

Regulations of the State Secretary for Economic Affairs and Climate Policy of 20062897, establishing the application and auction procedure for the award of licences for radio spectrum in the 700, 1400 and 2100 MHz bands for mobile communication applications (Regulations on the application and auction procedure for 700, 1400 and 2100 MHz licences (*Regeling aanvraag- en veilingprocedure vergunningen 700, 1400 en 2100 MHz*) and amendment of the regulations on payments to the Radiocommunications Agency Netherlands 2020 (*Regeling vergoedingen Agentschap Telecom 2020*))

The State Secretary for Economic Affairs and Climate Policy,

In view of Articles 8, 9 and 10 of the Frequency Decree 2013 (*Frequentiebesluit 2013*);

Has decided as follows:

§ 1. Terms and definitions

Article 1

The following definitions apply to the terms used in these regulations:

- *applicant*: a party that has submitted an application;
- *eligibility level*: the total number of eligibility points available to a participant at a given moment in the auction, which number also determines the participant's maximum bidding authority to actively bid in or remain in the auction;
- *eligibility point*: a point assigned to a licence to be auctioned pursuant to Article 2(2) for the purpose of determining a participant's eligibility level;
- *notification*: Notification of the auction of licences for radio spectrum in the 700, 1400 and 2100 MHz bands (*Besluit bekendmaking veiling vergunningen 700, 1400 en 2100 MHz*);
- *bid*: a bid or bids for K, L and M licenses submitted by a participant using the Minister's electronic auction (e-auction) system and confirmed by means of this electronic auction system;
- *capping regulation*: Capping regulation for mobile communication frequencies 2020 (*Capregeling frequenties mobiele communicatie 2020*);
- *participant*: in Articles 8 to 20: an applicant that is admitted to the auction; in Articles 21 to 25: a successful participant;
- *Minister*: the Minister of Economic Affairs and Climate Policy;
- *lower band*: with regard to licence K: 703-733 MHz, with regard to licence M: 1920-1980 MHz;
- *interest*: the interest paid by the bank at which the civil-law notary nominated by the Minister has the client account referred to in Article 6(3), which interest will be a minimum of 0%;
- *group company*: a group company within the meaning of Article 3 of the capping regulation;
- *licence K*: licence for the use of 2x5 MHz radio spectrum within the frequency range 703-733 MHz paired with 758-788 MHz, with 55 MHz separating both 5 MHz radio spectrums each time, as set out in Annex 1 to the notification;
- *licence L*: licence for the use of 5 MHz radio spectrum within the frequency range 1452-1492 MHz, as set out in Annex 2 to the notification;
- *licence M*: licence for the use of 2x5 MHz radio spectrum within the frequency range 1920-1980 MHz paired with 2110-2170 MHz, with 190 MHz separating both 5 MHz radio spectrums each time, as set out in Annex 3 to the notification;

- *provisional winning bid*: the bid that qualifies as the provisional winning bid in accordance with Article 18;
- *winning bid*: the bid that qualifies as the winning bid in accordance with Article 20(2);
- *successful participant*: the participant whose bid qualifies as the winning bid.

§ 2. Available licences

Article 2

1. Pursuant to the notification, the following are available for allocation through an auction:
 - a. six licences K;
 - b. eight licences L;
 - c. twelve licences M.
2. A licence corresponds to the following number of eligibility points:
 - a. licence K: 10 eligibility points;
 - b. licence L: 5 eligibility points;
 - c. licence M: 10 eligibility points.
3. An applicant will not be assigned more eligibility points than corresponding to the maximum amount of radio spectrum that may be awarded to the applicant in the auction, having regard to Article 4(1) of the capping regulation.
4. An applicant will not be awarded more licences K than corresponding to the maximum amount of sub-1 GHz radio spectrum that may be awarded to the applicant in the auction, having regard to Article 4(2) of the capping regulation.

§ 3. Licence application and provision of security (submission phase)

Article 3

1. A party wishing to qualify for the award of a licence as referred to in Article 2(1) must submit an application.
2. An application must be:
 - a. received by registered mail at the following address and bear the following address details: Pels Rijcken & Droogleever Fortuijn N.V., attn. *mr.* C.A. de Zeeuw, civil-law notary, P.O. Box 11756, 2502 AT The Hague; or
 - b. delivered by hand at the following address and bear the following address details: Pels Rijcken & Droogleever Fortuijn N.V., attn. *mr.* C.A. de Zeeuw, civil-law notary, Bezuidenhoutseweg 57, 2594 AC The Hague;whether sent by registered mail or delivered by hand, the application must be received by 12.00 am on 6 April 2020.
3. The delivery by hand referred to in Paragraph 2(b) above must take place between 8.30 am and 6.00 pm on working days in the above-mentioned period. In case of delivery of the application by hand, a proof of receipt will be given stating the date and time of receipt and bearing a signature.

Article 4

1. An applicant may submit no more than one application.
2. For the purpose of Paragraph 1, group companies will be deemed to be one applicant.
3. The application must state the names of at least one and no more than four natural persons, each of whom has independent authority to act on behalf of the applicant during the auction and has been granted legally valid and sufficient power of attorney for that purpose.
4. The application must be submitted using the model set out in Annex I and, notwithstanding any other requirements specified elsewhere in these regulations, must be accompanied by the information and documents referred to in the model.
5. The application must be drafted in Dutch.
6. Comparable information and documents under the law of another Member State of the European Union or one of the other states that are a party to the Agreement on the European Economic Area will be considered equivalent to the information and documents referred to in Paragraph 4.
7. By way of derogation from Paragraph 5, the information and documents referred to in Paragraph 6 may be drafted in one of the official languages of the European Union or the European Economic Area. The information and documents must then be accompanied by a Dutch translation of such information and documents.

Article 5

1. The applicant will inform the Minister immediately of any change regarding the information and documents referred to in Annex I. It will inform the Minister in the manner described in Article 3(2).
2. If the applicant has failed to comply with the requirements set out in Article 4 or Article 6, the Minister will notify the applicant accordingly and will give the applicant the opportunity to rectify the omission.
3. The applicant will have seven working days, counted from the day after the notification referred to in Paragraph 2 was sent, to rectify the omission, on the understanding that the information and/or documents must be received before 6.00 pm on the last working day of such period.
4. The information intended to rectify the omission must be submitted in the manner described in Article 3(2). Article 3(3) will apply *mutatis mutandis*, on the understanding that the time and date the information and documents referred to in paragraph 2 are received will be considered as the time and date of receipt. Rectification of an omission regarding the guarantee deposit must be made using the bank account number referred to in Article 6(3).
5. If the omission is not rectified within the period referred to in Paragraph 3 and in the manner stated in Paragraph 4 or, following rectification, the requirements set out in Article 4 or Article 6 are not met, the Minister may decide not to consider the application in accordance with Section 4:5 of the General Administrative Law Act (*Algemene wet bestuursrecht*).
6. Without prejudice to the provisions in Section 3.18 of the Act, the Minister will reject the application:
 - a. in the event of non-compliance with Article 3(2);
 - b. if the applicant has been excluded from participation in the auction pursuant to Article 11(5).

Article 6

1. An applicant must provide a deposit or a bank guarantee in the amount of €35,279,000 as security for the payment of its bid.
2. The deposit will be provided for the period until:
 - a. if the application is rejected, the date of rejection;
 - b. if the application is not considered, the date of the decision not to consider the application;
 - c. if the application is successful, the date on which the total price referred to in Article 25(3) is paid in full.
3. Applicants must ensure, by no later than the time referred to in Article 3(2), that:
 - a. the deposit has been credited to bank account number NL72ABNA0213013495 in the name of Pels Rijcken & Droogleeveer Fortuijn inzake Derdengelden Notariaat (BIC code: ABNANL2A), stating "Auction 700, 1400 and 2100 MHz", or
 - b. the bank guarantee, issued in accordance with the model referred to in Annex II, Part A or B, has been received at the address referred to in Article 3(2).
4. No more than two weeks after the date on which the Minister decided not to consider the application, in accordance with Article 5(5), rejected the application pursuant to Article 5(6) or Article 7(5), refused the application pursuant to Section 3.18 of the Act, or excluded an applicant or participant from participation pursuant to Article 11(5), or Article 13(4), the Minister will refund the deposit to the applicant concerned or send a written notice stating that the bank guarantee will revert to the bank of the applicant that provided a bank guarantee as security. The Minister will forward a copy of this notice to the applicant. Article 29(3) will apply *mutatis mutandis*. The Minister will pay the applicant interest on the deposited amount for the period from the date after the date that the Minister decided not to consider the application, rejected or refused the application, or excluded the applicant or participant from participation or further participation, until and including the date preceding the date on which the deposit is refunded by the Minister. This interest will be refunded on the same date that the deposit is refunded.

Article 7

1. The applicant must be a private-law legal entity under Dutch law or the equivalent thereof under the law of another Member State of the European Union or one of the other states that are a party to the Agreement on the European Economic Area, and have its registered office, central administration or principal place of business within the European Economic Area.
2. The applicant must, in addition, comply with the following requirements:
 - a. the applicant is not in a state of liquidation or in the process of being wound up, and
 - b. the applicant has not been granted suspension of payments, nor has the applicant applied for suspension of payments.
3. Comparable requirements according to the law of another Member State of the European Union or one of the other states that are a party to the Agreement on the European Economic Area will be considered equivalent to the requirements referred to in Paragraph 2.
4. Within six weeks after the time referred to in Article 3(2), the Minister will determine whether the applicant whose application has been accepted for consideration meets the requirements referred to in Paragraphs 1 and 2. This time limit may be extended once only by four weeks at most.
5. If it is not evident from the application that the requirements referred to in Paragraphs 1 and 2 are met, the Minister will reject the application.

§ 4. Admission to the auction

Article 8

1. The Minister will inform the applicant whose application has not been excluded from consideration, rejected or refused pursuant to Section 3.18 of the Act in writing:
 - a. that it is admitted as a participant to the auction;
 - b. of the maximum MHz allocation for which the participant may acquire licences in accordance with Article 2(3) and the number of eligibility points consequently available to the participant at the start of the auction;
 - c. of the maximum number of licences K that the participant may acquire in accordance with Article 2(4) and the maximum number of eligibility points that the participant may consequently deploy for licences K.
2. The application of Article 2(3) and (4) referred to in Paragraph 1(b) and (c) above is based on the amount of radio spectrum used by the applicant and group companies within the meaning of the capping regulation on the date of entry into force of these regulations.

§ 5. General provisions regarding the auction

Article 9

1. The auction will be held online, using an electronic auction (e-auction) system.
2. Bids may only be made through the electronic auction system.
3. Other communications will be conducted through the electronic auction system or by telephone or secure email, with the participant being reachable under the telephone number and email address and corresponding public security key provided in its application and the Minister being reachable under the telephone number and email address and corresponding public security key referred to in Article 10(1)(d).
4. The auction will only be held on working days.
5. The Minister will be in charge of the auction and ensure the smooth course of the auction.

Article 10

1. The Minister will notify a participant in writing at least three weeks prior to the start of the auction of:
 - a. the date and starting time of the first bidding round in the primary phase;
 - b. the duration of this first bidding round;
 - c. the software required for the auction;
 - d. the telephone number and email address plus corresponding public security key at which the Minister can be reached;
2. The Minister will notify a participant in writing at least two weeks prior to the start of the auction of:
 - a. its user name and password; and
 - b. the Internet address where the participant can log in to take part in the auction.

Article 11

1. An applicant or participant, including any party that provides an applicant or participant with assistance for the auction, or a group company of the applicant or participant, will refrain from agreements or concerted practices that jeopardise or may jeopardise the smooth course of the auction, which includes competition in the context of the auction procedure.
2. Prior to and during the auction procedure and until the notification referred to in Article 28(1), an applicant or participant, including any party that provides an applicant or participant with assistance for the auction, or a group company of the applicant or participant, will not disclose any information and will not divulge any information or cause any information to be divulged to third parties regarding its strategy, budget, desired or obtained number, type or combination of licences, and expected or desired prices, or prices to be paid, in the auction. The previous sentence will not prevent an applicant or participant from providing the information referred to there to its shareholders if it is required to do so contractually, in accordance with its articles of association or otherwise. Should it do so, the applicant or participant will ensure that the information is provided confidentially as much as possible, to avoid the further dissemination of the said information.
3. Prior to and during the auction procedure and until the notification referred to in Article 28(1), an applicant or participant, including any party that provides an applicant or participant with assistance for the auction, or a group company of the applicant or participant, will immediately fully disclose information about whether or not it will participate in the auction and its submission of an application to this end as soon as the said information is disclosed to one or more third parties.
4. The Minister may stop or suspend the auction if he considers there is evidence of the existence of agreements or practices contrary to Paragraph 1, 2 or 3, or of the information provision referred to in Paragraph 2, second sentence, or if the Minister has justified reasons to suspect the aforementioned.
5. If, in the Minister's opinion, an applicant or participant has acted contrary to Paragraph 1, 2 or 3, the Minister may exclude the applicant or participant concerned from participation or further participation in the auction and declare the bid or bids made by the participant concerned in one or more bidding rounds invalid. The first sentence will apply *mutatis mutandis* to an applicant or participant that, in the capacity of shareholder in another applicant or participant, has been notified of the information referred to in Article 11(2) by the latter applicant or participant, in fulfilment of an obligation to this effect.
6. Without prejudice to Paragraph 5, the Minister may, if, in the Minister's opinion, a participant has acted contrary to Paragraph 1, 2 or 3, declare the outcome of all bids submitted in one or more bidding rounds invalid and decide that one or more bidding rounds should be held again. Where necessary, Article 18 will be applied again with regard to the bidding round prior to the bidding round to be held a second time, subject to exclusion of bids that have been declared invalid.
7. If it is not established until after the conclusion of the auction that, in the Minister's opinion, a participant has acted contrary to Paragraph 1, 2 or 3, the Minister may declare the winning bid or bids made by that participant invalid.

Article 12

1. The Minister will determine when the bidding rounds of the auction will take place, as well as their duration.
2. A bidding round in the primary phase will end on the expiry of the duration of the bidding round determined by the Minister, as referred to in Paragraph 1.
3. The bidding round in the allocation phase will end on the expiry of the duration of the bidding round determined by the Minister, as referred to in Paragraph 1, or as soon as all the eligible participants have submitted a bid, if that is earlier.
4. A participant is unconditionally and irrevocably bound by its bid.

Article 13

1. The Minister may suspend the auction in the event of special circumstances, in his opinion, beyond the control of the Minister or the participants, or in the event of technical problems as a result of which the auction temporarily cannot proceed. A special circumstance or technical problem must be notified to the Minister by a participant by telephone without delay, and in any event within 10 minutes after the end of a bidding round.
2. If the technical problems occur at a participant, the Minister may demand that its bids be submitted using a computer that is made available by the Minister at a location to be determined by him.
3. In the event the auction is suspended, the Minister may decide in respect of the bidding round during which or after which the special circumstances or technical problems occurred that the bidding round and all the bids submitted in that round be declared invalid and that the bidding round should be held again.
4. The Minister may exclude an applicant or participant that no longer meets the requirements made of an applicant, as set out in Article 4(1) and Article 7, from participation or further participation in the auction. Article 11(5) and (6) will apply *mutatis mutandis*.

Article 14

1. An invalid bid will not be considered for the purpose of:
 - a. establishing the provisional winning bids pursuant to Article 18;
 - b. establishing the final winning bids pursuant to Article 24.
2. Without prejudice to the provisions in Article 11(5) and (6) and Article 13(3), a bid will be invalid if the following conditions are not met:
 - a. The bid was made and confirmed through the electronic auction system via the Internet.
 - b. The bid complies with the eligibility level set out in Article 16(1).
 - c. The bid does not contravene Article 16(2) to (4).
 - d. the bid was submitted within the set time limit.
3. If a participant has not satisfied the conditions set out in Paragraph 2(a) to (c), the Minister will inform the participant of this and give the participant the opportunity to rectify the omission by means of the electronic auction system during the term allowed for the bidding round concerned.

§ 6. The primary phase

Article 15

1. The primary phase consists of one or more bidding rounds.
2. During the primary phase, a participant may submit no more than one bid for each bidding round.
3. A bid is expressed in the number of bids for licences K, L or M, respectively, submitted by the participant, for the prices set for that bidding round.

Article 16

1. A participant's eligibility level is determined by:
 - a. in the first bidding round, the number of eligibility points that were notified to it pursuant to Article 8(b);
 - b. in subsequent bidding rounds, the number of eligibility points of the bid submitted by the participant in the previous bidding round, plus the number of eligibility points of the participant's provisional winning bids at the commencement of the previous bidding round in a category in which it did not submit a new bid in the previous bidding round.
2. A participant may not submit a bid in a bidding round that is higher than the participant's eligibility level in that bidding round.
3. A participant may not submit a bid relating to more licences K than corresponding to the maximum number of eligibility points for that category of licences set for that participant pursuant to Article 8(1)(c).
4. A participant that has made a provisional winning bid in a category will not, in the category concerned:
 - a. submit a bid that relates to a lower number of licences than the number of provisional winning bids made by the participant in that category, if the price for that bidding round is higher than that for the bidding round in which the participant submitted its provisional winning bids; and
 - b. submit a bid that relates to an equal or lower number of licences than the number of provisional winning bids made by the participant in that category, if the price for that bidding round is equal to that for the bidding round in which the participant submitted its provisional winning bids.
5. If a participant fails to submit a bid in a bidding round and the number of eligibility points of its provisional winning bids at the start of that bidding round is lower than its eligibility level, the e-auction software will automatically register an option to pass on behalf of the participant concerned.
6. By way of derogation from Paragraph 1, a participant will retain the eligibility level in the bidding round in which an option to pass was registered on its behalf in accordance with Paragraph 5 as its eligibility level in the subsequent bidding round.
7. An option to pass may be exercised no more than three times per participant.
8. An option to pass that has been exercised will not be deducted from the number of options to pass available to the participant in accordance with Paragraph 7 if it was used in a bidding round that is held again pursuant to Article 11(6) or Article 13(3).
9. The Minister may decide not to deduct an option to pass that has been exercised from the number of options to pass available to the participant if it was used in a bidding round during which or after which the auction was suspended in accordance with Article 13(1), without, however, the bidding round being held again.

