



Contract documents for

A16 - Invitation to tender for regular bus services in
Movia

Trafikselskabet Movia

Contracts

July 2017

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1. Contract Conditions

This is an invitation to tender (ITT) for regular bus services in a negotiated procedure in accordance with the EU Utilities Directive (2014/25/EC) implemented into Danish law by Regulation No. 1624 of 15 December 2015. Regulation No. 1624 of 15 December 2015 on public legal aid provided by lawyers admitted to the bar, s. 5(1).

Trafikselskabet Movia ("Movia") invites tenders in A16 – Invitation to tender for regular bus services – for approx. 175,850 timetable hours per year using 49 in-service busses. The bus services are divided into the nine units of the ITT (lots), see section 2.

The contract documents consist of the following documents:

- Notice of invitation to tender
- Contract conditions, including contract clauses (this document)
- Time schedule for the tender process

Appendices to the contract clauses:

- Appendix a: Billing sheet
- Appendix b1: Vehicle schedules – HASTUS files
- Appendix b2: Vehicle schedules – Text files
- Appendix c: RPS Requirements Specification
- Appendix d: Plant drawings (for unit 9)
- Appendix e: Infotainment Traffic Information - Requirements Specification
- Appendix f: Travel Card Manual
- Appendix g: Environmental Inspection Manual – part 1
- Appendix h: Environmental Inspection Manual – part 2
- Appendix i: Mapping Manual

Schedules to be used in connection with the prequalification process

- Appendix 1: European Single Procurement Document (eESPD) template
- Appendix 2: Comfort letter for joint agents in consortia
- Appendix 3a: Comfort letter for technical capacity
- Appendix 3b: Comfort letter for economic and financial capacity

Schedules to be used in connection with the submission of tenders

- Appendix 4: Tender form
- Appendix 5: List of bus equipment
- Appendix 6: Statement of operations
- Appendix 7: Reservations and comments
- Appendix 8: List of charging stations

Schedules to be used after contract conclusion

- Appendix 9: Detailed description of quality of operations
- Appendix 10: Detailed description of facilities
- Appendix 11: Empty running

- Appendix 12: Environmental mapping

Information to be used in connection with the submission of tenders

- Staff data
- Instructions for reading the billing sheet
- Instructions for reading vehicles schedules
- Sheet to estimate CO2 emissions
- Text on invitation to tender for bus depot site

1.1 Questions

All inquiries in the form of questions to the content, understanding of the contract documents or procedural issues must be addressed to Movia Contracts, on the ITT website under the "Send questions" tab.

Prior to the deadline for applications, Movia reserves the right to only answer questions which are directly relevant for the preparation of the application.

All questions submitted no later than 14 days before the deadline for submission of applications/tenders will be answered. Responses to questions submitted later than 14 days before the deadline for submission of applications/tenders will be given only if the response can be given no later than six days before the deadline for submission of applications/tenders. Tenderers cannot expect a response to questions submitted later than six days before the deadline for submission of applications/tenders. Questions received later than that date may be answered, but at Movia's discretion only.

Questions and answers will be published in anonymised form at the ITT website.

1.2 Prequalification

1.2.1 Prequalification application

In the prequalification application, applicants must clearly and unambiguously state the name of the legal person who is the applicant. If the application is submitted by a consortium comprising several legal persons, the name of each legal person participating in the consortium must be marked clearly and unambiguously.

When applying for prequalification, the applicant will only have to submit a completed eESPD generated from Appendix 1, European Single Procurement Document, as documentation for its suitability.

For consortium members and applicants who rely on the technical capacity of other entities, a completed eESPD file generated from Appendix 1, European Single Procurement Document, must be submitted for each economic player.

If an applicant is a consortium, the application must be accompanied by a letter on joint agents, see Appendix 2.

Applications based on the capabilities of other entities must be accompanied by a comfort letter, see Appendices 3a and 3b.

Applicants must send their applications to Movia, using the e-Source system. The application must be uploaded in the e-Source system https://www.ethics.dk/asp4/qualify/movia_0116_20170627.nsf on or before:

3 August 2017 at 02:00 pm.

Applications uploaded after the deadline for applications will not be considered.

Completion of eESPD

To complete the eESPD, the applicant must import Movia's eESPD template (request) (Appendix 1 to the Contract Conditions) in the European Commission tool (<https://ec.europa.eu/growth/tools-databases/espd-filter?lang=da>). After completion, an XML file is to be exported and uploaded at the ITT website. It is not possible to open the eESPD file by clicking on it.

The Danish Competition and Consumer Authority has published eESPD Guidelines (<http://www.kfst.dk/media/46438/espd-dokumentation-og-ecertis.pdf>)

1.2.2 Grounds for exclusion

Applicants who are affected by circumstances covered by ss 135(1) and (3), 136 and 137(1)(i)(ii) and (vi) of the Danish Public Procurement Act (in Danish: *udbudsløven*) must be excluded from the procurement process. An applicant who is, at any time, subject to one of the grounds for exclusion found in ss 135(1) and (3), 136 and 137(1)(i), (ii) and (vi) of the Act will be excluded from the procurement process unless the applicant produces documentation for the reliability of the tenderer within a reasonable time fixed by Movia (see s. 138 of the Danish Public Procurement Act).

1.2.3 Suitability

The applicant (if a company, the head of the company) must fulfil the qualification requirements set out in Consolidated Act no. 1050 of 12 November 2012 concerning bus services (as amended) and must be licensed for commercial passenger transport by the Danish Transport, Construction and Housing Authority (vehicle operator's licence).

The applicant must further be entered in the register of companies (the so-called CVR register in Denmark).

The applicant is required to have a usual general liability insurance policy with a limit of cover for personal injury of at least DKK 10 million and a limit of cover for damage to property of at least DKK 2 million per year.

1.2.4 Selection

Movia will shortlist 25 suitable candidates who have the best and most relevant references in terms of the type of bus services put out to tender. The references must be for projects carried out within the past three years (date of completion, if not a project in progress).

The selection will be based on the references listed in the applicants' eESPDs.

1.2.5 Documentation for suitability and fulfilment of selection criteria

As documentation for the accuracy of the information submitted in the eESPD, the applicant/tenderer must, on request, send the following:

- Documentation for licence for commercial passenger transport (vehicle operator's licence);
- Documentation for registration in the register of companies (the CVR register) (or comparable register for foreign companies);

The documentation must only be forwarded on request and must be received by Movia within one week from the request.

Movia reserves the right to demand at any time that applicants submit all or part of the documentation listed above if Movia deems it appropriate for the process.

As a general rule, it is not necessary to submit documentation for references, but Movia reserves the right to insist on references certified by customers.

1.3 Submission of tenders

Only shortlisted bidders may submit tenders. In connection with the prequalification, the tenderers will have access to all contract documents at the ITT website under the Contract Documents tab with the Internet address:

https://www.ethics.dk/asp4/tender/movia_0116_20170627.nsf

Movia may make changes to requirements and terms in these contract documents, including as a result of the negotiations until request for a final tender. Changes will be notified to the tenderers under the FAQs tab on the ITT website.

1.3.1 Negotiation phases

The description of the process below makes up the preliminary planning of the negotiations. Movia reserves the right to later amend the process described:

1.3.1.1 First negotiation round

After the opening of the tenders submitted, Movia will make a preliminary review of the tenders. The first negotiation round includes a negotiation based on the tenderers' initial tenders.

During the negotiations, Movia will inform the individual tenderer about its view on the strengths and weaknesses of the tender. The negotiations may cover all aspects of the tenders, including price.

If possible, Movia will inform the tenderers if Movia is aware that the initial tender does not meet the requirements of the contract documents.

After negotiations with the tenderers, Movia will encourage the tenderers to submit updated tenders within a deadline set by Movia.

1.3.1.2 Additional negotiation rounds

Based on the updated tenders, there will be yet another negotiation round based on the tenderers' updated tenders. During the negotiations, Movia will inform the individual tenderer about its view on the strengths and weaknesses of the updated tender. The negotiations may cover all matters, including price.

Movia may repeat the procedure of encouraging the tenderers to submit updated tenders until after the receipt of the most recently updated tenders, Movia deems it appropriate to make an award.

Alternatively, Movia may choose to hold a written negotiation round.

Movia expects to complete two negotiation rounds and then award the contract on the basis of the finally adjusted tenders. The tenderers must therefore ensure that the finally adjusted tenders meet all specifications in the contract documents which are not only the subject of evaluation and do not contain reservations which may lead to non-conformity, see section 1.3.7.5.

1.3.2 Tenderers

The bus service contract may be concluded with an individual, a company or other legal entity. The contracting party must be the same as the tenderer and thus the shortlisted entity.

The tenderer must fulfil the qualification requirements set out in Consolidated Act no. 1050 of 12 November 2012 concerning bus services (as amended) and must be licensed for commercial passenger transport by the Danish Transport, Construction and Housing Authority (vehicle operator's licence).

On request, documentation must be available to Movia Contracts to show that the tenderer holds the necessary number of licences for the agreed bus services. All of the services covered by the contract documents must be performed in full compliance with Danish law.

1.3.3 Requirements and terms

Tenders must be submitted in the Danish language. Similarly, all subsequent communication, whether written and oral, during contract negotiations as well as during the subsequent operational phase must be in the Danish language.

All prices must be stated in Danish kroner at the September 2017 price level. All prices must be inclusive of VAT and taxes, if applicable. All prices stated in these contract documents are inclusive of VAT, unless otherwise indicated.

All services to be provided by the tenderer must be included in the tender. No separate fee is payable for spare buses, and the costs of spare buses must therefore be included in the prices for in-service buses quoted in the tender.

1.3.4 Submission of tenders in general

The tenderer may submit a single tender for one, more or all units, possibly supplemented by a combination tender, see section 1.3.5.

The tenderer is entitled to submit multiple tenders for each unit or possible combinations which all meet the requirements set out in the contract documents. For example, the tenders may offer different equipment and machinery. Alternative tenders or variants are not accepted.

The tenderer may submit second round tenders and/or final tenders for units and combinations of units that the tenderer has not tendered for in previous rounds.

Movia reserves the right to shortlist candidates on the basis of second round tenders. Movia will create a shortlist on the basis of second-round tenders, applying the award criterion in section 1.4, and tenderers whose tenders are rejected will receive a written notice as soon as the decision is made.

Movia evaluates final tenders only. The tenderer must thus ensure that both single and combination tenders are included in final tenders.

The tenderers must ensure that the final tenders meet all specifications in the contract documents which are not only the subject of evaluation and do not contain reservations which may lead to non-conformity, see section 1.3.7.5.

1.3.5 Combinatorics

The tenderers may submit combination tenders for up to four units within units 2, 3, 5 and 7.

It is further possible to submit combination tenders for units 4 and 8.

Units 4 and 8 may not be included in combination tenders with units 2, 3, 5 and 7, nor may units 1, 6 and 9 be included in combination tenders. This means that only single tenders may be submitted for units 1, 6 and 9.

The same unit within units 2, 3, 5 and 7 may be included in multiple combination tenders.

Only combination tenders containing units for which the tenderer has submitted single tenders are permitted.

In addition, tenders for units cannot be submitted if they are subject to the reservation that the tenderer must be awarded the contract for other units.

1.3.6 Options

1. For unit 9, package b, tenders must be submitted for an option (Option 1) consisting in the option for Movia to choose diesel Euro 6 buses as an alternative to electric buses on package b.

No later than 30 days after the award, the tenderer will be notified whether or not the option will be exercised.

The budgetary circumstances will affect Movia's choice of the basic package (package a and b) or the basic package on a and the option package on b.

In the evaluation of the tender, the weighting between the basic package and the option is set out in section 1.4.

2. For unit 9, package a, tenders must be submitted for an option (Option 2) allowing the tenderer to upgrade the exterior of the bus (a full respray with up to three colours) to +Way standard. The option can be exercised throughout the contract period.
3. For unit 9, package a, tenders must be submitted for an option (Option 3) allowing the tenderer to upgrade the exterior of the bus (a full respray with up to three colours), to re-cover seats and to respray hand rails to +Way standard. The option can be exercised throughout the contract period.

1.3.7 Tender content

When submitting tenders, the tenderer must produce the following documents, duly filled in. The documents are available for download at the ITT website under the *Contract Documents* tab:

- Tender form
- List of bus equipment
- List of charging stations (if submitting tenders for unit 9)
- Statement of operations
- Reservations and comments (uploaded only if there are reservations and comments)

Moreover, the tenderer must submit the following documents:

- A complete official certificate from the Danish Business Authority containing all information from public authorities required for the tender (in Danish: serviceattest) or similar documentation for foreign enterprises, no more than six months old
- Documentation for usual general liability insurance
- Drawings in scale 1:10 of the most important design details of the charging station and positioning (where relevant), including control cabinet (when submitting tenders for unit 9)
- The tenderer's proposal for time tables for unit 9 (electric buses)
- The tenderer's proposal for bus runs for unit 9 (electric buses)

1.3.7.1 Tender form

The following information must be included in the tender form (appendix 4 to the contract documents) consisting of two sheets – one for submission of tenders for single units and one for submission of combination tenders:

- Price
 - ❖ Basic price
 - Basic price to be broken into:
 - a) Overheads (facilities, administration, etc.) Monthly price
 - b) Bus-related costs (interest, depreciation, repairs, maintenance and cleaning, insurance, etc.) Monthly price per in-service bus
 - c) Costs related to timetable hours (driver's wages, fuel, etc.) Price per timetable hour
 - d) Facility-related costs (Maintenance, cleaning etc.) Monthly price

The total quoted price per normal year is the sum of overheads, bus-related costs, costs related to timetable hours and facility-related costs. The total quoted price will be included in the evaluation of tenders.

- ❖ The option price for option 1 for unit 9, package b, see section 1.3.6
On submission of tenders for the option for unit 9, the prices must, as for the basic price, be divided into overheads, bus-related costs, costs related to timetable hours and facility-related costs.
 - ❖ The option price for option 2 for unit 9, package a, for upgrade to +Way standard (only exterior upgrade), see section 1.3.6. A lump-sum per bus price must be quoted.
 - ❖ The option price for option 3 for unit 9, package a, for upgrade to +Way standard (complete upgrade), see section 1.3.6. A lump-sum per bus price must be quoted.
- Level of quality
 - ❖ Quality index
The quoted level for the quality index must be specified in the tender form. Not until contract conclusion, the tenderer must submit detailed information by sending a completed appendix 9 to the contract documents. (No quality index must be given for units 4, 6 and 8)
 - ❖ Level of service
The quoted level of service must be specified in the tender form. (No level of service must be given for units 4, 6 and 8)

1.3.7.2 List of bus equipment

The list of bus equipment (appendix 5 to the contract documents) is to include the following information:

Clear specification of the bus equipment included in the tender for each unit.

Clear specification of the spare buses which will be available in case of breakdowns or similar events. If the tenderer intends to put other buses and equipment into service during the contract period (temporary or new), this must also be specified here.

Details such as length, height, Euro standards, etc. for all specified equipment. The specific information to be given appears from the form.

The tenderer is required to attach one completed form containing all tenders.

For unit 9 in particular

For unit 9, the tenderer must specify whether it offers temporary equipment, and if so, from which date electric buses are put into operation. Section 3.2 specifies the date before which electric buses for package a and package b, respectively, must be put into service.

The equipment included in the tender for Option 1 must also be specified.

1.3.7.3 List of charging stations

The list of charging stations is to specify the charging stations that the tenderer wishes to be installed and the power output of each charging station.

If the tenderer wishes to make use Movia' offer to let Roskilde Municipality install charging stations in urban space, the tenderer must specify the charging stations to be installed by virtue of the tenderer's

tender and the desired charging output from each charging station (300 kW or 450 kW). The tenderer must make sure to comply with redundancy requirements, see section 4.5.

If the tenderer wishes to install charging stations in urban space itself, the tenderer must specify the charging stations to be installed and the desired charging output from each charging station (300 kW or 450 kW option). If the tenderer wishes to use a different charging output stage (e.g. 150 kW), the tenderer must state so in Appendix 8 (list of charging stations)). The tenderer must make sure to comply with redundancy requirements, see section 4.5.

As to charging at the tenderer's garage, the tenderer must state how many electric buses the stations must be able to charge at the same time and at what output.

1.3.7.4 Statement of operations

In the statement of operations (appendix 6 to the contract documents), the tenderer must fill in a binding statement of operations and the resources to be spent in connection with the bus services offered.

1.3.7.5 Reservations and comments

Any intended or unintended disagreement or discrepancy between the contract documents and negotiation tenders or final tenders are in the nature of reservations. Movia is entitled – and often obliged – to reject final tenders containing reservations to the contract documents unless the reservation is obviously trifling.

If the tenderer has not filled in one or more of the following boxes, Movia will assume that the tenderer only just meets the minimum requirements:

In Appendix 4, Tender Form:

- Quality in operations, Quality index
- Quality in operations, Service level

In Appendix 5, List of bus equipment:

- Practicalities, Number of seats, not including tip-up seats
- Practicalities, Front-facing seats
- Practicalities, Tip-up seats
- Environment, Euro standard
- Environment, CO2 emission level
- Environment, Exterior noise
- Environment, Interior noise

If a tenderer states a number of buses or a number of timetable hours that, for each bus, deviates from the number specified in the contract documents, Movia reserves the right to correct the error, provided that the rates per bus and timetable hour quoted by the tenderer will not change.

In the initial tender and any updated tenders, Movia allows any reservations to the contract documents, provided that reservations do not imply that tenderers who have made reservations will be excluded from the tender procedure. However, it should be noted that minimum requirements are not negotiable.

The tenderer is encouraged not to make reservations in final tenders as reservations imply a considerable risk that the tender cannot form the basis of a contract award. If the tenderer nevertheless chooses to make reservations, the tenderer is asked to write the reservation clearly in the list of reservations (appendix 7) and explain why the tenderer makes the reservation.

Movia cannot make a contract award based on a tender containing reservations to the fundamental elements of the contract documents or other reservations that cannot be priced by Movia with the necessary certainty unless they are trifling. Minimum requirements are always deemed to be fundamental elements.

Instead of considering reservations, the tenderer is encouraged to draw Movia's attention to any inappropriate requirements of relevance to the contract documents during Q&As.

The tenderer is requested not to include generic documents such as standard terms of delivery etc. in tenders without thought as such documents may contain unintended reservations.

It is not possible to make reservations for being awarded fewer units than those tendered for. The tenderer is thus obliged to be able to deliver the services on all the units tendered for.

1.3.7.6 Other documents

It must be possible for Movia to obtain the following documentation at short notice during the negotiation process:

- Drawings of bus types
- Drawings at a scale of 1:20
- Charts of rotary torque measurements of the bus
- Photographs of bus interior and exterior
- A copy of the approval certificate of the bus engine regarding gaseous emissions (88/77/EEC as most recently amended)
- Documentation of fuel consumption (SORT measurement report) or, if no SORT report is available, other official documentation (e.g. for buses running on alternative fuels and the like)
- Documentation for noise level, see Environmental Inspection Manual – part 2

1.3.8 Deadline for submission of tenders

The deadline for submission of first negotiation tenders is

20 October 2017 at 02:00 pm

Any tender received after this date and hour will be rejected.

The deadline for submission of subsequent tenders is set out in the time schedule available at the ITT website which tenderers are advised to check regularly for changes. See always the date and hour specified at the ITT website.

Final tenders must be binding until 1 August 2018.

The costs incurred by the tenderer in connection with this ITT are of no concern to Movia.

1.4 Evaluation

The award criterion is the most economically advantageous tender which is identified on the basis of the best price/quality ratio.

Each tender unit will be evaluated individually on the basis of the below sub-criteria, taking into account combination tenders and with the aim of identifying the combination of tenders for all units as a whole which is most economically advantageous for Movia. This means that Movia will not necessarily award the contract to the tender which is the most economically advantageous tender for the individual unit.

When evaluating which tender is most economically advantageous for Movia as a whole, Movia will include each unit in the evaluation with its proportionate share of timetable hours for the units. In its evaluation of unit 9, Movia will also include unit 9 with the proportionate share of timetable hours for packages a and b, see section 2 (list of units).

Movia will evaluate all tenders on the basis of the weighted scores for the sub-criteria “Price”, “Quality of Operations”, “Environment” and “Quality of Equipment” of each unit regardless of whether the tenderer has submitted a tender for the individual unit or for a combination of units.

Movia applies the following sub-criteria:

• Price	40%	
• Quality of operations	35%	
• Environment		10%
• Quality of equipment	15%	

The indication in percentage is the weighting factor by which the number of points awarded for the sub-criterion is multiplied.

Below is described the aspects on which Movia will attach importance in its evaluation of the individual sub-criteria and the evaluation process.

Only the conditions in the initial contract period will be included in the contract award. This means the contract period without any renewal period.

1.4.1 Sub-criteria

1.4.1.1 Price – 40%

Units 1, 2, 3, 5 and 7

For units 1, 2, 3, 5 and 7, the criterion is evaluated on the basis of the basic price quoted for each normal year (translated into average hourly rate). For details on how to calculate a normal year, see section 2. In the evaluation of price, the lowest price will be awarded a maximum score of 10 and the lowest price +20% will be awarded a score of 0 with a linear interpolation between them.

Units 4, 6 and 8

For units 4,6 and 8, the criterion is evaluated on the basis of the basic price quoted for each normal year (translated into average hourly rate). For details on how to calculate a normal year, see section 2. In the evaluation of price, the lowest price will be awarded a maximum score of 10 and the lowest price +10% will be awarded a score of 0 with a linear interpolation between them.

Unit 9

To allow for comparison of the tenders submitted by the different tenderers, Movia will estimate a total average hourly rate for the tenderer's tender. The total average hourly rate includes:

A. The tenderer's costs of operating the bus services, see specification in Appendix 4.

B1. The costs incurred by Roskilde Municipality for installation and operation of charging stations in urban space (including VAT)

B2. Installation costs associated with grid connection and excavation works in connection with the tenderer's installation of charging stations in urban space (including VAT)

The combined costs of A + B1 + B2 estimated as an average hourly rate over a 10-year contract period. Where the tenderer does not base the operation of electric buses on charging in urban space (ie where the tenderer neither makes use of Movia's offer to use the charging stations of Roskilde Municipality nor install charging stations in urban space itself), the price for B1 + B2 will be estimated at DKK 0/h.

For unit 9, the criterion is evaluated on the basis of the basic price quoted for each normal year (translated into an average hourly rate) and the option price (Option 1) quoted for each normal year (translated into an average hourly rate). The basic price and the option price (Option 1) will be evaluated separately in that the lowest price will be awarded a maximum score of 10 and the lowest price +20% will be awarded a score of 0 with a linear interpolation between them. In the evaluation of the basic price and the price of Option 1, scores will be multiplied using the following weighting: 90% and 10%.

Options 2 and 3

Options 2 and 3 will not be included in the evaluation of the tenders.

1.4.1.2 Quality of operations – 35%

The evaluation of the sub-criterion "quality of operations" will include:

- Part criteria - All units will not be evaluated on the basis of all part criteria.
- Scoring
- Weighting

Part criteria for the sub-criterion "quality of operations":

- **Customer satisfaction** (quality index)
In the evaluation of the part criterion "*Customer satisfaction*", Movia will assess whether and to what extent the tenderers offer a better quality index than the minimum requirement. The tenderer may submit tender for a quality index ranging from 810 up to and including 1,000. If this minimum requirement is not met, the tender will be rejected as non-compliant.
- **Level of bus service provided** (service level)
In the evaluation of this part criterion, Movia will assess whether and to what extent the tenderers

offer a better quality index than the minimum requirement. The tenders must provide for a level of service between 99.90 and 100.00. If this minimum requirement is not met, the tender will be rejected as non-compliant.

- **Other quality of operations**

To secure other quality in operations, it will be assessed:

- Traffic flow: The appropriateness of the tenderer's supervision of the traffic flow and active traffic control handling, and
- Continuous communication: The appropriateness of the tenderer's organisation of the continuous communication with Movia on day-to-day operations, including reporting of incidents that the tenderer is obliged to report to Movia.
- Flexibility in operations: The appropriateness of the tenderer's securing of a high range, change of routing in the contract period, etc. (Only relevant for electric buses)

The sub-criterion "quality of operations" is assessed on the basis of the tenderer's specifications in the tender form ("Customer satisfaction" and "Level of bus service provided") and statement of operations ("Other quality of operations"). For "Other quality of operations" all tenders will be given the same score based on the statement of operations (regardless of the unit).

Scoring of the sub-criterion "quality of operations":

In the scoring of "Customer satisfaction", a score of 10 will be given to tenders providing for a quality index of 910-1,000 where the minimum requirement for the quality index of the unit is 810, and a score of 0 to tenders providing for a quality index of 810. A linear interpolation will be performed between 810 and 910.

