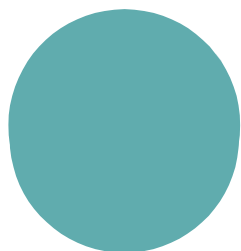


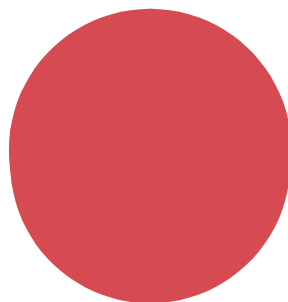


Energistyrelsen



Information Memorandum

Annex G



Draft 26 GHz Licence

**1500 MHz, 2100 MHz, 2300 MHz, 3.5 GHz and 26 GHz
Auction**



2021

Annex G: Draft licence in the 26 GHz frequency band

A draft licence and the associated technical information are indicated below:

- A draft licence to use frequencies in the frequency band 26 GHz (24.65-27.5 GHz frequency band) and annexes containing technical conditions for using these frequencies, and legal conditions.

[Licensee]

Licence [no.] to use frequencies in the frequency band [24.65-27.5] GHz

Following an auction, [name of licence holder] (hereinafter referred to as the licensee) is granted a licence to use the following radio frequencies (band limits):

| | |
|---------------|---|
| [xxx-xxx] MHz | Base station transmitting and receiving frequency |
|---------------|---|

The licence is issued in pursuance of section 10 of the Act on Radio Frequencies, cf. Consolidated Act No. 1100 of 10 August 2016 (Frequency Act), as changed by Act no. 1833 of 8 December 2020.

Licence terms and conditions

The licence shall enter into force on [date of issue] and expire on 31 January 2042.

Upon expiry, the licence shall lapse without further notice.

Pursuant to section 10(3) and sections 14 and 15 of the Frequency Act, the following terms and conditions shall apply to the licence:

- 1) The frequencies may be used throughout Denmark, which shall mean Danish land territory and Danish territorial waters, cf. Executive Order No. 242 of 21 April 1999 on Delimitation of Danish Territorial Waters (as subsequently amended).
- 2) Base station emissions shall comply with the relevant harmonised standard in the ETSI EN 301 908 series applicable to the technology chosen.
- 3) The use of frequencies in the band [xx-zz] GHz shall be subject to the licensee complying with the technical requirements that appear from Annex to Commission Implementing Decision (EU) 2019/784 of 14 May 2019 on harmonisation of the 24.25-27.5 GHz frequency band for terrestrial systems capable of providing wireless broadband electronic communications services in the Union with the adjustments that appear from the Annex to Commission Implementing Decision (EU) 2020/590 of 24 April 2020 amending Decision (EU) 2019/784 as regards an update of

relevant technical conditions applicable to the 24.25-27.5 GHz frequency band.

- 4) TDD with the following synchronisation scheme is to be used:
- a. DL/UL pattern: DDDSU (4:1)
(D = downlink, S = Special subframe, U = uplink)
 - b. Configuration of special subframe: 10:2:2
(10 x downlink : 2 x gap : 2 x uplink)
 - c. Cyclic prefix: normal
 - d. Subcarrier spacing: 120 kHz
 - e. Time base: UTC as described in Recommendation ITU-R TF.460
 - f. Radio frames are synchronised to the UTC second, which corresponds to phase synchronisation as defined by ITU-T. The typical measurement signal is 1 pps (pulse per second). The rising edge represents the beginning of the UTC second. The DL/UL pattern, as described above, starts at the beginning of a radio frame.
 - g. A maximum deviation from UTC as described in Recommendation ITU-T G.8271, i.e. a maximum deviation from UTC of +/- 1.5 μ s at the radiation point of the transmitter antenna.

The conditions will be evaluated by the Danish Energy Agency every fifth years throughout the licence period and be adjusted on that basis, subject to notice being given.

- 5) The use of frequencies in the band [xx-zz] MHz is subject to the licensee coordinating frequency use with other licensees in the band 24.25-27.5 GHz, as no frequencies have been allocated for guard bands. During the period until 1 December 2021 the licensee must not cause interference to the use of fixed radio links in the same frequency band. If the frequency use causes interference to the use of fixed radio links in the same frequency band, such use by the licensee shall cease forthwith.
- 6) However, subject to agreement with holders of licences in frequency bands adjacent to the present licence, the licensee may depart from the technical requirements mentioned in clauses 2, 3 and 4 regarding unwanted emissions within the frequency band concerned and the TDD synchronisation scheme. This is based on the condition that technical conditions in relation to other licensees and neighbouring countries are complied with, and that the agreement does not affect frequency users other than the parties to the agreement.
- 7) The licensee shall comply with such agreements as might be concluded from time to time between Denmark and other countries on the use of 24.25-27.5 GHz.

- 8) The licensee shall, not later than [four years from the date of entry into force], fulfil the usage requirement specified in Annex 1 to this licence.
- 9) As instalments on the licence price, the licensee shall pay DKK [amount] to the Danish Energy Agency or the authority responsible at the time, each year during the period from [2022 to 2030 / 2024 to 2032], both years inclusive. This amount is the total instalment for the frequency licences issued to the licensee in the [1500 MHz, 2100 MHz, 2300 MHz, 3.5 GHz and 26 GHz frequency bands]. Thus the amount appears from each individual licence, but shall be paid once only.
- 10) In case of failure to pay an instalment in due time, interest shall accrue from the due date until the date on which payment is effected, in accordance with the Act on Interest¹.
- 11) The licensee shall provide at any time a demand guarantee in relation to the Danish State, issued by a bank or insurance company which does not control, nor is controlled by, the licensee, nor is controlled by a person who controls the licensee, and which is registered in the European Economic Area and has a minimum long-term debt rating from Standard & Poors or Fitch Rating of at least A or from Moody's Investors Service Limited of at least A2. The guarantee shall at any time be for an amount equivalent to the sum of three annual instalments payable on the licence price, cf. clause 68 in the Decision by the Danish Energy Agency of 22 December 2020 on the 1500 MHz, 2100 MHz, 2300 MHz, 3.5 GHz and 26 GHz Auction, cf. Annex 2, however in such a manner that the guarantee shall be reduced by the instalments that are paid over the last three years of the repayment period. The guarantee shall be effective from the date of issue of the licence and shall at any time be effective in the period when the following three instalments fall due for payment. Other terms appear from the guarantee payable on demand as signed by the licensee.
- 12) The licensee shall notify the Danish Energy Agency, or the authority responsible at the time in question, without undue delay in the event that the bank or insurance company that has provided the guarantee mentioned above no longer has the credit rating stated.