Article 17

1. The prices for the first primary bidding round are:
 - a. € 75,180,000 per licence K;
 - b. € 5,030,000 per licence L;
 - c. € 35,279,000 per licence M.
2. In the second and subsequent primary bidding rounds, the Minister will increase the prices referred to in Paragraph 1 in accordance with Paragraph 3.
3. The price for a licence set for a bidding round will be increased by an amount to be determined by the Minister if a provisional winning bid has been submitted for all the licences in that category for the price applicable to that category in the previous bidding round.

Article 18

1. After each bidding round, the Minister will determine the provisional winning bids for each licensing category in accordance with the provisions in Paragraphs 2 to 5 below; the drawing of lots referred to in the said paragraphs will be effected using the auction software.
2. Grouped per participant, bids submitted in the first bidding round will be placed in a bid listing in an order determined by lot using the auction software.
3. In each bidding round following the first bidding round, the bids submitted in that bidding round will be grouped per participant and placed in a bid listing in an order determined by lot, after which the provisional winning bids from the bid listing for the previous bidding round will be listed behind them, in the order used there.
4. A provisional winning bid submitted in a previous bidding round will only be placed in a bid listing if the participant concerned does not submit a new bid for a licence in the same category.
5. The x highest listed bids in a bid listing will qualify as provisional winning bids, where x equals the number of licences available in the relevant category.

Article 19

1. The Minister will confirm the following to each participant as soon as possible after the end of a bidding round:
 - a. the number of that bidding round;
 - b. the bid submitted by the participant in that bidding round, or the absence thereof;
 - c. the provisional winning bid or bids submitted by the participant;
 - d. the participant's eligibility level in the next bidding round;
 - e. the number of options to pass available to the participant;
 - f. whether a subsequent bidding round will follow;
 - g. for each licensing category, the price that will apply in the next bidding round;
 - h. per licensing category: the number of bids in the bid listing referred to in Article 18;
 - i. the starting time and duration of the next bidding round; and
 - j. the number of the next bidding round.
2. By way of derogation from Paragraph 1, the Minister will inform each participant as follows as soon as possible after the end of the last primary bidding round referred to in Article 20(1):
 - a. that the primary phase has ended;
 - b. the winning bid or bids submitted by the participant;

c. the base prices determined for the participant and the total thereof.

Article 20

1. The last primary bidding round is the first bidding round in which no option to pass is exercised and, in all the categories, the number of bids in the bid listing referred to in Article 18 is less than or equal to the number of licences available in the category concerned.
2. The Minister will qualify the provisional winning bid in the last primary bidding round as the winning bid for that licence.
3. The basic price for a licence equals the price for the bidding round in which the winning bid was submitted for that licence.

§ 7. The allocation bidding round

Article 21

1. The allocation bidding round will consist of a single bidding round in which bids can be made on combinations of licences K, L and M simultaneously and during which it will be determined for which radio spectrum a participant will acquire a licence.
2. As soon as possible after the end of the last primary bidding round, the Minister will notify each participant of:
 - a. the date and starting time of the allocation bidding round;
 - b. the duration of the allocation bidding round.
3. The Minister will also inform each participant prior to the start of the allocation bidding round of the alternatives for which the participant concerned can bid pursuant to Article 23(1).
4. During the allocation bidding round, a participant may only bid for alternative combinations of radio spectrum that appear on the list of alternatives compiled for it, as referred to in Article 23(1).
5. The start of the allocation bidding round will be no sooner than three working days after the notification referred to in Paragraph 3.

Article 22

1. The allocation bidding round will not take place if, upon application of Article 23(1) and (2), there is no more than one alternative combination of radio spectrum for any of the participants.
2. By way of derogation from Article 24, the final combination of winning bids if no allocation bidding round is held, consists of the allocation resulting from the application of Article 23(1) and (2).
3. By way of derogation from Article 25, the additional price will be zero euros if no allocation bidding round is held.

Article 23

1. The Minister will, on the basis of Article 20(2) and with due regard for Paragraph 2, compile a list for each participant of the alternative combinations of radio spectrum for which it may bid in view of the number of licences K, L and M that it has won in the allocation bidding round.
2. The licences will be awarded in such a way that:

- a. licences L are contiguous per participant and licences K and M per participant are contiguous in the lower band, and
- b. unsold licences L are contiguous and unsold licences K and M are contiguous in the lower band.
3. During the allocation bidding round, a participant may submit no more than one bid for each alternative combination of radio spectrum as referred to in Paragraph 1.
4. A bid is expressed in whole euros and has a minimum amount of zero euros.
5. If no bid is received for an alternative combination of radio spectrum as referred to in Paragraph 1, a bid amount of zero euros will be assumed for that alternative combination.

Article 24

1. In accordance with Paragraphs 2 and 3, the Minister will determine the final combination of winning bids.
2. The final combination of winning bids will be the combination of bids submitted for during the allocation bidding round that satisfies the following conditions:
 - a. The bids in the combination are radio spectrum alternative combinations that appear on the list referred to in Article 23(1).
 - b. The combination is in conformity with Article 23(2).
 - c. The combination generates the highest revenue.
3. If multiple combinations of winning bids satisfy Paragraph 2, lots will be drawn to determine the final combination of winning bids from amongst all these combinations of winning bids.

Article 25

1. Once the final combination of winning bids has been determined, the Minister will set the additional prices in accordance with Paragraph 2.
2. The additional price for a participant consists of the difference between:
 - the sum of the bids submitted by the other participants in the combination of winning bids that would generate the highest revenue if the bids by the participant concerned were to be disregarded;
 - and
 - the sum of the bids submitted by the other participants in the final combination of winning bids;and complies with the conditions set out in Annex III.
3. The total price payable by a successful participant for the licences it has won consists of the basic price for those licences determined on the basis of Article 20(3) and the additional price for the same licences.

Article 26

- As soon as possible after the determination of the additional prices referred to in Article 25(1) and the determination of the total prices referred to in Article 25(3), the Minister will inform the participants:
- a. that the auction has concluded;
 - b. of the identity of the successful participants and the licences they have acquired; and
 - c. of the total prices determined on the basis of Article 25(3), including an overview of basic prices and additional prices.

§ 8. Award of licence after the auction

Article 27

1. After the auction has concluded, the Minister will award a successful participant a licence for the licences it has won.
2. The Minister will reject the application of a participant that has not submitted a winning bid in accordance with Article 20(2).

Article 28

1. The Minister will publish the information referred to in Article 26 no later than on the first working day after the auction.
2. The Minister will publish an overview of the bids submitted by all the participants in the primary bidding rounds and in the allocation bidding round within one week after the auction, where the identity of a participant that did not submit a winning bid pursuant to Article 20(2) will not be revealed.

Article 29

1. Within no more than two weeks after the notification referred to in Article 26:
 - a. the Minister will refund the deposit provided by each participant not awarded a licence;
 - b. the Minister will inform the bank of each participant not awarded a licence, and that provided a bank guarantee as security in writing, by registered letter that the bank guarantee has expired. The Minister will provide the participant with a copy of the aforementioned bank notification.
2. A participant to which a licence has been awarded will pay the amount due from it pursuant to Article 25(3) within two weeks of the date on which the licence was awarded to it, in the manner determined in its licence.
3. If the participant awarded a licence has provided a bank guarantee, then the Minister will inform the participant's bank in writing, by registered letter, that the bank guarantee has expired, as soon as the amount due referred to in Article 25(3) has been received from the participant in the manner provided in its licence. The Minister will provide the participant with a copy of the aforementioned bank notification.
4. If the participant awarded a licence has lodged a deposit, the deposit will be used to pay the amount due for the licence, on the understanding that:
 - a. if a participant's deposit is less than the amount due for the licence, the participant will pay the remainder of the amount due; and
 - b. if a participant's deposit is more than the amount due for the licence, the remaining amount of the deposit will be refunded to the participant within no more than two weeks after the notification referred to in Article 26 is made.
5. The Minister will pay the interest on the deposit that is lodged from the date on which it received the deposit into the bank account number referred to in Article 6(3)(a), on the understanding that the interest will be paid until and including the date:
 - a. prior to the date on which the deposit is refunded by the Minister, for the participant not awarded a licence; or
 - b. on which the notification referred to in Article 26 is made, for the participant awarded the licence, on the understanding that interest is only payable on the amount deposited by the participant.

6. The Minister will additionally pay a participant whose deposit is more than the amount due for the licence interest on the remaining amount referred to in Paragraph 4(b) for the period from the date following the date on which the notification referred to in Article 26 is made until and including the date prior to the date on which the deposit is refunded by the Minister, on the understanding that interest is only payable on that remaining amount.

7. The Minister will refund the interest referred to in Paragraphs 5 and 6 on the same date on which it refunds the deposit or the remaining amount of the deposit.

§ 9. Concluding provisions

Article 30

In Annex 1 of the 2020 regulations on payments to the Radiocommunications Agency Netherlands, the following rows will be added after Point 5 in Table I, Part A, in replacement of the row for Point 6:

6.	800-900-1400-1800-2100-2600 MHz <i>(Per licence and per MHz)</i>			€ 7,626 (paired) and € 3,814 (unpaired)		B
7.	700 MHz <i>(Per licence and per MHz)</i>		€ 773	€ 8,666 (onshore, with coverage and speed requirement) (paired) and € 7,626 (onshore, without coverage and speed requirement) (paired) and € 433 (offshore) (paired)		B

Article 31

These regulations will enter into force on the day after the publication date of the Government Gazette (*Staatscourant*) in which it is included.

Article 32

These regulations are referred to as: Regulations on the application and auction procedure for 700, 1400 and 2100 MHz licences.

This Ministerial Order and the associated explanatory notes will be published in the Government Gazette.

The Hague,

The State Secretary for Economic Affairs and Climate Policy,

Annex I, as referred to in Article 3(1) of the Regulations on the application and auction procedure for 700, 1400 and 2100 MHz licences

Model application form

Part A

A.1 General

A.1.1 Applicant details

Name of applicant given in the articles of association:.....

Registration number listed in the Trade Register or comparable register:

Country of registration listed in the Trade Register or comparable register:

Body responsible for administering the Trade Register or comparable register:

A.1.2 Applicant contact details

The telephone number on which the authorised representative can be reached during the auction:

The e-mail address via which the authorised representative can be reached during the auction and the corresponding public security key:

Provide the public security key via multibandveiling@agentschaptelecom.nl

A.1.3 Recent extract from the Trade Register

A recent extract, not older than one month from the date of submission of the application, from the Trade Register or comparable register is attached.

A.2 Representative authority

Details of the person/persons who is/are authorised to duly represent the applicant in relation to this application and all acts during the auction procedure, also listing any limitations applying to the representative authority:

A.2.1 Representative 1

Name:

First names in full:
Position at applicant:
Type of identity document:
Number of identity document:
Representative authority:
Limitations to authority:
Authority and limitations evidenced by:

Signature:

A.2.2 Representative 2

Name:
First names in full:
Position at applicant:
Type of identity document:
Number of identity document:
Representative authority:
Limitations to authority:
Authority and limitations evidenced by:

Signature

A.2.3 Representative 3

Name:
First names in full:
Position at applicant:
Type of identity document:
Number of identity document:
Representative authority:
Limitations to authority:
Authority and limitations evidenced by:

Signature

A.2.4 Representative 4

Name:
First names in full:
Position at applicant:
Type of identity document:
Number of identity document:
Representative authority:
Limitations to authority:
Authority and limitations evidenced by:

Signature

If the representative authority is not apparent from the Trade Register or a comparable register, but from a power of attorney, a copy of the power of attorney should be attached.

A.3 Group companies

An organisation chart showing the legal structure of the group companies, as referred to in Article 3 of the Capping regulation for mobile communications frequencies 2020 (Capregeling frequenties mobiele communicatie 2020), should be attached, clearly describing:

- a. each group company, including the control structure between the group companies on the basis of the criteria set out in Article 3 of the Capping regulation for mobile communications frequencies 2020;
- b. the mutual relationship between the group companies ensuing from shareholdings or membership rights, or comparable controlling rights;
- c. every member of the management board and, where present, supervisory body of each group company;
- d. the registration number of each group company listed in the Trade Register or comparable register.

Use an appendix and provide all relevant documents, including the following at the very least:

- a. the current articles of association of the applicant;*
- b. shareholders' agreements that the applicant is the subject of or a party to in its capacity as a shareholder;*
- c. the most recent annual report and annual accounts of the applicant;*
- d. organisational agreements and/or management agreements to which the applicant is a party and that evidences that the applicant has the right to manage the affairs of another undertaking.*

A.4 Written declaration regarding the accuracy of information

A.4.1 The applicant is a legal entity incorporated in accordance with the laws of a Member State of the European Union or one of the other states that are a party to the Agreement on the European Economic Area, and has its registered office, central administration or principal place of business within the European Economic Area.

A.4.2 The applicant has/has not* been dissolved.

A.4.3 The applicant has/has not* been put into liquidation.

A.4.4 The applicant has/has not* filed its own winding-up petition.

A.4.5 A winding-up petition in respect of the applicant has/has not* been filed.

A.4.6 The applicant has/has not* been granted suspension of payments.

A.4.7 The applicant has/has not* filed for suspension of payments.

A.4.8 The applicant is/is not* required to share the information referred to in Article 11(2) with shareholders.

If the applicant is subject to an obligation of this nature: on what basis is the applicant subject to the obligation and which information is the applicant required to share and when?

.....
.....

Provide the document in which the obligation to share the information referred to in Article 11(2) has been included.

A.4.9 The applicant has/has not* shared the information referred to in Article 11(2) with shareholders.

If the information referred to in Article 11(2) has been shared: which information and with who?

.....
.....

(*) delete as appropriate.

Declaration by civil-law notary

The undersigned, a civil-law notary practising in(name of town/city)

Declares, without reservation, that:

(i) the information provided in this application under A.1.1, A.2, A.4.1, A.4.2, A.4.3 and A.4.6 has been verified by him/her and has been found to be complete and accurate;

(ii) the information provided in this application under A.3, A.4.4, A.4.5, A.4.7 and A.4.8 has been verified by him/her to the best of his/her ability and in his/her opinion is complete and accurate;

(iii) the persons named under A.2 have been identified in person by him/her in accordance with the rules of the Money Laundering and Terrorist Financing (Prevention) Act (*Wet ter voorkoming van witwassen en financieren van terrorisme*), on behalf of the Minister, in evidence of which a copy of the identity document used to verify their identity is hereby attached, and that those persons placed their signature against A.2 in his/her presence.

Name:

Town/city:
.....

Date:

Signature
.....

The declaration by the civil-law notary may be provided by means of an attachment, if required.

Part B

Application

I am applying for one or more licences in the 700, 1400 and/or 2100 MHz band and I request to be admitted to the first bidding round of the auction with a maximum number of eligibility points in accordance with the capping regulation.

I am/am not* herewith submitting a request for a deferment of payment, as referred to in Section 4:94 of the General Administrative Law Act, equal to half of the total price referred to in Article 25(3), for a period of one year, calculated from the date following the date on which the licence is granted. Pursuant to Section 4:101 of the General Administrative Law Act, statutory interest will be payable on the amount deferred, to be calculated as of the date on which the amount is to have been paid, pursuant to Article 29(2), up to and including the date on which the amount is paid.

(*) delete as appropriate.

Declaration by director

The undersigned declares that

- (i) the information provided in this application is complete and accurate;
- (ii) this application was not prepared under the influence of an arrangement or agreement with another party or a decision or practice that jeopardises or may jeopardise the smooth conduct of the auction, including competition;
- (iii) during the auction procedure, the participant will refrain from concluding arrangements or entering into agreements with another party and that the participant will refrain from any decision or practice that jeopardises or may jeopardise the smooth conduct of the auction, including competition.

Name :

Town/city :
.....

Date :

Signature:

Annex II, as referred to in Article 6(3)(b) of the Regulations on the application and auction procedure for 700, 1400 and 2100 MHz licences

Part A

Model bank guarantee

I. The undersigned (*name of a bank that is established and has its registered office in a Member State of the European Union or one of the other states that are a party to the Agreement on the European Economic Area*)*, with its registered office in and its place of business, among other places, at, hereinafter: "the Bank";

Whereas:

A. Section 3.13, subsection 1, of the Telecommunications Act (*Telecommunicatiewet*) provides that the use of radio spectrum requires a licence, to be issued by the Minister of Economic Affairs and Climate Policy (hereinafter: "the Minister");

B. (*participant's name*), a legal entity under (*the law of a Member State of the European Union or one of the other states that are a party to the Agreement on the European Economic Area*) law, with its registered office in and its principal place of business at, hereinafter: "the Participant", intends to submit a bid in the auction for the purpose of acquiring a licence as referred to in Section 3.13(1) of the Telecommunications Act;

C. the Minister has established rules for the award of licences. These rules are laid down in the Regulations on the application and auction procedure for 700, 1400 and 2100 MHz licences;

D. in accordance with these rules, the Minister requires that the Participant arrange for a bank guarantee to be provided as security for the entire amount to be put up as security by the Participant, hereinafter: "the Amount Due", for the benefit of the State of the Netherlands, a legal entity under Dutch law, whose seat is established in The Hague, hereinafter: "the State";

E. the Participant has requested the Bank to provide an irrevocable and independent bank guarantee for the benefit of the State, which is payable on first demand by the State;

II. Undertakes as follows:

1. The Bank irrevocably stands surety to the State, by way of an independent obligation for an amount of up to € 35,279,000.00 (in words: thirty-five million two-hundred-and-seventy-nine-thousand euro), for the payment by the Participant of the entire amount payable to the State in respect of the Amount Due as appears from a written notice by the State, such that the Bank undertakes to pay the amount due to the State as its own obligation.