In the scoring of "Level of bus service provided", a score of 10 will be given to tenders providing for a level of service of 100, and a score of 0 to tenders providing for a level of service of 99.90. A linear interpolation will be performed between 99.90 and 100.

In the scoring of "Other quality of operations", Movia will assess "Traffic regulations", "Continuous communication" and "Flexibility in operations" separately, applying the model in table 1:

Fulfilment of the part criteria	Score
Best possible fulfilment of the criterion Excellent/superior fulfilment of the criterion	10
Very good/very satisfactory fulfilment of the criterion	9
Poor fulfilment of the criterion	8
Above-average fulfilment of the criterion	7
Satisfactory/average fulfilment of the criterion	6
Below-average fulfilment of the criterion	5
Below-average fulfilment of the criterion	4
Poor fulfilment of the criterion	3
Poor fulfilment of the criterion	2

Very poor fulfilment of the criterion	1
Completely unsatisfactory fulfilment of the criterion	0

Table 1:

Weighting of the sub-criterion “quality of operations”:

In the evaluation, scores for the individual units with respect to “Customer satisfaction”, “Level of bus services provided” and “Other quality of operations” will be multiplied by the weighting in table 2.

Quality of operations 35%						
Unit	Customer satisfaction	Level of bus service provided	Other quality of operations			Total
			Traffic flow	Flexibility in operations	Continuous communication	
1	45	40	10	0	5	100
2	45	40	10	0	5	100
3	45	40	10	0	5	100
4			75	0	25	100
5	45	40	10	0	5	100
6			75	0	25	100
7	45	40	10	0	5	100
8			75	0	25	100
9 basis	45	40	5	10	0	100
9 option 1	45	40	10	0	5	100

Table 2:

In the evaluation of the sub-criterion “Quality in operations” on basic price and the price of Option 1 for unit 9, scores will be multiplied using the following weighting: 90% and 10%.

1.4.1.3 Environment – 10%

The evaluation of the sub-criterion “Environment” will include:

- Part criteria - All units will not be evaluated on the basis of all part criteria.
- Scoring
- Weighting

Part criteria for the sub-criterion “Environment”:

Movia attaches importance to the buses having the lowest possible emission level, and therefore, an emission level below the requirements in the below part criteria will affect the evaluation positively. All units will not be evaluated on the basis of all part criteria.

- CO2 emission.
- Euro standard of the bus.
The Euro standard of the bus and not the specific values are included in the evaluation.

“Almost Euro 6” buses, see clause 5.3.2, will be weighted higher than EEV, but lower than Euro 6 buses

- Interior noise emitted by the bus
- Exterior noise emitted by the bus

The sub-criterion is evaluated on the basis of the information provided by the tenderer in appendix 5 to the Contract Conditions.

The overall emission of the unit will be used as the basis of the evaluation.

Scoring of the sub-criterion "Environment":

In the scoring of the CO₂ emitted by the vehicle (unit), a score of 10 will be given for an emission of 0 g of CO₂, and a score of 0 will be given for emission equivalent to the maximum emission of the vehicle (unit). The maximum emission appears from table 3. Scores will be given with a linear interpolation between them.

Unit	SORT	Gram CO ₂ e/km
3	3	993
4	3	848
5	3	978
6	3	836
7	3	978
8	3	978
9 option 1	2	978

Table 3:

In the scoring for the Euro standard of the buses, scores will be given according to the model in table 4.

Units 1, 2, 3, 5 and 7		Units 4, 6 and 8		Unit 9	
Standard	Score	Standard	Score	Standard	Score
EURO 6½	0	EURO 5	0	EEV	0
EURO 6	1	EEV	1	EURO 6½	1
EURO 6 +GtL	2	EURO 5 +GtL	2	EURO 6	2
Electricity/hydrogen	10	EURO 6½	5	EURO 6 +GtL	3
		EURO 6	6	Electricity/hydrogen	10
		EURO 6 +GtL	7		
		Electricity/hydrogen	10		

Definitions	
EURO 6½	Air pack buses or comparable upgraded E3, E4, E5 or EEV

+GtL	Buses of the given emission standards operating only on GtL fuel (100%)
Reservations	
Air pack buses or other upgraded buses cannot achieve scores for operating on GtL fuel.	

Table 4:

If, in unit 9, package a, the tenderer offers temporary equipment where the European emission standard is Euro 5, the equipment will be included in the evaluation with the same score as an EEV.

In the scoring for emission of exterior and interior noise, scores will be given according to the model in table 6.

Exterior noise Units 1-8 and option1 on unit 9		Exterior noise Unit 9		Interior noise Units 1-8 and option1 on unit 9		Interior noise Unit 9	
dB	Score	dB	Score	dB	Score	dB	Score
77	0	70	0	72	0	70	0
76	0.77	69	1.67	71	0.91	69	1.11
75	1.54	68	3.33	70	1.82	68	2.22
74	2.31	67	5	69	2.73	67	3.33
73	3.08	66	6.67	68	3.64	66	4.44
72	3.85	65	8.33	67	4.55	65	5.56
71	4.62	64	10	66	5.45	64	6.67
70	5.38			65	6.36	63	7.78
69	6.15			64	7.27	62	8.89
68	6.92			63	8.18	61	10
67	7.69			62	9.09		
66	8.46			61>	10		
65	9.23						
64>	10						

Table 6:

Weighting of the sub-criterion “Environment”:

In the evaluation, scores for the individual units with respect to “Emission of CO₂”, “Euro standard of the bus”, “Interior noise emitted by the bus” and “Exterior noise emitted by the bus” will be multiplied by the weighting in table 7.

Environment 10%					
Unit	CO ₂	Euro standard	Interior noise	Exterior noise	Total
1		20	40	40	100
2		20	40	40	100
3	20	20	30	30	100
4	20	20	30	30	100
5	20	20	30	30	100

6	20	20	30	30	100
7	20	20	30	30	100
8	20	20	30	30	100
9 basis		40	30	30	100
9 option 1	20		40	40	100

Table 7:

In the evaluation of “Environment” on basic price and the price of Option 1 for unit 9, scores will be multiplied using the following weighting: 90% and 10%.

1.4.1.4 Quality of equipment – 15%

The evaluation of the sub-criterion “quality of operations” includes

- Part criteria - All units will not be evaluated on the basis of all part criteria
- Scoring
- Weighting

Part criteria relevant for the sub-criterion “quality of equipment”:

Movia attaches importance to the equipment being of high quality. In the evaluation of the quality of equipment, the sub-criterion will be grouped into the below part criteria. All units will not be evaluated on the basis of all part criteria.

- **Age of the bus**
Movia gives new equipment the best score, and new equipment is scored higher than old equipment.
- **Capacity and layout**
Movia attaches importance to the layout and capacity of the bus based on
 - Layout conditions or measures providing a good flow for passengers and increase passenger comfort in other areas.
 - A request for the number of seats
 - A request for the number of front-facing seats
- **Maintenance of bus equipment**
Movia attaches importance to:
 - That the tenderer will ensure that the bus equipment is constantly in a good state of repair and maintenance. (Applies to units 1-8 option 1 on unit 9) - including during day-to-day operations, prevention and rectification of defects.
 - That the tenderer will ensure that the electric bus solution is constantly in a good state of repair and maintenance, including with respect to implementation, number of spare

buses, daily preparation measures, service and maintenance, prevention of defects and breakdown, rectification of defects, recharging. (Applies to unit 9 package a)

- **Charging station design**

In the evaluation of design (unit 9), the following factors will have a positive impact:

- that the design of the charging mast is minimalistic, contemporary, timeless and visionary
- that the control cabinet with power electronics fits into both the close urban open space and open country
- that the charging mast, control cabinet with power electronics and other installations installed as part of the charging station is of high design quality

- **Date of commissioning**

It will have a positive impact on the evaluation of the tender if the electric buses in unit 9 package a will be put into operation from the date when operations start on 14 April 2017.

The sub-criterion “quality of equipment” will be evaluated on the basis of the information given by the tenderer in Appendix 5, List of bus equipment (“Age of the bus”, “Capacity and layout” and “Date of commissioning”), Appendix 7 Reservations and comments (“Capacity and layout”), Appendix 6 Statement of operations and Appendix 8 List of charging stations (“Maintenance of bus equipment”) and the tenderer’s drawings and descriptions of the most important design details of the charging station (“Charging station design”).

Scoring of the sub-criterion “quality of equipment”:

In the evaluation, the buses included in the tenders will be assessed individually, and on that basis, Movia will estimate an average bus package (total score for all buses divided by the number of buses) which will be included in the evaluation of the unit. Spare buses will be included in the evaluation on an equal footing with in-service buses.

If the tenderer tenders for several possible bus packages, but wishes to make the final choice of bus package after contract award, Movia will let the assessment of the bus package with the lowest score under the sub-criterion form part of the evaluation.

If the tenderer tenders for several possible bus packages and leaves it to Movia to make the final choice of bus package after contract award, Movia will let the assessment of the bus package with the highest score under the sub-criterion form part of the evaluation.

It is specified that by “bus package”, Movia means the package of buses which is sufficient to deliver the bus services.

If the tenderer offers to replace equipment in the contract period (period without the possibility of renewal) - including replacement of temporary equipment, the equipment will be included in the calculation relative to the period in which the specific equipment is offered. If the tenderer offers replacement in the extension period, it will not be included in the evaluation of the tender.

If the tenderer offers temporary equipment on unit 9 where the minimum requirements in the contract documents are not met, and Movia (in Q&As) (see clause 2.7.9) will accept the lack of performance, the equipment will on the specific points be included in the evaluation, as if the minimum requirements are met.

In the scoring for the age of the bus, scores will be given according to the scale in table 8.

Age of the bus up to - Applicable from 1 registration date	Score
1 yr	10
2 yrs	9
3 yrs	8
4 yrs	7
5 yrs	6
6 yrs	5
7 yrs	4
8 yrs	3
9 yrs	2
10 yrs	1
10 years +	0

Table 8:

In the scoring for Capacity and layout, the following scores will be given:

- A score of up to 10 for layout conditions or measures providing for a good flow for passengers and increase passenger comfort in other areas. Comfort-enhancing equipment may be USB power outlets, air-conditioning system and infotainment screens (if not a requirement) and similar equipment. For service buses (SB1), it is particularly important that the layout caters for passengers with walking frames and includes as many tip-up seats and single seats as possible without steps and is wholly or partly without wheel casings in the passenger area.
- Scores will be given for seats and front-facing seats according to the model in table 9.

Units 1 and 2 (SB1)				Units 2 (LB2/TB1) 4, 5, 7, 8 and 9				Unit 6				Unit 3			
Seats		Front-facing		Seats		Front-facing		Seats		Front-facing		Seats		Front-facing	
No.	Score	No.	Score	No.	Score	No.	Score	No.	Score	No.	Score	No.	Score	No.	Score
17	0	10	0	25	0	18	0	21	0	15	0	33	0	27	0
18	0	11	0	26	0	19	0	22	0	16	0	34	0	28	0
19	0	12	0	27	0	20	0	23	0	17	0	35	0	29	0
20	2.5	13	2.5	28	1	21	1	24	1	18	1	36	1	30	1
21	5	14	5	29	2	22	2	25	2	19	2	37	2	31	2
22	7.5	15	7.5	30	3	23	3	26	3	20	3	38	3	32	3
23+	10	16+	10	31	4	24	4	27	4	21	4	39	4	33	4
Please note that the minimum requirement for the number of seats/front-facing seats for these units is 17/10				32	5	25	5	28	5	22	5	40	5	34	5
				33	6	26	6	29	6	23	6	41	6	35	6
				34	7	27	7	30	7	24	7	42	7	36	7
				35	8	28	8	31	8	25	8	43	8	37	8

36	9	29	9	32	9	26	9	44	9	38	9
37	10	30	10	33	10	27	10	45	10	39	10
38	10	31	10	34	10	28	10	46	10	40	10
39+	10	32+	10	35+	10	29+	10	47+	10	41+	10
Please note that the minimum requirement for the number of seats/front-facing seats for these units is 25/19				Please note that the minimum requirement for the number of seats/front-facing seats for these units is 21/15				Please note that the minimum requirement for the number of seats/front-facing seats for these units is 21/13			

Table 9:

Tip-up seats count as seats, but never as front-facing seats regardless of their direction.

In the scoring for Maintenance of bus equipment, Movia will use the model in table 10, where a score of 10 is given for the best possible fulfilment of the criterion, and where a score of 0 is given for the completely unsatisfactory fulfilment of the criterion.

Fulfilment of the part criteria	Score
Best possible fulfilment of the criterion Excellent/superior fulfilment of the criterion	10
Very good/very satisfactory fulfilment of the criterion	9
Poor fulfilment of the criterion	8
Above-average fulfilment of the criterion	7
Satisfactory/average fulfilment of the criterion	6
Below-average fulfilment of the criterion	5
Below-average fulfilment of the criterion	4
Poor fulfilment of the criterion	3
Poor fulfilment of the criterion	2
Very poor fulfilment of the criterion	1
Completely unsatisfactory fulfilment of the criterion (only conformant tender)	0

Table 10:

In the scoring for design of charging station, Movia will use a scale of 0-10 based on the model in table 10, where a score of 10 is given for the best possible fulfilment of the criterion, and where a score of 0 is given for very poor fulfilment of the criterion. The design must achieve a score of at least 2.5 for the tenderer's tender as a whole to be considered. If the design achieves a score of less than 2.5, the tender will be considered non-conformant.

Great importance is attached to the absence of charging stations in urban space. If, as a result of the tenderer's tender, no charging stations will be installed in urban space, such solution will be given a maximum score of 10 for design.

If the tenderer makes use of Movia's offer to install charging stations in urban space in Roskilde, the score for design of charging solution achieved by the system supplier of Roskilde Municipality in Roskilde Municipality's evaluation of the system supplier's tender will be included in the evaluation of the tender submitted by the tenderer. Roskilde Municipality will evaluate the system supplier's charging solution, using a scale of 0-8, where a score of 0 is given for the best possible fulfilment of the criterion, and where a score of 8 is given for very poor fulfilment of the criterion. The score given to the system supplier will be converted to the scale of 0-10 used by Movia. The conversion factor from the scale used by Roskilde Municipality to the scale used by Movia is:

$$MP = 10 \cdot (8 - RKP) / 8$$

MP: Score using Movia's scale

RKP: Score using the scale of Roskilde Municipality

Example:

The system supplier achieves a score of 3 according to the scale of Roskilde Municipality. Converted into Movia's scale, the score will be as follows: $MP = 10 \cdot (8 - 3) / 8 = 6.25$

In the scoring for the date of commissioning for electric buses on unit 9 package a, a score of 10 will be given if the tender provides for the delivery of all electric buses within 30 days (test bus must be delivered earlier) before the start of operations on 14 April 2019 so that they are ready to be put into operation on 14 April 2019. If the equipment is not ready to be put into operation on 14 April 2019 - and not later than 30 June 2019 (delivered 30 days earlier), a score of 0 will be given.

Weighting of the sub-criterion "quality of bus equipment":

The "Capacity and layout" factor of this sub-criterion is divided into additional categories: Layout conditions or measures, Seats and Front-facing seats. In the evaluation, scores will be multiplied using the following weighting: 30%, 35% and 35%.

The "Maintenance of bus equipment" factor (applicable to unit 9 package a) is divided into additional categories: the implementation of the electric bus solution, number of spare buses, day-to-day operations, prevention and rectification of defects and charging. In the evaluation, scores will be multiplied using the following weighting: 15%, 10%, 5%, 30%, 30% and 10%.

In the evaluation, scores for the individual units with respect to "Age of the bus", "Capacity and layout" and "Maintenance of bus equipment" will be multiplied by the weighting in table 11.

Quality of equipment 15%						
Unit	Age	Capacity and layout	Maintenance of bus equipment	Design of charging station in urban space	Date of Commissioning	Total
1	35	50	15			100
2	35	50	15			100
3	35	50	15			100
4	35	50	15			100

5	35	50	15			100
6	35	50	15			100
7	35	50	15			100
8	35	50	15			100
9 basis		5	70	20	5	100
9 option 1	35	50	15			100

Table 11

In the evaluation of the quality of bus equipment with respect to basic price and the price of Option 1 for unit 9, scores will be multiplied using the following weighting: 90% and 10%.

1.4.2 Final evaluation

To assess whether a single tender or a combination tender is on a whole the most economically advantageous tender, the following evaluations will be made:

- I) Movia will evaluate which of the tenders submitted for the individual units is the most economically advantageous.
- II) Movia will further evaluate which combination tender for each of the permitted combinations is the most economically advantageous.
- III) Movia will then evaluate which composition of combination tenders and single tenders is the most economically advantageous.

Movia will then evaluate whether it is, on a whole, most economically advantageous for Movia to i) accept the best single tender in a permitted combination, ii) accept the best combination tender for all units in a permitted combination or iii) accept a combination of combination tenders and single tenders.

The evaluation of "Price" is made by way of a comparison of the best combination tender with the sum of the prices for the best single tenders for the units covered by the permitted combination and the sum of the prices for an accepted combination of combination tenders and single tenders. The lowest price will be awarded a score of 10 and the lowest price +15% will be awarded a score of 0 (linear interpolation between them). As to the qualitative sub-criteria, the evaluation of the tenders will be weighted according to the number of timetable hours. The total score for the best tenders for the individual units in the permitted combination will be compared with the quality evaluation of the best combination tenders. The weighting of the sub-criteria is set out below.

Example (the description prevails over the example):

	Enhed	Timer	Pris	Point for pris	Point for kvalitet	Point for Vægtet*	Materiel	Vægtet*	Point for Miljø	Vægtet*	Resultat
Enkeltilbud	1	600	500.000		7	2,33	5	1,67	10	3,33	
Enkeltilbud	3	650	500.000		8	2,89	10	3,61	5	1,81	
Enkeltilbud	4	550	600.000		3	0,92	9	2,75	8	2,44	
		1.800	1.600.000	6,67		6,14		8,03		7,58	6,78
Kombinationstilbud	1	600			8	2,67	8	2,67	8	2,67	
	3	650	1.500.000		7	2,53	9	3,25	7	2,53	
	4	550			3	0,92	9	2,75	3	0,92	
		1.800	1.500.000	10,00		6,11		8,67		6,11	8,05
Enkeltilbud	1	600	600.000		8	2,67	7	2,33	8	2,67	
Kombinationstilbud	3	650	950.000		5	1,81	10	3,61	8	2,89	
	4	550			9	2,75	10	3,06	10	3,06	
		1800	1.550.000	8,33		7,22		9,00		8,61	8,07

*(Point*antal timer/samlede antal timer)

In exceptional cases, Movia reserves the right not to award contracts for certain units.

1.5 Conclusion of the contract

The contract award notice is not a promise to conclude a contract with the winning tenderer. The Tenderers continue to be bound by their tenders until expiry of the period for which the tender will remain open for acceptance. The contract cannot be concluded until after expiry of the standstill period, see s. 3 of the Danish Complaints Board Act (in Danish: *klagenævnsloven*).

After the award of the bus service contract, Movia will prepare for conclusion of the contract with the tenderer. All contract documents will thus form an integral part of the contractual basis. If Movia accepts multiple tenders from the same tenderer, Movia may decide to enter into one or more contracts for the bus service in question. Regardless of the number of units and tenders which are included in the contract, the tenderer's total sum of the timetable hours and in-service buses will serve as the basis for any adjustments to be made during the contract period.

In a contract including a combination tender, all units in the tender will be part of the same contract.

In case of a contract with a combination tender, the tenderer must be prepared to accept that only the prices quoted in the combination tender for the individual units will apply for the contract period. For example in connection with:

- Regular billing, including calculation of correction factor CF1 and CF2
- Change of bus services under section 12
- Extension of parts of the contract

The prices will also form the basis of Movia's settlement of accounts with the local authorities/regions.

In case of accepted combination tenders involving units with different dates for start of operations, billing will only take place for the units put into operation.

After conclusion of the contract, the tenderer must submit the following documents:

- Completed schedule for detailed description of quality of operations (Appendix 9)
The completed schedule must be sent to Movia as soon as possible after conclusion of the contract. The schedule must describe the quality index offered in the tender form in more detail.

For unit 9a, the tenderer is required for complete two schedule - one for bus services where passengers enter and exit the bus as follows:

- Entering the bus through the front door and exiting through the middle and rear doors
- Entering and exiting the bus using all doors

If during the contract period, changes are made to the requirements with respect to entering and exiting the bus, the relevant schedule will be used for the calculation of penalty and bonus. The level of the overall quality index will be the level set out in the tender form.

- Completed schedule for detailed description of facilities (Appendix 10)
The completed schedule must be sent to Movia as soon as possible after conclusion of the contract. In the schedule, the facility-related costs must be broken down into the facilities included in the individual unit.
- Completed schedule for empty running (Appendix 11)
The completed schedule must be sent to Movia as soon as possible after conclusion of the contract. The amount of empty running is to be calculated in a schedule as described in section 2.5.

1.6 Right of access to documents and publication

To the widest extent possible, Movia will keep secret all confidential information about the tenderer's business given by the tenderer during the negotiations and contained in the tenders.

Naturally, a statutory obligation to disclose information to a third party will override this duty of confidentiality.

To the extent that the tenderer regards information for particularly commercially sensitive, the tenderer should clearly mark the relevant information in its tender, and Movia will then endeavour to protect such information from disclosure. Tenderers are advised that general references to the effect that information is commercially sensitive or similar statements are likely to be disregarded. Movia is not bound by the tenderer's indications of such confidential information in connection with requests for access to public records, but these indications may be included in Movia's consideration of whether and to what extent such access to public records should be granted.

Movia is, however, entitled to use information to the extent required to legitimately safeguard Movia's interests in legal proceedings or complaints procedures relating to the ITT.

2. Scope of tender

Movia invites tenders for bus services in the form of equipment and hours according to the units specified for the ITT. Movia thus reserves the right to change or close down routes and to change the use of equipment and hours, e.g. for use on other routes or units. Any such changes will be made in accordance with the requirements and provisions contained in the contract, including the provisions of the contract documents on changes in the number of buses and timetables, adjustments for empty running, etc.

The tendered bus services operated in the Local Authority of Helsingør and the southern area of Greater Copenhagen are divided into nine tender units. Approx. 175,850 bus timetable hours per year using 49 in-service busses are put out to tender.

With a few exceptions, the contract documents are based on the routing and timetable of the existing bus routes. Any changes are described in section 2.1.

The current timetables are available at DOT's website www.dinoffentligetransport.dk.

Movia will determine the structure of routes, timetable intervals, scope of services, general interchanges and connections, location of bus stops, other bus stop requirements etc. and will conduct negotiations with local authorities, the police and road authorities. The tenderer will be involved as much as possible.

Movia's target for bus timetable reliability is 85%. Bus timetable reliability is measured by punctuality (timetable compliance of -1 to + 5 minutes at check point level) for routes with less than six departures

Enhed	Pakke	Område	Linjenr.	Timer pr. normalår	Buskrav			Euronorm	CO2 Udledning	Tællebus	Manuelt talte linjer	Chaufførfaciliteter Administrator	Kontrakt længde
					Antal	Længde	Type						
1	a	Helsingør	342, 840, 841, (353)	12.705	4	9,0 - 10,6 m	SB1	½6	0		342, 840, 841		6+2+2+2
2	a	Høje Taastrup	850	19.347	1	9,0 - 10,6 m	SB1	½6	0		850	Blekinge Boulevard	6+2+2+2
			116		4	11,9 - 12,2 m	LB2 / TB1				116		
3	a	Roskilde, Høje Taastrup, Albertslund, Glostrup	123	39.785	9	12,9 - 13,7 m	TB3	½6	993	1			6+2+2+2
4	a	Solrød, Roskilde, Lejre	215, 219	9.243	3	11,9 - 12,2 m	LB2 / TB1	5	848	1		Kirke Hyllinge miniterminal	1½+2
5	a	Roskilde, Egedal, Ballerup	216, (201A og 202A)	10.307	3	11,9 - 12,2 m	LB2 / TB1	½6	978	1			6+2+2+2
6	a	Roskilde, Egedal, Ballerup	217, 163	5.803	2	9,9 - 12,2 m	LB1 / TB1	5	836	1		Solrød Strand St.	8 måneder
7	a	Roskilde, Solrød	220	10.245	4	11,9 - 12,2 m	LB2 / TB1	½6	978	1			6+2+2+2
8	a	Køge, Solrød	246	5.430	2	11,9 - 12,2 m	LB2 / TB1	5	978	1			1½+2
9 basis	a	Roskilde	201A, 202A	42.341	10	11,9 - 12,2 m	TB1	EL*	0 (978)	2		Roskilde Stationscenter Trekroner St.	10+2
			203, 204, 205, 206, 208, 209, 212, (202A)	20.645	7	11,9 - 12,2 m	LB2 / TB1	EL**	0 (978)	1		Veddelev Mark	
9 option 1	b	Roskilde	203, 204, 205, 206, 208, 209, 212, (202A)	20.645	7	11,9 - 12,2 m	LB2 / TB1	6	978	1		Veddelev Mark	
I alt				175.851	49					9			

Når linjerne i skemaet er angivet i (), køres der kun enkelte ture på linjen i den pågældende vognplan. Hovedparten af linjens ture vil findes i en anden vognplan

*5 i op til 2,5 måneder

** EEV i op til 2 år

per hour, and regularity (interval compliance of the interval + 5 minutes at check point level) on routes with six or more departures per hour. The timetable has been made on the basis of this target.