Further details

The licence shall be subject to the provisions of Acts and Executive Orders that specify rules for holders of frequency licences. At the time of issuing the licence, the provisions of the following Executive Orders are particularly relevant:

- Executive Order No. 1849 of 8 December 2020 on Licences to Use Radio Frequencies, and
- Executive Order No. 1129 of 1 December 2009 on the Transfer and Return of Certain Licences to Use Radio Frequencies.

¹ Consolidated Act No. 459 of 13 May 2014 on Interest Accruing on Delayed Payments etc.

The frequencies may only be used in radio equipment that complies with the Act on Radio Equipment and Electromagnetic Matters and rules issued in pursuance thereof, including requirements for the use of radio equipment that complies with the essential requirements and the regulated interfaces.

Under section 21 of the Frequency Act, the licence may be transferred in its entirety without prior approval. Transfer or return of part of the licence shall be subject to approval by the Danish Energy Agency, cf. section 1 of Executive Order No. 1129 of 1 December 2009 on the Transfer and Return of Certain Licences to Use Radio Frequencies.

Under section 5 of Executive Order No. 1849 of 8 December 2020 on Licences to use Radio Frequencies, the licensee shall notify the Danish Energy Agency of its plans to lease or transfer the licence or parts thereof before such lease or transfer takes place. Information about current plans for lease or transfer will be published in the Frequency Register on the Danish Energy Agency's website.

The Danish Energy Agency will collect frequency charges, cf. section 50 of the Frequency Act. The charges are fixed annually in the Finance Act. An invoice for the frequency charge will be sent separately.

The Danish Energy Agency shall revoke the licence if the licensee fails to pay frequency charges due, cf. section 25 of the Frequency Act.

The Danish Energy Agency may decide that a licensee who has the possibility of offering electronic communications network in an area using spectrum, shall accommodate any reasonable request of giving access to the licensee's existing passive infrastructure or entering into an agreement on roaming for offer of electronic communications services in the area, cf. section 22 a of the Frequency Act.

In certain cases the Danish Energy Agency may modify terms in the licence or revoke the licence, cf. section 23 and section 24 of the Frequency Act.

If the licensee grossly violates the Frequency Act, rules laid down in pursuance of the Act, or terms in the licence, cf. section 26 of the Frequency Act, the Danish Energy Agency may revoke the licence.

Upon return of its licence to the Danish Energy Agency, the licensee may terminate future rights and obligations not yet due by paying not later than the date of return an amount equivalent to 30% of the licence price, or, if payment of a smaller amount of the licence price is outstanding, then such smaller amount. Thus a return of the licence shall not imply that the licence price will be repaid.

The Danish Energy Agency may impose on the licensee the sanctions that follow from the Danish Energy Agency's Decision of 22 December 2020 on the 1500 MHz,

2100 MHz, 2300 MHz, 3.5 GHz and 26 GHz Auction, appended as Annex 2 to this licence. Annex 2 thus specifies the sanction options that may be adopted in case of violation of the payment terms of this licence and for matters relating to the auction process if the Danish Energy Agency becomes aware of such violations after issuing this licence, refer in particular to clauses 81-82 and 86-93 in Annex 2.

Relevant Acts and Executive Orders may be found on the Danish Energy Agency's website under: <http://www.ens.dk>

No supplement to the licence will be issued if the rules mentioned above are changed.

In regard to matters relating to the licence, the venue applicable to the licensee shall be in Denmark. If the venue of a licensee is not in Denmark, the agreed venue of the licensee will be the Danish Energy Agency's venue.

Danish Energy Agency, [dd Mm 2021]

Janni Torp Kjærgaard

/Maria Schmidt Jensen

Annex 1: Requirements for using frequencies in the frequency band [xx MHz]

Terms

Antennas and transmitting and receiving equipment capable of using the frequencies specified in the licence shall be installed by the licensee not later than [four years from the date of entry into force] at a minimum of 100 mast positions. The equipment at the relevant mast positions shall be connected to the necessary telecommunications infrastructure in such a way as to enable the licensee, via the relevant mast positions, to offer at least one electronic communications service (at the licensee's own discretion) to end-users by using the frequencies specified in the licence.

Supervision

The licensee shall forward, not later than [dd Mm 2025], a survey to the Danish Energy Agency specifying the mast positions at which antennas and transmitting and receiving equipment have been installed such that at least one electronic communications service can be offered to end-users by using the frequencies specified in the licence. In the survey, the licensee shall indicate the geographical coordinates of the mast positions and the type of the installed transmitting and receiving equipment.

Annex 2: Decision by the Danish Energy Agency of 22 December 2020 Mm 2020 on the 1500 MHz, 2100 MHz, 2300 MHz, 3.5 GHz and 26 GHz Auction

[Reference is made to Annex B to the Information Memorandum.]