2. The Bank undertakes to pay the State, as if it were its own debt, on first demand and on the mere written notice of the State, without requiring any other document to be presented or any reasons to be given, the amount that the State declares it is due in respect of the Amount Due from the Participant, on the understanding that the Bank will never be obliged to pay more to the State than the maximum amount referred to above.

3. Partial reliance is possible under this bank guarantee. The maximum amount of this bank guarantee will be reduced by an amount equal to each partial reliance.

4. This bank guarantee will expire after receipt by the Bank of a written notice by the State, sent by registered letter, that the bank guarantee has expired and in any event one year after the date on which this guarantee was signed, unless the Bank has received a written notice by or on behalf of the Minister, to be sent by registered letter, at least one month prior to the expiry date of the guarantee stating that this bank guarantee will not expire, in which case the guarantee will be valid for a successive new period of one year.

5. This bank guarantee is governed by Dutch law. Any disputes relating to this bank guarantee may only be submitted to the competent Dutch court in The Hague.

6. Following the expiry of this bank guarantee, the State may no longer make any claim against the Bank under this bank guarantee, unless the Bank received a notice as referred to under 2 above prior to the scheduled expiry date of this bank guarantee with which the Bank has failed as yet to comply. At the Bank's request, the State will return this bank guarantee to the Bank upon its expiry.

Town/city:

.....

Date:

Name of Bank and signature:

.....

* the details shown in italics above are to be completed by the Bank.

Part B

Model bank guarantee

I. The undersigned (*name of a bank that is established and has its registered office in a Member State of the European Union or one of the other states that are a party to the Agreement on the European Economic Area*)*, with its registered office in and its place of business, among other places, at, hereinafter: "the Bank";

Whereas:

A. Section 3.13, subsection 1, of the Telecommunications Act (*Telecommunicatiewet*) provides that the use of radio spectrum requires a licence, to be issued by the Minister of Economic Affairs and Climate Policy (hereinafter: "the Minister");

B. (*participant's name*), a legal entity under (*the law of a Member State of the European Union or one of the other states that are a party to the Agreement on the European Economic Area*) law, with its registered office in and its principal place of business at, hereinafter: "the Participant", intends to submit a bid in the auction for the purpose of acquiring a licence as referred to in Section 3.13(1) of the Telecommunications Act;

C. the Minister has established rules for the award of licences. These rules are laid down in the Regulations on the application and auction procedure for 700, 1400 and 2100 MHz licences;

D. in accordance with these rules, the Minister requires that the Participant arrange for a bank guarantee to be provided as security for the entire amount to be put up as security by the Participant, hereinafter: "the Amount Due", for the benefit of the State of the Netherlands, a legal entity under Dutch law, whose seat is established in The Hague, hereinafter: "the State";

E. the Participant has requested the Bank to provide an irrevocable and independent bank guarantee for the benefit of the State, which is payable on first demand by the State;

II. Undertakes as follows:

1. The Bank irrevocably stands surety, by way of an independent obligation, for an amount of €35,279,000 (in words: thirty-five million and two hundred and seventy-nine thousand euros), to the State for the payment by the Participant of the entire amount payable to the State in respect of the Amount Due as appears from a written notice by the State, such that the Bank undertakes to pay the amount due to the State as its own obligation.

2. The Bank undertakes to pay to the State, as if it were its own debt, on first demand and on the mere written notice of the State, without requiring any other document to be presented or any reasons to be given, the amount that the State declares it is due in respect of the Amount Due from the Participant, on the understanding that the Bank will never be obliged to pay more to the State than the maximum amount referred to above.

3. Partial reliance is possible under this bank guarantee. The maximum amount of this bank guarantee will be reduced by an amount equal to each partial reliance.

4. This bank guarantee will expire after receipt by the Bank of a written notice by the State, sent by registered letter, that the bank guarantee has expired and in any event one year after the date on which this guarantee was signed, unless the Bank has received a written notice by or on behalf of the Minister, to be sent by registered letter, at least one month prior to the expiry date of the guarantee stating that this bank guarantee will not expire, in which case the guarantee will be valid for successive new periods of one year.

5. This bank guarantee is governed by Dutch law. Any disputes relating to this bank guarantee may only be submitted to the competent Dutch court in The Hague.

6. Following the expiry of this bank guarantee, the State may no longer make any claim against the Bank under this bank guarantee, unless the Bank received a notice as referred to under 2 above prior to the scheduled expiry date of this bank guarantee with which the Bank has failed as yet to comply. At the Bank's request, the State will return this bank guarantee to the Bank upon its expiry.

Town/city:

Date:

Name of Bank and signature

.....

* the details shown in italics above are to be completed by the Bank.

EXPLANATORY INFORMATION

I. GENERAL SECTION

1. Introduction

These regulations set rules regarding the allocation of licences in the following frequency bands: 703-733 MHz paired with 758-788 MHz (hereinafter also: 700 MHz band), 1452-1492 MHz (unpaired, hereinafter also: 1400 MHz band) and 1920-1980 MHz paired with 2110-2170 MHz (hereinafter also: 2100 MHz band). These licences are intended for electronic communication services (mobile communications) and will be awarded on a national basis – for the 700 MHz band, this is excluding installations at sea.

The government is fully committed to maintaining the Netherlands' strong position in terms of having an excellent digital infrastructure. The letter to the House of Representatives of 2 July 2018,¹ states that the fixed and mobile networks make an important contribution to the favourable business climate and conditions in the Netherlands. The government's Digital Connectivity Action Plan (*Actieplan Digitale Connectiviteit*), which accompanied the letter, lays down a comprehensive plan that is in line with the European call to generate new targets and plans for the development of broadband and 5G.

The Digital Connectivity Action Plan (hereinafter also referred to as the "Action Plan") was an initial follow-up to the Radio Spectrum Policy Memorandum of December 2016.² This Memorandum sets out that the availability of radio spectrum is an essential condition for a high-quality digital infrastructure. Demand for radio spectrum is increasing and society is imposing ever greater requirements on the availability and reliability of telecommunications infrastructure, wireless or otherwise. These and other developments, including the introduction of new wireless applications and services and the demand for higher data speeds and increasing data volumes, necessitate more efficient and more effective use of the spectrum. Frequency policy therefore has a prominent role to play in contributing to these developments. In addition to performing a traditional regulatory function, to prevent interference and disruption, frequency policy also fulfils a market-regulating function aimed at ensuring a properly functioning market for telecommunication services.

The Action Plan adds that it is essential for connectivity providers that the government act predictably, thereby providing investment security regarding the availability of spectrum. In the Action Plan, the government gives mobile communications providers the security that the award of frequencies on a nationally exclusive basis, including the 700, 1400 and 2100 MHz frequency bands, will in principle be for 20 years, providing certainty regarding the roll-out of the new 5G networks. Another important frequency band for 5G roll-out is the 3.5 GHz band.

A further aspect specifically highlighted by the Action Plan concerns mobile coverage. As it is not possible to deliver this to certain areas in the Netherlands in a commercially feasible manner, there currently remain places in the country where network coverage is poor or absent. To address this issue, a coverage obligation has been announced, to be imposed on licence holders in the upcoming auction. They can factor this information and their knowledge regarding the associated costs they would incur into their bids during the auction. As a first element in the coverage requirement, the Action Plan states that coverage should be provided on 98% of the surface area of each municipality in the Netherlands, with a minimum data speed. This rate of data transfer was yet to be determined and was later laid down in the Memorandum on Mobile Communications (*Nota Mobiele Communicatie*).

¹ House of Representatives of the States General, 2017-2018 session, 26 643, No. 547.

² House of Representatives of the States General, 2015-2016 session, 24095, No. 409.

Following the Radio Spectrum Policy Memorandum and the Action Plan, the Memorandum on Mobile Communications was drawn up and the House of Representatives received regular progress reports. The Memorandum on Mobile Communications provides a more specific policy framework on spectrum allocation in the upcoming years, thereby confirming the need for predictability of policy.

In the Memorandum on Mobile Communications, it was decided as a first step to award the 700, 1400 and 2100 MHz spectrum jointly in a multi-band auction. This choice follows the recommendations of Aetha Consulting and is prompted by the linkage between these bands. This linkage primarily concerns the substitutability of the frequencies. The licences to be awarded will become effective at different times. The 1400 MHz band is already available. The 700 MHz band became available in 2020, after the former user surrendered the band in accordance with the relevant licensing terms. KPN currently uses this part of the spectrum within a larger frequency range for its digital terrestrial TV services (DVB-T). The European Commission has decided that, by 30 June 2020, Member States are obligated to allow the use of the 700 MHz frequencies.³ In practice, this means that the 700 and 1400 MHz licences can be used immediately following the award of licences following the auction.

The situation is slightly different as regards the 2100 MHz licences. These licences relate to the frequencies that were originally auctioned in 2000, a small number of which were auctioned once again in 2012. The licences were made renewable by Decision of 11 December 2014, following which the licences were renewed for the period from 1 January 2017 to 1 January 2021 for all the licence holders concerned on submission of their application. Following on from this renewed licence, a transitional licence will be awarded ex officio to the current licence holders, as well as to the parties that acquire 2100 MHz licences in the auction, in accordance with Section 3.8a of the Telecommunications Act. This transitional licence will be valid for a period of four weeks and may be renewed for a maximum of four weeks. This will be followed by the start of the licence period for the new 2100 MHz licences.

The Memorandum on Mobile Communications (hereinafter also: the Memorandum) was approximately three years in the making. An initial draft of the Memorandum was presented for consultation back in 2017. As the Memorandum deals, in a concrete manner, with the market regulating measures that need to be implemented to ensure competition in the mobile telecommunications market, the drafting of the Memorandum was heavily dependent on actual developments in the market. That made it necessary, among other things, to ask the Netherlands Authority for Consumers and Markets (ACM) for an opinion. The merger of T-Mobile Nederland and Tele2 Nederland, which was announced in November 2017, meant that the ACM's opinion inevitably needed to wait until the European Commission's final decision on the merger. Following approval of the merger by the European Commission, the ACM gave its opinion on the measures to be implemented in the auction in April 2019. The most important recommendations concerned the introduction of a 40% cap on the total frequencies that an individual operator may possess, an identical cap on the total spectrum possession in what are known as the low-spectrum bands (the 700 MHz band yet to be auctioned and the 800 and 900 MHz frequencies that have already been awarded) as well a 40% cap for the 3.5 GHz band that will be auctioned later. The ACM's opinion was incorporated in the Memorandum on Mobile Communications, which was published on 11 June 2019.

The Memorandum on Mobile Communications focuses on the frequency allocations in the upcoming years and formulates the objective for the government to strive for high-quality services that can cater to a wide range of demand and are available anywhere and at any time at competitive rates. This objective is overarching for, in any case, the upcoming auction of 700, 1400 and 2100 MHz spectrum and the subsequent auction of the 3.5 GHz band. As it is also important, in relation to the

³ Decision (EU) 2017/899 of the European Parliament and of the Council of 17 May 2017 on the use of the 470-790 MHz frequency band in the Union

auction of the 700, 1400 and 2100 MHz frequencies, for the market parties to know what perspectives are offered in this 5G band, from the point of view of investment security and the possible linkage between the various frequency bands, the outlines of this allocation were described in a letter to the House of Representatives sent on 24 December 2018.⁴ The letter also set out that this would be elaborated further in the Memorandum on Mobile Communications, following consultation.

The Memorandum on Mobile Communications states that, prior to the consultation on the auction regulations for the multiband auction of the 700, 1400 and 2100 MHz bands, further clarity will be provided regarding the alternative for satellite interception in Burum. Efforts have recently been made to find a solution that does justice to the roll-out of 5G on the one hand and protects national security on the other hand. Satellite interception generates vital information for the intelligence and security services and, as such, is crucial for national security, to support the armed forces and for the cyber domain.

It has recently become clear that a solution within the context of international cooperation is feasible, in principle. All efforts are focused on finding this international solution in time, i.e. before September 2022. This would pave the way for the availability of 300 MHz, from 3450 – 3750 MHz, for mobile communication (5G) as of 1 September 2022. If it is not possible to achieve the international solution by this date, it may be necessary to implement a bridging measure for a short period of time. At the current time, the likelihood of this measure being necessary is estimated to be low. Where required in the interests of national security, further agreements will be made about the (technical) nature and exact duration of any bridging measure to be implemented in consultation between the Ministry of Defence, the Ministry of the Interior and Kingdom Relations, the Ministry of Economic Affairs and Climate Policy and the parties that acquire spectrum in the 3.5 GHz auction. The bridging period to be sought will be limited to a maximum of six months in any event.

The radio spectrum between 3400 and 3450 MHz and between 3750 and 3800 MHz may be assigned for local use again as of 2026. These two blocks of 50 MHz may have limitations due to protection from neighbouring use, i.e. above 3800 MHz and below 3400 MHz.

In addition to the measures in relation to competition, the Memorandum on Mobile Communications also details the coverage obligation that will be imposed on the possession of licences for the use of the 700 MHz frequencies. This obligation addresses the element "available always and everywhere" within the above-mentioned objective of the Memorandum on Mobile Communications.

With the policy choices in the Memorandum on Mobile Communications as a framework for the allocation of the various frequency bands, an external organisation with expertise in auctions (DotEcon) was asked to recommend an auction model for the award of spectrum in the 700, 1400 and 2100 MHz bands. At the same time, Professor Peter Cramton, a renowned expert on auction theory and practice, was asked to give an opinion on the recommendations. The advisory report and the review report were published on 4 July 2019 and submitted to the House of Representatives. The responses submitted during the public consultation of the auction regulations were subsequently presented to DotEcon. It appraised these responses, which was then assessed by Professor Peter Cramton. The DotEcon appraisal has been attached as an appendix to a new version of its advisory report.⁵ These auction regulations have been drawn up on the basis of the advice mentioned above.

⁴ House of Representatives of the States General, 2018-2019 session, 24 095, No. 459.

⁵ The DotEcon advisory report and the assessment by Peter Cramton have been published on www.rijksoverheid.nl.

2. Starting points for the award of licences

2.1 Choice of auction instrument

In the Notification of the auction of licences for radio spectrum in the 700, 1400 and 2100 MHz bands (*Besluit bekendmaking veiling vergunningen 700, 1400 en 2100 MHz*), it was announced that the licences for radio spectrum in the 700, 1400 and 2100 MHz bands will be allocated through an auction. The Memorandum on Mobile Communications stated that scarce frequencies are, in principle, to be awarded by means of an auction. Demand is expected to exceed supply for the 700, 1400 and 2100 MHz bands and the 3.5 GHz band. It also seems an obvious choice to award licences for these bands on a national scale.⁶ The 700, 1400 and 2100 MHz frequencies will become available sooner than the 3.5 GHz frequencies. In addition, in accordance with the decision of the European Commission, Member States must allow the use of the 700 MHz frequency band for wireless broadband electronic communications services by 30 June 2020. This makes it necessary to hold a timely auction of licences for nationwide use of the 700, 1400 and 2100 MHz frequencies in 2020.

2.2 Memorandum on Mobile Communications policy choices

The Memorandum on Mobile Communications addresses this auction in depth and describes in great detail the basic criteria and policy choices, as well as the reasons and considerations on which they are based.⁷ These include, among other things, the division into lots (scope of licence) and the frequency usage requirements. The acquisition options are also described for the three current licence holders in frequency bands that are used for mobile communications.

2.2.1. How the caps work

The Capping regulation for mobile communications frequencies 2020 (hereinafter also: "capping regulation") specifies two caps: the 40% overall cap on total spectrum possession and the 40% cap on (total) possession of low-band spectrum (in the 700, 800 and 900 MHz bands). These caps and the amount of radio spectrum already licensed to an applicant determine the acquisition options in the auction.

In theory, new market players participating in the auction can acquire all the frequencies that are being auctioned. These options are limited for the existing licence holders, depending on the frequencies they currently possess.

The Memorandum on Mobile Communications set out the acquisition options available to participants in the auction. Minor changes have been made in these options. The reason is that the acquisition options were elaborated in the Memorandum based on the recommendations of the ACM, which assumed a total spectrum of 180 MHz in the 2600 MHz band. This has been changed to 170 MHz in the capping regulation, which has implications for the acquisition options, given the 40% cap on total spectrum possession. Where the ACM, with 180 MHz in the 2600 MHz band, had assumed a total of 670 MHz, the situation now, with 170 MHz in the 2600 MHz band, concerns a total of 660 MHz. 40% of this is 264 MHz.

The acquisition options are therefore as follows:

party	Total spectrum owned before the start of the auction (MHz)	Maximum spectrum to be acquired in the auction (MHz)
KPN	120	144, in practice: 140

⁶ It should also be noted that the licences to be auctioned for the 700 MHz frequency band relate to the land and the territorial waters, but not to installations at sea within the meaning of the North Sea Installations Act (*Wet installaties Noordzee*); the licences for these installations will be allocated separately in an on-request allocation. For reasons of clarity, these explanatory notes will hereinafter refer to "nationwide" use.

⁷ Memorandum on Mobile Communications, Chapter 4 (spectrum caps), Chapter 5 (licensing requirements) and Chapter 7 (consequences for the allocation of the 700, 1400 and 2100 MHz bands).

VodafoneZiggo	140	124, in practice: 120
T-Mobile	180	84, in practice: 80
new entrant	-	264, in practice: 260

As is set out in the capping regulation, the parties' acquisition options in the auction do not precisely match the allotment of 2x5 MHz (10 MHz) for the 700 and 2100 MHz licences and 1x5 MHz for the 1400 MHz band. Bids may only be submitted in lots of 5x in total, so that, due to the operation of the cap, the maximum is 260 MHz in the context of this auction. This explains the addition in the table of how the acquisition options work out in practice in the auction.