If bus service performance has a reliability of less than 80% in three consecutive months, Movia will enter into a dialogue with the tenderer as to the reasons for and possibilities of changes to the conditions for the timetable or adjustment of the timetable as quickly as possible, thus focusing efforts on a reliability of at least 85%.

See section 8 for information about operations and irregular bus services.

For the tendering, the contract documents include vehicle schedules (appendices b1 and b2) and billing sheets (appendix a) for the tender units.

The billing sheet provides an outline of the bus services (hours, kilometres, etc.) in the individual tender units.

Detailed information on the individual runs and timetables is available in the HASTUS files or text files which - like the billing sheet - can be downloaded by shortlisted tenderers from Movia's website under the *Contract Documents* tab. You can also find instructions on how to read the files.

HASTUS is Movia's timetabling system.

2.1 Material changes to current timetables

With a few exceptions, the contract documents are based on the structure and timetables of the existing bus routes.

In relation to such timetables, the structure of the routes and timetables have been adjusted on the following routes:

- Unit 1 Unit 1 Route 342 will have a new route between Helsingor and Ålsgårde in December 2017.
- Unit 3 Route 123 is put out to tender requiring longer buses and therefore it has a new timetable.

2.2 Vehicle schedules for payment

The vehicle schedules put out to tender are called "vehicle schedules for payment" and form the basis for calculating the timetable hours and the buses to be paid for.

The vehicle schedules for payment with the specific runs are only delivered electronically as standard export files from the HASTUS timetabling system and as text files.

The vehicle schedules for payment will be sent to the tenderer no later than three months before the first day of operation with respect to vehicle schedules for weekdays, Saturdays and Sundays. Weekday runs from Monday to Friday are considered one run.

The number of in-service buses will be adjusted in connection with the timetable changes. Payment will only be made for the number of buses required to deliver the overall services forming part of the contract. For the tenderers who already provide contract bus services to Movia, Movia may combine the use of in-service buses across contracts with the same company.

Movia will thus only pay for the number of in-service buses required for the tenderer to provide all its bus services to Movia. In such case, the combined bus services will be settled in accordance with the contract most favourable to the tenderer. The regulating mechanisms of the contracts are taken into account, see section 12.

Vehicle schedules for payment may be changed until three months prior to the start of operations. Any changes to the number of runs in the period between the submission of tenders and start of operations are included in the calculation of the variation for the first year of contract, see section 20.

2.2.1 Changes to vehicle schedules for payment

In case of temporary route changes due to road works, track work, etc., the time allowed for submission of vehicle schedules for payment may be reduced to two months.

Any objections to the vehicle schedules for payment and timetables must be made within two weeks of receipt. After the two weeks, the tenderer may only require changes against payment to Movia for its extra work.

During the objection period – i.e. the two weeks after receiving the vehicle schedule for payment – the tenderer may propose changes to the timetable to increase operational efficiency. If Movia agrees to change the timetable as requested by the tenderer, the tenderer's gain will be shared with Movia. The gain will be divided 60/40 between the tenderer and Movia.

In the same period, the tenderer may submit proposals as to how to expand the bus services if such proposals can advantageously be implemented in the timetable at a price equivalent to the marginal costs. If Movia agrees to change the timetable as requested by the tenderer, the accounts will be settled at the prices set out in the contract.

If agreements are made as described above within the objection period, the deadline for submission of the vehicle schedules for payment will be two months before the start of operations.

Such agreements will only be effective until the next ordinary timetable change.

If Movia fails to comply with the deadline for submission of the vehicle schedules for payment, Movia will pay the following amount to cover the tenderer's additional costs:

1. In case of late delivery of the vehicle schedule for payment, Movia will pay DKK 250 per changed run for each weekday (excluding Saturdays) by which it is late.
2. If Movia changes the times without changing the run, no payment will be made. It is a condition that the date of replacement is not changed.
3. If Movia wishes to implement changes which are not ordinary timetable changes or after delivery of the vehicle schedule for payment, a "quotation" may be obtained from the tenderer concerning the additional costs involved in a speedy implementation of the changes. In such case, item 1 should be disregarded.

The tenderer must make its claim for compensation no later than 30 days from Movia's delivery of the vehicles schedules for payment (see the above on late delivery). Otherwise the tenderer will forfeit its right to compensation.

2.2.2 Timetable changes

Movia may make five timetable changes per unit each year. Currently, timetables change in spring, at the start and end of the summer holiday period and in autumn and winter. In case of any additional timetable changes – except for any timetable changes stated in the general information in section 2.7 for the individual tender units – Movia will pay the additional costs incurred by the tenderer in preparing the new duty rosters, at a rate of DKK 1,000 for each run for the timetable in question.

Temporary changes due to major events – up to and including 10 days – will not be regarded as a timetable change.

2.2.3 Timetable boards

To the extent possible, timetable boards must be installed after regular bus service ends on the relevant route the day before a timetable changes, and the installation must be completed before regular bus service begins the following day.

Movia will deliver the timetable boards to the tenderer free of charge in reasonable time before installation.

2.3 Timetable hours and stops

The number of timetable hours per standard year is calculated as the daily production per type of day multiplied by the number of days for a year which - for the above tender units- is fixed at 250 days with a normal weekday timetable (200 school days and 50 holidays), 50 days with a Saturday timetable and 65 days with a Sunday timetable.

Reduced service because of holidays will be deducted from timetable hours.

The contract documents contain vehicle schedules for normal weekdays divided into school days and holidays as well as Saturdays and Sundays. There may be additional variations of the weekday vehicle schedules (e.g. for youth school transport and different holiday periods for educational institutions, Saturday timetables (e.g. New Year's Eve) and Sunday timetables (e.g. Christmas Eve) which do not affect the number of timetable hours appreciably. Vehicle schedules for such variations are not included in the contract documents.

2.3.1 Calculation of timetable hours and extra time

Total timetable hours means the hours spent on the bus journeys which are included in the timetables made by Movia. The entire journey counts towards total timetable hours.

Garage and dead journeys are not included in total timetable hours. The tenderer will be paid for timetable hours, and the tenderer is consequently to include unproductive hours in the rate of the costs related to timetable hours.

Extra hours mean an amount describing the efficiency of the individual runs.

It is used exclusively for adjustment of the costs related to timetable hours (see the definition of extra time in section 2.5.1).

Timetable hours and extra hours are stated under the individual tender unit (section 2.7.1 to 2.7.9) – corresponding to the production in a normal week (week 4). The timetable hours stated for the day periods and the extra hours mentioned will form the basis of calculation of the adjustment of changes to the efficiency in the runs (CF1) and changes to day and 24-hour distribution (CF2).

The adjustment will be made once a year and will be calculated on the basis of the production in week 4 each year (except for the first adjustment).

The first adjustment will be made in May 2019 – apply from 1 May 2019 to 31 December 2019. The adjustment will take into account changes made to the timetable from the date of tender to the timetable valid in week 19 in 2019.

The next adjustment will take into account changes to the timetable for week 19 in 2019 to week 4 in 2020 and will be made in January 2020, etc. The next adjustment will take into account changes to the timetable for week 4 in 2020 to week 4 in 2021 and so forth.

The principles for calculating the adjustment are described in further detail in section 2.4.

2.3.2 Definition of stop

In the runs in the vehicle schedules for payment, the journeys are tied together by a stay. In case of changes to the distribution between timetable hours and stops in a run, the CF1 factor adjustment will ensure that the payment for the journeys in the run is close to constant (see section 2.4).

This means that stops of 15 minutes and less are included in the price per timetable hour for the journeys on the run concerned. For stay of more than 15 minutes, there will be no payment for the part of the stay which is above 15 minutes.

It is not considered a stop if the bus has difference arrival and departure times at a check point in the middle of a journey, and there are or may be passengers in the bus. The time interval between the above arrival and departure times is included in the timetable hours.

2.3.3 Minimum stopping time at final destination

In the vehicle schedule for payment purposes, the routes must be planned to allow for minimum stopping times of normally two minutes at the final destinations.

In special cases (for instance if a change of driver is allowed at other places than the final destination), Movia may move the minimum final destination stop to another place on the bus route.

For routes in central Copenhagen, the planning must allow for at least five minutes' stops at the final destinations. In special cases, some of the five minutes may be transferred between the final destinations on the condition that the total stop on a circulation must be at least 10 minutes (e.g. 4 and 6 minutes).

Such planned minimum stopping times must be used to catch up variation in the timetable and may consequently not be used for breaks or change of driver.

The minimum stopping time is set out in the individual units in section 2.7.1 to 2.7.9.

Subject to agreement, Movia is prepared to increase the minimum stopping time at the final destination on certain routes and times if there is deemed to be necessary to do so.

Movia assumes that the tenderer will ensure that before departing from the bus terminal, the driver can attend to and take fares from passengers in sufficient time to depart on time.

2.4 Calculation of factors for adjustment of costs related to timetable hours

The purpose of this adjustment is to compensate the tenderer for changes to the composition of the production.

2.4.1 Changes in stopping time (CF1)

The purpose of the adjustment is to adjust for changes in stopping time – including start-up and shutdown time for the driver – in connection with timetable changes. When estimating the use of driver hours in its tender, the tenderer should include the time spent on such stops based on the vehicle schedules in the contract documents.

Time is added for stops as follows:

- For intermediate stops of up to 15 minutes, the entire stop is included as extra time.
For intermediate stops of more than 15 minutes, 15 minutes are included as extra time.
- If the sum of timetable hours and extra time is less than 420 minutes for the individual run, 30 minutes will be added to the extra time.
If the sum of timetable hours and extra time is 420 minutes or more, 30 minutes will be added to

the extra time for the first 420 minutes and an additional 15 minutes for each period of additional 420 minutes or any part of such period.

The extra time will be calculated for each run and for days with different timetables and will be converted to a normal week as when calculating total timetable hours.

At the first adjustment, the correction factor CF1 will be calculated as follows:

$$1 + \frac{(f1) \text{ Extra time in week 4 of 2018}}{(e1) \text{ Timetable hours in week 4 of 2018}} = \text{CF1}$$

$$1 + \frac{(f) \text{ Extra time stated in the contract documents}}{(f) \text{ Timetable hours stated in the contract documents}}$$

2.4.2 Changed day-time and night-time distribution (CF2)

The adjustment is intended to adjust for the change in how drivers' working hours are distributed on periods with different rates of pay. The tenderer's tender must be based on the distribution of drivers' working hours according to the timetables in the contract documents and must include payroll costs in this respect.

Timetable hours must be calculated for each of the day time periods mentioned. The calculation must be for a normal week (such as week 4).

The following weighting is used for the calculation:

Weekdays	06 - 18	= factor 100
Weekdays	00 - 06 and 18 - 24	= factor 115
Saturday	06 - 14	= factor 100
Saturday	00 - 06 and 14 - 24	= factor 115
Sundays and public holidays	06 - 18	= factor 150
Sundays and public holidays	00 - 06 and 18 - 24	= factor 165

Weighted total timetable hours are calculated as follows:

$$\begin{aligned} \text{Weighted timetable hours} = & \\ & (100 \times \text{number timetable hours weekdays 06-18}) + (115 \times \text{number: timetable hours: weekdays 00-06 and 18-24}) + \\ & (100 \times \text{number timetable hours Saturdays 06-14}) + (115 \times \text{number: timetable hours Saturdays 00-06 and 14-24}) + \\ & (150 \times \text{number timetable hours Sundays 06-18}) + (165 \times \text{number: timetable hours Sundays 00-06 and 18-24}) + \end{aligned}$$

The correction factor is then calculated as follows:

$$\text{Weighted timetable hours after}$$

$$=$$

$$\frac{\text{Timetable hours after}}{\text{Weighted timetable hours after}} = \text{CF1}$$

$$=$$

$$\frac{\text{Timetable hours before}}{\text{Timetable hours before}}$$

2.4.3 Adjustment of costs related to timetable hours

The rate of costs related to timetable hours, which can be seen from the tender unit, will be adjusted as follows:

Cost related to timetable hours x CF1 x CF2 = new cost related to timetable hours.

If the tender unit involves more than one rate for the costs related to timetable hours, all such rates will be adjusted using the same CF1 and CF2, meaning that only one CF1 and one CF2 will be calculated for each tender unit.

2.4.4 Illustration of principles

The principles are illustrated by the below example.

Tenders including a cost related to timetable hours of DKK 600.00. Start of operations in December 2017.

Timetable hours:	Stated in the contract documents	Factor	Example: Week 4,
Weekdays 06 am -	a: 87.83	100	a1: 85.23
Weekdays 00-06 am	b: 10.75	115	b1: 9.65
Saturday 08:00 am -	c: 6.97	100	g1: 4.30
Saturdays 00-06 am	h: 8.78	115	h1: 9.78
Sundays 06 am - 06	c: 13.60	150	c1: 15.90
Sundays 00-06 am	d: 1.13	165	d1: 2.20
Timetable hours,	e: 129.06		e1: 127.06
Total extra time:	f: 36.70		f1: 38.70

Changes in stopping time

$$\text{CF2 is then calculated as follows: } \frac{1 + \frac{(f1) 38.70}{(e1) 127.06}}{1 + \frac{(f) 36.70}{(e) 129.06}} = 1.016$$

Changed day-time and night-time distribution

CF2 is then calculated as follows:

$$\begin{aligned} \text{Weighted timetable hours after} &= (100 \times 85.23) + (115 \times 9.65) + (100 \times 4.30) + (115 \times 9.78) \\ &+ (150 \times 15.90) + (165 \times 2.20) = 13,935.45 \end{aligned}$$

$$\begin{aligned} \text{Weighted timetable hours before} &= (100 \times 87.83) + (115 \times 10.75) + (100 \times 6.97) + (115 \times 8.78) \\ &+ (150 \times 13.60) + (165 \times 1.13) = 13,952.40 \end{aligned}$$

13935.45	
127.06	
13952.40	= 1.015
129.06	

The correction factor is then calculated as follows:

Adjustment of costs related to timetable hours

The new rate of costs related to timetable hours effective from January 2018 is calculated as follows:

$$\text{DKK } 600.00 \text{ (see tender)} \times 1.016 \times 1.015 = 618.74 \text{ (new cost related to timetable hours)}$$

2.5 Empty running

Garage journeys are defined as journeys without passengers between the garage and the start/end of a run.

Empty journeys specified in the vehicle schedules for payment issued by Movia are defined as journeys without passengers in a run where a journey ends in a place different from the place where the next journey begins.

Below both empty journeys and garage journeys are defined as empty runs.

Empty running is never included in timetable hours on a route, and the tenderer must consequently include empty running in the rate of the timetable-dependent cost.

As Movia can change the composition and scope of the run during the contract period, the scope of empty running may change relative to billable hours. Consequently, the below compensation and set-off mechanism has been established for the purpose of reducing the tenderer's risk.

The tenderer will decide where the buses are to be garaged. In the statement of operations for the tender, the tenderer must specify the garage which forms the basis for the tender per tender unit.

If the tenderer is awarded the contract, the tenderer must specify the empty run which forms the basis for the tender as follows:

The minutes and kilometres run empty (per journey and in total) must be calculated at the time when the tender was issued for each tender unit for a normal week (week 19). At the same time, the timetable hours for a normal week (week 19) must be specified.

On this basis, an empty run percentage for a normal week (week 19) per tender unit must be calculated:

$$\text{Empty running percentage} = \text{hour run empty} / \text{timetable hours} (\%)$$

The empty running percentage will be used to adjust the empty running in the tender by subsequent changes to the scope of services.

The tenderer is to use Appendix 11 for the calculation of empty running and the empty running percentage and the information in Appendix 11 will then form the basis for a normal week (week 4).

An adjustment required as a result of a change to empty running must always be based on the vehicle schedules for payment delivered by Movia as follows (see also the example in table 11):

1. Each year, the tenderer must calculate the total minutes and the total kilometres actually run empty for each tender unit on the basis of the change of timetable in December. At the same time, the tenderer must specify the number of timetable hours.
The statement must be made for a normal week (week 4).
The statement must be sent to Movia Contracts on or before 20 January each year in the contract period. The table for the statement is available from Movia Contracts.
At the request of Movia, the tenderer must, within 14 days, send a more detailed statement breaking down empty running into journeys – like in Appendix 11.

2. A possible adjustment must be calculated as follows:

Actual empty running in week 4 less empty running for week 4 as estimated in the tender * =
Adjustment (A) in hours and minutes

*Empty running as estimated in the tender must be adjusted to account for changes to the scope of services before the adjustment as follows: Adjusted empty running = Empty running percentage estimated in the tender x Actual timetable hours

3. The adjustment will be made in the monthly payment with the following amounts:

Timetable price (indexed) x Adjustment (A) x 52/12.

The first adjustment will be made in May 2019. Then January 2020, January 2021 and so forth.

4. Adjustments will only be made for changes to empty running if the change in the normal week (week 4) per tender unit exceeds +/- 2 hours relative to the empty running estimated in the tender (adjusted as described in section 2).
5. If the tenderer changes the garage for the tender unit or if Movia changes the run so that it is only natural to move buses between garages, the contractual basis for empty running will be renegotiated, and the empty running estimated in the tender will be re-evaluated relative to the new garage. In such cases, the original relationship between empty running and timetable hours in the tender will be adjusted to fit the new garage position.
6. In case of extraordinary timetable changes outside the regular changes in December and regular annual variations, it is possible to negotiate an extraordinary adjustment.

2.6 Changes in routes, additional and relief services and other matters

Movia reserves the right to change routes or relocate the agreed service to other parts of Movia's service area. In that case, Movia will pay/set off the increased or reduced costs incurred by the tenderer as a result of such changes in terms of dead mileage etc. See also section 2.5.

In case of major changes, including relocation of routes or parts of routes, Movia is willing to pay for the costs of training drivers upon presentation of receipt. In that connection, Movia will only reimburse costs

associated with the drivers assigned to the routes affected by the changes. Costs will be reimbursed at an hourly rate of DKK 300 (price index September 2017).

If, during the contract period, pilot projects are established on the tenderer's routes or in its area, the tenderer is to participate in such projects subject to agreement. Subject to agreement, the tenderer must also participate in test-driving new bus routes etc.

In order to ensure efficient use of in-service buses, Movia is entitled to demand when they are not in use according to the vehicle schedules that the tenderer carries out scheduled additional or scheduled relief services on the routes served by the tenderer or on other routes or stretches, exclusively against payment of the agreed costs related to timetable hours.

In such case, the tenderer will be given at least two months' prior notice, and the services will extend over at least one month.

Any additional or relief bus services provided with spare buses or other buses may be provided subject to agreement with Movia.

2.7 Tender units

2.7.1 Tender unit 1. Runs 342 and 840

The overall scope of services for a normal year for the use of the submission of tenders: **12,705 timetable hours**

Detailed information

Route 342

Helsingør St. – Kongevejen – Trækbanen – Kronborgvej – Allegade – Sct. Anna Gade – Lappen – Nordre Strandvej – Krogebakke – Ålsgårde St. – Ellekildehavevej - Skibstrup St. - Skibstrup Stationsvej - Falkenbergvænget – Falkenbergvej – Apperupvej - Krogebakke - Nordre Strandvej – Sandagerhusvej – Sauntevej – Holmegårdsvej - Bødker Nielsens Vej – Karetmagervej - Bødker Nielsens Vej – Holmegårdsvej – Sauntevej - Hornbæk St. - Nordre Strandvej – Hornebyvej – Villingebækvej - Dronningmølle Strandvej - Nordre Strandvej - Hornbæk St.

Route 840

Prøvestenscentret – Klostermosevej - Kronborg Ladegårds Vej – Abildgaardsvej – Kingosvej – Blichersvej – Esrumvej – Kingosvej – Blichersvej – Montebello – Gefionsvej - Hellebo Park - Gl. Hellebækvej - Marienlyst Allé - Sankt Anna Gade – Allegade – Kronborgvej – Allegade – Jernbanevej - Helsingør St. – Kongevejen – Trækbanen – Rosenkildevej – Gurrevej – Gefionsvej – Montebello - Rønnebær Allé - Borgm.P.Christensens Vej - Prøvestenscentret

Route 841

Prøvestenscentret - Borgm.P.Christensens Vej - Rønnebær Allé – Nørrevej – Klostermosevej – Strandvejen - Espergærde St. – Kløvermarken – Søndermarken – Hovvej – Hovgårdsvej - Kofod Anchers vej - Jernbane Allé – Stokholmsvej – Gylfesvej - Espergærde St. – Kløvermarken – Søndermarken – Hovvej – Agnetevej – Nørrevej – Smakkevej – Klostermosevej - Prøvestenscentret

(Route 353)

Kokkedal St. – Ådalsvej - Usserød Kongevej – Egedalsvej – Brønsholmgårdsvej – Holmegårdsvej - Brønsholm Kongevej - Niverød Kongevej – Hørsholmvej – Kongevejen - Kvistgård St. – Munkegårdsvej – Egeskovvej – Kongevejen – Prøvestensvej – Prøvestenscentret – Klostermosevej – Esrumvej – Kronborgvej – Allegade – Jernbanevej - Helsingør St.

Scope of services per normal week (week 4)

A normal week is 1 Monday, 1 Tuesday, 1 Wednesday, 1 Thursday, 1 Friday, 1 Saturday and 1 Sunday.

Day of the week no.	Time interval	Hours	Total hours	Bus
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Monday	6 am - 6 pm	34.25	40.50	4
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	6.25		
Tuesday	6 am - 6 pm	34.25	40.50	4
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	6.25		
Wednesday	6 am - 6 pm	34.25	40.50	4
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	6.25		
Thursday	6 am - 6 pm	34.25	40.50	4
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	6.25		
Friday	6 am - 6 pm	34.25	40.50	4
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	6.25		
Saturday	6.00 am - 2.00 pm	13.29	22.54	3
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	9.25		
Sunday	6 am - 6 pm	17.05	22.53	3
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	5.48		

Total timetable hours in week 4	247.57
Extra time in week 4	35.00
Weighted timetable hours in week 4	26573.20

See calculation method of extra time and weighted timetable hours in section 2.4.

Comments:

According to plan, route 342 is to have a minimum stopping time of two minutes at final destination.

According to plan, route 840 is to have a minimum stopping time of two minutes at final destination.

According to plan, route 841 is to have a minimum stopping time of two minutes at final destination.

Mileage and other detailed information appear from billing sheet_A16.xlsx.

Vehicle schedules, runs and journeys for this tender unit (HASTUS file and text file):

<i>HASTUS files</i>	<i>Text files</i>
HAS 0342 Hverdag 2017-01-02 2017-12-29 V01.HAS	VP 0342 2017-01-01 2017-12-29 Søndag V01.txt
HAS 0342 Lørdag 2017-01-02 2017-12-31 V01.HAS	VP 0342 2017-01-02 2017-12-29 Hverdag V01.txt
HAS 0342 Søndag 2017-01-01 2017-12-29 V01.HAS	VP 0342 2017-01-02 2017-12-31 Lørdag V01.txt
HAS 0840 Hverdag 2017-01-02 2017-12-24 V01.HAS	VP 0840 2017-01-01 2017-12-26 Søndag V01.txt
HAS 0840 Lørdag 2017-01-02 2017-12-31 V01.HAS	VP 0840 2017-01-02 2017-12-24 Hverdag V01.txt
HAS 0840 Søndag 2017-01-01 2017-12-26 V01.HAS	VP 0840 2017-01-02 2017-12-31 Lørdag V01.txt
HAS 0840f Hverdag 2017-04-10 2017-12-29 V01.HAS	VP 0840f 2017-04-10 2017-12-29 Hverdag V01.txt

The files are available for download at the ITT website under the menu item Contract documents.

