



ELLEVIO



VATTENFALL 

Vattenfall Eldistribution



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AGENDA

MEETING WITH FSP:S (ENGLISH)

1. Background
2. Products and timetables
 1. Free bids
 2. Availability contracts
 3. mFRR
3. Marketplace NODES
4. Contact information and webpages
5. Questions

Meetings

2020-08-25 Dialoger aggregator (13-14)

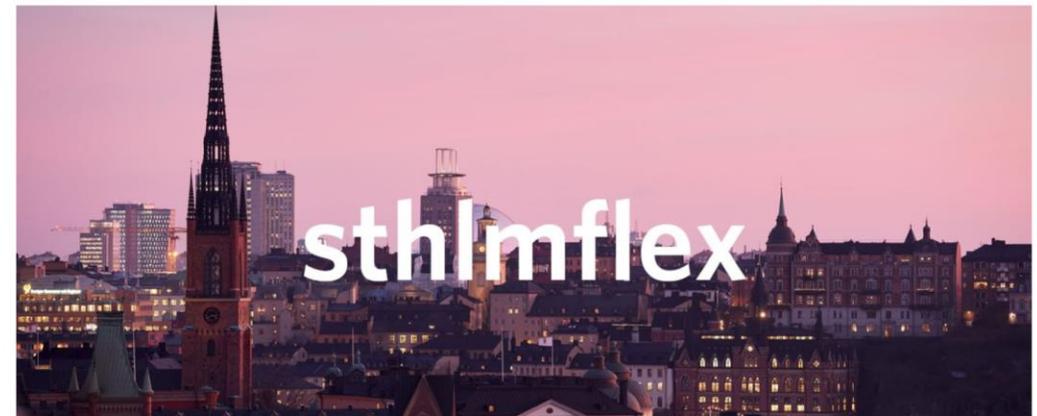
2020-08-26 Informationsmöte flexibilitetsleverantörer (13-14)

2020-08-28 Dialogmöte elnätsbolag (13-14)

2020-09-04 Informationsmöte FSP:s (English) (13-14)

sthlmflex

- The project goal is to create a power market for flexibility in the Stockholm region, in order to manage bottlenecks in the grid
- In the short-term perspective, enable continued development of the Stockholm region and relieve the existing grid congestion.
- Release capacity with the help of new tools and processes, as well as through collaboration between TSO & DSO and between DSO & DSO
- mFRR pilot with lower bid size requirement than in today's mFRR market – increasing the interest in the local flexibility market through increased chance of cleared flexibility bid
- Learnings on the market for power flexibility for both DSO and FSP
- Create conditions for efficient use of the electricity grid and the energy system – in-line with EUs Clean Energy Package
- In the long-term perspective, create conditions for cost-effective electricity distribution (mitigating need for grid enforcement that are only required under transition phase before other investments are finalized).
- One step on the journey from DNO to DSO (transforming from static network operator to dynamic system operator)
- <https://www.svk.se/sthlmflex>



ELLEVIÖ

SVENSKA
KRAFTNÄT

VATTENFALL 
Vattenfall Eldistribution

We are looking for flexibility suppliers in the Stockholm region under the following regional network areas:

- Stockholm North (Vattenfall Eldistribution)
- Stockholm City (Ellevio)
- Stockholm Södra (Vattenfall Eldistribution)

Buyers in the R&D project 20/21:
Vattenfall Eldistribution, regional network
Ellevio nät within the city of Stockholm

DSOs will buy flexibility in their own concession areas, as well as in underlying networks.

In the future, we intend to enable for also the underlying local networks to participate as buyers (as flexibility providers might be located in the underlying networks).

New possibilities with sthlmflex

Free bids in all Greater Stockholm
Free bids aggregated (Stockholm Norr, Stockholm City och Stockholm Söder)

Minimum participation 0,5 MW
Bid size : 0,1 MW

Availability contracts tender in Stockholm Norr and Stockholm Söder

Minimum participation 0,5 MW
Bid size : 0,1 MW
Availability

mFRR-Bud (can be aggregated) 1 MW will be forwarded to mFRR market

Minimum participation 1 MW
Bid size : 1 MW

GENERAL

In sthlmflex the buyers will call off flexibility mainly the day before. Bids and baseline should be delivered before 09 the day before.
FSP needs a contract with BRP.