The aforementioned adjustment in the 2600 MHz band has no implications for the acquisition options in the 700 MHz band. These remain unchanged from what was described in the Memorandum on Mobile Communications. For the sake of completeness, they are shown here again:

party	Maximum spectrum to be acquired in the 700 MHz band (MHz)
KPN	40
VodafoneZiggo	40
T-Mobile	30
new entrant	60

The capping regulation will remain applicable until 2030. The licences may therefore be traded, or transferred, after the auction, provided that the caps imposed on spectrum possession continue to be observed. In accordance with Section 3.20 of the Telecommunications Act, a full or partial transfer of licences requires the Minister's approval, however. In the event the licence is transferred by universal title, an application for transfer to another name will be assessed by the Minister. In the interest of an orderly preparation of the auction, applications for transfer or transfers to another name will be deferred in the period from the entry into force of the auction regulations, marking the start of the application procedure, until the award of licences after the auction. In principle, applications that are received up to eight weeks before the entry into force of the auction regulations may still be considered prior to the entry into force of the auction regulations.

2.2.2. Licences

The available spectrum is as follows:

- 700 MHz band: 2x30 = 60 MHz (paired spectrum), offered in 6 licences, each of 2x5 MHz.
- 1400 MHz band: 40 MHz (unpaired spectrum), offered in 8 licences, each of 5 MHz;
- 2100 MHz band: 2x60 = 120 MHz (paired spectrum), offered in 12 licences, each of 2x5 MHz.

The (band-specific) frameworks for the award, the technical conditions, the provisions regarding transition and various obligations and requirements for the licence holders are set out in the explanatory notes to the licences, which are attached as an annex to the Notification of the auction of licences for radio spectrum in the 700, 1400 and 2100 MHz bands.

In addition to the specific licensing requirements, the Telecommunications Act also includes generic provisions that licence holders must comply with in full. Attention is drawn, among other things, to the provisions regarding authorised wiretapping and the application of other powers in accordance with the Code of Criminal Procedure and the Intelligence and Security Services Act 2017 (*Wet op de inlichtingen- en veiligheidsdiensten 2017*) in connection with telecommunications, so that the public services with a public order and security task, also in view of technological developments such as 5G, can continue to perform their work effectively within the legal framework.

The licence sizes referred to in the Memorandum on Mobile Communications and reproduced in the licences represent the minimum spectrum for which a participant may bid in the auction. These are 2x5 MHz for the 700 and 2100 MHz frequency bands and 5 MHz for the 1400 MHz band. The auction makes no specific provision for parties to indicate the minimum spectrum they may wish to acquire above these licence sizes. Nonetheless, the auction is designed in such a way that parties can bid and continue to bid for the minimum spectrum they wish to acquire. The frequencies acquired in the auction will be awarded as a block. The manner in which this is provided for in the auction is described in Chapter 5 of these explanatory notes.

2.2.3. Licensing period

The Memorandum on Mobile Communications stated that the 700, 1400 and 2100 MHz licences would be valid until 2040, without further specifying the date. The expiry date for each of the three licensing categories concerned is now set at 31 December 2040. This synchronised expiry date fits perfectly with the allocation schedule given in the Memorandum on Mobile Communications.⁸ After the auction in 2020, it will be possible to use the 700 and 1400 MHz licences immediately after they are awarded. The current 2100 MHz licences will remain valid until 1 January 2021. The transitional licence plays an important role in facilitating a smooth transition to a change in the allocation of the 2100 MHz frequencies amongst the licence holders, which may be a consequence of the results of the auction. It is legally awarded in accordance with Section 3.8a of the Telecommunications Act. The transitional licence determines that old and new licence holders must arrange for the new licences to be implemented and the old licences to be discontinued in a transition agreement. A four-week period after 1 January 2021 is provided for the actual transition, with the possibility of extension for a maximum of four weeks, after which the new 2100 MHz licences will take effect in 2021.

2.2.4. Frequency usage and the coverage and speed requirement

The Memorandum on Mobile Communications specifies the frequency usage and the coverage and speed requirement that are attached to the licences to be auctioned. The frequency usage requirements have been reproduced unchanged in the licensing requirements. As regards the coverage and speed requirement, the Memorandum stated that the 700 MHz licences will be subject to the requirement that, two years after the licences have been granted, 98% of the surface area of each Dutch municipality must have coverage outdoors, with a minimum speed of 8 Mbps. Users must be able to experience this outdoors with a high degree of probability. From six years after the granting of the licences, the minimum speed will be 10 Mbps. The Memorandum indicated that this standard would be explicitly stated in the licences and the draft licences. This applied more specifically in respect of the quantification of the high degree of probability. This is set at 90% in the licences. In addition, the coverage and speed requirement will only apply to parties that hold licences in the 800 and 900 MHz frequency bands and will be limited in time until 2030. The latter is because, in the event licences are re-awarded, the requirement will be reviewed in the light of the state of technological and other developments at that time. Finally, the coverage and speed requirement is imposed for spectrum possession of 2x10 MHz or more in the 700 MHz frequency band. The requirement does not apply in the event a single licence of 2x5 MHz is acquired.

3. Application procedure

Section 3.13(1) of the Telecommunications Act provides that a licence for the use of radio spectrum must be obtained from the Minister of Economic Affairs and Climate Policy. An application needs to be submitted to obtain a licence. For the purposes of Article 8 of the Frequency Decree 2013 (*Frequentiebesluit 2013*), these regulations set out how an applicant should submit an application for a licence for mobile communications applications and which information it must provide with the application. The regulations also lay down which requirements referred to in Article 9 of the Frequency

⁸ Memorandum on Mobile Communications, pages 12 and 13.

Decree 2013 an applicant needs to comply with in order to be admitted to the allocation procedure (admission requirements). In addition, these regulations are intended to implement Article 10 of the Frequency Decree 2013, pursuant to which, with regard to the consideration of a licence application, rules are laid down regarding the manner in which the auction should take place.

The application procedure starts with the submission of the application in conformity with Article 3(1).

Only one application may be submitted per applicant (Article 4). Reference is made to Article 3 of the capping regulation for establishing whether two or more applicants are to be considered as a single applicant. To facilitate this, applicants are required to include an organisation chart and corresponding documents showing their legal structure with their application (see Annex I, under A.3). Applicants are advised to ensure the information they are required to provide is as complete as possible. If the information is not sufficient to allow a proper judgement to be formed of the mutual relations, Section 18.7 of the Act may be applied. This Section permits any and all information to be demanded that may be needed to implement the provisions under or pursuant to the Act. If more than one application is submitted per applicant, by different legal entities that are group companies within the meaning of Article 3 of the capping regulation and, therefore, pursuant to Article 4(2), are qualified as a single applicant, the possibility of rectifying the omission then will be offered. If the number of applications is not reduced to one within the period provided for that purpose, it will not be possible to consider the applications submitted by that applicant, in accordance with Article 5(5), due to contravention of Article 4(1) of the capping regulation. The parties must take due account that the following will apply, in principle, in this situation: none of the applications submitted by *any* legal entities that are qualified as being one and the same applicant will be taken into consideration.

The application and the information and documents that must be provided with it should, in principle, be drafted in Dutch. The only possible exception to this requirement applies to market players that are established and have their registered office in a Member State of the European Union or one of the other states that are a party to the Agreement on the European Economic Area (see Article 4(5) and (7)). The information and documents referred to in Annex I may be drafted in the language of these states, provided that they are accompanied by a Dutch translation of the documents concerned.

Section 4:5 of the General Administrative Law Act (*Algemene wet bestuursrecht*) provides for the possibility of rectifying an omission where the applicant has failed to comply with a legal requirement for considering the application, or if the information provided is not sufficient to enable an assessment of the application or preparation of the decision. Article 5(5) provides that the Minister may decide not to consider an application, in accordance with Section 4:5 of the General Administrative Law Act, if, following the possibility of rectifying an omission, the application does not satisfy, or does not fully satisfy, the specified requirements. The following is relevant as regards the manner in which the Minister will use the power granted to him in this Section. Major commercial interests are at stake with any spectrum allocation. It is important that future licence holders and their investors are able to make a realistic assessment of the legal and commercial consequences of the Minister's decisions. There may be major implications in the unfortunate event that an applicant is wrongly admitted to an auction or wrongly excluded from an auction. It is therefore essential to ensure as much clarity as possible. Insofar as permitted by the legal framework, the policy is designed to allow applicants one opportunity to rectify an omission. If an applicant still does or does not entirely satisfy the specified requirements, its application will, in principle, not be considered.

An applicant must provide a deposit or a bank guarantee in an amount equal to the minimum price for a licence in the 2100 MHz band as security for payment of its bid. The amount of the deposit or a bank guarantee is the same for each applicant, irrespective of whether the applicant actually wishes to acquire 2100 MHz spectrum. In addition, several requirements are imposed in Article 7(2) that applicants must fulfil, in order to assure the creditworthiness of the applicants. Here, too, the intention is to avoid a situation where an applicant is unable to honour its bids. In this connection, an applicant

may not be in a state of liquidation or in the process of being wound up, it may not have been granted suspension of payments and it must not have applied for the suspension of payments.

The 700, 1400 and 2100 MHz frequencies are considered as scarce, in view of the fact that they represent a value of several (tens of) millions of euros, according to the study carried out by Deloitte (as set out in the next paragraph), even with the coverage and speed requirement applicable. Therefore, a situation is not the case in which it could reasonably be expected that the radio spectrum available is sufficient to meet demand (as referred to in Article 3.10(2) of the Act). There will be no separate determination of scarcity on the basis of applications that are received. For this reason, it is not necessary for applicants to state in the application the number of licences they wish to obtain in the auction at the reserve prices discussed below; applicants can wait to express this in the first primary bidding round, once they have been admitted to the auction.

4. Reserve prices

4.1 Starting points with regard to reserve prices

A reserve price is the minimum price for which a frequency licence is sold. This price is consequently taken as the starting price in the first round of the auction. As set out in the explanatory memorandum to the introduction of the present Chapter 3 of the Telecommunications Act,⁹ the reserve price has two purposes: (1) to facilitate a faster and more efficient conduct of the auction and (2) to bar non-serious bidders from participating in the auction. It follows from recommendations by DotEcon,¹⁰ Peter Cramton¹¹ and Deloitte that a reserve price can also serve other purposes. An adequate reserve price serves to minimise the monetary advantage from ending the auction early for strategic reasons. This promotes competition in the auction and prevents frequencies from being acquired for an economically unjustifiable amount. It is therefore important not to set the reserve prices too low. A reserve price that is too high, being above market value, poses the risk of scarce spectrum not being allocated or of impeding market access by new entrants. This can lead to an inefficient allocation of spectrum, which would conflict with efficient use of spectrum, which is the central objective of frequency policy. Consequently, a reserve price should be below the estimated market value, so that the market value can be expressed through competition in the auction and the auction results in an efficient allocation of spectrum.

Given the importance of the reserve price for an efficient conduct of the auction, it was decided to ask an external research agency to make recommendations on an appropriate reserve price level. This study was carried out by Deloitte Corporate Finance (hereinafter: "Deloitte"). The basic principle underlying Deloitte's advice on the determination of reserve prices is that they must reflect the reserve-price purposes mentioned and the main objective for the allocation of licences, being that "the auction should result in an efficient allocation, offer realistic chances of success to all participants and yield a realistic amount of revenue". The reserve prices were adopted in full from Deloitte's recommendations. Information on the value of the spectrum to different operators can be drawn from the recommendations. As this information is competition-sensitive and may encourage strategic behaviour, the method of valuing the spectrum and the associated reserve prices will be explained in terms that are as abstract as possible below, and in a way that ensures it cannot be used to identify individual parties.

4.2 Valuation method

Deloitte used two main methods to arrive at its recommendations: the benchmark method and the opportunity cost method. The opportunity cost method consists of two (sub)methods: the cost reduction approach and the DCF (discounted cash flow) approach. These methods are covered in more detail in

⁹ House of Representatives of the States General, 2007-2008 session, 31412, No. 3.

¹⁰ House of Representatives of the States General, 2015-2016 session, 24095, No. 491.

¹¹ House of Representatives of the States General, 2015-2016 session, 24095, No. 491.

the subparagraphs below. Calculating the value on the basis of the above three approaches results in a separate value range for each frequency licence. Merging these three approaches allows a total value range to be determined. The minimum value of this total value range is formed by the lower end of the benchmark valuation and the maximum value by the upper end of the DCF valuation. Based on different considerations, Deloitte determined a reserve price within this total value range.

4.2.1. Benchmark method

In the benchmark method, the value is derived from the results of frequency auctions in other countries. As not all auctions are comparable with the auction of the 700, 1400 and 2100 MHz frequencies, a selection was made of the most comparable frequency auctions. Deloitte used its own database with data on historical mobile communications frequency auctions for this purpose. This included frequency auctions from developed European economies in the period 2009 to 2019. Only frequency auctions from the following European countries were used: Belgium, Denmark, Germany, Finland, France, Greece, Iceland, Italy, the Netherlands, Norway, Austria, Portugal, Spain, Czech Republic, United Kingdom, Sweden and Switzerland. Deloitte considered these auctions as being most comparable with the situation in the Netherlands. Deloitte examined different valuation elements such as market conditions, possible applications, revenue generating potential and competition. In addition, only the auctions of which the auction results (prices) per frequency band were available or could be derived were analysed. After applying the above selection criteria, 44 usable frequency auctions remained. When selecting usable auctions, auctions selling 700 MHz, 1400 MHz and 2100 MHz bands and easily comparable frequencies were both taken into consideration. For example: historical 800 MHz auctions were included in the benchmark analysis of the 700 MHz auction. A broader control group has been chosen as there have been just relatively few 700 MHz spectrum auctions in Europe to date. A comparison is made with the 800 MHz band, due to the comparability of the characteristics of the frequencies (both paired sub-1 GHz spectrum) and due to the prevailing technologies used in these frequency bands. Deloitte opted for this method to ensure that the benchmark analysis for each frequency is supported by a sufficient number of observations (historical auctions). A subselection of usable historical auctions was then made for each licence category. The subselection per licence category was made on the basis of the frequency band, whether it concerned paired or unpaired spectrum and whether the spectrum was already being used at the time of the auction. This subselection then determined the value range for each frequency band. To make it possible to compare the historical auctions, Deloitte applied corrections for aspects like duration, payment in instalments, price and differences in prosperity (based on the purchasing power parity of exchange rates) and inflation. The benchmark valuation produced a value range of € 0.1562 - € 1.3851/MHz/Capita for 700 MHz spectrum, € 0.0058 - € 0.2795 for 1400 MHz spectrum and € 0.0013 - € 0.3818 for 2100 MHz spectrum.

4.2.2. Opportunity cost method

The value range produced by the opportunity cost method is a result of merging the results of (1) the cost reduction method and (2) the DCF method. Both are explained in more detail below. Three scenarios were used for both the cost reduction method and the DCF method. The three scenarios differed in terms of certain key variables for valuation: development of ARPU (Average Revenue Per User), development of data usage and the WACC (weighted average cost of capital). The valuation of these variables was assessed as pessimistic, average or optimistic. As regards development of ARPU, this varies from falling to rising, development of data usage varies from strong increase to very strong increase, while a surcharge has been included in the pessimistic scenario for the WACC. This produced three values that jointly constituted the best estimated value range of the cost reduction method and the DCF method.

The cost reduction method was used to determine the value of the frequencies to be auctioned by calculating the cost savings an average market player could achieve by acquiring (a combination of) frequencies compared to the situation in which it acquires no frequencies. Acquiring frequencies allows a market player to generate more capacity by adding additional frequencies to existing installation sites. The alternative is to densify the network. This can be achieved by building additional installation sites

and using them to deploy frequencies that are already possessed by the market player. This involves capital expenditure on equipment (CAPEX) as well as operational expenditure (OPEX) for the continued use of the equipment. Acquiring frequencies reduces the growth in installation sites needed to continue to provide customers with sufficient capacity. The associated savings were used as a proxy for the value of the frequencies to be auctioned. The cost reduction valuation produced a value range of € 0.367 - € 0.435/MHz/Capita for 700 MHz spectrum, € 0.049 - € 0.058/MHz/Capita for 1400 MHz spectrum and € 0.123 - € 0.146/MHz/Capita for 2100 MHz spectrum.

The DCF method was used to determine the value that an average market player could create by acquiring the various frequencies that are being auctioned off. The benefits were quantified on the basis of the anticipated data usage per user and the ARPU. The costs, including the costs of purchasing network equipment and for new additional installation sites, as well as the operating costs, were also estimated. Based on this, it was possible to calculate the net cash flows. The value of the spectrum being approximately equal to the sum of the net present value of the future cash flows achievable with the frequencies being auctioned off. The value of the frequencies based on the DCF method is normally greater than the value calculated using the cost reduction method, because account is taken not only of the costs that can be saved by acquiring frequencies, but also of the revenues that can be generated with those frequencies.

The DCF method produced a minimum value of € 0.780/MHz/Capita for 700 MHz spectrum, € 0.104 for 1400 MHz spectrum and € 0.262 for 2100 MHz spectrum.

Both the cost reduction method and the DCF method assume that the market player wishes to acquire a portfolio of lots. The total value of the portfolio is then allocated to the separate lots using an allocation formula based on the benchmark outcomes.

4.3 Recommended reserve prices

Deloitte took the overall value range as its starting point for making recommendations on the reserve prices. On this basis, Deloitte first considered within which range compared to the overall value range the reserve prices should be set. This range within the overall value range is the reserve price range. The minimum value of the reserve price range was set, in line with the overall value range, at the lower end of the benchmark valuation, while the maximum value of the reserve price range was set at the lower end of the DCF valuation. The maximum value of the reserve price range was the minimum value of the DCF valuation, as this should minimise the risk of unsold frequency licences. It also ensured that a reserve price would be set at a level below the expected economic value of the spectrum. Deloitte consequently recommended reserve prices for the 700 MHz band licences of € 0.16 - €0.78/MHz/Capita, for the 1400 MHz band of € 0.00 - € 0.10/MHz/Capita and for the 2100 MHz band of € 0.00 - € 0.26/MHz/Capita.

