energinet.dk/Gas/Shippers/Incremental-capacity>

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