Breaks and/or toilet facilities

Helsingør Station (routes 342, 840, 353)

Share of operating expenses 0%

Hornbæk Station (route 342)

Share of operating expenses: 0 %

Espergærde Station (route 841)

Share of operating expenses: 0 %

Kokkedal Station (route 353)

Floor area: 90 m²

Other users 150S, 353, 365R, 500S

Estimated current operating expenses per year: DKK 180,000.

Preliminary share of operating expenses: 5%

Special conditions

- Routes 840 and 841 provide service bus transport.

Service bus transport is to give passengers who cannot – or find it difficult to – use ordinary public transport an opportunity to take care of their need for transportation to for instance the doctor, post office, pharmacy, shopping centre or bank. The service is organised to accommodate this need and is delivered almost entirely during the day.

The users often depend of help from the driver, and therefore, the driver must be prepared to help mobility-impaired people when boarding and disembarking the bus.

As the users of the bus are primarily elderly and mobility-impaired people who are very dependent on the punctuality and steadiness of the bus, it is important that the bus drives regularly without delays and cancelled journeys.

The drivers must be experienced and have a flair for good customer service, and it must mainly

be the same regular drivers operating the route.

The bus equipment must be designed to allow mobility-impaired people, wheelchair users, other physically handicapped people and persons with prams easily board and disembark the buses.

The buses can be used by all everyone.

- It is necessary to make manual passenger counts on the routes in this unit. It is, however, not necessary to make a count on route 353 as there are only few journeys from that route which are included in the unit.

2.7.2 Tender unit 2. Vehicle schedule 116

The overall scope of services for a normal year for the use of the submission of tenders: **19,347 timetable hours**

Detailed information**Route 116**

Hedehusene St. – Vesterkøb – Hedetoften – Hedevej – Sønderled – Vesterled - Marbjerg Byvej – Nørreled – Sønderled – Østerled – Nørreled – Vendesløjfen – Vadsbyvej - Vadsby Bygade – Ågeholmsvej – Midtervej – Spangåvej – Landsbygaden - Ole Rømers Vej – Snubbekorsvej - Hveen Boulevard - Blekinge Boulevard - Høje Taastrup St. - Høje Taastrup Boulevard - Frøgård Allé – Charlotteager – Hovedgaden - Hedehusene St. – Reerslevvej – Stenbuen – Brandhøjgårdsvej – Tingstedvej – Brandhøjgårdsvej – Stenbuen - -Reerslevvej - Hedehusene St.

Route 850

Høje Taastrup St. – Rådhuset – Bygaden – Øtoftegårdsvej - Taastrupgårdsvej - Taastrup have - - Selsmosevej - Grundtvigsvej – Ibsensvej - Jernbane Allé - Taastrup St. – Parkvej – Rødkælkevej – Markvangen – Sidegade – Vejtoften – Skolevej – Gasværksvej - Espens Vænge - Høje Taastrup Vej - Birkehøj Plejecenter - Høje Taastrup Vej - City 2 - Østerby Torv - Sønderby Torv – Sønderby - Vesterby Torv - Taastrup Boulevard - Nørreby Torv - Taastrup Boulevard - Høje Taastrup St.

Scope of services per normal week (week 4)

A normal week is 1 Monday, 1 Tuesday, 1 Wednesday, 1 Thursday, 1 Friday, 1 Saturday and 1 Sunday.

Day of the week no.	Time interval	Hours	Total hours	Bus
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Monday	6 am - 6 pm	48.78	61.28	5
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	12.50		
Tuesday	6 am - 6 pm	48.78	61.28	5
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	12.50		
Wednesday	6 am - 6 pm	48.78	61.28	5
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	12.50		
Thursday	6 am - 6 pm	48.78	61.28	5
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	12.50		
Friday	6 am - 6 pm	48.78	61.28	5
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	12.50		
Saturday	6.00 am - 2.00 pm	17.27	38.30	4

	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	21.03		
Sunday	6 am - 6 pm	21.32	31.89	3
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	10.57		

Total timetable hours in week 4	376.59
Extra time in week 4	65.31
Weighted timetable hours in week 4	40665.00

See calculation method of extra time and weighted timetable hours in section 2.4.

Comments:

According to plan, route 116 is to have a minimum stopping time of two minutes at final destination.

According to plan, route 850 is to have a minimum stopping time of two minutes at final destination.

Please note that route 850 is not in service on Sundays, but operates on special holidays.

Mileage and other detailed information appear from billing sheet_A16.xlsx.

Vehicle schedules, runs and journeys for this tender unit (HASTUS file and text file):

<i>HASTUS files</i>	<i>Text files</i>
HAS 0116 Hverdag 2017-01-02 2017-12-29 V01.HAS	VP 0116 2017-01-01 2017-12-29 Søndag V01.txt
HAS 0116 Lørdag 2017-01-02 2017-12-31 V01.HAS	VP 0116 2017-01-02 2017-12-29 Hverdag V01.txt
HAS 0116 Søndag 2017-01-01 2017-12-29 V01.HAS	VP 0116 2017-01-02 2017-12-31 Lørdag V01.txt
HAS 0116h Søndag 2017-06-04 2017-06-04 V01.HAS	VP 0116h 2017-06-04 2017-06-04 Søndag V01.txt

The files are available for download at the ITT website under the menu item Contract documents.

Breaks and/or toilet facilities

Blekinge Boulevard (Route 116, 850)

Owned/rented by Movia

Rental of area with facility owned by Movia

Floor area:

64 m²

Estimated operating expenses per year:

DKK 150,000.

Furniture and equipment (Purchase)

DKK 20.000

Share of operating expenses:

100%

Degree of use:

1

Ventilation plants
agreement

Yes, but without a service and maintenance

Special conditions

- Route 850 provides service bus transport.

Service bus transport is to give passengers who cannot – or find it difficult to – use ordinary public transport an opportunity to take care of their need for transportation to for instance the doctor, post office, pharmacy, shopping centre or bank. The service is organised to accommodate this need and is delivered almost entirely during the day.

The users often depend of help from the driver, and therefore, the driver must be prepared to help mobility-impaired people when boarding and disembarking the bus.

As the users of the bus are primarily elderly and mobility-impaired people who are very dependent on the punctuality and steadiness of the bus, it is important that the bus drives regularly without delays and cancelled journeys.

The drivers must be experienced and have a flair for good customer service, and it must mainly be the same regular drivers operating the route.

The bus equipment must be designed to allow mobility-impaired people, wheelchair users, other physically handicapped people and persons with prams easily board and disembark the buses.

The buses can be used by all everyone.

- It is necessary to make manual passenger counts on the routes in this unit.

2.7.3 Tender unit 3. Vehicle schedule 123

The overall scope of services for a normal year for the use of the submission of tenders: **39,785 timetable hours**

Detailed information**Route 123**

Roskilde St., Stationscentret – Jernbanegade – Københavnsvej – Hovedgaden - Hedehusene St. – Hovedgaden – Roskildevej - Halland Boulevard - Høje Taastrup St. - Blekinge Boulevard - Høje Taastrup Vej – Vesterparken - Taastrup St. - Taastrup Hovedgade – Roskildevej – Hovedvejen - Glostrup St.

Scope of services per normal week (week 4)

A normal week is 1 Monday, 1 Tuesday, 1 Wednesday, 1 Thursday, 1 Friday, 1 Saturday and 1 Sunday.

Day of the week	Time interval	Hours	Total hours	Bus no.
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Monday	6 am - 6 pm	91.07	122.09	9
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	31.02		
Tuesday	6 am - 6 pm	91.07	122.09	9
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	31.02		
Wednesday	6 am - 6 pm	91.07	122.09	9
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	31.02		
Thursday	6 am - 6 pm	91.07	122.09	9
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	31.02		
Friday	6 am - 6 pm	91.07	122.09	9
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	31.02		
Saturday	6.00 am - 2.00 pm	35.75	80.78	6
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	45.03		
Sunday	6 am - 6 pm	56.25	80.40	6
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	24.15		

Total timetable hours in week 4	771.63
Extra time in week 4	164.94
Weighted timetable hours in week 4	84,547.20

See calculation method of extra time and weighted timetable hours in section 2.4.

Comments:

According to plan, route 123 is to have a minimum stopping time of five minutes at final destination.

Mileage and other detailed information appear from billing sheet_A16.xlsx.

Vehicle schedules, runs and journeys for this tender unit (HASTUS file and text file):

<i>HASTUS files</i>	<i>Text files</i>
HAS 0123 Hverdag 2017-01-02 2017-12-29 V01.HAS	VP 0123 2017-01-01 2017-12-29 Søndag V01.txt
HAS 0123 Lørdag 2017-01-02 2017-12-31 V01.HAS	VP 0123 2017-01-02 2017-12-29 Hverdag V01.txt
HAS 0123 Søndag 2017-01-01 2017-12-29 V01.HAS	VP 0123 2017-01-02 2017-12-31 Lørdag V01.txt

The files are available for download at the ITT website under the menu item Contract documents.

Breaks and/or toilet facilities

Glostrup Station (Route 123)

Share of operating expenses: 0 %

Roskilde Station Center (Route 123)

Share of operating expenses: 0 %

Special conditions

Double-screen infotainment must be installed as described in section 7.3.

The buses must have carpet/felt on ceilings and walls.

All new buses must be equipped with USB power outlets. There must be a USB power outlet at each seat. Exceptions can be made for some seats.

2.7.4 Tender unit 4. Vehicle schedule 215

The overall scope of services for a normal year for the use of the submission of tenders: **9,243 timetable hours**

Detailed information**Route 215**

Hvalsø St. – Søvej – Roskildevej - Kisserup Krat – Hjortemarksvej – Bryggervej - Skov Hastrupvej – Særløsevej – Orupvej – Avnstrupvej – Tolstrupvej – Hovedvejen – Assendløsevejen – Dalen – Søndergade – Parkvej – Ørstedvej – Lunden – Ørstedvej – Hovedgaden - Havdrup St. – Skolevej – Kirkegade – Roskildevej - Solrød Byvej - Solrød Strand St.

Route 219

Hvalsø St. – Holbækvej – Blakledsvej – Dyvelslystvej – Dyvelslyst – Hvalsøvej – Englerupvej – Ordrupvej – Elverdamsvej - Ejby Strandvej - Ejby Havnevej – Elverdamsvej – Åvej – Ejbybrovej - Vestre Digevej – Møllehøjvej – Sydmarksvej – Ammershøjvej – Kirke Hyllinge, Bygaden

Scope of services per normal week (week 4)

A normal week is 1 Monday, 1 Tuesday, 1 Wednesday, 1 Thursday, 1 Friday, 1 Saturday and 1 Sunday.

Day of the week no.	Time interval	Hours	Total hours	Bus
------------------------	---------------	-------	-------------	-----

Monday	6 am - 6 pm	26.50	36.97	3
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	10.47		
Tuesday	6 am - 6 pm	26.50	36.97	3
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	10.47		
Wednesday	6 am - 6 pm	26.50	36.97	3
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	10.47		
Thursday	6 am - 6 pm	26.50	36.97	3
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	10.47		
Friday	6 am - 6 pm	26.50	36.97	3
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	10.47		
Saturday	6.00 am - 2.00 pm	0.00	0.00	0

	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	0.00		
Sunday	6 am - 6 pm	0.00	0.00	0
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	0.00		

Total timetable hours in week 4	184.85
Extra time in week 4	33.90
Weighted timetable hours in week 4	19,270.25

See calculation method of extra time and weighted timetable hours in section 2.4.

Comments:

According to plan, route 215 is to have a minimum stopping time of two minutes at final destination.

According to plan, route 219 is to have a minimum stopping time of two minutes at final destination.

Mileage and other detailed information appear from billing sheet_A16.xlsx.

Vehicle schedules, runs and journeys for this tender unit (HASTUS file and text file):

<i>HASTUS files</i>	<i>Text files</i>
HAS 0216 Hverdag 2017-01-02 2017-12-29 V01.HAS	VP 0215 2017-01-02 2017-12-29 Hverdag V02.txt
HAS 0216 Lørdag 2017-01-02 2017-12-31 V01.HAS	
HAS 0216 Søndag 2017-01-01 2017-12-29 V01.HAS	

The files are available for download at the ITT website under the menu item Contract documents.

Breaks and/or toilet facilities

Solrød Strand Station (Route 215)

Share of operating expenses: 0 %

Kirke Hyllinge mini terminal (Route 219)

Owned/rented by Movia	Rental of area with facility owned by Movia
Floor area:	20 m ²
Estimated operating expenses per year:	DKK 25,000.
Furniture and equipment (Purchase)	DKK 5.000
Share of operating expenses:	100%
Degree of use:	2
Ventilation plant	No

At present, the facility consists of a separate toilet and a caravan.

Hvalsø (Route 215, 219)

Owned/rented by Movia

Rental of area with facility owned by Movia

Floor area:

32 m²

Estimated operating expenses per year:

DKK 50,000.

Furniture and equipment (Purchase)

DKK 15.000

Share of operating expenses:

100%

Degree of use:

2

Ventilation plants
agreement

Yes, but without a service and maintenance

2.7.5 Tender unit 5. Vehicle schedule 216

The overall scope of services for a normal year for the use of the submission of tenders: **10,307 timetable hours**

Detailed information

Route 216

Ballerup St. – Baltorpevej – Baltorpbakken – Baltorpevej – Skebjergvej – Flodvej – Råbrovej - Smørum Bygade - Hove Bygade - Hove Møllevvej - Østrup Trafikplads – Hvedstrupvej – Ågerupvej - Lille Valbyvej – Frederiksborgvej - Himmelev Bygade – Herregårdsvej – Klosterengen - Kong Valdemars Vej – Algade – Jernbanegade – Roskilde St., Stationscentret

(Route 201A)

Svogerslev, Søbredden - Kongemarksvej - Svogerslev Hovedgade – Holbækvej – Ringstedgade – Roskilde St. – Stændertorvet - Sankt Peders Stræde - Dronning Margrethes Vej - Kong Valdemars Vej – Haraldsborgvej - Himmelev Sognevej – Herregårdsvej - Nordens Parkvej - Trekroner St.

(Route 202A)

Roskilde St. - Køgevej - Søndre Ringvej – Maglegårdsvej - Pulsen – Køgevej – Roskilde St. - Schmeltz Plads – Støden – Helligkorsvej – Møllehusvej – Låddenhøj – Margrethehåbsvej - Margrethehåb

Scope of services per normal week (week 4)

A normal week is 1 Monday, 1 Tuesday, 1 Wednesday, 1 Thursday, 1 Friday, 1 Saturday and 1 Sunday.

Day of the week no.	Time interval	Hours	Total hours	Bus
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Monday	6 am - 6 pm	25.33	33.57	3
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	8.24		
Tuesday	6 am - 6 pm	25.33	33.57	3
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	8.24		
Wednesday	6 am - 6 pm	25.33	33.57	3
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	8.24		
Thursday	6 am - 6 pm	25.33	33.57	3
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	8.24		
Friday	6 am - 6 pm	25.33	33.57	3
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	8.24		

Saturday	6.00 am - 2.00 pm	7.07	16.97	2
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	9.90		
Sunday	6 am - 6 pm	11.17	16.40	2
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	5.23		

Total timetable hours in week 4	201.22
Extra time in week 4	57.00
Weighted timetable hours in week 4	21,786.95

See calculation method of extra time and weighted timetable hours in section 2.4.

Comments:

According to plan, route 216 is to have a minimum stopping time of two minutes at final destination.

Mileage and other detailed information appear from billing sheet_A16.xlsx.

Vehicle schedules, runs and journeys for this tender unit (HASTUS file and text file):

HASTUS files	Text files
HAS 0216 Hverdag 2017-01-02 2017-12-29 V01.HAS	VP 0216 2017-01-01 2017-12-29 Søndag V01.txt
HAS 0216 Lørdag 2017-01-02 2017-12-31 V01.HAS	VP 0216 2017-01-02 2017-12-29 Hverdag V01.txt
HAS 0216 Søndag 2017-01-01 2017-12-29 V01.HAS	VP 0216 2017-01-02 2017-12-31 Lørdag V01.txt

The files are available for download at the ITT website under the menu item Contract documents.

Breaks and/or toilet facilities

Roskilde Station Center (Routes 201A, 202A, 216)

Share of operating expenses: 0 %

Ballerup Station (Route 216)

Estimated operating expenses per year: DKK 280,000.

Preliminary share of operating expenses: 5%

The facility at Ballerup Station is currently being managed in accordance with a different set of rules than it will be from December 2019. From December 2019, the share of operating expenses will be 0%.

Trekroner Station (Route 201A)

Share of operating expenses: 0 %

2.7.6 Tender unit 6. Vehicle schedule 217

The overall scope of services for a normal year for the use of the submission of tenders: **5,803 timetable hours**

Detailed information**Route 217**

Jyllingecentret - Jyllinge Parkvej – Frederiksborgvej – Sognevej – Gulddyssevej – Piledyssen – Holmevej – Hovevej – Veksø St.

Route 163

Veksø St. – Hove Bygade – Overdrevsvejen – Ledøje Bygade – Ledøjetofte – Råbrovej – Flodvej – Smørum Parkvej – Måløv Byvej – Måløv St.

Scope of services per normal week (week 4)

A normal week is 1 Monday, 1 Tuesday, 1 Wednesday, 1 Thursday, 1 Friday, 1 Saturday and 1 Sunday.

Day of the week	Time interval	Hours	Total hours	Bus no.
------------------------	----------------------	--------------	--------------------	----------------

Monday	6 am - 6 pm	16.63	18.58	2
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	1.95		
Tuesday	6 am - 6 pm	16.63	18.58	2
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	1.95		
Wednesday	6 am - 6 pm	16.63	18.58	2
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	1.95		
Thursday	6 am - 6 pm	16.63	18.58	2
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	1.95		
Friday	6 am - 6 pm	16.63	18.58	2
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	1.95		
Saturday	6.00 am - 2.00 pm	5.20	10.07	1
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	4.87		
Sunday	6 am - 6 pm	8.43	10.06	1
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	1.63		

Total timetable hours in week 4	113.03
Extra time in week 4	40.85
Weighted timetable hours in week 4	12,049.75

See calculation method of extra time and weighted timetable hours in section 2.4.

Comments:

According to plan, route 217 is to have a minimum stopping time of two minutes at final destination.

According to plan, route 163 is to have a minimum stopping time of two minutes at final destination.

Mileage and other detailed information appear from billing sheet_A16.xlsx.

Vehicle schedules, runs and journeys for this tender unit (HASTUS file and text file):

<i>HASTUS files</i>	<i>Text files</i>
HAS 0217 Hverdag 2017-01-02 2017-12-29 V03.HAS	VP 0217 2017-01-01 2017-12-29 Søndag V03.txt
HAS 0217 Lørdag 2017-01-02 2017-12-31 V03.HAS	VP 0217 2017-01-02 2017-12-29 Hverdag V03.txt
HAS 0217 Søndag 2017-01-01 2017-12-29 V03.HAS	VP 0217 2017-01-02 2017-12-31 Lørdag V03.txt

The files are available for download at the ITT website under the menu item Contract documents.

Breaks and/or toilet facilities

Måløv Station (route 163)

Share of operating expenses: 0 %

Jyllinge Shopping Center (route 217)

Owned/leased by Movia Lease

Floor area: 30 m²

Estimated operating expenses per year: DKK 30,000.

Furniture and equipment (Purchase) DKK 10.000

Share of operating expenses: 100%

Degree of use: 2

Ventilation plant No

2.7.7 Tender unit 7. Vehicle schedule 220

The overall scope of services for a normal year for the use of the submission of tenders: **10,245 timetable hours**

Detailed information**Route 220**

Solrød Strand St. - Solrød Byvej – Roskildevej - Snoldelev Bygade – Køgevej - Vor Frue Hovedgade – Køgevej - Ny Østergade – Københavnsvej – Byageren – Ternevej – Præstemarksvej – Østbyvej - Trekroner Allé - Trekroner Centervej – Universitetsvej – Aboretvej - Trekroner Parkvej – Trekroner East

Scope of services per normal week (week 4)

A normal week is 1 Monday, 1 Tuesday, 1 Wednesday, 1 Thursday, 1 Friday, 1 Saturday and 1 Sunday.

Day of the week	Time interval	Hours	Total hours	Bus no.
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Monday	6 am - 6 pm	30.80	36.42	4
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	5.62		
Tuesday	6 am - 6 pm	30.80	36.42	4
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	5.62		
Wednesday	6 am - 6 pm	30.80	36.42	4
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	5.62		
Thursday	6 am - 6 pm	30.80	36.42	4
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	5.62		
Friday	6 am - 6 pm	30.80	36.42	4
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	5.62		
Saturday	6.00 am - 2.00 pm	3.43	9.91	1
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	6.48		
Sunday	6 am - 6 pm	6.17	9.92	1
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	3.75		

Total timetable hours in week 4	201.93
Extra time in week 4	62.86
Weighted timetable hours in week 4	21,263.95

See calculation method of extra time and weighted timetable hours in section 2.4.

Comments:

According to plan, route 220 is to have a minimum stopping time of two minutes at final destination.

Mileage and other detailed information appear from billing sheet_A16.xlsx.

Vehicle schedules, runs and journeys for this tender unit (HASTUS file and text file):

<i>HASTUS files</i>	<i>Text files</i>
HAS 0220 Hverdag 2017-01-02 2017-12-29 V02.HAS	VP 0220 2017-01-01 2017-12-29 Søndag V02.txt
HAS 0220 Lørdag 2017-01-02 2017-12-31 V02.HAS	VP 0220 2017-01-02 2017-12-29 Hverdag V02.txt
HAS 0220 Søndag 2017-01-01 2017-12-29 V02.HAS	VP 0220 2017-01-02 2017-12-31 Lørdag V02.txt

The files are available for download at the ITT website under the menu item Contract documents.

Breaks and/or toilet facilities

Solrød Strand Station (route 220)

Owned/leased by Movia	Lease	
Floor area:	30 m ²	
Estimated operating expenses per year:		DKK 50,000.
Furniture and equipment (Purchase)	DKK 10.000	
Share of operating expenses:	100%	
Degree of use:	2	
Ventilation plant	No	

Movia's contract for this facility expires on 31 December 2017. We do not currently know the conditions for the new place. We may have to share facility with the Night Ravens and DSB staff.

Tenders should include a facility comparable to the above. When Movia knows the conditions relating to the new facility, Movia will assess whether it meets that terms and conditions described. If the costs associated with the facility are shared with the Night Ravens and DSB, it will be included in the evaluation.

Trekroner Station (route 220)

Share of operating expenses:	0 %
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Special conditions

Requirement for double-screen infotainment

2.7.8 Tender unit 8. Vehicle schedule 246

The overall scope of services for a normal year for the use of the submission of tenders: **5,430 timetable hours**

Detailed information**Route 246**

Borup St. – Kimmerslevvej – Dalbyvej – Kulerupvej - Vestre Ringvej – Ringstedvej – Ejbyvej – Gemsevej – Salbyvej – Ejbyvej – Hovedgaden – Yderholmvej – Åsvej – Taastrupvej - Solrød Byvej - Solrød Strand St.

Scope of services per normal week (week 4)

A normal week is 1 Monday, 1 Tuesday, 1 Wednesday, 1 Thursday, 1 Friday, 1 Saturday and 1 Sunday.

Day of the week	Time interval	Hours	Total hours	Bus no.
------------------------	----------------------	--------------	--------------------	----------------

Monday	6 am - 6 pm	19.07	21.72	2
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	2.65		
Tuesday	6 am - 6 pm	19.07	21.72	2
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	2.65		
Wednesday	6 am - 6 pm	19.07	21.72	2
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	2.65		
Thursday	6 am - 6 pm	19.07	21.72	2
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	2.65		
Friday	6 am - 6 pm	19.07	21.72	2
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	2.65		
Saturday	6.00 am - 2.00 pm	0.00	0.00	0
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	0.00		
Sunday	6 am - 6 pm	0.00	0.00	0
	0.00 (midnight) - 6.00 am and 6.00 pm - 12 pm (midnight)	0.00		

Total timetable hours in week 4	108.60
Extra time in week 4	29.40
Weighted timetable hours in week 4	11,058.75

See calculation method of extra time and weighted timetable hours in section 2.4.

Comments:

According to plan, route 246 is to have a minimum stopping time of two minutes at final destination.

Mileage and other detailed information appear from billing sheet_A16.xlsx.

Vehicle schedules, runs and journeys for this tender unit (HASTUS file and text file):

<i>HASTUS files</i>	<i>Text files</i>
HAS 0246 Hverdag 2017-01-02 2017-12-29 V01.HAS	VP 0246 2017-01-02 2017-12-29 Hverdag V01.txt

The files are available for download at the ITT website under the menu item Contract documents.