To determine the reserve price, Deloitte then carried out the following four analyses: (i) a further analysis of all of the auctions included in the benchmark, (ii) a further analysis of the values obtained via the cost reduction method, (iii) an analysis of the impact of the chosen auction model on the reserve prices, and (iv) an analysis of the impact of the chosen spectrum caps on the reserve prices. The further analysis of the benchmark consists of an analysis of how the Dutch situation compares to the auctions included in the benchmark, with a view to arriving at a decision on where in the reserve price range the reserve price should be positioned. The following factors are considered: a) demography: population growth, population density, the penetration rate of mobile communication, data use per person and ARPU; b) auction model and design: type of auction model, type of MHz band, MHz per lot, adjacent lots, licence period duration, the (coverage) requirements stipulated and restrictions imposed; and c) market and competition: existing infrastructure, number of bidders in the auction / competition and economic conditions. These factors all play a role in explaining the outcome of an auction. If these factors differ too greatly from the situation in the Netherlands, the average auction outcome cannot be considered as a benchmark outcome and the reserve price value will need to be adjusted upward or downward. The demographic variables are a case in point. The Netherlands has, on average, high

population growth and high population density compared to the countries in the benchmark. It would therefore be logical to set the reserve price slightly higher in the reserve price range.

Further analyses were also carried out on the values generated via the cost reduction method. These analyses involved weighing up the values from the Deloitte benchmark against the values calculated using the cost reduction method. The relative position of the cost reduction value within the reserve price range is taken into account in the determination of the price range. Deloitte took into account the impact of the Dutch auction model and the Dutch spectrum caps too. The median of the benchmark is taken into consideration when determining the reserve prices, to further limit the impact of any deviations above and below the median.

In the case of the 700 MHz licences, the analyses above gave rise to the recommendation that the reserve price be set in the middle of the reserve price range. For the 1400 MHz band, too, Deloitte believes that the reserve price should be set in the middle of the recommended range. On the basis of the position in the benchmark, the relative value of the cost reduction, the auction model, the spectrum caps and the auction participation of deviating market players, Deloitte recommends that the reserve price for the 2100 MHz band be set at the upper end of the reserve price range. As such, the reserve prices set at below market value, the efficient allocation of frequencies is achieved and a realistic revenue from auctioning is guaranteed too.

Taking all considerations into account, Deloitte recommends a reserve price of € 0.435/MHz/Capita for the 700 MHz band, € 0.058/MHz/Capita for the 1400 MHz band and € 0.204/MHz/Capita for the 2100 MHz band. This translates to € 75,180,000, € 5,030,000 and € 35,279,000, respectively, per licence. The recommended reserve prices are reproduced in Article 17 of the auction regulations as round prices in the first primary bidding round.

5. Auction model: SMRA-Clock Hybrid

The model that will be used for this auction is the SMRA clock hybrid model, hereinafter: simultaneous multiple-round auction with provisional winning bids. The auction will take place online. Any party having a computer with an internet connection and the required software can, from a technical viewpoint, take part in the auction.

5.1 Reasons for choosing this model

The auction model should safeguard the auction objectives, according to which the auction should result in an efficient allocation of spectrum, with the spectrum being assigned to the party able to generate the most value with it. The auction should offer realistic chances of success to all the potential participants and result in a realistic revenue from auctioning. Other objectives are simplicity, transparency and freedom of choice. They ensure that all participants are clear on how the model works. In addition, the auction model should ensure that strategic bidding is discouraged. DotEcon, an external consultancy firm with expertise in auctions, was asked to recommend a suitable auction model. DotEcon has also developed the software to be used for the auction.

DotEcon prepared its recommendations on the basis of the spectrum to be auctioned, the division of the spectrum into lots,¹² the auction objectives set out above, the market-regulating measures that were decided on in the Memorandum on Mobile Communications based on the ACM's opinion¹³ and the results of the study carried out by Aetha,¹⁴ which found that the linkage between the frequencies of these bands is limited. DotEcon recommends using a simultaneous multiple-round auction with

¹² The decision has been made to award 6 and 12 licences of 2x5 MHz for the 700 MHz and 2100 MHz bands, respectively. For the 1400 MHz band, eight licences of (1x)5 MHz will be awarded.

¹³ <https://www.acm.nl/sites/default/files/documents/frequentieveiling-advies-2019.pdf>.

¹⁴ Aetha, 'Research into linkages between the 700 MHz, 1452-1492 MHz and 2100 MHz bands', Cambridge: 07 October 2016.

provisional winning bids for the primary phase and a combinatorial second-price closed-bid model for allocating specific lots. DotEcon's recommendations were presented to Professor Peter Cramton, an internationally renowned expert on auction theory and practice, who agreed with this choice.

DotEcon argues that multiple-round auction models are better suited to achieving the auction objectives than models with a single closed bidding round, since the multiple-round model reduces uncertainties for participants as well as the strategic complexity. As the participants are able to respond to changing circumstances in each round, they each have the possibility of influencing the outcome of the auction. This auction model therefore ensures that a participant in the auction cannot be surprised by the outcome of the auction. As an earlier market consultation on the main characteristics that the auction design should include highlighted that bidders should not be exposed to substantial aggregation risk, the primary phase is not combinatorial. The participants in the auction are therefore responsible for securing the desired number of frequencies and desired combination of frequencies between the various frequency bands themselves.

For the primary bidding phase, the auction model employs a simple pay-as-bid price rule, just like every non-combinatorial multiple-round auction; successful bidders pay the price they themselves bid for their winning bids. For the secondary bidding phase, the allocation bidding round in which participants bid for the place in the frequency band they wish to obtain, a second-price rule is employed, just as in the previous multi-band auction. This creates an incentive in this phase to bid according to value, which contributes to efficient spectrum allocation.

The simple pay-as-bid price rule provides participants with maximum certainty, but at the same time also offers participants certain strategic incentives, in particular to strategically reduce their demand in order to benefit from lower prices, thereby raising the possibility of reduced auction efficiency (*strategic demand reduction*). As the bids by other participants are not relevant for determining the price that a bidder pays, it is advantageous for the auction to be brought to a conclusion as quickly as possible. Given the objectives of ensuring an efficient spectrum allocation and a realistic revenue, this risk must be as low as possible. Setting an adequate reserve price can mitigate this risk without losing the aforementioned benefits (certainty and simplicity) of a pay-as-bid price rule. Reducing transparency during the auction can also drive down strategic incentives. DotEcon states in its recommendations that any concerns about strategic incentives could be accommodated in the design of the auction, such as regarding the provision of information to participants during and after the auction. For this reason, it has been decided not to disclose the number of participants or their identity prior to and during the auction. This does not prevent participants from making their intended or actual participation in the auction known themselves, if they wish. If a participant opts to do so, it will be expected to make its participation known publicly (via a press release, for example). Other than this, minimal information will be provided to participants on the course of bidding during the auction itself: after each bidding round, participants will be notified of the demand there was for licences in the licensing category in question. After the auction, all bids from each bidding round will be disclosed. The bids made by participants in the auction that did not acquire any spectrum will be anonymised.

5.2 How the model works

The auction consists of two phases: the primary phase and the allocation phase. In the primary phase, it will be determined whether and how much radio spectrum a participant has won in each band. A simultaneous multiple-round clock auction with provisional winning bids will be held to this end. The specific radio spectrum to which a licence relates is then determined in the allocation bidding round. This will be based on a combinatorial second-price closed bidding model. The allocation bidding round is restricted to the participants that have acquired licences in the primary phase. The primary and allocation phases are discussed further in the following paragraphs.

5.2.1 Primary phase of the auction

Purpose of the primary bidding rounds

The purpose of the primary bidding rounds is to allocate the licences amongst the participants in the auction. A bidder submits one bid in each round. A bid is expressed in the number of bids for the licences K, L and M that it wishes to acquire for the round prices set in that bidding round (for example, two licences K, three licences L and three licences M). Bids are made for licences K, L or M without it having been determined to which specific radio spectrum the licences K, L or M relate. After each round in the primary phase, participants will be informed of the number of bids in the bid listing per licensing category; this identifies total demand for the type of licence in question in that particular round. The primary bidding rounds will continue until the total demand for the licences is equal to or less than the total supply of licences. The primary phase of the auction will not conclude until all three frequency bands are no longer scarce and bidders are not able to bid for new licences any more (also see the explanation below). Even if there is no scarcity for a certain band in a bidding round, it will continue to be possible to submit new bids for licences in the band in question in subsequent rounds, as participants often retain the possibility to switch their demand between frequency bands as the price of a frequency band increases.

Provisional winning bids

In the primary phase, the provisional winning bids are determined by the drawing of lots after the conclusion of each bidding round (Article 18). They are identified per licensing category by the e-auction system, which uses the drawing of lots to determine the order of participants first and then places all bids, grouped per participant, in the same order in the bid listing. The first six, eight and 12 bids placed for the 700, 1400 and 2100 MHz bands respectively will be identified as provisional winning bids. If demand is greater than supply and participants have submitted bids that have been placed at the end of the listing, it is possible that none or just some of their bids may be identified as provisional winning bids. The identification of provisional winning bids will end when the number of provisional winning bids that have been identified as such is the same as the number of licences available.

A simplified example can help clarify this. It only shows the course of bidding in a single licence category and not in other licence categories that are simultaneously auctioned. Let us say five participants are interested in licences in a category (in this example, band 1). Eight licences are available in this category and the course of bidding is as follows:

Band 1														
round	price	Bids	VWB1	VWB2	VWB3	VWB4	VWB5	VWB6	VWB7	VWB8	No PWB			
1	5	A: 3	B@5	B@5	A@5	A@5	A@5	C@5	C@5	D@5	D@5	D@5	E@5	E@5
		B: 2												
		C: 2												
		D: 3												
		E: 2												
2	7	D: 3	E@7	E@7	D@7	D@7	D@7	B@5	B@5	A@5	A@5	A@5	C@5	C@5
		E: 2												
3	7	A: 4	A@7	A@7	A@7	A@7	C@7	E@7	E@7	D@7	D@7	D@7	B@5	B@5
		C: 1												
4	9	B: 2	B@9	B@9	A@7	A@7	A@7	A@7	C@7	E@7	E@7	D@7		
5	9	D: 3	D@9	D@9	D@9	B@9	B@9	A@7	A@7	A@7	A@7	C@7	E@7	
6	9	C: 1	E@9	E@9	C@9	D@9	D@9	D@9	B@9	B@9	A@7	A@7	A@7	
		E: 2												
7	10	A: 2	A@10	A@10	E@9	E@9	C@9	D@9	D@9	D@9	B@9	B@9		
8	10		A@10	A@10	E@9	E@9	C@9	D@9	D@9	D@9				

PWB stands for "provisional winning bid". This provisional winning bid is shown in the table as "bidder@price", with the "price" being the price at which the bidder obtained the provisional winning bid.

This way of establishing provisional winning bids means that a maximum of one participant per licensing category could find that just some of its bids will be identified as provisional winning bids. In the above example, this happens after rounds 1, 2, 3, 4 and 5. As shown in the example, just some of the bids submitted by participant D after round 1 have been identified as provisional winning bids; it has a provisional winning bid for one licence, despite bidding for three licences. It is also possible that none of the bids submitted will be winning bids. This happens in Round 1, for example, in which bidder E does not have any provisional winning bids.

In a situation where just some of the bids that participants have submitted are identified as provisional winning bids, they may decide, in the next bidding round, to bid on a) the same number of licences as in the previous round, b) a lower number of licences (but, in the event of a higher round price, at least the same number of licences for which they have provisional winning bids and, if the round price is the same, more licences than the number for which they have provisional winning bids), or c) a higher number (if permitted by their activity level; see the next paragraph). The round price may be increased, in this case. In the example, this is illustrated in relation to bidder D. It bid on three licences in round 1, but had a provisional winning bid on just one licence, at a price of 5, at the end of the round. In round 2, bidder D bids on three permits, just as it did in round 1, but now at the round price of 7. By doing this, bidder D replaces its earlier provisional winning bid at a price of 5: all provisional winning bids that a participant has in a particular licensing category will have the same

round price. Provisional winning bids are established as follows in this situation. The bids made at the higher price will be placed at the top of the listing. If new bids are submitted by a number of participants, the order in which the bidders are placed at the beginning of the listing will be determined by drawing lots again. If as many or more bids were submitted at that higher round price than there are licences available in that category, all the provisional winning bids will have a higher round price. If fewer bids are submitted in a bidding round at the higher round price than the number of licences available, some of the provisional winning bids from the previous round will continue to apply (with the exception of the provisional winning bids from the previous round that have been increased in this round; see Article 18(4)); bids move up the listing as it were. The same will happen if the round price is not increased and new bids are made. New bids will always be placed at the top of the listing, while the order in which participants is placed will be determined by drawing lots if there is more than one bidder. In the example, this happens between rounds 5 and 6, where the place in the listing for bidders E and C is determined again.

If no more bids are made in following rounds at the applicable round price, then it is possible that, at the end of the auction, a participant will pay a higher base price (Article 20(3)) for the licences it has acquired than other participants. In the example, this happens in round 8, in which participant A acquires two licences for a higher price than the other participants (participants E, C and D) with winning bids. It can choose to have the eligibility points associated with the unsuccessful bid moved to a different licensing category or submit an empty bid. See the paragraph below about the eligibility level and points.

Participants can also choose to exercise an option to pass, while maintaining their eligibility level without having to submit a bid. Participants might want to do this if they want to switch to a different frequency band but do not have the eligibility points necessary. An option to pass enables a participant to skip a round and wait to see whether it is outbid on its provisional winning bid(s). The eligibility level and eligibility points are explained in more detail below.

Eligibility level and points

Each licence is equivalent to a number of eligibility points; licences K or M are equivalent to 10 eligibility points and a licence L is equivalent to five eligibility points (Article 2(2)). The eligibility level is the total number of eligibility points a participant can use at a certain moment in the auction.

The maximum eligibility level of a participant may never exceed the number of eligibility points corresponding to the total number of frequencies it may acquire under the spectrum cap (see also the Capping regulation for mobile communications frequencies 2020 and the accompanying explanatory notes). It will therefore be established, prior to the auction, how much scope for acquisition a participant has under the capping regulation, in view of the amount of radio spectrum for which it already holds licences. In accordance with Article 8(2), this will be based on the amount of radio spectrum for which the applicant and its group companies within the meaning of Article 3 of the capping regulation have licences on the date on which the auction regulations enter into force.¹⁵ The participant will be assigned the corresponding number of eligibility points in accordance with Article 8(1)(b) as its eligibility level at the start of the first bidding round; a participant may submit a bid in that bidding round that corresponds to no more than the number of eligibility points assigned beforehand. The eligibility level of a bid in a subsequent bidding round must be equal to or lower than the eligibility level of the bid made by the participant concerned in the previous round (see Article 16(2)). If, for instance, it made a bid in the first primary bidding round equal to 60 eligibility points, it

¹⁵ In order to ensure the orderly conduct of the auction, requests for a transfer of licences, or a transfer of name, cannot be considered from eight weeks prior to the entry into force of the auction regulations until one week after the award of licences.

may make a bid in the following round (in this example: the second primary bidding round) of no more than 60 eligibility points.

The eligibility points that are linked to its provisional winning bids are then taken into account. If the provisional winning bids correspond to 30 eligibility points, for instance, it may use its remaining 30 eligibility points in the following round, thereby ensuring that it retains its total of 60 eligibility points. It may also decide, however, not to use all 30 remaining eligibility points again - if the prices increase, for instance. As a result, the total demand for spectrum of each participant will gradually decrease as the auction progresses and the price increases. If a bidder has a provisional winning bid, it may only use the associated eligibility points in an attempt to retain this provisional winning bid or to increase the number of bids on that licensing category with eligibility points that have become available, provided, of course, that its total bid conforms to its eligibility level. An increase of the total demand for licences is not possible, guaranteeing the transparency of the auction process.

The auction system software will check whether a participant's bid meets the maximum number of eligibility points applying to the participant in that round (Article 16). The software therefore does not allow a bid to be made that exceeds the maximum number of eligibility points for the participant in that round. Once a participant has provisional winning bids in the auction, the eligibility level associated with those bids is not lost or cancelled in the following round. A participant is not obliged to continue bidding in each primary bidding round, and may stop bidding at any moment. It can do this by submitting an empty bid (submission without entering anything) or bidding zero in the categories in which it does not have any provisional winning bids. Its provisional winning bids and the associated eligibility level will not be cancelled as a result, although the participant will, as a consequence, lose the remainder of its eligibility level. As explained above, a participant can also opt not to submit a bid. If it still has an option to pass, this will be triggered automatically and it will retain its eligibility level. If it no longer has an option to pass, any eligibility level it has that is not linked to provisional winning bids will be cancelled in this situation too.