Free bids

Example of resources that might be **frequently called off** (depending on prices)

- Heat pumps in building
- Energy storage
- Charging infrastructure

FlexServiceProvider (FSP) bids shall reflect reduction of usage of electricity, it's not a reduction in relation to the customer subscription.

FSP need to have an agreement with their balance responsible (BPR)

Example of resources that might **called off more seldom**.

- Reserve power cat. 4 e.g. resources installed in public building, datahalls
- Large heat pumps for heat or cooling that have challenges to be flexible in general
- Hydrogen production

Free bids – indication of flexibility needs

Lowest price for flexibility for DSO's is temporary subscriptions (TA) from Svk.

During 2020 the price for TA in Stockholm area is 220-240 kr/MWh.

Prices for 2021 will be presented during early September, estimated to be 5-10% higher than 2020. <https://www.svk.se/aktorsportalen/elmarknad/anslut-till-transmissionsnatet/transmissionsnatstariffen/tariff-prislistor-avtal-abonnemang/>

A higher price than the cost of a temporary subscription from Svk will also be called for - how often we don't know depends on the operating situation for Svk. But since it is the operating situation that is a cause of sthlmflex, we expect it to happen.

We estimate that we don't receive TA 30-60% of the hours where we need it. The price will then vary between TA level and available resources with a higher call-off price up to SEK 500/800/1000 / MWh. In emergencies, it can be interesting with a bid of SEK 2,000 / MWh

The bids themselves - even if they have not been called out - are important for learning about future business models and planning network capacity.

Revenues might increase if the resource also participates in Svk's mFRR market.

Three example's from winterperiods(nov-mars) i Stockholm region

First example reflects needs during a 10-year winter, the others more normal winters but with different number of periods with cold weather.

The winter 2019/2020 was there hardly any needs, but few days and hours still some minor needs.

[MWh]	[Antal Timmar]
75 017	ca 700
18 120	ca 200
12 965	ca 200

Product: Free bids (Shortflex)

Product requirements proposed are an initial version. Will be published in the Rule book for sthlmflex 2020-09-16 after the submission of interest 2020-09-09.

Delivery time: 60 min (on average)

Required bid size for qualification: 0.5 MW

Step size (granularity): 0.1 MW

Aggregation allowed: Yes

Which market participate in: All Stockholm region

Bid: NODES Market Platform or NODES API

Trade signal: NODES market platform or NODES API or sms or mail

Baseline delivery: NODES market platform or NODES API

Activation: Done by Flexibility provider when bid is bought

Pricing: Pay as bid

Availability: Availability as bid

Verification of delivery : Baseline

Market information: The three lowest bids per hour will be displayed on the NODES platform, along side your own bid

Market information:

In this continuous market, the buyer is foreseen to clear bids mainly between 09:00 – 10.00, on the day before delivery day
Flexibility bids for Monday will be cleared on Friday (tentatively at 15 o'clock)

Timetable Free bids (Shortflex)

2020-08-27 Forms for registration of interest to participate as a flexibility provider are available at Nodes homepage.

<https://nodesmarket.com/sthlmflex-eoi/>

2020-09-09 Deadline registration of interest

2020-09-16 Registration form and agreement / rule book as well as username for each flex resource are sent to parties who have registered an expression of interest

2020-09-30 Deadline registration on the marketplace NODES for flex with API as a means of communication

Flexibility providers get access to NODES test environment and training, after registration

2020-10-18 Deadline registration on the marketplace NODES for flex without API as a means of communication

Flexibility providers get access to NODES test environment and training, after registration

2020-10-30 Deadline agreement with marketplace NODES applies to all

Flexibility Suppliers get access to NODES production environment and education, after agreement

2020-12-01 Start sthlmflex free bids

2021-03-31 End of season for free bids

Tender of availability

- Stockholm Norr
- Stockholm Söder

Vattenfall Eldistribution is the buyer, NODES does the tender

FSP is available X hours/day jan-march 2020/21 for a fixed price/MWh

Product: Availability (Longflex)

Product requirements proposed are an initial version. Will be published in the Rule book for sthlmflex latest 2020-10-02 after the submission of interest 2020-09-30.