Breaks and/or toilet facilities

Solrød Strand Station (route 246)

Share of operating expenses: 0 %

Borup Station (route 246)

Share of operating expenses: 0 %

2.7.9 Tender unit 9. Vehicle schedules 201A, 202A, 203, 206, 209 and 212

The overall scope of services for a normal year for the use of the submission of tenders: **62,986 timetable hours**

Detailed information**Route 201A**

Svogerslev, Søbredden - Kongemarksvej - Svogerslev Hovedgade – Holbækvej – Ringstedgade – Roskilde St. – Stændertorvet - Sankt Peders Stræde - Dronning Margrethes Vej - Kong Valdemars Vej – Haraldsborgvej - Himmelev Sognevej – Herregårdsvej - Nordens Parkvej - Trekroner St.

Route 202A

Roskilde St. - Køgevej - Søndre Ringvej – Maglegårdsvej - Pulsen – Køgevej – Roskilde St. - Schmeltz Plads – Støden – Helligkorsvej – Møllehusvej – Låddenhøj – Margrethehåbsvej - Margrethehåb

Route 203

Veddelev – Fiskervejen - Veddelev Bygade – Baunehøjvej – Frederiksborgvej – Sankt Clara vej – Byvolden – Roskilde St.

Route 204

Veddelev - Fiskervejen - Veddelev Bygade – Frederiksborgvej – Fynsvej – Ollerupvej – Bernadottegården - H.H. Kochsvej - Himmelev Sognevej – Haraldsborgvej - Dronning Sofies Vej – Kongebakken - Frederiksborgvej – Palæstræde - Roskilde St.

Route 205

Roskilde St. – Allehelgensgade - Schmeltz Plads – Støden – Helligkorsvej – Fælledvej – Holbækvej – Rønnebærparken - Neergårdsparken

Route 206

Sankt Jørgens Skole - Sønderlundsvej – Hedegade – Møllehusvej – Helligkorsvej – Støden – Bredgade – Roskilde St. – Jernbanegade – Københavnsvej – Dommervænget – Bymarken – Vindingevej - Østre Ringvej – Køgevej - Motelvej – Astersvej - Gartnervang

Route 208

Roskilde St. – Køgevej – Pulsen – Maglegårdsvej – Bakkesvinget - Bakkekammen

Comments:

According to plan, route 201A is to have a minimum stopping time of two minutes at final destination.

According to plan, route 202A is to have a minimum stopping time of two minutes at final destination.

According to plan, route 203 is to have a minimum stopping time of two minutes at final destination.

According to plan, route 204 is to have a minimum stopping time of two minutes at final destination.

According to plan, route 205 is to have a minimum stopping time of two minutes at final destination.

According to plan, route 206 is to have a minimum stopping time of two minutes at final destination.

According to plan, route 208 is to have a minimum stopping time of two minutes at final destination.

According to plan, route 209 is to have a minimum stopping time of two minutes at final destination.

According to plan, route 212 is to have a minimum stopping time of two minutes at final destination.

Mileage and other detailed information appear from billing sheet_A16.xlsx.

Vehicle schedules, runs and journeys for this tender unit (HASTUS file and text file):

<i>HASTUS files</i>	<i>Text files</i>
HAS 201a Hverdag 2017-01-02 2017-12-29 V01.HAS	VP 201a 2017-01-01 2017-12-29 Søndag V01.txt
HAS 201a Lørdag 2017-01-02 2017-12-31 V01.HAS	VP 201a 2017-01-02 2017-12-29 Hverdag V01.txt
HAS 201a Søndag 2017-01-01 2017-12-29 V01.HAS	VP 201a 2017-01-02 2017-12-31 Lørdag V01.txt
HAS 202a Hverdag 2017-01-02 2017-12-29 V01.HAS	VP 202a 2017-01-01 2017-12-29 Søndag V01.txt
HAS 202a Lørdag 2017-01-02 2017-12-31 V01.HAS	VP 202a 2017-01-02 2017-12-29 Hverdag V01.txt
HAS 202a Søndag 2017-01-01 2017-12-29 V01.HAS	VP 202a 2017-01-02 2017-12-31 Lørdag V01.txt
HAS 0203 Hverdag 2017-01-02 2017-12-29 V01.HAS	VP 0203 2017-01-01 2017-12-29 Søndag V01.txt
HAS 0203 Lørdag 2017-01-02 2017-12-31 V01.HAS	VP 0203 2017-01-02 2017-12-29 Hverdag V01.txt
HAS 0203 Søndag 2017-01-01 2017-12-29 V01.HAS	VP 0203 2017-01-02 2017-12-31 Lørdag V01.txt
HAS 0206 Hverdag 2017-01-02 2017-12-29 V01.HAS	VP 0206 2017-01-01 2017-12-29 Søndag V01.txt
HAS 0206 Lørdag 2017-01-02 2017-12-31 V01.HAS	VP 0206 2017-01-02 2017-12-29 Hverdag V01.txt
HAS 0206 Søndag 2017-01-01 2017-12-29 V01.HAS	VP 0206 2017-01-02 2017-12-31 Lørdag V01.txt
HAS 0209 Hverdag 2017-01-02 2017-12-24 V01.HAS	VP 0209 2017-01-02 2017-12-24 Hverdag V01.txt
HAS 0209f Hverdag 2017-04-10 2017-12-29 V01.HAS	VP 0209f 2017-04-10 2017-12-29 Hverdag V01.txt
HAS 0212 Hverdag 2017-01-02 2017-12-29 V02.HAS	VP 0212 2017-01-01 2017-12-29 Søndag V01.txt
HAS 0212 Lørdag 2017-01-02 2017-12-31 V01.HAS	VP 0212 2017-01-02 2017-12-29 Hverdag V02.txt
HAS 0212 Søndag 2017-01-01 2017-12-29 V01.HAS	VP 0212 2017-01-02 2017-12-31 Lørdag V01.txt

The files are available for download at the ITT website under the menu item Contract documents.

Breaks and/or toilet facilities

Roskilde Station Centre (route 201A, 202A, 203, 204, 205, 206, 208, 209, 212)

Owned/leased by Movia

Lease

Floor area:	140 m ²	
Estimated operating expenses per year:		DKK 240,000.
Furniture and equipment (Purchase)	DKK 30.000	
Share of operating expenses:	100%	
Degree of use:	1	
Ventilation plant	Yes, with service and maintenance agreement	

Trekroner Station (route 201A)

Owned/rented by Movia	Rental of area with facility owned by Movia	
Floor area:	2 m ²	
Estimated operating expenses per year:		DKK 30,000.
Furniture and equipment (Purchase)	DKK 0	
Share of operating expenses:	100%	
Degree of use:	3	
Ventilation plants agreement	Yes, but without a service and maintenance agreement	

The facility at Trekroner Station is a cubicle toilet which will be upgraded to a toilet in a new property. The project has started and is expected to be completed before the start of operations in this tender process.

Veddelev Mark (route 203, 204)

Owned/leased by Movia	Lease	
Floor area:	2 m ²	
Estimated operating expenses per year:		DKK 30,000.
Furniture and equipment (Purchase)	DKK 0	
Share of operating expenses:	100%	
Degree of use:	3	
Ventilation plant	No	

Special conditions

The basic service on unit 9 consists of two packages – packages a and b. Package a consists of Routes 201A and 202A. Package b consists of Routes 203, 204, 205, 206, 208, 209, 212 and a couple of single journeys on route 202A.

On the two packages, the in-service and spare buses to perform the bus services are required to be electric buses where

- 1.1. one or more electric motors alone drive the vehicle;
- 1.2. the power train includes an onboard energy store (based on e.g. batteries or capacitors), and
- 1.3. the energy storage alone will be recharged when connecting the EV to the electricity grid

The electric buses are to have sufficient range to cover the distance of a return trip on the longest route variant from final destination to final destination, plus 5 km, during regular traffic and under all climate conditions, during maximum passenger load and independently of driver behaviour.

On package b, tenders must include an option, see section 1.3.6. The option is defined as Option 1 in the contract documents.

The tenderer is to allocate a dedicated employee to be responsible for smoothest possible phasing in of electric bus service. The employee is to take part in the Urban Traffic Cooperation, see section 11.

Temporary bus equipment

Operations start on 14 April 2019. On package a, the tenderer may choose to insert temporary equipment in the period from 14 April 2019 to 30 June 2019. The tenderer must specify the date when electric buses begin to operate in Appendix 5 (List of bus equipment). Temporary buses used for package a must, as a minimum, meet the Euro 5 standard.

On package b, the tenderer may choose to insert temporary equipment until 14 April 2021. The tenderer is to specify the date when electric buses begin to operate for package b in Appendix 5 (List of bus equipment). Temporary buses used for package b must, as a minimum, meet the EEV standard.

The minimum requirement for the combination of doors for temporary bus equipment on package a and b is 1-2-0.

If the temporary equipment deviates from the requirements described, it must appear from the tenderer's tender in order for it to be negotiated. If Movia approves deviations from temporary equipment, Movia will give notice in Q&As at the ITT website.

Roskilde Municipality puts up for sale land for a garage

Roskilde Municipality has designated an area of up to 20,000 m² that may be used by the tenderer. Geometry and size can be clarified with the Business Department of Roskilde Municipality. Subject to agreement, it will be possible to enter into a conditional contract for sale of the land which is conditional only on the outcome of the A16 tender process. Roskilde Municipality will thus be able to enter into a condition contract of sale with anybody who wishes to participate in the A16 tender process.

For further information on the land concerned, please contact the Business Department of Roskilde Municipality or see

<http://roskilde.dk/lykkegaardsvej>

Tenderer's proposal for adjustment of the vehicle schedule

In connection with the tenderer's initial tender, the tenderer may suggest adjustments in the timetables. If Movia considers the tenderer's proposal for adjusted timetables inappropriate, Movia will reject the tenderer's proposal. The purpose of the provision is to give the tenderer the possibility to suggest adjustments of the timetables that promote the transition of an electric bus system. The total number of timetable hours and departures on each route must remain unaltered (changes in stoppage time at final destinations will not affect the total number of timetable hours).

Planning of runs

Based on bus runs for payment for packages a and b, the tenderer is to prepare bus runs for the performance of bus services, using electric buses. The tenderer's bus runs must be appended to the tender. The tenderer must be aware that Movia may decide to make use of Option 1.

Tenderers who wish to charge the electric buses in urban space must also prepare emergency timetable for route 201A and route 202A and related bus runs.

For route 201A the emergency timetable must be based on one of the route's charging stations being out of service, and the bus therefore having to be charged at Roskilde Station instead.

For route 202A the emergency timetable must be based on the charging station in Margrethehåb being out of service and the bus therefore having to be charged at Roskilde Station instead.

The tenderer will be paid the ordinary hourly rate when delivering bus services according to emergency timetables.

For package b, the bus runs prepared by Movia will form the basis of the tenderer's tender.

Calculation of hourly rate

The tendered bus runs are called "bus runs for payment" and form the basis for calculating the timetable hours and the buses to be paid for. The tenderer must be aware that the bus runs for payment in scale 1:1 will form the basis of the calculation of the number of in-service buses. The total costs of the tenderer must be distributed over the bus runs for payment regardless of the number of spare buses used by the tenderer. If the tenderer needs more buses to deliver the bus services than the number of in-service buses, the tenderer must use spare buses to deliver such services.

Training of drivers before the start of operations

When training drivers in operating electric buses, the tenderer can buy out drivers transferred from the existing operator.

The tenderer may buy out 5-10 driver per weekday if planned no later than 14 days before buy-out.

Buy-out must be completed for an entire workday per driver. Buy-out costs DKK 2,220 exclusive of VAT for each day of buyout per driver.

Training is to be conducted at the tenderer's premises.

The detailed terms and conditions for the buy-out of drivers are subject to agreement between the tenderer and Arriva.

For unit 9 in particular

Please note that the following sections of the contract documents may contain special requirements for unit 9. This is marked "*For unit 9 in particular*".

3. Bus equipment

3.1 In general

The tenderer must procure the necessary number of in-service and spare buses. The buses used for the bus services must be suitable for performance of the bus service contract and be able to meet the timetable.

In the statement, the tenderer must specify where in-service and spare buses are garaged. If the buses are relocated in the contract period, notice must be given to Movia Contracts.

Movia must be notified if spare buses are garaged in a place different from the in-service buses.

Movia is happy to assist the tenderer by giving guidance on the purchase of new buses and refurbishment of used buses.

Movia encourages the tenderer to check the tendered routes for bumps, bridges and other road conditions which may affect the choice of bus type suitable for the individual routes. The tenderer will be responsible for adapting the equipment covered by the tender to the bus services required on the tendered routes.

All buses must meet the requirements set out in these contract documents at all times.

All buses must be in a good state of repair and maintenance, clean and presentable. Any failure to meet the requirements to the buses will be evaluated in accordance with Movia's penalty system, see the Contract.

Movia reserves the right to ask for tenders with other types of buses having e.g. alternative capacity or a different combination of doors during the negotiation phase.

In case buses are replaced during the contract period, new in-service and spare buses must as a minimum meet the same requirements as the buses previously used. However, the replacement of buses in the contract period is at all times subject to agreement with Movia Contracts, and it is further necessary to submit a completed form for each bus providing information for Movia's bus database.

3.2 Buses brought into service

The delivery of the buses covered by the tender must observe the deadlines set out in the General Conditions, and the buses must be put into service from the start of operations. In table 5 (list of buses covered by the tender) a binding date of delivery is specified for the buses covered by the tender. The buses must be delivered no later than 30 days prior to the start of operations unless otherwise agreed in writing with Movia Contracts. In the period up to the start of operations, the buses must be available for installation of IT equipment, see section 6.

For the purpose of ordering travel card equipment, etc. and planning installations, the number and type of buses must be clarified at least six months before the start of operations.. See section 6.2.2 for the number of spare buses

Any replacement of machinery and equipment in the contract period requires the specification of replacement in the tender (Appendix 5 - list of bus equipment). If the tender does not provide for the replacement of bus equipment, Movia may replace bus equipment if the equipment is, in overall terms, deemed to be better or equally as good as the bus equipment included in the tender. Unless otherwise

agreed with Movia in writing, bus equipment installed in the contract period must be delivered 30 days before the buses are put into service.

If buses are delivered or put into service later than agreed, the monthly contract price of DKK 2,000 per bus per 24 hours will be reduced until the buses are delivered and/or put into service. This term also applies to in-service and spare buses. It is not possible to make reservations in respect of this term. Movia considers a bus delivered when it is available for installation of Movia equipment (fare taking equipment etc.), and the bus is not deemed to have been put into service until it is in fully functional condition and is fully available for normal service, and when Movia has received written notice of the date when the bus is brought into service.

In case of any increase in the number of in-service buses in the contract period, the same delivery requirements apply, see section 12.2.1.

Before the bus is deemed to be in operation, the tenderer must further have submitted a completed form providing information for Movia's bus database. This form is available from Movia Contracts.

For unit 9 in particular

If the tenderer wishes to make use of Movia's offer to install charging stations in urban space for route 201A and/or 202A (package a), see section 4.1, or if the tenderer wishes to install such charging stations itself, see section 4.2, at least one electric bus must be delivered no later than 60 days before the electric buses are put into service. On deliver, this bus must be ready for charging testing using charging stations in urban space. All other buses for package a must be delivered no later than 30 days before the start of operations.

Electric buses for package b must be delivered on or before 15 March 2021.

If electric buses are delivered later than agreed, the monthly contract price will be reduced by DKK 3.000 per bus per 24 hours until the agreed date of commissioning or delivery.

If the electric buses are delivered later than the agreed date of commissioning, the reduction in the monthly contract price will be increased. For buses delivered in the period from agreed commissioning and up to 30 calendar days after agreed commissioning, the contract price will be reduced by DKK 4,000 per bus per 24 hours until the date when the bus is delivered. For each period of 30 days or any part thereof by which the electric busses are delivered later than 30 calendar days after agreed commissioning, the reduction will, in such period, be increased by DKK 1,000 per bus per 24 hours until the date when the bus is delivered. The amount of the reduction may not exceed DKK 7,000 per bus per 24 hours. See the below table. This term also applies to in-service and spare buses.

Period with late delivery	A penalty per bus per 24 hours for the period in which delivery of the bus is late
From agreed date of delivery to agreed commissioning	3,000
Day 1 to day 30 after agreed commissioning	4,000
Day 31 to day 60 after agreed commissioning	5,000
Day 61 to day 90 after agreed commissioning	6,000
After day 90 after agreed commissioning	7,000

Example:

If it is agreed to put the electric buses into service on 14 April 2019, the agreed date of delivery is 15 March 2019 and the electric buses are in fact delivered on 20 May 2019, the amount of the reduction will be calculated as follows:

For the period from 15 March to 14 April 2019, the reduction is 30*DKK 3,000 per day, i.e. DKK 90,000. For the period from 15 April to 14 May 2019, the reduction is 30*DKK 4,000, i.e. DKK 120,000. For the period from 15 May to 20 May, the reduction is 6*DKK 5,000, i.e. DKK 30,000.

The total reduction of the payment per electric bus is then DKK 90,000 + DKK120,000 + DKK 30,000 = DKK 240,000.

3.3 Fitting out, safety, etc.

Below are requirements and requests for the bus equipment to be used for the bus services in this tender. The requirements apply to all in-service and spare buses. The requirements are based on Common Bus Regulations ("Fælles busforskrifter") published by the Transport Authorities in Denmark. Movia has, however, made adjustments to these requirements.

3.3.1 Regulatory requirements

All buses must meet all requirements to fitting-out, road safety, etc. imposed by the government such as: The Danish Detailed Vehicle Standards ("Detailforskrifter for Køretøjer"), the Danish Executive Order making special requirements to buses ("Bekendtgørelse om særlige krav til busser) and the Danish Executive Order on the maximum width, length, height and axle load of vehicles (the Danish Dimension Order) ("Dimensionsbekendtgørelsen").

3.3.2 Length

Reference is made to the table in section 2.

3.3.3 Bus type

Reference is made to the table in section 2 for requirements for bus types in this ITT. Translation of type codes:

- LB: Light urban bus transport
- TB: Heavy urban bus transport
- SB: Service bus

Accessibility for the individual bus types:

Type	Accessibility
Heavy urban bus transport	Low entrance or low floor
Light urban bus transport	Low entrance or low floor

Service bus	Low entrance or low floor
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Low entrance buses have low floors (no steps) at front and middle doors and in the gangway between these doors. Low floor buses have low floors (no steps) at all doors and in the entire bus gangway.

For unit 9 in particular

On unit 9 it is a requirement that all buses have low floors.

3.3.4 Doors

Unless otherwise specifically stated, all buses must be fitted to allow boarding at the front end and exit through to other doors. Passengers with prams, bicycles or wheelchairs excepted. They use the door closest to the platform for both entry and exit.

For unit 9 in particular

Today passengers board the buses using the front door and exit through the middle and rear doors. All buses must, however, be prepared for passenger boarding and exit through all doors. This includes cabling for travel card equipment for two travel card terminals at each door, see section 6.

See also section 10.1.2

Combination of doors

The combination of doors is specified as the number of front, middle and rear doors.

Type	Requirement
Heavy urban bus transport	2-2-1 or 2-2-2
Light urban bus transport	1-2-0 or 2-2-0
Service bus	0-2/2-0 or 2-2-0

In all cases, more doors are permitted provided that the other requirements are met.

For unit 9 in particular

On unit 9 package a, it is a requirement that the combination of doors is 2-2-2.

Free door width

The free door width on the opening of double doors must be approx. 110 cm or more and on the opening of single doors approx. 70 cm or more - but at least 90 cm at single doors with wheelchair ramps. If the free door width requirement is met, a double door may be replaced by a single door.

Door type

Outward-swinging front doors are not accepted. However, sliding doors moving 12 cm from the side of the bus (measured at right angles to the side of the bus) are accepted.

The swing on the opening and closing of outward-swinging doors must be as little as possible and no more than 40 cm measured at right angles from the side of the bus.

For units 4, 5, 6, 7, 8 and 9b outward-swinging front doors will possibly be approved in the course of the tender process after successful testing. Notice will be given to all tenderers in Q&As at the ITT website.

Safety of doors

All buses must be equipped with holding brakes to prevent the buses from driving with open central and rear doors.

All doors are equipped with one or more types of safety devices to protect passengers from being trapped in the door arrangements during the opening and closing of doors. It should also be impossible for passengers' coats, etc. to get caught in the door when they pass by an open bus door.

In all buses, warning sound signal device must be placed at every exit which is automatically activated when central and rear doors open and close. It must be a single sound which is not repeated. The sound level must ensure that the sound signal is clear without causing inconvenience. Front doors may not be equipped with warning sound signal devices.

Sources of light which light up exit areas i.e. the pavement (roadside etc.) must be placed at central and rear doors. The exit lights may be activated only when the exit doors open. On new buses, the source of light must be integrated in the bus door frame.

Video surveillance cameras must allow the driver to monitor central and rear doors.

The passengers may not be able to operate the opening and closing functions of the doors.

Auto radio

In all buses, the auto radio must automatically deactivate (mute function) when the front doors open.

3.3.5 Entry and exit

Entrance and exit heights must comply with the following requirements:

Type	Requirement
Entrance height at front doors	0 - 32.0 cm
Exit height at central and rear doors	0 - 34.0 cm
Step heights at doors where steps are permitted	0 - 27.0 cm

The entrance and exit heights specified in the table apply to buses in non-kneeling position. All measurements refer to unloaded buses.

Step heights must be as low as possible.

The treads must have non-slip, non-removable surfaces.

Kneeling

All buses must be able to "kneel" to reduce entrance and exit heights by at least 7 cm.

Wheelchair ramps

All buses must be equipped with either electrically powered telescopic ramps or manual swing ramps at the door used by wheelchair users. The ramp must be designed to facilitate clean and easy operation.

The size of the ramp must be at least 87 x 87 cm (length x width). The ramp must have a load capacity of 300 kg. The ramp must have non-slip surfaces.

It shall not be possible to set the bus in motion while the ramp is being used.

On the exterior bus side in front of the relevant door, a push button must be affixed to allow passengers to request door opening. The push button must be placed to prevent wheelchair users from colliding with the ramp or door during activation.

3.3.6 Seating and standing capacity

Capacity

Movia requests buses which have the optimal design to accommodate the need. Consequently, the correlation between seats, front-facing seats and flexi area is weighted differently for each type of bus included in this ITT.

The following requirements and requests apply to seats and front-facing seats. In the evaluation, importance is attached to the satisfaction of Movia's request, and additional scores are given if the tender provides for better solution.

Type	Seats		Front-facing seats	
	Minimum	Request	Minimum	Request
SB1	17	20+	10	13+
LB1	21	24+	15	18+
LB2	25	28+	18	22+
TB1	25	28+	19	22+
TB3	33	36+	27	30+

Movia has no requirements for total capacity, but attention is drawn to the requirement for the length of the bus, see the table in section 2 and section 3.3.8 on flexi area.

Tip-up seats count as seats, but never as front-facing seats regardless of their direction.

3.3.7 Seats

The seats must be fabric upholstered, and the padding on the seat and the backs of the seats must be provide high comfort.

This requirement is considered satisfied if the seats have the following characteristics:

Bus type TB for A and C bus routes

The padding on the front edge of the seat must be at least 2 cm, whereas the padding shall in no place be less than 1.5 cm on the seat and 1 cm on the back of the seat. The seat-back height must be approx. 50 cm measured from the top point of the seat to the top edge of the seat-back padding.

Bus type LB and other TB

The padding on the front edge of the seat must be at least 5 cm, whereas the padding shall in no place be less than 4 cm on the seat and 2 cm on the back of the seat. The seat-back height must be approx. 70 cm measured from the top point of the seat to the top edge of the seat-back padding.

If provided, arm rests must be flip-up.

For unit 9 in particular

The following requirements apply to both the basic package and option 1 for unit 9: The padding on the front edge of the seat must be at least 2 cm, whereas the padding shall in no place be less than 1.5 cm on the seat and 1 cm on the back of the seat. The seat-back height must be approx. 50 cm measured from the top point of the seat to the top edge of the seat-back padding.

Distance between seats

The distance between seats must be 70 cm or more, and 72 cm or more in new buses.

The distance is measured in a height of 62 cm above the floor from the front of the seat back (in the middle of the seat) and to the back of the preceding seat. Movia may accept a shorter distance between seats in certain rows of seats, e.g. at wheel casings and behind driver's wall and partition. In all cases, it is subject to the approval of Movia.

For unit 9 in particular

The distance between seats must be 70 cm or more on packages a and b.