Options to pass

A bidder may use an option to pass three times. If it does not make a bid, an option to pass is automatically triggered and its eligibility level is maintained. It may then participate again in the following round. Participant D, which bids on three licences in the example but only provisionally wins one licence, can opt not to bid for three licences at a higher price straight away in the second primary round. It can use an option to pass and thereby retain its eligibility level from round 1 for the third primary round (an eligibility level that is linked to the three licences). It may do this because it prefers to bid for one or more licences in other categories in a later round and will use its eligibility points for this purpose. It may need to use the eligibility points from its provisional winning bid to switch to another licensing category. An option to pass therefore enables it to skip a round and wait to see whether its provisional winning bid for the licence is cancelled. Using an option to pass provides no guarantee, however, that the full eligibility level will become available for switching to another licensing category. If the participant does retain its provisional winning bid(s) in the round, it may, in the following round, either partially switch its eligibility points to another band or choose not to use its eligibility points in the following round and accept a lower eligibility level for the round thereafter, or use its eligibility points in the same licensing category. If all the participant's eligibility points in a round are attached to provisional winning bids, there will be no reason for it to make a fresh bid. In this case, an option to pass is not automatically triggered. If a participant is unable to make a bid in a round due to technical problems, an option to pass will automatically be triggered. If these technical problems can be identifiably demonstrated, the Minister may decide to disregard this exercised option to pass (see Article 16(8) and (9)); this is explained further in Chapter 5.4 Technical problems and special circumstances). An option to pass will be exercised even if technical problems prevent a bidder from making a bid in the first bidding round. In Article 16, the exercising of an option to pass is linked to the level of eligibility points corresponding to the provisional winning bids that a participant has. These eligibility points will be zero if the bidder does not have any provisional winning points - in the

first bidding round, for example. Even in this situation, the eligibility points will be lower than the eligibility level and an option to pass will be triggered automatically.

Round prices

At the start of the first primary bidding round, the initial round price for the licences will be € 75,180,000 for a licence K, € 5,030,000 for a licence L and € 35,279,000 for a licence M (Article 17(1)). These minimum amounts are also referred to as the "reserve prices". The considerations on which reserve prices are based is explained in Chapter 4. During the primary bidding rounds, the Minister will increase the price per licence for a licensing category if all provisional winning bids in the category in question are the same price (see Article 17(3)). This will also happen if demand in the bidding round matched the number of licences available, as this could mean that the licences in the category in question are scarce. However, participants could also still be able to expand their demand using eligibility points that were linked to bids in other categories. If other licences are scarce, the round price for a licensing category will be raised despite the licences concerned not being scarce at that moment. This is explained based on the example described above.

In the previous example, after round 4, there are two provisional winning bids at a price of 9 (from Bidder B) and six further provisional winning bids from round 3, which have a price of 7 (from bidders A and C). There are changes in the provisional winning bids compared to round 3, but the price is not increased in round 5. In other words, bidders will first be invited to outbid the provisional winning bids with a price of 7. This happens in round 5 in part, resulting in almost all the provisional winning bids (submitted by bidders B and D) having a price per licence of 9.

The increase may vary from one licensing category to the next. For instance, the price of the licences K may increase by 2% while the price of the licences L increases by 5%. The maximum price increases vary from one band to another: licences K and M increase by a maximum of 5% and licences L by a maximum of 10%. Price increases will be announced prior to the first auction day, in the letter in which participants are notified of their admission to the auction as participants. The auctioneer will announce the maximum price increase prior to each subsequent auction day. Given the possibility to respond to current circumstances in the conduct of the auction, the price increases for the day in question may be adjusted downwards if considered necessary by the auctioneer.

End of the primary phase

The primary bidding phase will end if, in a bidding round, no option to pass was exercised and the number of bids in the bid listing referred to in Article 18 (consisting of new bids plus unincreased provisional winning bids from previous rounds) is not less than or equal to the number of licences available in all of the three categories: K, L and M. In other words, the primary bidding phase will end once there is no scarcity in any of the categories. Towards the end of the auction, options to pass may be triggered automatically if participants do not want to bid (any more) but are not submitting empty bidding forms (either); this will stop them from losing the last eligibility points they have that are not linked to provisional winning bids. This could mean that, after a bidding round has ended, participants are notified that there is no scarcity in any other bands but that another new round will follow anyway. The provisional winning bids in the last primary round qualify as the winning bids for those licences.

5.2.2 Allocation bidding round

Purpose of the allocation bidding round

This round determines how the spectrum in the various frequency bands allocated in the primary phase is divided up. After the primary phase, the names of the winners will already be known, although they will only know how many licences K, L or M they have won, but not yet which place in the band. What is certain is that they will be assigned block spectrum per frequency band and that any unsold licences will be left as block spectrum too. Participation in the allocation bidding round is restricted to participants that submitted a winning bid in the primary phase.

Course of the allocation bidding round

The allocation bidding round will consist of a single bidding round in which bids can simultaneously be made on (combinations of) licences K and L and M. Participants will have the possibility to bid on combinations of these licences, enabling them to minimise the possible risk of interference. This can be defined as the risk of interference in user devices by unwanted harmonic signals when certain frequencies in the 700 MHz band are used at the same time as certain frequencies in the 1400 MHz or 2100 MHz band.¹⁶ Before the allocation bidding round commences, the Minister will draw up a list of the bidding options available to each participant for each combination of licences (K, L and M combined) in the allocation bidding round (Article 23). This list will show each participant the specific spectrum for which it may potentially be awarded licences. A participant in the allocation bidding round may only make a bid on the bidding options that appear on this list.

If a participant has no preference for a specific place in the spectrum, it may submit a bid of zero euros pursuant to Article 23(4) and (5) or waive submitting a bid, which is considered as being equivalent. The allocation bidding round will end once all of the participants have made a bid in the electronic auction system (consisting of the price each is willing to pay for each of the alternative combinations presented there) or if the duration of the bidding round has expired.

Determining the final combination of winning bids

From amongst the bids for combinations of places in the respective frequency bands submitted in the allocation bidding round, the combination that results in the highest revenue will be designated as the final combination of winning bids. The licences will be awarded to the successful participants in accordance with these band allocations.

5.2.3 Setting the additional price and the total price

After the allocation bidding round has concluded, the price payable by the participants with a winning bid will be determined in accordance with Article 25. This price consists of the base price determined in accordance with Article 20(3) (the round price at which the winning bids were submitted in the primary phase) plus an additional price payable by the successful participant for its winning bids from the allocation bidding round. This additional price is based on the "second-price rule", which is explained further in Annex III to the regulations.

¹⁶ Aetha, 'Research into linkages between the 700 MHz, 1452-1492 MHz and 2100 MHz bands', Cambridge: 07 October 2016.

5.3 End of the auction

Once the additional prices and the total prices have been determined, the Minister will inform the participants as soon as possible that the auction has concluded and will notify them of the names of the successful participants, which licences they have won and the total prices determined on the basis of Article 25(3), while also providing an overview of the base prices and additional prices (Article 26). Within one week of the conclusion of the auction, all the participants' bids from all the primary rounds and the allocation bidding round will be published, in which publication the identity of the unsuccessful candidates and/or participants that have not been disclosed publicly will be anonymised. After the auction has concluded, the Minister will proceed to award the licences in accordance with Article 27. The total prices must be paid within two weeks of the date on which they are granted, or in two equal instalments if requested by the participant when submitting its application: the first instalment within two weeks of the date on which the licence is granted and the second within one year. In this situation, statutory interest will be charged on the amount deferred (the second instalment).

5.4 Technical problems and special circumstances

If a participant is unable to submit a bid in a bidding round using the e-auction system due to a technical problem or special circumstance, it must notify this to the Minister by telephone immediately, and in any event within 10 minutes after the end of the bidding round in question.

This refers in particular to a force majeure situation or event, such as where a participant's computer or internet connection is not working or not working satisfactorily. In a primary bidding round, an option to pass will automatically be used in the bidding round concerned if one is still available to the participant. The Minister may then suspend the auction. Participants are advised to put measures in place to prevent any delay by ensuring they have a back-up computer and internet connection that can be used immediately. If a participant is no longer able to connect up to the auction software, the Minister may demand that the participant's bids be submitted using a computer provided by the Minister at a location made available by the Minister. The object here will be to prevent any further delay to the auction. If an option to pass has been used as a result of technical problems, the Minister may decide that it will not be counted toward the total number of options to pass that may be used (Article 16(9)). The Minister may allow communication by telephone in case of special circumstances, for instance if communication via a digital channel is not possible.

5.5 Requirement to be met by bids

In accordance with Article 14(1)), an invalid bid cannot be part of the provisional winning bids and the final combination of winning bids. This ensures that invalid bids are effectively "excluded from the auction". Article 14(2)(a) provides that a bid must be submitted and confirmed by means of the e-auction system. Only authorised persons named in the application will be given access to the e-auction system. This is to ensure, including in a legal sense, that it can be verified and irrefutably established that a specific bidder has submitted the bid concerned.

In the event a participant mistakenly fills in an "invalid bid", it will receive a warning from the e-auction system. A message will appear on the participant's screen informing it what is wrong with the bid it has compiled, so as to give the participant the opportunity to rectify its bid and to submit a valid bid.

5.6 Orderly conduct of the auction

It is of the utmost importance for the orderly conduct of the auction that the participants can determine for themselves without interruption what value they assign to the auctioned spectrum. The price-setting and allocation of the spectrum may not be disturbed by participants consulting with one another (collusion) or otherwise influencing one another during the auction. The rules to be observed by applicants and participants in this respect have been laid down in Article 11.

A party is designated as having the status "applicant" upon submitting an application and the status of "participant" upon being admitted to the auction. The parties are not formally bound by Article 11 of the auction regulations until they have submitted an application, although they are subject to general competition law.

Article 11(1) prohibits applicants and participants, including any parties that provide them with assistance for the auction and the applicant or participant's group companies within the meaning of Article 3 of the capping regulation, from conducting themselves or making agreements that jeopardise or may jeopardise the smooth conduct of the auction, including competition in the auction procedure. For instance, applicants or participants must refrain from providing information on matters that may offer other (potential) participants pointers for modifying their own conduct prior to and during the auction. Article 11(2) lists the information that must remain confidential prior to and during the auction. This includes information on strategy, budget, the desired or obtained number, type or combination of licences, as well as information on the expected or desired prices, or prices to be paid, in the auction. Such communication on the auction prior to and during the auction by applicants or participants, through the media, amongst themselves or otherwise, is therefore absolutely forbidden. Failure to comply with the above can lead to the imposition of an administrative fine of € 900,000 and/or a penalty payment but also to exclusion from (further) participation in the auction.

The same applies, in principle, to (potential) applicants or participants that hold shares in each other (but are not regarded as group companies as referred to in Article 3 of the capping regulation, as a result of which they could participate in the auction separately to each other, in principle). If an applicant or participant is required to share this information with its shareholders under its articles of association, shareholders' agreements, board regulations or legislation from other EU Member States or for other reasons, the sharing of information of this nature will not lead to the exclusion of the applicant that was required to share this information with its shareholders.¹⁷ An applicant or participant that is required to share information of this nature with its shareholders will also be required to ensure that shareholders treat the information in question as confidential and do not circulate it to any other party. The consequence of sharing information in order to meet a requirement of this nature could be that the shareholders with which this information is shared may be excluded from participation or further participation in the auction if they themselves are applicants or participants too (Article 11(5), second sentence). Although the shareholders above may have a legitimate interest in wanting to independently participate in the auction, it is very important that the auction is conducted in an honest and orderly manner. If the information shared would put the shareholders at a disadvantage in their capacity as participants in comparison with the other participants and, as such, the situation would compromise the honest and orderly conduct of the auction, the shareholders in question must be excluded from (further) participation. This will be necessary to safeguard the honest and orderly conduct of the auction. To ensure that this happens, the application form asks applicants to specify whether they have shared the information referred to in Article 11(2) with shareholders and, if yes, which shareholders. If necessary, this will be verified, on the basis of reports of shareholders' meetings, for example.

There is nothing to prevent applicants and participants from themselves disclosing their intended or actual participation in the auction, if they wish. Article 11 therefore does not prevent a (potential) participant from bringing legal action with regard to the application or auction procedure during those procedures where it believes this to be necessary. Regular meetings between providers that relate to other subjects, which include making procedural arrangements about placing licence-free antennas or shared use, may go ahead provided the subjects referred to in Article 11(2) are not discussed. Applicants and participants may also communicate about their ambitions in relation to the roll out of 5G, provided no specific information is expressed about the subjects stated in Article 11(2). Thus, applicants and participants are free to decide whether or not they will disclose their participation in the

¹⁷ The documents evidencing requirements of this nature must be provided with the application.

auction. However, they will not be permitted to disclose this information to just one or some of the applicants or participants: doing so could be detrimental to the good conduct of the auction, because of which it is prohibited pursuant to Article 11(3). Therefore, if an applicant or participant chooses not to keep its participation secret, it must announce it publicly, via a press release for example.

The Minister will not make the total number of participants and the identity of the successful participants known until after the auction has concluded (Article 26).

In the event a participant acts contrary to Article 11(1), (2) or (3), the Minister may decide to exclude the participant concerned from further participation pursuant to Paragraph 5 of that Article and/or impose an administrative fine or penalty payment (to prevent a recurrence). The intervention appropriate in a situation of this nature will be determined based on the circumstances of the case. Article 11(4) gives the Minister the power to temporarily suspend the auction in such a situation, to investigate the situation further, for instance. Under Article 11(6), the Minister may also decide to declare the result of one or more bids or bidding rounds invalid, or decide that one or more bidding rounds should be held again. This may be necessary, for instance, because the development of the prices for the different licences would have been different had the participant that acted contrary to Article 11 not taken part in the bidding rounds concerned.

The auction will take place, in principle, in a continuous period. The Minister is only authorised to suspend the auction in the situations referred to in Article 11 and Article 13. In accordance with Article 11(4), the Minister may, as mentioned, exercise this authority in the event of what they consider to be conduct contrary to Article 11(1), (2) or (3). In addition, the Minister may suspend the auction in accordance with Article 13(1) in the event the Minister considers that the auction temporarily cannot continue due to special circumstances beyond the control of the Minister or the participants. In accordance with Paragraph 3, the Minister may also decide, if necessary, to hold one or more bidding rounds again. It may then be necessary, in the interest of the fair and efficient conduct of the auction, to order that one or more bidding rounds be held again, since the omission of a participant may have an impact on the development of the prices of the various licensing categories. This could include, for instance, the situation referred to in Paragraph 4, where an applicant, following the decision on admission, finds itself in a position where it no longer meets the requirements imposed on it pursuant to Article 7. This may be the case *inter alia* where an applicant, after being admitted to the auction, applies for suspension of payments, is put into liquidation or is in the process of being wound up. In this case, the applicant concerned may be excluded from (further) participation in the auction.

Only one application may be submitted per applicant. Reference is made to Article 3 of the capping regulation for establishing whether two or more applicants are to be considered as a single applicant. If two applicants, having submitted their application, are considered to constitute a single legal entity from that moment, due to a merger or takeover, for instance, they may withdraw an application themselves. If they fail to do so, the Minister may, pursuant to Article 13(4), exclude both applicants from (further) participation in the auction, since such a situation is in contravention of Article 4(1).

In these situations, it may be necessary to temporarily suspend the auction in the interest of the efficient conduct of the auction, until there is more clarity regarding a participant's financial position or the announced takeover, for instance. Continuing with the auction regardless might, for example, result in a participant acquiring licences that it is unable to pay for (in case of liquidation or suspension of payments). This could lead to licences remaining unallocated.

6. Consultation

From 5 December 2019 up to and including 15 January 2020, an internet consultation took place on all draft decisions and regulations for the multi-band auction (700, 1400 and 2100 MHz). The drafts of the Notification, the auction regulations, the capping regulation and the licences to be auctioned were made available for inspection. This implemented the requirement for the draft notification and draft

licences to be made available for inspection as part of the uniform public preparation procedure set out in the General Administrative Law Act. A total of 993 online responses were received on the consultation via <https://www.internetconsultatie.nl/multibandveiling>. Respondents made 789 of these responses publicly available. A limited number of responses were received via other channels too. The responses pertaining to the coverage and speed requirement, reserve prices and the auction model were considered by the external advisers too. Where the consultation responses led to changes to the external advice, the latter was updated in the final report. This has also led to several changes to the relevant chapters of these explanatory notes and the explanatory notes on the licences to be auctioned.

This chapter will discuss the responses relating to the auction regulations. The consultation responses have been grouped into a number of subjects: general policy, auction, licences, different intended uses for frequencies, radiation and health and other consultation responses. Imprecise responses will not be discussed in this consultation chapter. Responses relating to the draft licences, including the coverage and speed requirement, will be discussed in the consultation paragraph in the explanatory notes on licences.

General policy

In one of the responses, a respondent asked which Act facilitated this auction and why no referendum had been put to the people about it. Although a referendum is not mandatory when allocating licences, legislation does provide for a consultation exercise: the uniform public preparation procedure described in Part 3.4 of the General Administrative Law Act. Section 3.10 of the Telecommunications Act provides for the allocation of the licences in question via one of the procedures referred to in Chapter 1. According to Chapter 3, the decree that sets out the allocation procedure chosen, being an auction in this case, must be prepared via a uniform public preparation procedure and the Senate and the House of Representatives must be notified of the draft of the decree. These procedures have been followed.

In the consultation, respondents asked for more substantiation of the scarcity established. Chapter 3 of the explanatory notes and the explanatory notes on the Notification have been updated accordingly. It was also contended that the absence of a scarcity determination based on the applications received is an omission in the auction design. However, auctions are not required to determine scarcity separately, on the basis of applications received. Article 16 of the Frequency Decree 2013, which was referred to in the consultation, in which the applications are used to establish whether demand is greater than supply, only applies to the 'on-request allocation' allocation procedure. It does not apply to an auction such as the one in question. In this situation, it is sufficient if scarcity is not 'reasonably to be expected' (Section 3.10(2) of the Telecommunications Act).

Respondents asked about the applicability of the caps to the 3.5-GHz band. The adoption of the opinion expressed by the ACM is discussed in the Memorandum on Mobile Communications. They apply to the frequencies to be allocated in both the multi-band and 3.5-GHz auctions.

Some respondents want the auction to take place later than scheduled. However, European decisions prescribe that the 700 MHz band is to have been awarded on 30 June 2020.

Auction

Primary round

Further to consultation responses, changes have been made to the primary round of the auction and to Chapter 5 of the explanatory notes. The responses in question are described below.