Delivery time: 60 min (on average)

Required bid size for qualification: 0.5 MW

Step size (granularity): 0.1 MW

Aggregation allowed: Yes (to be defined if aggregation is to be within one regional grid area or all Stockholmregion)

Which market participate in: Stockholm North and Stockholm South (Vattenfall Distribution buyer)

Bid: NODES Market Platform or NODES API

Trade signal: NODES market platform or NODES API or sms or mail

Baseline delivery: NODES market platform or NODES API

Activation: Done by Flexibility provider when bid is bought

Pricing: As agreed (in tender)

Availability: As agreed (in tender)

Verification of delivery : Baseline

Market information: The three lowest bids per hour will be displayed on the NODES platform, along side your own bid

Market information:

In this continuous market, the buyer is foreseen to clear bids mainly between 09:00 – 10:00, on the day before delivery day Flexibility bids for Monday will be cleared on Friday (tentatively at 15 o'clock)

Timetable availability contract (LongFlex)

2020-09-14 Expression of interest open att portal

2020-09-30 Deadline expression of interest

2020-10-02 "LongFlex Indication Notice" - information om områden där flex behövs- publiceras

2020-10-16 Deadline skicka "Prequalification questionnaire" (PQQ) – information om flex resurser

2020-10-26 Beslut om prekvalifikation skickas till parter som skickat in PQQ

2020-10-26 "Invitation to Tender" (ITT) – detaljer runt behov av flexibilitet, krav och vilkor publiceras

2020-11-16 Deadline svara på ITT: prisbud

2020-11-30 Beslut om tilldelade avtal skickas ut

2020-12-01 – 2020-12-31 Registrering och onboarding på NODES

2021-01-04 Go live

Product: mFRR R&D trial

Delivery time: 60 min

Gate closure: 45 minutes before hour of delivery

Activation time: 15 minutes for full activation

Required bid size for qualification: 1 MW in the R&D project

Maximum bid size: No limit

Step size (granularity): 1 MW (mFRR bids must be increase by one MW at a time)

Aggregation allowed : Yes, but only from the same price area and same BRP or according to agreement

Market: Nordic balancing market

Bid clearing method: Electronic ordering

Activation: By flexibility provider

Pricing: Pay-as-cleared if called for balancing. Pay-as-bid if called for network congestion (special regulation)

Availability: as agreed individually for each flexibility provider

Verification of delivery: based on measured values

mFRR and sthImflex

Why?

Preparatory pilot for future bid sizes and types of FSPs for mFRR

Increased possibility of accepted bids and possible increased compensation. See historical prices for mFRR here:

<https://www.nordpoolgroup.com/Market-data1/Regulating-Power1/Regulating-Prices1/SE/Hourly/?view=table>

How?

Pre-qualification is a requirement for participation. Information and templates for the application here:

<https://www.svk.se/en/stakeholder-portal/Electricity-market/information-about-ancillary-services/prequalification/>

Bid size has to be at least 1 MW (ie larger than for the capacity market)

The BRP needs to be involved in the process

When?