3.3.8 Flexi area: Pram and wheelchair area

The following requirements apply to wheelchair and pram spaces:

Type	Number of units	
	Minimum	Request
SB1	2*	2*
LB1	2	2
LB2	2	2
TB1	2	2
TB3	2	2

In all cases, the tender is required to accommodate for one wheelchair only. Units also cover the number of prams.

When a wheelchair space is not being used by a wheelchair user, the space should be suitable for a pram.

Space for the above-mentioned number of units is delivered by way of the insertion of a horizontal platform with a width of at least 90 cm and the number and length of the buses as follows:

Number of units	Can be met by delivering a number and length of at least:	
1 unit	1 x 130 cm	
2 units	1 x 200 cm	2 x 130 cm

In buses with wheelchair ramps, the flexi area must be placed close to the door with a ramp. The flexi area may be placed in the right or left side of the bus. Movia requests that the area is placed in the right side.

Buses must be fitted with a Velcro fastener or similar anchoring device to secure prams.

The platform must allow wheelchairs to be placed with their backs against the direction of travel and with side supports to the gangway. 60–80 cm above the floor, a single-string belt must be installed to secure the wheelchair.

*In SB1 a flexi area for one unit can be replaced by easily accessible single seats, see also section 3.3.18.

Tip-up seats

At the flexi area, tip-up seats will be installed, corresponding to at least:

Type	No. of tip-up seats
Service bus	4
Heavy urban bus transport	3
Light urban bus transport	3

Movia requests optimal use of the flexi area by e.g. installing additional tip-up seats or upholstered backrest.

The tip-up seats must be as comfortable as the other seats.

Tip-up seats not being used must be fitted so that they tip up automatically.

Allowing bicycles on the bus

All buses must be able to carry bicycles. The bus must be able to carry a total of two units where one unit is a wheelchair, a pram/buggy or a bicycle. Buses must be fitted with an anchoring device to secure bicycles.

3.3.9 Gangway and floor areas

Gangway areas and floors must be established in two horizontal levels.

The floor gradient must be 0-8% in the longitudinal direction of the bus.

Steps in the gangway between the front door and the middle door are not accepted. In buses with steps between the middle door and the rear door / end, Movia requests that the steps are as few and as low as possible - the steps may be 0-25 cm high.

New buses must have a free gangway width of at least 50 cm. The requirement applies in any height. If any arm rests reduce the free gangway width, such arm rests may be disregarded.

Floor areas intended for standing passengers must provide for a secure foothold in all circumstances.

The differences in levels and front edges of steps must be clearly marked. The colour RAL1028 is requested.

Movia requests as low landing heights as possible. In low entrance and low floor buses, the landing height shall be 0-20 cm in the front half of the bus (between the front door and the middle door) and 0-25 cm in the rear half of the bus (from the middle door to the rear end of the bus). In other buses, the landing height may be 0-25 cm for the entire length of the bus. Movia may accept deviations to the individual seats subject to approval in each case.

3.3.10 Hand rails and bus stop buttons

Hand rails next to seats

The following guidelines apply to the location of vertical seat-back to ceiling stanchions:

Type	Requirements for location of hand rails next to seats
Heavy urban bus transport	Next to every transverse seat adjacent to the gangway
Light urban bus transport	Next to every other transverse seat adjacent to the gangway
Service bus	Next to every transverse seat adjacent to the gangway

For units 4, 5, 6, 7, 8 and 9b vertical hand rails are required next to seats..

Buses must be fitted with hand straps next to rows of seats where there are no hand rails. Hand strap must be clearly in yellow. Movia requests the colour RAL1028.

Other hand rails and stanchions

At all doors, buses must be equipped with hand rails giving passengers something to grab onto when boarding and exiting the bus.

Hand rails and stanchions are not allowed in the middle of the bus entrance.

At longitudinal seats and platform, ceiling rails running horizontally along the bus must be fitted 190 - 200 cm above the floor/landing edge (if any). This requirement does not apply to the units 4, 5, 6, 7, 8 and 9b. Hand grabs at seat facing each other must be agreed with Movia.

An appropriate number of straps must be mounted on the above-mentioned horizontal ceiling rails (at platform at least six straps) for easy grip.

At the flexi area, a rail running horizontally along the window side of the bus must be fitted just beneath the edge of the windows. This rail may be replaced by hand grabs at the top of the tip-up seats.

In all new buses, the diameter of hand rails and hand grabs must range between 3 and 4 cm.

In all new buses, hand rails must be coloured RAL 1028 (Melon Yellow).

As many customers as possible should be able to see combination signs, customer information displays and similar signs without hand rails and straps blocking the view.

Bus stop buttons

Bus stop buttons must be fitted at all rows of seats on both sides of the gangway with easy reach of the passengers. At rows of seats with stanchions, the bus stop buttons must be fitted on the stanchion in a height of 100 - 150 cm above the floor.

In new buses, such bus stop buttons must have a grey cabinet with a red push button. Movia requests that the bus stop button is designed as shown on the picture.

A bell (ding) is to sound when the passengers push the stop button.

3.3.11 Indoor climate and window panes

In general

The temperature of the bus must range between 18°C and 22°C. Movia accepts deviations from the temperature requirement for the first 20 minutes the bus drives. In case of an outdoor temperature above 22°C, Movia accepts deviations from the temperature requirement. Special requirements apply to buses with air-conditioning systems, see below.

The temperature in the bus is to be measured in a so-called stationary test where the engine is running and the doors are closed. The temperature measurement must be made 1.2 m above the floor in the gangway at the front and rear axles. The average of the temperatures measured is deemed to be an indication of the indoor temperature of the bus. To secure the reliability of the measurement, the measurement must be made three times at intervals of one minute.

The measurement method can subsequently be adjusted if it proves inappropriate to work with the assumptions stated.

For unit 9 in particular

The temperature of the bus must be at least 16 °C in the winter months (December, January and February). For other times of the year, the above temperature requirements apply. It is for the tenderer to ensure that the temperatures in the driver's area meet the working environment requirements.

Air-conditioning system

An air-conditioning system for the passenger area of the bus is a requirement in A, C, E, R and S buses. In other buses, an air-conditioning system is a request.

When the closest outdoor temperature in the shade exceeds 22°C, the air-conditioning system is required merely to emit cooled air.

In buses with air-conditioning systems, the following functionality requirements apply: When the air-conditioning system is switched on, it must be possible to reduce the temperature measured in the bus by 3-6 degrees compared to the nearest outdoor temperature in the shade. The temperature reduction must be achievable within ten minutes when the bus doors are closed. Moreover, it must be possible to dehumidify the inlet air to prevent windows from misting up.

The air-conditioning system is expected to be automatically controlled, but the driver must be able to switch it on and off while the bus is driving.

For unit 9 in particular

It is not a requirement that the A buses in this unit are equipped with an air-conditioning system. Buses without an air-conditioning system must be equipped with mechanical ventilation.

Window panes

All window panes must be kept mist-free at all times – regardless of weather and temperature. There is no requirement for double-glazed windows if the window panes can be kept mist-free in a different manner, e.g. by using a ventilation or air-conditioning system.

Buses without an air-conditioning system must be equipped with flip-up or sliding windows:

- Buses with a length of 12 metres or more must have 2-4 flip-up or sliding windows on each side of the bus distributed at the front and rear of the bus.
- Buses with a length below 12 metres must have 1-2 flip-up or sliding windows on each side of the bus distributed at the front and rear of the bus.

The customers must be able to operate the flip-up / sliding windows.

Roof hatches

All new buses without air-conditioning systems must be fitted with at least two roof hatches operable independently of each other from the driver's seat.

For unit 9 in particular

Automatic control of all roof hatches is required to create the best possible indoor climate. For automatically controlled roof hatches, Movia may grant exemptions from the requirement that the roof hatches may be operated independently of each other from the driver's seat.

3.3.12 Interior lighting

Lights must be evenly distributed throughout the bus. Lights must be switched on if and when needed.

In special circumstances (no road lighting, rain, snow, sleet, etc.), the lighting system may provide the option of dimming the lights in the bus to prevent reflections in the front window.

Above entrance and exit doors and ticket collection equipment, strong, anti-dazzle spotlights must be fitted. The amount of light must be determined on the basis of the other lights, and the spotlights must be switched on when the doors open and switched off when the doors close.

3.3.13 Video surveillance system

Video surveillance cameras must be present in all Movia buses.

In buses with a rear door there must be at least four cameras, whereas there must be at least three cameras in buses with no rear door. The cameras must cover the areas at the entrance and exit doors and as much of the bus passenger cabin as possible.

The cameras must as a minimum store recorded material digitally for 120 hours. The cameras must produce data quality at a resolution to permit clear visual recognition of persons or incidents.

The tenderer is deemed to be data controller in respect of the recordings under the provisions of the Danish Data Protection Act. The tenderer is consequently responsible for ensuring that the video surveillance complies with Danish legislation and that the recordings are only used in conformity with such legislation.

The recordings must on request be placed at the disposal of the police in accordance with current legislation.

Signs

In Movia buses there must be pictograms indicating the presence of video surveillance cameras as prescribed by the Danish Video Surveillance Act, and in all other respects, the video surveillance must comply with Movia's design rules as set out in the section on pictograms, logos, etc.

3.3.14 Fitting out the driver's seating area

The driver's seating area must be fitted out in co-operation with representatives of the drivers.

The fitting-out must comply with current rules, "Branchevejledning om busser i rutekørsel" (or any update thereof).

Next to the driver's seating area, it must be possible to install ticketing and fare collection equipment – see section 15.5.

3.3.15 Safety

Blind spot and side-view mirrors

All buses must be equipped with blind spot mirrors providing drivers with a wider angle of view when turning right to improve the safety of cyclists etc.

Side-view mirrors must further be fitted in a height and with an angle from the bus side that prevents the mirror arms from endangering waiting passengers when the bus arrives at the bus stop. A height of 180 cm above the kerb is likely to secure this. To the extent possible, this height requirement must be observed.

Reversing alarm and camera

All buses must be equipped with a reversing alarm in the form of a sound signal.

When the bus is in reverse gear, the bus driver must have a clear view of the rear of the bus on a television screen.

In general about the television screen at the driver's seat

The pictures displayed on the television screen must be given priority as follows:

- 1) Surveillance of exit doors when the exit doors are not closed.
- 2) The rear of the bus (rear camera coverage) when the bus is in reverse gear.

Fire extinguishers

All buses must be fitted with automatic fire extinguishers located relevant places, e.g. in the engine compartment. All buses must meet DFK. 10.06.022 (buses of the M2 type) or 10.06.023 (buses of the M3 type) with respect to fire extinguishers.

Movia may at any time demand an independent and impartial inspection of the fire extinguishers.

3.3.16 Other requirements

Coin changer and counter

The drivers must use a coin changing apparatus.

The driver's compartment must be equipped with a coin counter to facilitate speedy payment and collection of fares.

The coin changers and coin counters and any driver's bags must be purchased and maintained by the tenderer.

Flags

Flag holders are to be fitted to each side of the front of the roof of all buses for vertical insertion of two flags with the following measurements: H 35 cm x W: 46 cm

The tenderer is to buy flags for all buses and ensure that they are kept in intact and good condition. Moreover, the flags must be Dannebrog (square flag) made from cloth of flags and must in all other respects comply with the rules applicable to Dannebrog as to colours and proportions. On request, the tenderer must be able to provide black mourning flags.

The flying of flags is subject to the directions of Movia.

The tenderer is also obliged to fly other flags as directed by Movia, for instance the Rainbow Flag and the Swan Flag from the Nordic Council of Ministers. In such cases, the flags will be delivered to the tenderer. The tenderer is to store the flags for later use.

Litter bins

A litter bin must be fitted in all doorways.

Newspaper holders

If the tenderer wishes to have newspaper holders in the buses, they and their location are subject to the approval of Movia.

3.3.17 Destination and bus route signs

All buses must be equipped with destination and bus route signs. Movia requests the best possible readability of destination and bus route signs. The signs must be legible under all light conditions and at any time – also during stops at the bus terminal. The text must be light-fast.

All new buses must be equipped with LED signs. Figures and texts on LED signs must be amber on a black background. Figures and texts on LED signs must appear with consistent luminosity. The luminosity of the LED signs must have adapted to the weather conditions by means of light sensors. Defect LEDs must be replaced immediately.

All destination and bus route signs must operable from the driver's seat.

The signs must be programmed to change destination when a via point on the route is reached.

While in service the bus must have destination and bus route signs showing the destination and bus route as displayed in Movia's infotainment service. When the bus is not logged on a ride, the bus sign is to change to "ikke i rute" ("not in service"). The driver must be able to set the sign manually in case of for instance lack of data connection.

Protective glass covering signs must be non-reflective.

Size/resolution, LED signs

Combined destination and bus route signs on the front of the bus:

Points in height:	Min 24
Points in width:	Min 160
Total LED area	Min 300 x 1580 mm

Combined destination and bus route signs in the right side of the bus:

Points in height:	Min 24
Points in width:	Min 160

Total LED area Min 200 x 1100 mm

Bus route sign in the rear end of the bus (exterior/interior):

Points in height: Min 24

Points in width: Min 40

Total LED area Min 200 x 270 mm

Bus route sign in the left side of the bus:

Points in height: Min 24

Points in width: Min 40

Total LED area Min 200 x 270 mm

Positioning:

In the bus front, a destination and bus route display is to be set on the exterior of the bus above the windscreen. The signs must be separated from the windscreen to prevent e.g. dirt from defroster air outlet settling on the signs.

On the right-hand side, a destination and bus route display must be positioned in or close to the edge of the roof close to the front entrance door.

On new buses, a four-digit bus route sign must be positioned in the rear end of the bus - inside and outside. On the outside, the sign must be positioned in or close to the edge of the roof. On the inside, the sign must be positioned close to the ceiling in a place visible to the passengers.

New buses must further be fitted with a four-digit bus route display on the left exterior side of the bus. The display must be positioned in or close to the edge of the roof in the front half of the bus.

3.3.18 Comfort measures

On some units, comfort-enhancing equipment is required. On other units, it is a request.

Comfort-enhancing equipment may be noise-reducing carpet/felt on ceiling and walls and other noise-reducing material, USB power outlets, air-conditioning system, infotainment or comparable equipment.

For service busses (SB1), the below equipment is considered to enhance comfort:

- Layout catering for passengers with walking frames, including as many tip-up seats and single seats as possible without steps.
- Design wholly or partly without wheel boxes in the passenger area.

On unit 9 in particular

Movia requests that noise-reducing materials e.g. on walls, ceilings and seats are used inside the electric buses. Movia also requests that the noise-reducing material is not carpets/felt on floor, ceiling and walls.

All new buses must be equipped with USB power outlets. There must be a USB power outlet at each seat. Exceptions can be made for some seats.

Appendix 7 (Reservations and comments) should specify the equipment included in the tender. The tender may append drawings to supplement.

3.4 Upgrading of equipment, etc.

Movia may at any time make change requests not described in the contract documents concerning the upgrading of the technical specifications of the buses in relation to e.g. the environment and IT according to the below guidelines:

- Movia makes a change request for upgrading of the technical specifications of the buses.
- The tenderer will forward a concrete proposal for an upgrading, including the financial consequences.
- After negotiations (if any), Movia may choose to accept the tenderer's proposal if the upgrade can be carried out within the scope of public procurement law.

Notwithstanding the above, the tenderer is entitled to upgrade the technical specifications of the buses if such an upgrade on all areas is, when viewed separately, to the benefit of Movia, and if Movia is given prior notice of the contemplated upgrade and the upgrade does not result in an increase in prices.

3.5 Cleaning

The interior and exterior buses must at all time be kept clean, but cleaning is not required more frequently than every other day of operation.

Movia Traffic Service will carry out inspections to determine the level of cleaning in the buses where a representative of the tenderer will always be invited to participate. During the inspections of Movia Traffic Service, the below points will be applied. They are an indication of the areas of focus, but Movia reserves the right to make changes to these points during the contract period.

Unsatisfactory cleaning
Exterior cleaning
- not washed the day before or later (here the weather will be taken into
"Kitchen tables" and entrance area
- not cleaned, dusty and stained
- windscreen smeared by road film
Floor and wheel boxes
- not cleaned
- many stains and a good deal of dirt
- more than one piece of graffiti
- radiators not cleaned
Seats (incl. backs and behind long sides)
- very dirty
- more than three seats with graffiti/chewing gum
- inadequate clearing (e.g. newspapers)
Walls, ceiling, roof hatches and surfaces

- dirty surfaces - more than one piece of sticker/graffiti - roof hatches unsatisfactory
Windows
- dirty frames - greasy or dirty windows - more than one piece of sticker/graffiti
Stair boxes, ramps and stairs
- dirty - a lot of gravel/sand and other effects
Doors
- dirty windows and cladding
Interior mirror/glass partitions
- greasy - stickers/graffiti
Hand rails and stanchions
- dusty and dirty

3.6 Design

The exterior design and layout of the buses affect the passengers' experience of the bus product.

Movia attaches weight to the extent to which the design of the entire fleet of buses signals quality and uniformity.

Below is described various requirements to the exterior design for the following subjects:

- Destination signs
- Colour scheme
- Logo
- Operator identity marking
- Advertisements

The below elements form part of the interior design of the busses and below requirements and requests in respect of interior design are described:

- Floors
- Stair tread edges
- Seats
- Driver's compartment back wall and partition
- Hand rails and stanchions
- Hand straps
- Bus advertisements
- Traffic information

- Infotainment

Movia Marketing and Traffic Information will be happy to assist the tenderer in setting design requirements in connection with the purchase of new buses.

3.6.1 Destination signs

The bus destination boards are to be erected as directed by Movia Marketing & Traffic Information and are to be written with the Movia Display font (see the example below) which has been developed specially for the LED signs.



Contact Movia Marketing for further guidelines on how to use the Movia Display font.

Data for destinations and route designations must be obtained from Movia's web services, see section 6.3.7. The destination designations on the signs are to be changed dynamically.

At the commencement of the contract and in case of changes to the contract period, the tenderer will pay for the necessary display texts and route numbers and any changes thereto.

Special sign texts

The destination boards must be able to show the following special sign texts:

- Not in service
- Special service
- Extra

The 'Special Services' board may only be used when the tenderer carries out special services for Movia.

The 'Special Services' board may only be used if the buses perform other transport than bus services for Movia, the Movia and DOT logos must be covered.

When the bus displays the special messages "Not in service" or "Special services", the bus may not show the route number.

3.6.2 Exterior design

Colour on the exterior of the bus

The exterior of all buses must be coloured RAL 1028 (Melon Yellow). Any deviations from this requirement on parts of the bus are subject to agreement with Movia Contracts.

Moreover, special requirements apply to the paint coating of A, E, R and S buses:

A-, R- and S-buses are characterised by the red (RAL 3020) and blue (RAL 5015) colours at the entrance door and diagonally from the entrance door. In addition, there is the product logo (A-bus, E-bus, R-bus or S-bus logo) on the edge of the roof.

- A-bus, red, RAL3020
- E-bus, Green RAL6029
- R- and S-buses, blue, RAL5015

It is therefore a requirement that all buses on the A, E, R and S routes are always foiled/painted with red, green or blue corners and that the product logo is positioned on the edges of the bus roof.

The use of RAL colours for paints and coatings and any other use of e.g. product markings are subject to agreement with Movia Marketing and Traffic Information when the type of bus is known.

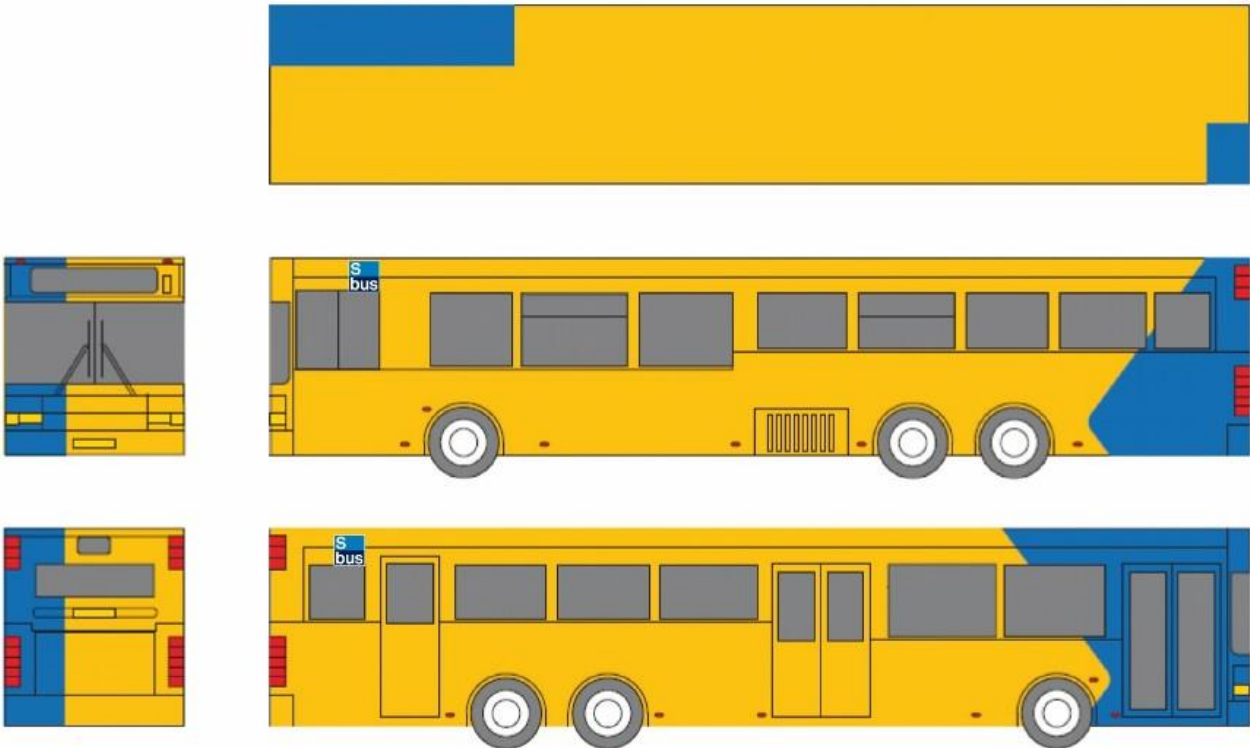
For unit 9 in particular

All in-service and spare buses on package a must be equipped with red corners. In exceptional cases, the tenderer may use electric buses without red corners to implement the bus services. "In exceptional cases" means that the tenderer will not base the completion of operations of package a without red corners.

Drawing of exterior design

The next pages show a layout drawing of the product marking on A, E, R and S buses.

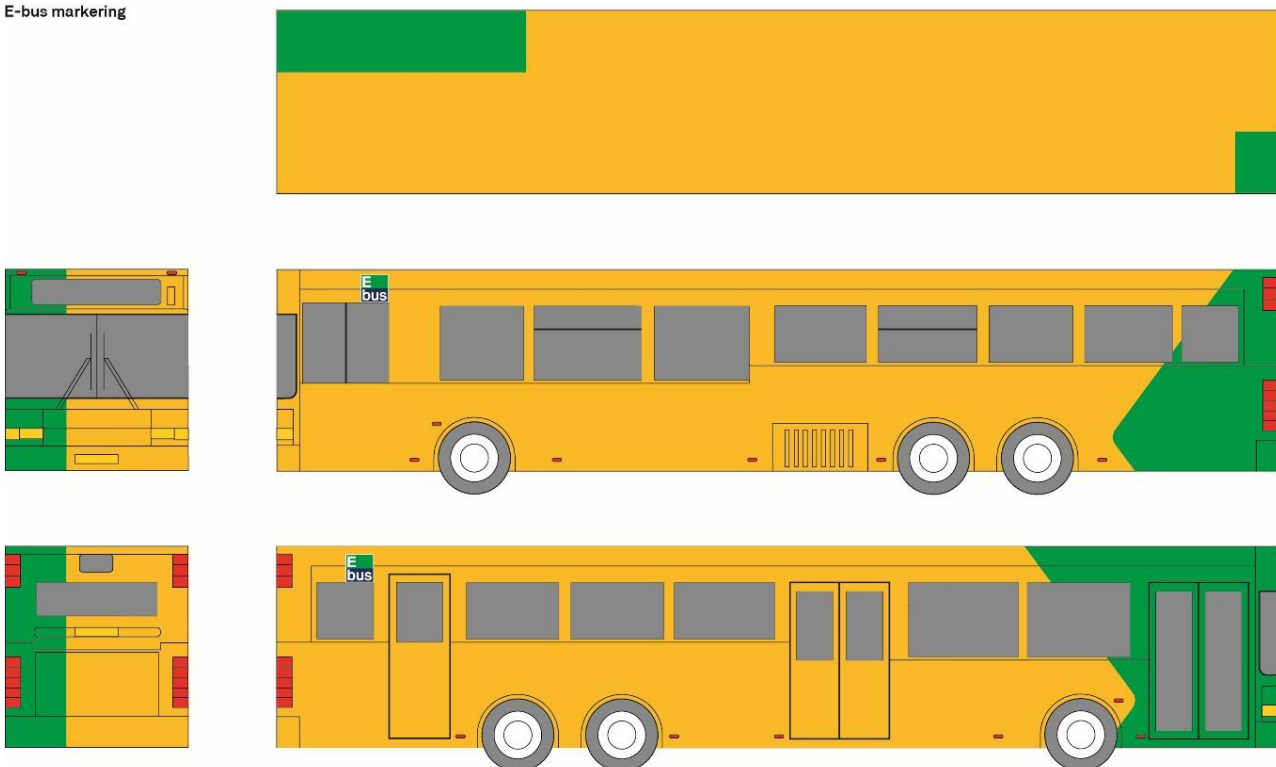
R and S bus markings



(R buses must have an R bus product logo)

A bus marking

E-bus marking



3.6.3 Bus interiors and interior design

Below are the requirements to design and choice of colours in all new buses. In used buses, the interior material and colour choices are subject to the approval of Movia Contracts.