The changes made to the primary round primarily affect the information regime and the determination of provisional winning bids. Respondents voiced their objections to the information regime proposed for the auction, in which surplus in a round would be announced per band after a bidding round, but not the extent of the surplus demand (aggregated demand). Respondents contended that it is vital for

them to receive information that provides them with an insight into demand development as a result of increasing prices, as this enables them to bid appropriately. This is because participants in the auction can only decide which eligibility points to switch between bands if they are able to estimate how demand is developing and whether the auction has almost ended. If this information is not shared, the efficient allocation of spectrum is undermined, because participants might not want to take the risk to which certain choices might expose them. Respondents also contended that the risk of strategic demand reduction is already adequately covered by setting high reserve prices, in accordance with the advice of auction expert DotEcon (and confirmed by Peter Cramton). Finally, respondents point out that it is extremely unusual, from an international perspective, not to announce aggregated demand per round.

The information regime has now been updated and aggregated demand per band is now announced after each bidding round. The ministry and external advisers agree with that the provision of information about aggregated demand will make the auction more efficient. However, the fact that frequency auctions abroad are governed by other, more transparent information regimes is not relevant for the determination of the information regime in the Netherlands; the circumstances and objectives particular to each frequency auction require a customised approach.

Given the object of the auction - a realistic chance of success for all participants - respondents also feel that the names of all of the participants in the auction should be announced in advance. This request will not be granted, as the efficiency of the auction does not depend on participants having this knowledge. Participants in the auction are able to decide whether or not they want to publicly disclose their participation themselves.

Respondents also requested that provisional winning bids be determined per bidder, not per bid. If information about aggregated demand is announced per band and per round, DotEcon advises that the method used to determine provisional winning bids is adjusted to avoid too much information asymmetry between bidders. **As it has been decided to adjust the information regime applicable during the auction and to disclose aggregated demand, lots will be drawn from the bids per bidder when determining provisional winning bids, as advised by DotEcon.**

A number of respondents also asked for more clarity about the price increases (increments) to be applied. Requests vary between the full disclosure of these increments, the setting out of maximum increments in the auction regulations and the disclosure of the basic principles applied. A number of respondents also asked for just small price increases to be applied during the auction. The exact price increases for the entire auction are not disclosed in advance, as these are determined by how the auction progresses in part. The auctioneer must have the opportunity to respond to actual circumstances. The relevant part of the explanatory notes has been updated to meet the wish that respondents have for more transparency about price increases (Paragraph 5.2.1, Round prices).

Respondents also requested the disclosure of any exercising of an option to pass, contending that this would make demand development in the auction more transparent. However, this would result in more disadvantages than advantages. If the exercising of options to pass were to be disclosed, the risk of options to pass being used as an indication of a particular situation would increase. Also, the exercising of an option to pass does not make it possible to deduce why it was exercised: a participant might want to skip a round to see whether it is outbid or because it is having technical problems. As such, this request will not be granted. Both DotEcon and Professor Cramton endorse these arguments in their assessment of the consultation responses in this respect.

In the same context, respondents ask for the possibility to extend a bidding round in the event of technical problems.

However, options to pass already protect participants that are experiencing technical and ensure that an auction goes ahead on time. Given the auction model chosen, this is more preferable than the extension of bidding rounds. Therefore, it will not be made possible to extend bidding rounds. The

reasons above are endorsed by both DotEcon and Professor Cramton in their assessment of the consultation responses in this respect.

One respondent also requested the equalisation of base prices for all winning bids after the primary round.

In the auction model used, participants may pay different base prices for licences in a particular licensing category. This situation is due to the choice for a pay-as-bid price rule, which is designed to help achieve the auction's simplicity and transparency objectives. If the prices were to be equalised at the end of the auction, bidders that stopped bidding in the last round because the price had increased too much would have wanted to make a last bid in retrospect because it was not necessary to pay the higher price. This would create unnecessary confusion and uncertainty. It should also be observed that the price difference is limited to a maximum of one price increment. As such, this request will not be granted. The reasons above are endorsed by both DotEcon and Professor Cramton in their assessment of the consultation responses in this respect.

Allocation bidding round

Further to the consultation responses, changes were made to the allocation bidding round in the auction and to Chapter 5 of the explanatory notes.

Responses relating to the linkage between the frequency bands were not unambiguous. On the one hand, respondents argue that there is no linkage between the bands and, on the other hand, that the linkage described is incomplete. After consulting external advisers, the ministry concluded that one combined allocation bidding round for the 700, 1400 and 2100 MHz is the best choice. A combined allocation bidding round enables participants to minimise the possible risk of interference by reflecting this in their bids on the various combinations of the three bands. This reduces the risk of the inefficient classification of licence holders in the different frequency bands and will not affect participants that do not foresee any risk of interference.

One respondent argued that parties that have acquired licences in just one frequency band in a combined allocation bidding round could be at a disadvantage. This is because a party that wants to achieve a preferential place in the band in question has to bid against parties that are bidding for preferential places in a number of bands. Although this is correct, it is incorrect to contend that this puts the party in question at a disadvantage. It is equally conceivable that a bidder that acquires licences in just one band will have a stronger preferential position within the band in question in the allocation bidding round, giving it an advantage over other bidders in a situation where the preferential position of the latter might depend on their position in other bands.

Article 23(2) stated that any unsold lots were to remain at the top or bottom of the frequency band, contiguously. However, in response to the consultation, it was contended that unsold lots ought to be placed in the middle of a frequency band too (contiguously). This would give winners more possible preferential places and more opportunities to secure them. It would also give more parties the opportunity to acquire contiguous spectrum in the event of a later allocation of unsold lots. This response prompted changes to the allocation bidding round in this respect. Article 23(2) has now been updated such that unsold (contiguous) lots may be positioned in any part of a frequency band.

Reserve prices

The consultation responses received in relation to reserve prices have not prompted changes to reserve price levels. However, several changes have been made to Chapter 4 of the explanatory notes further to the responses in question.

Respondents said that the reserve prices are close to market value, because of which they are too high. They contended that there will be less scope to invest in 5G networks in the future as a result. Respondents also asked why reserve prices are not determined on the basis of the method used in the 2012 multi-band auction. The reserve price will not be adjusted downwards further to these

responses. Market conditions have changed to such an extent since the auction of 2012 that there is a real chance of a lower number of serious bidders. In this situation, a good reserve price reduces the chance and incentive for bidders to bid strategically and - which keeps the price low - and avoids licences being granted for an amount that cannot be justified. The following has already been observed in the Memorandum on Mobile Communications about the assertion that auction amounts impact investment. An auction ensures that licences are awarded to the market players who are able to realise the most value through the commercial use of this spectrum. As such, the auction promotes competition by striving to achieve a realistic revenue. Although it is often said that a spectrum auction leads to reduced investments or higher prices for consumers, various studies show that this is not the case.

Respondents also had questions about the following methods: the benchmark method, cost reduction method and DCF method. Respondents say that it is unclear which auctions, in which countries, have been included in the benchmark and are concerned that auctions may have been included that will unjustly lead to high reserve prices. A number of respondents also contended that Deloitte has not considered the marginal value of the spectrum. To them, this is another reason why the reserve price is too high. Finally, it is observed that the assumptions that Deloitte makes are not possible to verify and unrealistic assumptions may have been made. Chapter 4 of the explanatory notes has been updated further to these observations.

Practical matters

Article 10 specifies which information the Minister will communicate to participants prior to the auction and when. For some of this information, the period with which information is to be communicated to participants, being a minimum of two weeks prior to the start of the auction, is considered too short for proper preparation to be possible. Respondents requested the earlier communication of the information in Paragraphs a. to c. Further to the above, it has been agreed that this information will be communicated at least three weeks prior to the start of the auction (Article 10(1)). The duration of the first bidding round and subsequent bidding rounds on the first auction day will be announced within this time frame too. Although the expectation is that the duration of the bidding round will not be subject to continual change, the round duration for the entire auction will not be established at this point in time. The auctioneer will announce the schedule for the day prior to each subsequent auction day and, if he considers this necessary, may establish a round duration that is different to the round duration for the first day. As regards software, participants should be aware that they will not need any special software to be able to participate in the auction. The information to be shared in this respect will relate to the types and versions of internet browsers that are suitable.

Respondents requested that the start date envisaged for the actual auction process be announced when the application procedure starts. Unfortunately, this is not possible, as the start date envisaged could still change at this stage, as a result of legal proceedings and unforeseen delays in the assessment of applications, for example. As such, the definite start date of the auction is only announced when the application procedure has been completed in full. Potential auction participants will want to plan for the auction, of course, because of which it is stressed that the aim is for the auction to start in the second half of June 2020.

To enable participants to familiarise themselves with the auction software, respondents requested that the auction software be made available to participants prior to the auction and/or that a trial auction be organised. The Radiocommunications Agency Netherlands will organise a trial auction for participants prior to the auction. Added to this, as instructed by the Radiocommunications Agency Netherlands, DotEcon will organise a webinar during the application period to explain the auction model in more detail. Bearing in mind the current schedule and the efforts necessary in this respect, it is thought unlikely that it will be possible to make the software fully available too. This is also considered unnecessary given the auction model to be used. Prior to the trial auction, DotEcon will also organise a webinar for the participants admitted to the auction, during which they will be guided through the auction software. These auction regulations, combined with the webinars and the trial

auction, will give participants a sufficient insight into how the auction model and the auction software work.

Orderly conduct of the auction

In the consultation, it was observed that the actual specifics of Article 11 are considered unclear and unnecessarily restrictive. Respondents said that it was unclear whether parties are permitted to publicly disclose their 5G roll-out strategy, when Article 11(2) applies and what exactly qualifies as a prohibited conduct, act or disclosure. This lack of clarity could hinder regular operational consultations between market parties. Respondents also asked for clarification about whether Article 11(2) also extends to information sharing between two or more applicants or participants that have shares in each other's enterprises but that are not interrelated legal entities within the meaning of Article 3 of the capping regulation, and for the Minister to ensure that this information sharing takes place with shareholders that will (potentially) (want to) take part in the auction themselves, to promote fair competition in the auction.

Based on these responses and other factors, Article 11 has been updated and Paragraph 5.6 of the explanatory notes has been clarified.

Licences

In the consultation, many responses were received in relation to the coverage and speed requirement. A number of respondents felt that the requirement is not ambitious enough. Some respondents felt that too many areas are excluded from the requirement (coastal waters, for example) or that the requirement ought to apply for indoor use too. Other respondents felt that the requirement is very ambitious and doubt its practical feasibility. To them, it is extraordinary, from an international perspective, for a country to impose such an ambitious coverage and speed requirement. After in-depth and extensive research, the ministry and the experts engaged concluded that the requirement is ambitious but reasonable for the Netherlands. As such, this requirement will not be adjusted.

The consultation responses in relation to the specifics of the coverage and speed requirement will be discussed in the consultation paragraph in the explanatory notes on licences. The same applies to the other licence-related consultation responses. Other responses raised questions about the time at which licences are awarded, the protection distance for radio astronomy, the transition period for 2100 MHz licences, interceptability obligations, the possibility of payment in instalments and the coverage and speed requirement.

During the consultation, several respondents said that they would like to see more arranged in the licensing requirements. They mentioned matters like the specification of the IPv6 internet standard protocol, radiation limits and the liability of mobile communications providers. However, these are matters that do not belong in the licensing requirements for (these) specific frequencies. Pursuant to Article 17 of the 2013 Frequency Decree, the Minister has the power to lay down obligations in the licensing requirements. The technology to be used is not specified in the licences (the IPv6 internet standard protocol, for example), because the Ministry of Economic Affairs and Climate Policy pursues a technology and service neutral policy. Neither do the licences specify radiation limits to apply for the entire mobile network. Firstly, because Article 17 does not provide any basis for this and, secondly, but also because limits for the entire mobile network, or a technology regulation, such as that for IPv6, cannot be arranged in licences for several frequencies that are used in the network. The radiation limits have been laid down in the Antenna Covenant (*Antenneconvenant*)¹⁸ and will be anchored under the Telecommunications Act later in 2020. For a detailed reaction to radiation-related responses, see the chapter entitled 'Radiation and health' below.

Other frequency allocations

¹⁸ <https://www.antennebureau.nl/documenten/convenanten/2018/januari/26/antenneconvenant-2010>

In the consultation, responses were also received about the allocation of frequencies other than mobile communication frequencies. However, frequency allocations are not set out in the auction regulations but are specified in the National Frequency Plan (*Nationaal Frequentieplan (NFP)*). Amendments to the NFP are deposited for inspection via a uniform public preparation procedure, which is the appropriate time to submit responses to the frequency allocations proposed.

Radiation and health

A large number of responses (974 out of 993) were received from private individuals who are concerned about the possible health risks ensuing from the roll-out of 5G. These respondents request that 5G is not rolled out, due to the fact that its impact on health, flora and fauna has not been researched, its harmlessness has not been proved and no research is being done on either of the first two reasons either.

On 17 April 2019, a letter was sent to the House of Representatives about this subject (also on behalf of the Ministry of Health, Welfare and Sport).¹⁹ Since the advent of mobile networks, much research has been done on their possible impact on health. As instructed by the Ministry of Infrastructure and Water Management, the Netherlands Organisation for Health Research and Development (ZonMw) has been coordinating a large-scale, 16.6-million euro research programme on high and low frequency electromagnetic fields (EMV) since in 2006. The programme focuses on (1) biological interaction between exposure to EMV and the human body; (2) epidemiological research studies on the connection between exposure to EMV and an impact on health; (3) the perceived risks of EMV; and (4) technological aspects of EMV. One of the studies from the ZonMw programme (COSMOS²⁰) has been extended until 2023. This is a very extensive European cohort survey, in which several hundred thousand people are monitored with the object of ascertaining long-term effects on health. Amongst other things, their use of means of telecommunication is documented and their health status over time is measured, so that connections between exposure to EMV and health can be researched. The Netherlands is one of the countries participating in this study. The Electromagnetic Fields and Health Knowledge Platform (*Kennisplatform Elektromagnetische Velden en Gezondheid (EMV Knowledge Platform)*) states that the whole of all research studies have not yielded any proof that long-term exposure to electromagnetic fields under the exposure limits is harmful to health.²¹

According to the EMV Knowledge Platform, scientific advisory bodies like the World Health Organization (WHO) and the Health Council of the Netherlands (*Gezondheidsraad*) conclude that scientific research studies have not found any proof that exposure to electromagnetic fields under the exposure limits has any negative impact on health.²² According to the EMV Knowledge Platform, electromagnetic radio signals may be harmful to health if they are *stronger* than the exposure limits applicable. In the event of exposure to radio signals that are *below* the exposure limits, no proof was found of possible health effects. In research studies on health effects, researchers considered the possible development of brain tumours and damage to DNA. They also considered the possible impact on the senses, brains, the central nervous system, heart and arteries, hormones, the immune system, fertility and harmful effects during pregnancy.²³ The total exposure of all radiation sources taken together must always be under the exposure limits. The Radiocommunications Agency Netherlands measures electromagnetic fields and will be given the power to supervise them in the future.

These measurements can be found on the Antenna Office (*Antennebureau*) website. On 21 January 2020, the Radiocommunications Agency Netherlands and the National Institute for Public Health and Environmental Protection (RIVM) published a report entitled Exploration of the exposure to

¹⁹ <https://www.rijksoverheid.nl/documenten/kamerstukken/2019/04/17/kamerbrief-over-5g-en-gezondheid>

²⁰ <https://web.archive.org/web/20100426101231/http://www.ukcosmos.org/index.html>

²¹ <https://www.kennisplatform.nl/elektromagnetische-velden-en-gezondheid/>

²² <https://www.kennisplatform.nl/conclusies-wetenschappelijk-adviesorganen-mobiele-telefoons/>

²³ <https://www.kennisplatform.nl/wetenschap-over-emv-mobiele-telefoons/>

electromagnetic fields from 5G systems (*Verkenning van de blootstelling aan de elektromagnetische velden van 5G-systemen*). The field strength measurements carried out at a number of 5G test locations for the purpose of this report show that the field strength stays under the European recommended limits. The literature review assumes an increase in the number of sources of electromagnetic fields. How exposure will change in relation to the limits cannot be predicted with any degree of certainty, because of which the Radiocommunications Agency Netherlands will continue to carry out measurements. The field strength must remain under the exposure limits, even after the roll-out of 5G.

The Health Council of the Netherlands (*Gezondheidsraad*) is monitoring developments in relation to electromagnetic fields and health and will report on this if necessary. The House of Representatives has asked the Health Council of the Netherlands to advise on possible health risks in relation to 5G based on current scientific knowledge. Its advice is expected by the second quarter of 2020 at the latest. The Dutch government will continue to keep a close eye on new scientific results.²⁴ The EMV Knowledge Platform and organisations like the RIVM, the Health Council of the Netherlands and municipal health services play an important role in the provision of advice on and access to EMV-related knowledge.

To avoid the damage to health caused by strong electromagnetic fields, an international committee, the International Commission on Non-Ionizing Radiation Protection (ICNIRP), has set exposure limits for electromagnetic fields; these exposure limits are applied in the Netherlands too. They include a generous safety margin, which makes allowance for vulnerable groups like the elderly, children and people with poor health. The safety margins are 50 times lower than the level above which health effects could arise. In this respect, the ICNIRP regularly assesses current scientific knowledge in the field of electromagnetic fields and health. Different exposure limits apply for the different frequencies of electromagnetic field. These limits apply for the frequencies used in the current networks and for future 5G frequencies too. The ICNIRP assesses the limits on a regular basis. The expectation is that an update of the ICNIRP exposure limits will be published in 2020. Finally, it should be pointed out that the exposure limits are regularly the subject of dispute in administrative proceedings. According to settled case law of the Council of State, it is reasonable to proceed on the basis of the advice of the Health Council of the Netherlands (see ECLI:NL:RVS:2018:3979, for example).