1 December 2020 – 31 March 2021

EXPRESSION OF INTEREST

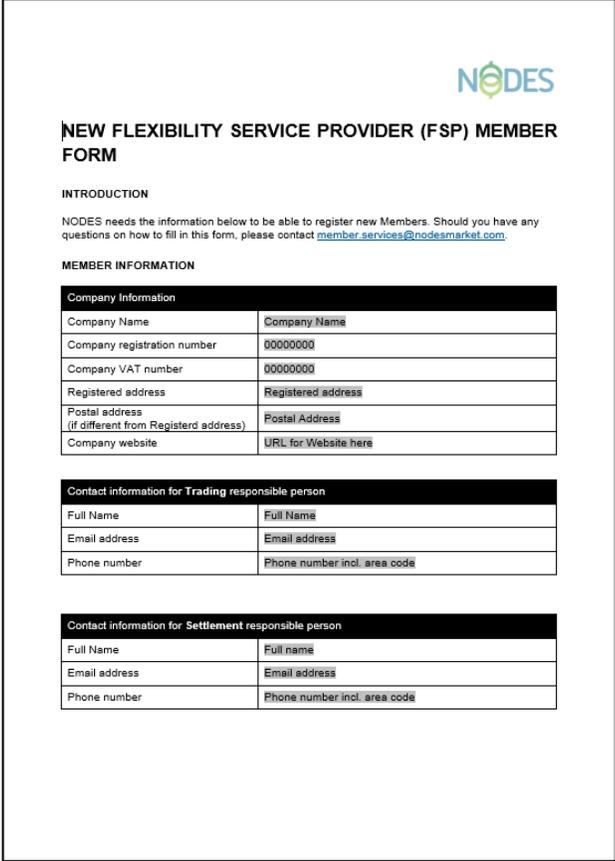


Intresseanmälan sthlmflex

Registration of interest

- Information on the company and flexibility service provider
- <https://nodesmarket.com/sthlmflex-eoi/>

FSP MEMBER FORM



NODES

NEW FLEXIBILITY SERVICE PROVIDER (FSP) MEMBER FORM

INTRODUCTION

NODES needs the information below to be able to register new Members. Should you have any questions on how to fill in this form, please contact member_services@nodesmarket.com.

MEMBER INFORMATION

Company Information	
Company Name	Company Name
Company registration number	00000000
Company VAT number	00000000
Registered address	Registered address
Postal address (if different from Registered address)	Postal Address
Company website	URL for Website here

Contact information for Trading responsible person	
Full Name	Full Name
Email address	Email address
Phone number	Phone number incl. area code

Contact information for Settlement responsible person	
Full Name	Full name
Email address	Email address
Phone number	Phone number incl. area code

FSP MEMBER FORM

- Company and user information

AGREEMENT & RULE BOOK



NODES MARKET RULES

GENERAL TERMS



MEMBERSHIP AGREEMENT
NODES MARKET

MEMBER DETAILS	Name of the Member			
	Registered business address		Company registration number	
	Postal code	Postal district/city	Country of incorporation	Tax resident
	E-mail	Tel. no. (int. format) +	VAT number	
	Supplemental Details (if any)			

AGREEMENT
This Membership Agreement is concluded between the Member (as identified above) and NODES AS, corporate registration number 920 321 844, having its registered office at Vollevæien 6-11, 1305 Lysaker, Norway ("NODES").
This Membership Agreement is supplemented by the Rulebook for the NODES Market (the "Rulebook") as may be amended from time to time, which shall form an integral part of this Membership Agreement, and which governs the Member's activities relating to the NODES Market.
The Member confirms that it has read and accepted the Rulebook as in force at the time of signature of this Membership Agreement without any reservation, and represents that it will comply with the Rulebook in respect of all Market Activities.

CONTACT PERSON
The Member hereby appoints as its Contact Person:
Name: _____
Position: _____
Postal address: _____
Email address: _____
Mobile phone: _____ Office phone: _____

SIGNATURES
By their signature below the parties agree to be bound by this Membership Agreement.
This Agreement has been signed in two (2) original counterparts, of which the parties receive one (1) each.

For NODES AS: _____ For: _____

Name and title in typed letters: _____ Name and title in typed letters: _____
Place: _____ Place: _____
Date: _____ Date: _____

NODES General terms, including sthlmflex annex

- The sthlmflex annex describes the terms valid for sthlmflex beskriver de vilkor som gäller för sthlmflex, i.a:
 - No membership fees/transaction fees/penalty fees for absent delivery during the R&D;
 - NODES validates delivered flexibility by comparing measured values with baseline (expected production/consumption where no flexibility is delivered)
 - Payment is decreased in steps when flexibility is not delivered;
 - Baselines (average per hour) are available automatically in the platform or can be uploaded by the FSP or their representative

Membership agreement

- Accept NODES rule book by signing an agreement with NODES

Contact information

More information on:

<https://www.svk.se/sthlmflex>

Svenska Kraftnät

Information on the project and application for mFRR: magnus.linden@svk.se, linda.schumacher@svk.se

Vattenfall Eldistribution:

Information on the project: yvonne.ruwaida@vattenfall.com

Questions regarding participating as a FSP in Stockholm South or Stockholm North: bjorn.godring@vattenfall.com

Ellevio:

Information on the project: bengt.i.johansson@ellevio.se

Questions regarding participating as a FSP in Stockholm City: stefan.lindbom@ellevio.se

NODES

Information on the project: sofia.eng@nodesmarket.com