Colours

RAL 1028 (Melon Yellow) is to be used on:

- Hand rails and stanchions
- Accessory mounting hardware (request)
- Perhaps supplementary hand rails (Request)
- Differences in level and stair tread edges (Request)



Light grey (NCS, S 2500-N matt) is to be used on:

- Air ducts
- Hand straps
- Ceilings, walls, stanchions
- IT cabinet
- Driver's wall and partition



Dark grey (e.g. RAL 7024) is to be used on:

- Travel card reader and fitting
- Infotainment system for passengers



The buses must have carpet/felt on ceilings and walls.

The fabric on the seats of new buses must be HT-Bus Prik (used where you sit) and HT-Bus Plain (used on the sides of the seat and possibly on the back of the seat) made of plush.

Where fabric/felt covered ceilings and walls are offered or required, HT-Bus Plain and/or light grey fabric/felt must be used as agreed with Movia

HT-Bus Prik (primary fabric) has light blue and yellow dots on a dark blue background as shown on the picture.

Must be mounted in the direction shown on the picture.

HT-Bus Prik:



The colour of HT-Bus Plain (option) is blue as shown on the picture.

Used on sides and back of the seats.

HT-Bus Plain:

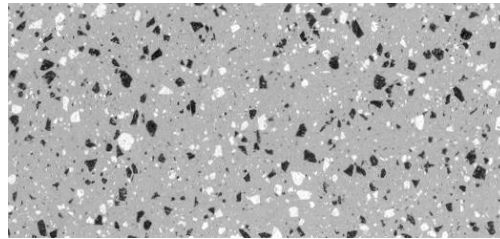


The seat fabric must be mounted as agreed with Movia Marketing & Traffic Information.

Flooring

The primary colour of the floor must be as close as possible to NCS, S 2500-N matt.

An example of the flooring is given in the picture.



Flooring:

Traffic information boards and leaflet holders

Immediately behind the middle door, a 75 x 85 cm glass plate must be positioned on which two DIN-A3 frames for traffic information posters and three leaflet holders must be mounted. See sketch below.

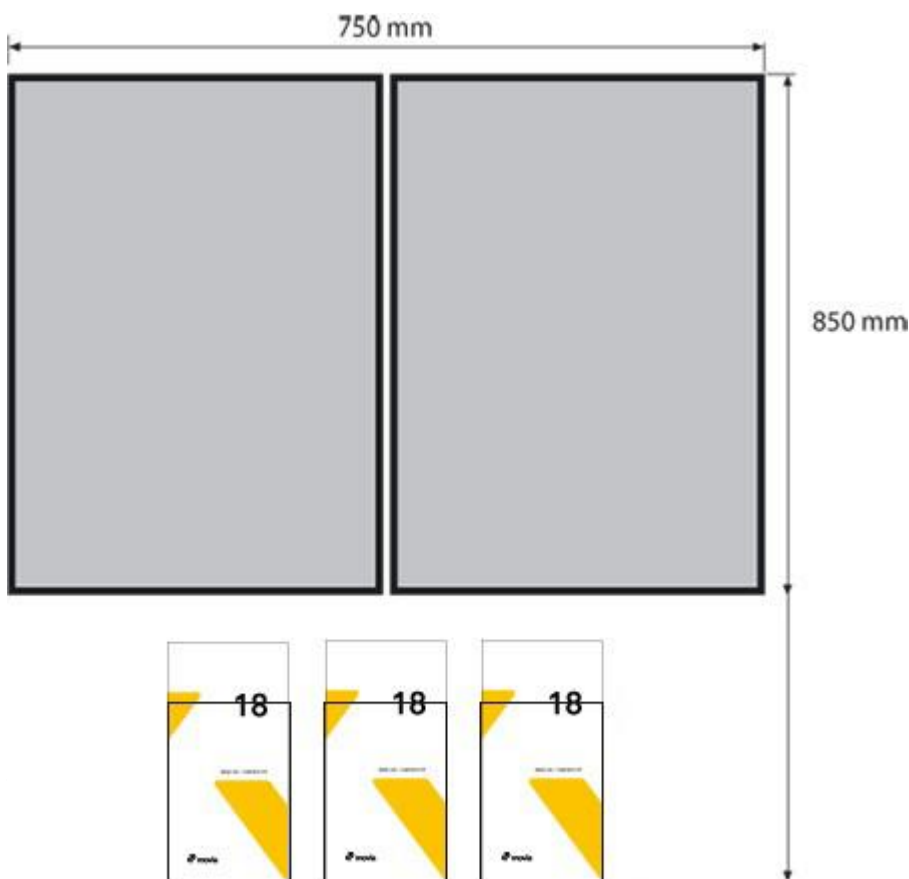
The frames must be A3 poster snap frames, and the edges of the frames must cover up to ½ cm of the visible area all the way round. The frame must be naturally anodized aluminium without a backplate with counter profile on the back. The frames must have a see-through front plate of good impact-resistant quality and with a thickness that fits the frames.

The inside of leaflet holders must be 110 mm wide, approx. 3 cm deep and have a front plate of approx. 15 cm. They must be of hard impact-resistant quality, have a front without a slot, see sketch below.

No door pillars, hand rails, stanchions or the like may be fitted in front of the information boards and the leaflet holders which may impede the change of traffic information posters or the passengers' access to the traffic information in leaflet format. Traffic information boards and leaflet holders are to be delivered and maintained by the tenderer, and it is the responsibility of the tenderer to ensure that both the traffic information boards and leaflet holders meet the above requirements in terms of format and quality.

The position of the leaflet holders and the traffic information boards is subject to the approval of Movia Marketing and Traffic Information.

Sketch of traffic information boards and leaflet holders:

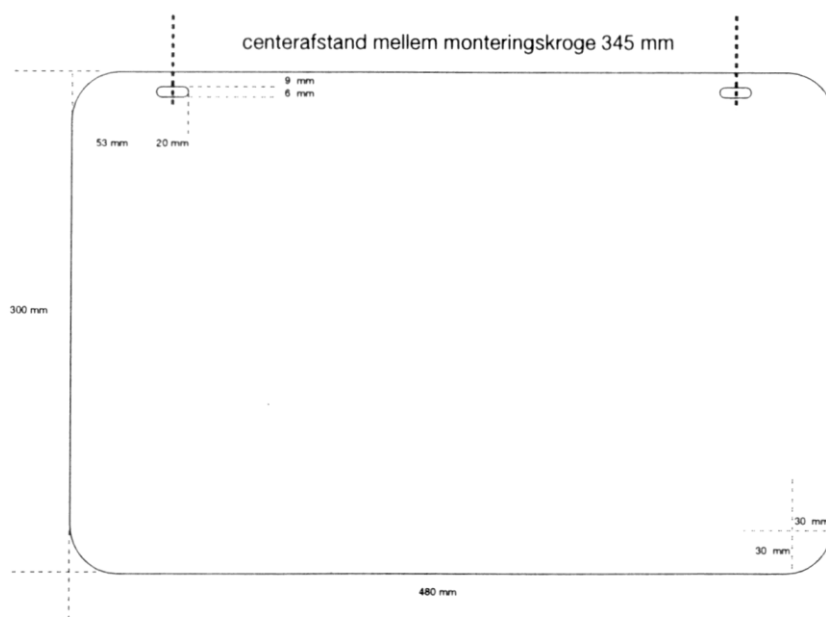


If the use of traffic information boards and/or leaflet holders ceases in whole or in part during the contract period, Movia will give notice to the tenderer who will then remove the boards and/or holders at no expense to Movia.

3.6.4 Advertisements inside the bus

Hanging signs

If the tenderer wants to display advertisements inside the bus, they must be signs hanging from windows (see sketch below). There may be no more than seven spaces for hanging signs, incl. Movia's mandatory two spaces, see section 7.



Hængeskiltet til krogeophængning, mål 1:5

It is possible that the use of hanging signs ceases in whole or in part during the contract period. In such case, Movia will give notice to the tenderer, and the tenderer will, at no expense to Movia, remove the clips for the hanging signs. In such case, Movia will not cover the lack of advertising revenue.

Advertisements on the back wall of the driver's compartment

On the back wall of the driver's compartment, the tenderer may put up a poster with the following format: H 60 x W: 50 cm, except in temporary buses, see section 7.

3.6.5 Advertisements on the exterior of the bus

If the tenderer wants advertisements on the exterior of the bus, such advertisements must meet the following maximum sizes:

Buses without product identity

On the left long side no more than one advertisement of:	Max H: H 48 cm x W: 480 cm
On the boarding side, no more than two advertisements of:	Max H: H 38 cm x W: 200 cm
On the rear of the bus, no more than one advertisement of: or 60x145 cm	Max H: H 265 cm x W: 220 cm
On the rear window of the bus, no more than one advertisement of: W: 160 cm	Max H: 30 cm x W: H 30 cm x

Buses with product identity (e.g. A and S buses)

On the left long side no more than one advertisement of:	Max H: H 48 cm x W: 480 cm
On the boarding side, no more than two advertisements of:	Max H: H 38 cm x W: 200 cm
On the rear of the bus, no more than one advertisement of: or	Max H: H 265 cm x W: 170 cm
On the rear of the bus, no more than one advertisement of:	Max H: H 60 cm x W: 145 cm
On the rear window of the bus, no more than one advertisement of:	Max H: 30 cm x W: H 30 cm x W: 160 cm

If the tenderer wishes to sell advertisements of other sizes and formats, it is subject to the approval of the Movia Marketing & Traffic Information. Also it is necessary to agree on a separate payment to Movia for this option.

It is often necessary to cut out part of the advertisement to make sure that the licence plate, handle etc. are free and visible.

3.6.6 Pictograms, logos etc.***Pram, wheelchair and video surveillance pictograms***

At the bottom of the exterior leaves of the relevant door, a pram pictogram and a wheelchair pictogram must be positioned. To the left of the entrance doors on the outside of the bus, a video surveillance pictogram must be positioned.

Pictograms on the outside of the bus must be black and 12 x 12 cm (see the drawings below).

Inside the bus, a pram pictogram and a wheelchair pictogram must be positioned at the respective spaces in connection with the platform area. A video surveillance pictogram must be positioned on or close to the door to the driver's compartment and two in the passenger cabin.

Pictograms on the outside of the bus must be white and 10 x 10 cm (see the drawings below).

It is accepted that Movia's pictograms are replaced by EU's standard pictograms.

Pram pictograms

Outside:



Inside:



Wheelchair pictograms

Outside:

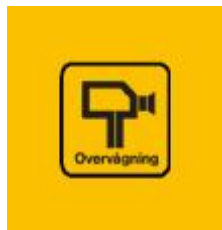


Inside:



Video surveillance pictograms

Outside:



Inside:



Priority seats

The buses must have 8 priority seats reserved for elderly or mobility-impaired persons and passengers with small children. On the window above the priority seats, one of the following pictograms must be placed to match the actual direction of the seats.

When the type of bus is known, the tenderer must agree with Movia at which seats the pictograms are to be positioned.

The pictograms are black/white on a Melon Yellow (RAL 1028) background and measure 80 x 190 mm (see illustration).



Bus number

Four sides of the bus must be fitted with a black four-digit bus number. Font: Helvetica. Size of figure: 8 cm Design, distance between figures etc. must be agreed with Movia Marketing and Traffic Information.

Example of the bus number:

4321

The individual tenderer will have its own number series. New tenderers must ask Movia for a number series after the conclusion of the contract.

If the tenderer buys used buses, such buses must be renumbered according to the tenderer's number series.

On the bus front, the bus number must be displayed above the left headlight.

On the entrance side, the bus number must be displayed to the left of the front door at the bottom of the bodywork.

At the rear end of the bus, the bus number must be displayed nearest to the entrance side below the rear window.

On the left long side, the bus number must be displayed nearest to the bus front at the bottom of the bodywork.

Inside the bus, the bus number must be displayed near the front on a place visible to the passengers. Size of figure: 2.5 cm

Special bell-push buttons for wheelchair users

In connection with wheelchair access, a wheelchair pictogram followed by the text "Dørbestilling" must be positioned on the exterior of the bus to the right of the special bell-push button to order door opening.

The pictogram must be black and 3 x 3 cm, and the text written in a capital letter height of 1.5 cm.

Table of weights

The table of weights must be transparent with white text and frames.

On the entrance side of the bus, a table of weights must be positioned to the left of the front wheel whereas on the left long side of the bus, a table of weights must be positioned to the left or right of the front wheel.

Operator identity marking

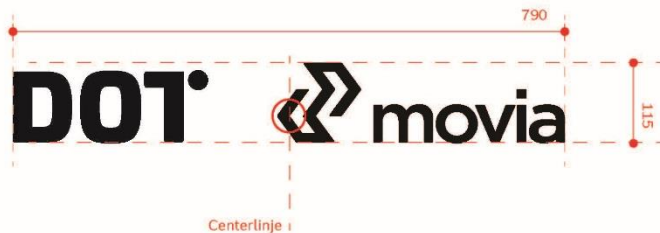
The operator identity marking may either appear as a white clear text or as a business logo. Maximum size: H: 20 cm x W: 60 cm

The operator identity marking may only be positioned on the left-hand and right-hand side of the bus at the bottom of the bodywork, next to or above the front wheel box.

DOT Movia logos

Movia's logo consists of a figure and a monogram:

DOT's logo consists of a logo type:



The logos must be placed on the front of the bus below the window as illustrated on the drawing below.

Height of the logo: 115mm. "DOT - Movia" is a lock-up. The respect distance between the two logos is fixed.

The centre line cuts through the apex of the Movia logo.

In cases where the above logo size is too large, it is possible to use a logo with a height of: 103mm

Please direct questions about the positioning and size of logos to Movia Marketing and Traffic Information.

No logos may be fitted on long sides, rear end or inside.

If the buses are used to provide services to any other entity than Movia, the Movia and DOT logos must



Logo centreret horisontalt på bussens front.

Med udgangspunkt i "DOT" centreret lock-up vertikalt på det frie stykke på fronten af bussen.

Se ovenstående eksempel (x-x)

Foto fra test.
Bus med farvet hjørne



I tilfælde hvor der er uregelmæssigheder på fronten (mærker og lignende).

Centreret lock-up vertikalt på det frie stykke mellem disse uregelmæssigheder.

Se ovenstående eksempel (x-x)

be covered.

Identity marking in general

The interior and exterior of the bus must be kept free of all other identity marks, except for Movia's logo, bus number and tenderer's logo.

Markings of the identity of engine and/or bodywork suppliers are, however, permitted. The number, size and position are subject to the approval of Movia.

Necessary internal texts such as fuel, lubricant etc. must be written in a white font.

Undesirable pictograms

Movia does not want the following pictograms on the bus:

- "No entry" signs on the exit door
- "Cards", "Cards and tickets" above the entrance door
- "Bus no." above the bus number.
- "Entrance" at the entrance door

Generally texts, symbols and markings other than those required are not permitted. Any other use of pictograms and text information, etc. must consequently be agreed with Movia Marketing & Traffic Information that is also happy to assist with guidance on signs providing information in the bus.

4. Charging of electric buses

The tender submitted by the tenderer for unit 9 must specify how the electric buses are to be charged. One of the following methods will be used to charge the buses:

- A. Charging stations in urban space installed by Roskilde Municipality, and possibly charging stations at the tenderer's facilities.
- B. Charging stations in urban space installed by the tenderer, and possibly charging stations at the tenderer's facilities.
- C. Charging stations located only at the tenderer's facilities.

Charging station means charging mast/charger and appurtenant power electronics, control cabinet with power electronics, cabling and grid connection.

4.1 Charging stations installed by Roskilde Municipality

In the period from 3 July to 12 October, Roskilde Municipality carries out a competitive tendering process concerning the infrastructure required to charge electric buses in urban space. The tendering process allows for installation of charging stations at Trekroner Station, Margrethehåb, Svogerslev (Søbredden) and Roskilde Station. On 12 October 2017, Roskilde Municipality expects to award a contract for the installation and operation of charging stations to a systems supplier. In that connection, Movia will give notice to all tenderers for tender unit 9 about the systems supplier's unit rates. The scope of this pricing schedule appears from table 1 **Fejl! Henvisningskilde ikke fundet..**

Table 1: Systems supplier's pricing schedule for services

Service	Unit price (exclusive of VAT)	Trekroner Station, charging station 1	Svogerslev, charging station 1	Margrethehåb, charging station 1	Roskilde Station, charging station 1	Roskilde Station, charging station 2	Roskilde Station, charging station 3	Roskilde Station, charging station 4
300 kW charging station								

Total costs over a period of ten contract years. (Set-up costs plus servicing costs, including VAT)	DKK/charging station							
450 kW charging station								
Total costs over a period of ten contract years. (Set-up costs plus servicing costs, including VAT)	DKK/charging station							
Electricity costs								
Supplier's supplement (exclusive of VAT)	DKK/kWh							

The maximum number of charging stations at each location will be subject to negotiation.

For Trekroner Station, Svogerslev (Søbredden) and Margrethehåb, the contract documents allow for the installation of one charging station at each location. For Roskilde Station, the contract documents allow for the installation of up to four charging stations.

The option to install charging stations at each location appears from the maps included in Appendix d (Plant Drawings).

If Roskilde Municipality does not award a contract to a systems supplier to install charging stations in urban space, the tenderer will no longer be able to tender for charging stations in urban space installed by Roskilde Municipality.

The terms and conditions for section 4.4.1 and sub-sections apply to tenderers using charging stations in urban space installed by Roskilde Municipality.

4.1.1 Costs of charging stations installed by Roskilde Municipality

Roskilde Municipality will pay all costs associated with the installation and operation of the charging stations in urban space that the tenderer wants Roskilde Municipality to install by virtue of section 4.1. The tenderer will pay the costs of electricity used to charge electric buses at charging stations organised by Roskilde Municipality (see section 4.1.8).

4.1.2 Connection technology and charging capacity

The charging stations offered by Roskilde Municipality are equipped with a pole-mounted pantograph which is compatible with the so-called OppCharge industry standard, see <https://www.oppcharge.org/>.

The charging stations offered by Roskilde Municipality will have a nominal capacity of either 300 kW or 450 kW.

4.1.3 System test

It is the responsibility of the tenderer to ensure that the electric buses included in the tender can use OppCharge and are compatible with the systems supplier's charging solution. It is for the system supplier to cooperate with the tenderer to make charging stations ready to charge the tenderer's electric buses and to perform the necessary tests of the charging of the tenderer's electric buses from the charging stations of Roskilde Municipality to ensure that the system supplier's charging system and the tenderer's electric buses are fully compatible from the start of operations. In that connection, the tenderer must, to a reasonable extent, deliver the necessary data to the systems supplier.

4.1.4 Allocation of responsibilities between the tenderer and the systems supplier

The system supplier is responsible that the tenderer can charge electric buses at the charging station at any time when providing bus services. The systems supplier warrants that the charging station will deliver the agreed charging capacity. The tenderer must be aware that the charging station does not always deliver the nominal charging capacity (e.g. 300 kW). One of the things that determine the actual charging capacity is the BMS (Battery Management System) of the electric bus.

It is for the tenderer to ensure that the charging station is used in compliance with the instructions. The tenderer's drivers must therefore park the electric bus as directed by the system supplier and if necessary arrange for activation of the charging station.

4.1.5 Logging of data for charging

The system supplier is responsible for recording all charging activities. Data from there will be saved in a database to which Roskilde Municipality, Movia and the tenderer will have access. As a minimum, the recorded data include correct/incorrect connection of pantograph to electric bus, capacity (kW), power consumption (kWh) and fault notices. Fault notices include a specification of the reason for the fault.

4.1.6 Availability (uptime)

The system supplier commits itself to a level of technical availability (uptime) for each charging station and for the total charging system of each route. The "total charging system" means the total average technical availability of all charging stations servicing the bus route. The minimum technical availability is required to be 98% for each charging station after a running-in period of up to three months, and the charging system for each bus route must be at least 99%. When Roskilde Municipality awards the contract for the installation of charging stations in urban space, tenderers will be given notice of the agreed availability. The percentage rate represents the share of successful charges (ratio between numbers of buses with completed charging relative to the number of charging attempts).

For a running-in period, Movia may grant exemptions for the technical availability delivered by the systems supplier. The tenderer will be given compensation for any such exemptions, see section 4.1.7.

4.1.7 Cancelled journey as a result of faults in charging station

If the tenderer cannot deliver the planned bus services due to faults/breakdown of the charging station, and the tenderer is not responsible for the fault/breakdown, Movia will compensate the tenderer for direct

costs associated therewith. "Direct costs" means that the tenderer will be paid as if the planned bus services had been delivered.

The tenderer must be able to provide evidence of the reason why the bus services are not delivered as planned. As documentation the tenderer can use the data that the system supplier is obliged to log according to section 4.1.5.

A condition for the above compensation is that the tenderer has exhausted all possibilities to deliver the bus services as planned. If one or more of the charging stations used by the bus on the route are wholly or partly functional, the tenderer must attempt to deliver the bus services as planned by for instance using the emergency timetable, see section 2.7.9. In case the tenderer cannot meet the timetable (i.e. the buses are delayed) or in case the tenderer needs to cancel bus journeys, the tenderer must inform Movia and state the reason for the cancellation and provide documentation. Movia will then ensure that delayed bus departures do not lead to penalties or have a negative impact on the tenderer's service level and that cancelled journeys are not set off against payments to the tenderer.

4.1.8 Electricity invoicing

The systems supplier will invoice the tenderer for all costs of electricity used on a monthly basis. The power consumption will be calculated as the power (in kWh) that the electric bus draws to charge. All power consumed during idle is payable by the systems supplier.

The electricity rate invoiced by the systems supplier has three elements:

1. The Nord Pool electricity rate, i.e. the spot market price on Nord Pool (<http://www.nordpoolspot.com/>) that is used to calculate the electricity rate
2. The supplier's supplement, i.e. the supplement covering subscription costs, costs of green electricity (if any), management of the sale of electricity and the systems supplier's profit on the sale of electricity
3. Taxes and charges, i.e. electricity tax, PSO charges, transmission charges (charges for the use of electricity distribution networks and systems)

The second element is determined in the systems supplier's quotation and will not be adjusted during the contract period.

At any time during the contract period, Movia/Roskilde Municipality may, however, require the system supplier to deliver green electricity. In that case, Movia will compensate the tenderer for the costs of green electricity at a ratio of 1:1.

4.2 Charging stations installed by the tenderer (in urban space)

The tenderer may arrange for the infrastructure required to charge electric buses in urban space itself. It is possible to install charging stations at Trekroner Station, Margrethehåb, Svogerslev (Søbredden) and Roskilde Station.

The terms and conditions for section 4.2 and sub-sections apply to tenderers who use charging stations in urban space installed by the tenderer.

4.2.1 Positioning of charging masts

The tenderer may install charging masts at the locations shown in Appendix d (Plant Drawings). If the tenderer wishes to install charging masts at other locations than the permitted locations, the tenderer is to request installation at the desired locations in its tender. The tenderer's request will then be considered at negotiation meeting(s). The tenderer's request for the positioning of a charging mast must be made in its tender in form of a map. The map must then be appended to the tender. Movia may reject the tenderer's request.

The maximum number of charging stations at each location will be subject to negotiation.

4.2.2 Positioning of control cabinets with power electronics

The tenderer may place control cabinets with power electronics in the areas marked on the maps that are shown in Appendix d (Plant Drawings). If the tenderer wishes to install control cabinet at other locations than the permitted locations, the tenderer is to request installation at the desired locations in its tender. The tenderer's request will then be considered at negotiation meeting(s). The tenderer's request for the positioning of control cabinet(s) must be made in its tender in form of a map. The map must then be appended to the tender. Movia may reject the tenderer's request.