In the responses received, reference is also made to the 5G Space Appeal. According to the EMV Knowledge Platform, the publications described by the 5G Space Appeal relate to research studies in which biological effects have been found in cells, plants and animals, often at exposure values in excess of the limits. The EMV Knowledge Platform also states that these biological effects (that involve the overheating of (parts of) the body as a result of radio signals) do not lead to health damage.²⁵ According to the EMV Knowledge Platform, it is not possible to automatically translate the effects on cells, plants and animals into health effects in people.²⁶

It is vital to stress that all Dutch scientists are required to comply with the Netherlands Code of conduct for Research Integrity (*Nederlandse gedragscode voor wetenschappelijke integriteit*).²⁷ The principles of honesty, care, transparency, independence and responsibility play a key role. The Netherlands Organisation for Health Research and Development applies this code of conduct too when awarding grants to research consortia. Besides this, the Health Council of the Netherlands applies the Code for the prevention of improper influence due to conflicts of interest (*Code ter voorkoming van*

²⁴ Parliamentary Paper 27 561, no. 46.

²⁵ <https://www.kennisplatform.nl/verschil-biologische-effecten-en-gezondheidseffecten/>

²⁶ <https://www.rijksoverheid.nl/documenten/kamerstukken/2019/04/17/kamerbrief-over-5g-en-gezondheid>

²⁷ https://www.zonmw.nl/fileadmin/zonmw/documenten/Corporate/Subsidies/PDF_s/Nederlandse_gedragscode_wetenschappelijke_integriteit_2018_NL.pdf

oneigenlijke beïnvloeding door belangenverstrengeling)²⁸, which it was involved in formulating. The same applies for the ICNIRP.²⁹ Therefore, it is always assumed that scientific studies and advice have been established independently and with all due care.

Recital 110 of the Telecom Code states that Member States must ensure that citizens are not exposed to electromagnetic fields caused by electronic communication networks to such an extent that it is harmful to public health. Another starting point for the introduction of regulations to protect public health against electromagnetic fields is that Member States do not deviate from Council Recommendation 1999/519/EC. This recommendation is based on limits that the ICNIRP has set for the safe exposure of humans to electromagnetic fields in the frequency area from 0 Hz to 300 GHz and includes a generous safety margin. In its Digital Connectivity Action Plan, the government announced that the limits applied internationally (and which are now also being applied in practice) will be set out in the Telecommunications Act. This is thus in line with EMV supervision already embedded in the Dutch Telecommunications Act (*Telecommunicatiewet*) regarding the trade in and commissioning of transmission equipment; the Netherlands Radiocommunications Agency will also become the competent supervisory authority in the use phase. Citizens can then be certain that the electromagnetic fields generated by antennas are within the limits and do not pose a threat to their health in their daily living environment, even if there are a number of antennas in the immediate vicinity.

Finally, it is observed that the (future) adoption of the international limits will take place in a general administrative order and not in licensing requirements pertaining to the use of frequencies. Article 17 of the 2013 Frequency Decree does not provide a basis for requirements of this nature. As such, it is not possible to impose health-related requirements in a licence. When assessing the limits, consideration should also be given to the cumulative effect of the use of different frequencies. For this reason, a general administrative order is a better instrument to use to set limits than licensing requirements.

Respondents also observed that there will be more transmitter masts and thousands of small cells after the auction, resulting in a higher radiation density. The EMV Knowledge Platform states that it is not yet clear whether 5G will result in increased exposure to electromagnetic fields because 5G has not been introduced on a large scale anywhere yet³⁰. In response to Parliamentary questions³¹, it has previously been stated that the general expectation is that there will be no major increase in the number of transmitter masts and small cells after the auction. However, the question of where and when the network will be rolled out or modified is a matter for licence holders. The choices they make in this respect will depend on their business strategies, which are classified as confidential. The Monet cooperation platform of telecom providers has estimated that there will be a 10% increase in 10% following the roll-out of 5G. This equates to approximately 4,500 extra antennas (and approximately 1,500 antenna installation sites). Operators also expect to install a limited number of additional small antennas (small cells) in the next three to five years.

Other consultation responses

One respondent said that 5G should be broken down into 5G UMTS and 5G Wi-Fi and that 5G represents a new generation of connection technology. It is correct that discussions about 5G sometimes broaden in scope and that other wireless technologies are placed under the same umbrella too (company-specific networks with their own frequencies, for example). These discussions pertain to 5G as a new type of connectivity, whereas government documents use the term "5G" to refer to a new generation of mobile technology, for which a mobile network is required. It should be observed that

²⁸ <https://www.knaw.nl/shared/resources/actueel/publicaties/pdf/qedragrcode-belangenverstrengeling>

²⁹ <https://www.icnirp.org/en/about-icnirp/commission/index.html>

³⁰ <https://www.kennisplatform.nl/neemt-de-elektromagnetische-straling-toe-door-5g/>

³¹ <https://zoek.officielebekendmakingen.nl/ah-tk-20192020-1170.html>

the upcoming auction is not a 5G auction by definition. The frequencies could be used for a new generation of mobile networks but could also be used in the current mobile network on the basis of other technologies (4G, for example). As such, other observations about 5G will not be discussed in the explanatory notes but will be addressed in the consultation report on internetconsultatie.nl.

Another respondent was concerned about the consequences of network sharing that arise when networks of this nature come into the hands of one party or a private joint venture. It is important to stress that one party will never be permitted to obtain all of the spectrum available. The spectrum caps adopted on the advice of the ACM ensure that any one individual party will only be able to acquire a maximum of 40% of the spectrum, including leased spectrum. Providers with market power can also be required to provide access to their networks. The ACM monitors the market and has the power to impose these requirements on providers. The respondent also said that 5G will result in a large increase in energy consumption. The European Green Deal states that digital technologies like 5G can actually help to achieve sustainability goals in various sectors. For example, digitalisation presents new opportunities to remotely monitor air and water pollution and to monitor and optimise energy consumption in general. However, the digital sector itself will need to embrace sustainability and use energy more efficiently. The European Commission is also considering measures in this respect, aimed at broadband networks amongst other things.

Besides the responses above, various other observations were made that do not concern the auction regulations, licences or the Notification. They related to the following subjects amongst others: the licence-free use of frequency space, the consequences for the programme-making and special events (PMSE) and intelligent transport system (OOV) sectors and company-specific applications. A further discussion of the above can be found in the report on the consultation, which will be published on the Internet Consultation site.

7. Regulatory burden

The applicant should submit the appropriate information with its application. This information will be used to assess whether the applicant meets the requirements set out in the regulations. Providing this information imposes a regulatory burden on applicants. It is a general regulatory principle that the regulatory burden imposed on businesses by regulations should be kept to a minimum. Against this background, the information that applicants are required to provide concerns, as far as possible, information that they are able to readily furnish.

A party that decides to bid for a licence must prepare and submit an application. The procedure starts with the submission of the application and the provision of the security. The application should be accompanied by:

- information on the applicant, including the applicant's name, registration number in and extract from the Trade Register or a comparable register;
- a list of persons who are authorised to duly represent the applicant (including a copy of power of attorney, where applicable);
- information on the legal entities related to the applicant within the meaning of Article 3 of the capping regulation, in the form of an organisation chart showing their legal structure;
- a declaration from a civil-law notary concerning the accuracy of the above details, also stating *inter alia* that the applicant is not in a state of liquidation, has not been granted suspension of payments and has not been dissolved. This declaration is needed to obtain sufficient certainty regarding the correctness of the applicant's statements. The civil-law notary need only carry out relatively simple research for this declaration.

An applicant should also provide security when submitting an application. This security can be furnished in the form of a deposit or a bank guarantee. In the event an applicant decides to provide a deposit, this will not result in any increase in regulatory burden. If an applicant chooses to furnish the security in the form of a bank guarantee, this will lead to an increase in the administrative costs. The

choice is up to the applicant, which, as such, is able to influence the costs it incurs itself in this respect. Assuming an overall figure of four to six candidates for this allocation and the activities of three employees per applicant party who will work full-time for one week on matters related to this auction at a standard hourly rate of €77 (executives and managers), the total estimated regulatory burden will be a maximum of 6 (applicants) x 3 (employees) x 40 (hours in a working week) x €77 (standard hourly rate); thus, a combined (non-recurring) amount of € 55,440 is expected for this allocation. The dossier was submitted to the Dutch Advisory Board on Regulatory Burden (*Adviescollege Toezicht Regeldruk*), but the Board will not issue a formal opinion on it.

II. ARTICLES

Article 1

The definition of a bid, with regard to the primary bidding phase, is detailed in Article 15(3). Having regard to the way in which provisional winning bids are determined according to Article 18, a bid in a primary bidding round is considered as a collection of bids for K, L and M licences by the participant. In other words, a bid by participant A for three licences in the 700 MHz band (licences K) consists of three bids by participant A for licences K. Grouped per participant, each of these three bids will be placed in the bid listing for licences K and the drawing of lots will be used to determine the order in which participants will be placed in the bid listing. Just the first six bids in the bid listing for licences K will be identified as provisional winning bids. Depending on the number of bids submitted by participants that were placed in the bid listing in the drawing of lots for the bidding round in question at an earlier stage, it is possible that just some bids may be identified as provisional winning bids (two of the three bids submitted by participant A for licences K, for example).

Article 2

For a description of the licences to be allocated in the auction, reference is made to the Notification, which provides for the choice of allocation instrument and the establishment of the conditions and restrictions attached to the licences. Each licence corresponds to a number of eligibility points laid down in this article. The number of eligibility points assigned to a participant determines how many licences that party may bid for in the auction. Prior to the auction, it will be established how much scope for acquisition a participant has under the capping regulation, overall as well as specifically for sub-1 GHz radio spectrum, covered by the licences in the 700 MHz band (licences K). In accordance with Article 8(2), this will be based on the amount of radio spectrum used by the applicant and its group companies pursuant to Article 3 of the capping regulation on the date of entry into force of the auction regulations. In other words: for which the applicant and group companies have acquired licences. The 2100 MHz licences that are shortly to expire and that will be re-allocated in this auction are, naturally, disregarded for this purpose. In order to ensure the orderly conduct of the auction, the Minister cannot, in connection with the above, consider requests for a transfer of licences, or a transfer to another name, from eight weeks prior to the entry into force of the auction regulations until commencing one week after the award of licences in accordance with Article 27.

The participant will be assigned the number of eligibility points corresponding to its scope for acquisition in accordance with Article 8(1)(b) as its eligibility level at the start of the first bidding round. The scope for acquisition of sub-1 GHz radio spectrum will be imposed as the maximum number of licences K that may be acquired, in accordance with Article 8(1)(c), to which the participant will be bound on submitting its bids for licences K (Article 16(3)). If the specific scope for acquisition for low spectrum is higher for a participant than its scope for acquisition within the general cap, the maximum number of licences K possible for it to acquire pursuant to the auction procedure will, of course, be equal to (and be no higher than) the eligibility points assigned to it pursuant to Article 8(1)(b).

Article 4

For an explanation of the condition in Paragraph 1, that no more than one application may be submitted per applicant, reference is also made to Paragraph 3 of the general section of the explanatory notes. As discussed there, the group companies referred to in Article 3 of the capping regulation will be regarded as being a single applicant. This means that just one legal entity in each collection of group companies will be able to submit an application.

Pursuant to Article 3 of the capping regulation, not all minority interests will result in 'affiliation'. If an applicant has an equity interest of 25% or less in another applicant, without there being any control within the meaning of Article 3 of the Merger Regulation (*Concentratieverordening*), the affiliation referred to in Article 3 of the capping regulation will not be the case. In this situation, both parties will be able to submit an application separately and participate in the auction separately too. It is important to observe here that, pursuant to Article 11(2), an applicant may, should it be obliged to do so, share the information referred to there with its shareholders (confidentially). However, this could mean that the shareholders in question are no longer able to participate in the auction themselves (Article 11(5), second sentence).

The model set out in Annex I will be used for the application. The applicant will not be asked to state the number of licences it wishes to bid for on the application form. The applicant may express this in the first primary bidding round, once it has been admitted to the auction.

Article 6

A model bank guarantee is set out in Annex II to the auction regulations. A Dutch and English version are available; the applicant is free to decide which to use, provided the text of the bank guarantee is the same, word for word, as the text used in one of the two models. If the applicant chooses to provide a deposit, it must pay this into the account of a civil-law notary nominated by the Minister. The interest received on the third party funds that are held will be paid to the entitled party.

Article 8

For an explanation of how the maximum MHz allocation for which the participant may acquire licences in accordance with Article 2(3) and (4) in the auction (in total or licences K) is determined, reference is made to the explanatory notes to Article 2.

Article 9

Communication other than bids will be effected via the e-auction system or by telephone or secure e-mail. The Minister will use Gpg4win open source software to send and receive encrypted e-mails. GPG4win supports OpenPGP and S/MIME (X.509), which are both current cryptography standards. Encryption is achieved via private and public security keys. The Minister will publish his public key, referred to in Article 10(1)(d) in the notification referred to there. This will enable participants to send encrypted e-mails to the Minister. To put the Minister in a position to send encrypted e-mails to participants, they will be required to include their public security keys with their applications.

Article 11

Reference is made to Paragraph 5.6 of the general section of the explanatory notes. In addition, attention is drawn to the fact that Article 11(7) gives the Minister the power, in the very exceptional case that he should consider, based on facts which he did not become aware of until after the conclusion of the auction, that a participant has acted contrary to Article 11(1), (2) or (3), to declare the winning bids made by that participant invalid. This will result in the licences awarded on the basis of those winning bids in accordance with Article 27 being revoked, since, pursuant to Section 3.19(2)(e) of the Act, licences will be revoked in the event the grounds on which they were awarded no longer apply. The licences awarded to participants that were not involved in the conduct contrary to Article 11(1), (2) or (3) will remain valid.

Article 15

For an explanation of Paragraph 3, where it is provided that a bid in the primary bidding phase will be expressed in the number of bids for licences K, L or M, respectively, made by the participant, for the round prices set for that bidding round, reference is made to the explanation of "bid" in Article 1.

Article 16

This Article describes a participant's permitted bidding activity, in the form of eligibility points, for each bidding round. In the first primary bidding round, a participant may use the full scope for acquisition available to it, in view of the amount of radio spectrum used by it, within the caps in Article 4(1) and (2) of the capping regulation. After this, the participant may not submit any further bids that exceed the eligibility level of that first bid.

A participant's eligibility level will be determined in each of the following bidding rounds based on the bid it made in the round preceding that bidding round, plus the provisional winning bids that it had at the start of the round and that it has not increased by submitting a new bid in the category concerned. For further details, reference is made to the wording on Eligibility level and points in Paragraph 5.2.1 of the general section of the explanatory notes.

Paragraph 4 states that any eligibility points a participant has that are linked to provisional winning bids can no longer be used freely for bids in other frequency bands. Where a participant has provisional winning bids in a particular category, it will only be able to submit a new bid if it is equal to or higher than the number of provisional winning offers it already has. If the price in the bidding round has stayed the same as the price for which it submitted its provisional winning bids in the previous round, it will only be able to submit a bid for the band in question if the bid is higher than the number of provisional winning bids it already has.

Article 18

Reference is made to the wording on Provisional winning bids in Paragraph 5.2.1 of the general section of the explanatory notes.

Article 20

This article describes the end of the primary bidding phase. The provisional winning bid for a licence in the last primary bidding round qualifies as the winning bid for that licence. The place of the licence in the band of the licensing category concerned is not yet known, however, since this will be decided in the allocation bidding round. In other words, a winning bid for a licence K or M is linked to an as yet undesignated lot of 2x5 MHz in the 700 MHz and 2100 MHz bands, respectively, while a winning bid for a licence L is linked to an as yet undesignated lot of 5 MHz in the 1400 MHz band.

Article 30

This article relates to an amendment to the regulations on payments to the Radiocommunications Agency Netherlands 2020. A new subcategory (I.A.7) has been added for licences in the 700 MHz band. The decree of 4 December 2019 (Government Gazette 65252) provides for the geographical division of radio spectrum in the 700 Mhz band. The licences for this radio spectrum are auctioned via the multi-band auction for the Dutch territory, including the territorial sea. Licences for the use of the 700 Mhz band on installations at sea on the continental shelf are allocated separately via the 'on-request allocation' mechanism. Fewer supervisory activities are necessary for this type of licence than for subcategories I.A.6 and the 700 Mhz licences on land, based in part on their secondary status - as opposed to a primary status for the 700 Mhz licences on land - and the fact that no coverage and speed requirement is included in the licences for installations at sea. However, additional supervisory activities are necessary due to the frequency usage requirement that these licences are subject to as well.

The supervision rate for 700 Mhz licences (with a coverage and speed requirement) is higher than the rate for category I.A.6. due to the coverage and speed requirement to which they are subject, making more supervisory activities and costs necessary. These costs include special measurements and the purchase of new measurement equipment to facilitate the measurement of the speed of the service(s) provided. A lower rate is charged for the 700 Mhz licences on land, which are not subject to the coverage and speed requirement, because they involve fewer supervisory activities and costs than if the coverage and speed requirement had applied.

Added to the above, the supervision rate for 700-MHz licences (land and sea part, without a coverage and speed requirement) combined is slightly higher than those in subcategory I.A.6. The reason for this is the geographic division of the 700 Mhz band into a land part with primary status and a sea part with secondary status. As a result, extra efforts are necessary in the form of supervisory activities.

Article 31

Contrary to policy on the common commencement dates, these regulations will come into force on the date after they are published in the Government Gazette. This is necessary to ensure that licences in the 700-Mhz are awarded on time, in connection with Decision (EU) 2017/899 of the European Parliament and of the Council of 17 May 2017 on the use of the 470-790 Mhz frequency band in the Union.

The State Secretary for Economic Affairs and Climate Policy,