4.2.3 Connection technology

The tenderer may choose a pole-mounted pantograph (e.g. OppCharge) or a roof-mounted pantograph as connector between the electric bus and the charging mast.

4.2.4 Requirements for the design of charging stations in urban space

The control cabinet should be painted in a RAL colour designated by Roskilde Municipality. Chargers should be painted in a RAL colour designated by Roskilde Municipality.

Drawings in scale 1:10 of the most important design details of the charging station, including charging mast and control cabinet, specifying height, width and length, must be appended to the tender.

The visible installations of the charging stations must be without unnecessary light and sound effects, free from advertisements, made of hard-wearing materials and without light reflection. The tenderer is permitted to affix its logo (one) on every part of the charging station as long as it does not dominate.

The charging mast, control cabinet with power electronics and other installations established as part of the charging station must not be designed in a manner that makes pedestrians or cyclists invisible to other road users and reduces road safety.

If the tenderer wishes to install more than one charging station at Roskilde Station, control cabinets for the charging stations must be designed in a way that makes it possible to subsequently install a front and roof on the building. The terms for such installation must be agreed with Movia. If Movia wants the tenderer to arrange for such installation, Movia will reimburse the tenderer for costs incurred. The total costs of such installation may not exceed DKK 2 million.

4.2.5 Installation of charging stations

The tenderer must make all necessary arrangements for installation of the charging station, including all necessary permissions such as planning and digging permits. Roskilde Municipality will follow the general procedures for regulatory approval of the tenderer's application for planning and digging permits, etc.

The costs incurred by Roskilde Municipality for installation of charging stations in urban space will be paid by the tenderer. The tenderer may, however, re-invoice costs (endorsed by an accountant) of grid connection and excavation works to Movia. "Excavation works" means laying power cables between the charging station and the control cabinet and laying power cables for the service line between the control cabinet and the grid connection point. Excavation works include burying power cables, cabling, restoration and any costs associated with the management of contaminated soil and archaeological investigations.

In case the tenderer re-invoices the costs of grid connection and excavation works to Movia, the ownership of these installations will pass to Roskilde Municipality. Movia may demand a separate statement of the costs of grid connection and excavation works for plots owned by Roskilde Municipality.

The tenderer must specify the costs of the grid connection charge (including VAT) in Appendix 8 (list of charging stations). The tenderer will be compensated up to the amount payable for the grid connection for each single location that appears from the values specified by the tenderer in Appendix 8 (list of charging stations).

In relation to excavation works, Movia will charge a unit price of DKK 1,250 (including VAT) per running metre which forms the basis for the evaluation of the total price quoted by the tenderer, see section 1.3.7. The tenderer will be compensated for the costs actually incurred for excavation works for the metres of excavation works that the tenderer has specified for each location in Appendix 8 (list of charging stations). Consequently, the tenderer may not re-invoice the costs of excavation works to Movia for more metres per location than the metres specified by the tenderer in Appendix 8 (list of charging stations).

Roskilde Municipality will, free of charge, place appropriate land at the disposal of the tenderer for installation of the agreed charging stations in urban space.

4.2.6 Operation of charging stations

The tenderer is responsible for the operation and maintenance of the charging station and will pay all costs associated therewith.

The tenderer must provide for the maintenance of all visible parts of the charging station (i.e. control cabinet and charging mast) at all times. This means that the charging station must be free of damage and vandalism (such as graffiti and stickers).

Damage and vandalism must be rectified as described in the below table:

Type of fault	Deadline for fault rectification
Graffiti and stickers	24 hours
Damage to paint and/or dents	14 days

4.2.7 Compliance with environmental regulations

The tenderer is obliged to comply with all current environmental regulations, including noise regulations.

4.2.8 Logging of data for charging

The tenderer is responsible for recording all charging events. Data from there will be saved in a database to which Movia will have access. The database must include the following data for all failed and successful charging.

- Exact recording of time and date and charging time
- ID of the bus (four-digit bus number) and charging mast ID
- Power used for charging (kWh)
- The SOC level of the bus before and after charging (#)
- Electricity (kWh and %) used for loss during idle running (#)
- The recording of correct/incorrect connection of pantograph to electric bus

Movia must be able to extract logged data in CSV or similar format. Movia wishes to make the logging of data parameters marked (#) subject to negotiation.

4.2.9 Relocation of charging stations

At the request of Movia, the tenderer must relocate one or more charging station in urban space. Charging stations must be relocated with due respect for the range of the electric buses. Movia must designate a new location for the charging station. The location of the new charging station must enable the tenderer to comply with current environmental regulations. The tenderer is obliged to procure all necessary permissions such as planning and digging permits and to comply with all current environmental regulations.

Movia will compensate the tenderer for all incurred and substantiated costs of relocating and connecting the charging station to the grid - but a maximum of DKK 1,250,000 per charging station (exclusive the costs of handling class 4 polluted soil and carrying out archaeological investigations). Movia will compensate the tenderer for all incurred costs of handling class 4 polluted soil and carrying out archaeological investigations notwithstanding that the aggregate costs of relocating the charging station exceed DKK 1,250,000).

4.2.10 Force majeure

If one of the below circumstances occurs, rendering the performance of the planned electric bus services impossible, Movia will grant exemption for cancelled journeys and delays:

1. Power failures, for which the power company is responsible. The tenderer must provide evidence of the time when the power failure began and ended.
2. Traffic collision with the charging station (charging mast and/or control cabinet) caused by a third party. The tenderer must provide documentation to show when the damage occurred and when the charging station is again fully functional.

A condition for the above exemption is that the tenderer has exhausted all possibilities of performing the bus services as planned. If one or more of the charging stations used by the bus on the route are wholly or partly functional, the tenderer must attempt to deliver the bus services as planned by for instance using the emergency timetable, see section 2.7.9. Movia will then ensure that delayed bus departures do not

lead to penalties or have a negative impact on the tenderer's service level and that cancelled journeys are not set off against payments to the tenderer.

4.2.11 Handling charging stations after termination of the contract

On termination of the tenderer's contract with Movia for bus services for the tender unit, the tenderer's right to operate the charging stations installed by the tenderer in urban space ceases. On termination of the contract, Movia has an option to purchase charging stations installed by the tenderer. On expiry of the contract for the tender unit after the twelfth contract year, Movia may purchase charging stations installed in urban space for the operation of electric buses in the tender unit at a price of DKK 1 per charging station. If the contract for the tender unit expires before the end of the twelfth contract year, Movia may purchase charging stations installed in urban space for the operation of electric buses in the tender unit at a price corresponding to the value of the charging station on termination of the contract. The value on termination of the contract will be determined on the basis of the below table, where the value will be calculated on the basis of the installation costs endorsed by an accountant (including VAT) of the charging station less the costs of connecting to the grid and excavation works that the tenderer has re-invoiced to Movia, see section 4.2.5.

Contract year	Value as a percentage of the installation cost*
1	100%
2	92%
3	83%
4	75%
5	67%
6	58%
7	50%
8	42%
9	33%
10	25%
11	17%
12	8%

NB *) Costs (including VAT) of installing the charging station are calculated as the installation costs endorsed by an accountant (including VAT) less costs of connecting to the grid and excavation works.

The tenderer has the duty to maintain ownership of the charging station at any time. Consequently, the charging station cannot be leased out. The tenderer may pledge or mortgage the charging station if the pledge or mortgage is expressly subject to Movia's option to purchase under this Agreement.

On termination of the contract, Movia may demand that the tenderer restores all areas where the tenderer has installed charging stations in urban space. The areas must be restored to the state and condition they were in before installation of the charging station. The tenderer must pay all costs associated therewith. However, underground installations are not to be demolished.

4.2.12 Only Movia buses may use charging stations

The tenderer may only use charging stations in urban space to charge electric buses covered by the tender unit.

4.3 Charging stations located at the tenderer's facilities

The tenderer is responsible for all charging of electric buses at the garage, including the installation and operation of charging stations.

In case of a power failure at the garage for which the utility company is responsible and which makes it impossible to deliver the planned bus services, Movia will grant an exemption for cancelled journeys and delays. The tenderer must provide evidence of the time when the power failure began and ended.

A condition for the above exemption is that the tenderer has exhausted all possibilities of delivering the bus services as planned. Movia will then ensure that delayed bus departures do not lead to penalties or have a negative impact on the tenderer's service level and that cancelled journeys are not set off against payments to the tenderer.

4.4 Redundancy

If the tenderer uses charging stations in urban space to operate electric buses in the tender unit, the tenderer must arrange for the installation of an extra charging station at Roskilde Station as a back-up for all electric buses in tender unit 9. The charging station must have a minimum power output of 300 kW. If the tenderer wishes to use Movia's offer to use the charging stations of Roskilde Municipality, Roskilde Municipality will pay all costs of installing and operating the extra charging station. If the tenderer wishes to install charging stations in urban space itself, the tenderer must pay the costs of installing and operating the charging station, see section 4.2.5 and section 4.2.6.

The tenderer's vehicles schedules (see section 2.7.9) may not be based on the use of this extra charging station.

5. Environment

5.1 Requirements for reduction of environmental impact

For the full contract period, the tenderer agrees to protect nature and the environment to contribute to the sustainable development of society. In the delivery of services under the contract, the tenderer is obliged to currently and consistently seek to prevent and combat pollution of the environment, including water, soil and subsoil, and to combat and reduce vibration and noise in a good and proper manner.

In connection with the operation of the garages and workshops servicing and repairing the buses, the tenderer further agrees to organise work processes that constantly seek to promote the use of a cleaner technology and recycling and to minimise problems associated with waste disposal.

In connection with the operation and maintenance of the buses, the tenderer further agrees to organise and deploy work processes that promote a cleaner environment, reduce spills and the impact on the environment to the best possible extent.

At the same time, the tenderer must comply with the requirements for the buses in terms of emissions, fuel etc., see section 5.3.

5.1.1 Statement of warranties and representations and other documentation

As documentation for fulfilment of the above requirements, the tenderer must, no later than one month from Movia's written request, send either: A certificate (e.g. EMAS or ISO14001) to regularly substantiate that the tenderer has prepared an action plan and constantly works to implement measures and business processes that reduce the impact on the environment,

5.2 Environmental mapping

The tenderer is obliged to help map out the environmental conditions in the business for the full contract period. The tenderer must use Movia's analysis sheet which is updated and issued once a year. The most recent edition of the analysis sheet is also available at the ITT website. The analysis of the environmental conditions is included in Movia's preparation of environmental accounts for the bus services in Movia's area.

The tenderer is also obliged to specify the consumption in detail for the type of buses used on the individual routes. The tenderer is obliged to specify the mixture ratio, the composition of the fuel and the reduction of CO_{2æ}, NO_x, particles, CO and HC, if the fuel contains more bio materials than the statutory percentage.

Movia requires the tenderers to appoint an environmental compliance officer, who is to be Movia's contact person in all environmental issues, see the statement of operations.

5.3 Environmental impact of the buses

5.3.1 Fuel

The tenderer must use sulphur-free diesel oil in accordance with EU Directive 2008/50/EC, Article 22 (PM10) or any other fuel which overall pollutes less.

Regardless of the type of fuel used, the tenderer must further secure access to a fuel storage facility which always has the capacity for at least 20 days' consumption. The fuel delivered through a physical grid to which the tenderer is connected is excepted.

5.3.2 Emissions

Particles, NO_x 's etc.

Minimum requirements for the environmental standard of the buses on commencement of the contract: The requirements are set out in the table:

Unit	New	Used
1	EURO 6	EURO ½6
2	EURO 6	EURO ½6
3	EURO 6	EURO ½6
4	EURO 6	EURO 5

5	EURO 6	EURO ½6
6	EURO 6	EURO 5
7	EURO 6	EURO ½6
8	EURO 6	EURO 5
9a	E-bus	E-bus
9b	EEV for max. two years	EEV for max. two years
	E-bus thereafter	E-bus thereafter
9 option 1	EURO 6	EURO 6

The values are maximum values and measured in g/kWh in accordance with EU's standards for heavy-duty vehicles. All vehicles, except for electric and hydrogen-powered vehicles, must be tested according to the transient cycle. The values are stated below.

Movia considers vehicles run on electricity or hydrogen alone as being free of these emissions.

Transient cycle

	CO	HC	NO _x	PM
Euro 4	4.00	0.55	3.50	0.03
EURO 5	4.00	0.55	2.00	0.03
EEV	3.00	0.40	2.00	0.02
EURO 6	4.00	0.16	0.46	0.01

It is accepted that buses using emission control equipment can meet the thresholds of a higher emission standard than the engine alone is certified to meet, if substantiated. Used buses are requested to be upgraded to a higher Euro standard. Appendix 5 (list of bus equipment) states the Euro standard of the bus and the emission values of the engine for the regulated emission types (PM, NO_x, HC, CO, etc.), including any retrofitted emission-reducing equipment. It is necessary to use equipment approved in principle by the Danish Transport, Construction and Housing Authority.

Buses retrofitted to Euro 6 standard with respect to only NO_x and particle emissions will be considered Euro ½6 buses. These buses will be weighted higher than EEV, but lower than Euro 6 buses. These buses must meet the guidelines of the Danish Transport, Construction and Housing Authority for retrofitting to Euro 6. The tenderer must deliver a test value in accordance with WHVC (World Harmonized Vehicle Cycle) for the NO_x and particle emission that meets the Euro 6 threshold. Buses upgraded to Euro ½6 must keep within the Euro 6 threshold value in the Environmental Inspection Manual, see section 5.4.

In relation to the particle emissions, Euro 5 buses using GtL in a 100 % mixture will be considered "Euro 5+GtL" buses and will be weighted one score higher than normal Euro 5 buses. Euro 6 buses with 100 % GtL will be considered "Euro 6+GtL" and are also awarded one more score than normal Euro 6 buses, but for the NO_x emission. No additional score(s) will be given for using GtL on buses upgraded to Euro ½6.

A copy of the air pollution certificate of the engines must be available from Movia at short notice in the negotiation phase.

To comply with the Euro 4 standard or a higher Euro standard, some bus manufacturers have chosen a technical solution that uses a fuel additive. If the tenderer uses buses using this technology, Movia may demand that the tenderer provides documentation for the correct purchase and use of such additive. This also applies to retrofitted vehicles. The quantity used, handling, etc. of the additive must also appear from the mapping of the environmental conditions at the tenderer.

To ensure that the buses are well-maintained in the day-to-day running and must therefore be presumed to meet the Euro standard, the buses must comply with the threshold values and requirements in the most recent and current Environmental Inspection Manual at all times. It is for the tenderer to ensure that the threshold values are not exceeded.

CO_{2e}

Minimum requirements for the environmental standard of the buses on commencement of the contract: CO_{2æ} stands for CO₂ equivalents and means that e.g. the methane emission from gas vehicles will be converted to CO₂, to allow Movia to make a comparison.

Unit	BLACK	Gram CO _{2e} /km
1	3	0
2	3	0
3	3	993
4	3	848
5	3	978
6	3	836
7	3	978
8	3	978
9a	-	0
9b	2	978 for the first two years
	-	thereafter 0
9 option 1	2	978

The tenderer must state what the tenderer expects from CO_{2e} emission of the buses when delivering the bus services included in the tender. The statement of operations must describe how the tenderer intends to meet the CO_{2e} requirement. The requirement is an average requirement for the individual unit, i.e. that some buses can emit more while other buses in the relevant unit emit correspondingly less. The average consideration is not applicable to units where the CO_{2e} emission requirement is 0. Here all buses must in themselves meet the requirement.

If for the contract period, Movia wishes to reduce the CO₂ emission by up to 100% on one or more of the tender units, such reduction may be required by Movia. Movia may not require the installation of new equipment. In such cases, Movia will pay up to 5% of the cost related to timetable hours, but no more than the substantiated additional costs.

At any time during the contract period, Movia may demand that the tenderer delivers green electricity. If Movia exercises this option, the tenderer will be compensated with 3.75 øre/kWh for the electricity used

by the tenderer to charge electric buses. (With respect to unit 9, it is the actual amount incurred for which the tenderer is compensated in the cases where Roskilde Municipality arranges for the charging stations. See section 4.1.8).

Green electricity means certified green electricity from renewable energy sources, e.g. in the form of RECS certificates (Renewable Energy Certificate System). In addition, documented green electricity from the tenderer's own production of electricity from renewable energy sources is accepted. Requirements for green electricity apply to charging at garages and at charging stations in urban space for which the tenderer is responsible.

The CO₂ requirements can be met by using diesel buses, gas buses, electric buses etc., or a combination meeting the above requirements or by using buses where all or part of the fuel results in a substantiated reduction of the CO_{2e} emission. For instance, it is possible to run buses on a mixture of ordinary diesel, synthetic diesel (BTL) or biodiesel. It is not possible to mix more than one type of alternative fuel with diesel. When using fuel with biomaterials exceeding the statutory limit, second generation biofuel must be used. The tenderer is free to choose the technical solution to heat the cabin. The tenderer may thus use an electricity heating source, a burner or a combination of these two options. If a non-electricity based heating source is being used (e.g. a diesel furnace), electric and hydrogen-powered buses must use a second generation biofuel such as synthetic biodiesel, and when using other technologies, the diesel or gas furnace must use the same fuel with the same environmental properties (e.g. biogas certificates) as the bus. In biogas buses, it is possible to use biogas certificated from Energinet. Using GtL does not result in a CO_{2e} gain.

In its tender, the tenderer must, to the extent possible, provide evidence to show that the above requirements are met by converting UITPs SORT (Standardised On-Road Test Cycles) certificate. If the tenderer cannot state a SORT value, e.g. as a result of the choice of technology, other documentation must be acceptable to Movia. At the request of Movia, such documentation must be available at short notice. In case of vehicles which are not tested according to the Euro standards, the tenderer is required to present documentation for the expected energy consumption (kWh per km).

Any calculation must be based on the emission when using diesel B0, see the table below. In its calculations, Movia uses the following CO₂ emissions from the different fuels:

<i>Diesel B0 (basis)</i>	2,670 gram CO _{2e} /litre.
<i>Diesel B7</i>	2,483 gram CO _{2e} /litre.
<i>Biogas (slurry)</i>	0 gram CO _{2e} /nm ³ . 0.8144 kg gas per nm ³ .
<i>Electricity</i>	0 gram CO _{2e} /kWh.

1 % biomaterial = 1 % CO_{2e} reduction, i.e. 100 % added biomass = 100 % CO_{2e} reduction. Please note that diesel B7 in itself reduces the CO_{2e} emission by 7% compared to diesel B0.

The tenderer must state energy efficiency (gram of fuel / kWh) of the vehicles included in the tender. For electric vehicles, the tenderer must state energy efficiency as kWh / km with and without heating. Hybrid vehicles must state both values (both diesel and electricity). The value is to be entered in to the Bus Information Form.

Use the spreadsheet (Excel sheet available for download at the ITT website) to calculate the emission from each vehicle or unit.

At any time during the contract period, Movia may require documentation for purchases (invoices), use and any CO₂ reduction of the stated fuel according to the tender.

5.3.3 Noise

Movia wishes the buses to have the lowest possible noise level.

Exterior noise

The below requirements are made to the noise impact of the buses.

Unit	Exterior (dB)	
	New	Used
1	76	77
2	76	77
3	76	77
4	76	77
5	76	77
6	76	77
7	76	77
8	76	77
9a	70	70
9b	76 for up to two years	77 for up to two years
	thereafter 70	thereafter 70
9 option 1	76	77

The exterior noise level is measured, see the Environmental Inspection Manual - part 2.

Neither the whole nor part of the bus may emit noise exceeding the noise limit for exterior noise.

When submitting the tender, the tenderer must provide evidence of compliance with the requirements for the exterior noise level of the buses by presenting a noise measurement performed in accordance with part 2 of the Environmental Inspection Manual for exterior noise.

Interior noise

Unit	Exterior (dB)
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	New	Used
1	72	72
2	72	72
3	72	72
4	72	72
5	72	72
6	72	72
7	72	72
8	72	72
9a	70	70
9b	72 for up to two years	72 for up to two years
	thereafter 70	thereafter 70
9 option 1	72	72

The interior noise level is measured, see the Environmental Inspection Manual - part 2.

Neither the whole nor part of the bus may emit noise exceeding the noise limit for interior noise.

When submitting the tender, the tenderer must provide evidence of compliance with the requirements for the interior noise level of the buses by presenting a noise measurement performed in accordance with part 2 of the Environmental Inspection Manual for interior noise.

5.4 Environmental inspection

For the full contract period, the entire fleet of buses covered by this ITT, including spare buses, must undergo an environmental inspection once a year.

Measurements must be made during a calendar year from 1 January to 31 December. For new buses, the period from the start of operations until 31 December of the same year is not covered by the requirement for an environmental inspection. Used buses must undergo an environmental inspection shortly before the start of operations. Subsequently, the buses will undergo an environmental inspection once every calendar year, except in the calendar year from the start of operations until 31 December of the same year.

Movia reserves the right to make unannounced environmental inspections to check for compliance with both part 1 and part 2 of the Environment Inspection Manual. In connection with random checks, Movia will pay the costs of the measurements itself and the measurement will be made so as to cause the least possible inconvenience to the tenderer. The emission measurements may be made without prior notice and at no charge when it does not cause disruption of the bus services.

The environmental inspection must be carried out in accordance with the guidelines in Movia's Environmental Inspection Manual - both emissions (part 1) and noise (part 2). As to electric and hydrogen-powered buses, only noise tests (part 2) are required.

The current Environmental Inspection Manual is available for download at the ITT website under the menu item *Contract Documents – Manuals*.

Movia reserves the right to publish the results of the environmental inspections stating the name of the tenderer, bus route and bus brand.

Movia requires that the approved measuring agencies are part of a calibration scheme, see the Environmental Inspection Manual.

6. IT

Creating an efficient and reliable public transportation system and related traffic information to Movia's many passengers requires a strong partnership between Movia and the tenderer. In particular on the IT system Movia and the tenderer must work closely together as IT affects almost all phases of planning, execution and follow-up on operations.

In recent years, Movia has been in a strategic transition from owning and operating most IT property to subcontracting most of it to the tenderer who has today the responsibility for purchasing, installing, operating and maintaining the information technology required to meet Movia's requirements. As from Tender Process A15, the generation of bus positions (e.g. for the generation of forecasts/real time) has become the responsibility of the tenderer.

This section describes Movia's IT requirements - in the bus and at the tenderer's facilities – but also service and functionality requirements made by Movia on behalf of the passengers. The latter requirements will be described in section 6.4 relating to the different "systems".

Before the start of operations, Movia and the tenderer will, where relevant, agree the exact procedures, operational tasks and the allocation of responsibilities for each IT system. In that connection, Movia will require the tenderer to appoint a person (or service desk) to be in charge of IT and to be Movia's contact at the tenderer with respect to all IT-related questions. This information is to be given in Appendix 6 (Statement of operations).

Any failure to comply with deadlines and requirements in this section 6 is subject to Movia's penalty system (see the Contract) unless otherwise agreed in advance.

6.1 Ownership

There are two types of ownership (ownership models) of the IT equipment required by Movia in all in-service and spare buses: A or B.

6.1.1 Model A:

Movia owns the IT equipment. Movia makes functional, operational and technical requirements. Movia chooses supplier. Movia pays the costs of all IT components. The IT equipment must be returned to Movia at the end of the contract period.

Unless otherwise agreed, Movia is to pay the costs of installation and de-installation on expiry of contract. The tenderer will place buses at Movia's disposal in connection with installation and de-installation at no charge to Movia.

6.1.2 Model B:

The tenderer owns the IT equipment. Movia makes functional requirements. The tenderer is responsible for all technical and operational requirements, chooses supplier and pays all costs of hardware and installation as well as operation.

Borderline cases

In case of testing and/or implementation and commissioning of new IT systems or new functionalities in existing IT systems during the contract period, the parties will negotiate which of them will own and be responsible for such systems and functionalities in each case.

The tenderer may not lease or sell buses or garages with equipment owned by Movia (Model A) without prior written approval from Movia. The tenderer will give at least thirty days' notice of its requests.

6.2 General requirements for IT systems and IT equipment in buses and at bus facilities

The below requirements apply to all IT equipment required by Movia unless otherwise specified under the specific requirements for the individual system.

Model A systems to be installed at the start of operations:

- Travel card, electronic ticketing and fare collection equipment
- Passenger counting system

Model B systems to be installed at the start of operations:

- Destination signs
- Loudspeaker system
- RPS (New real time system)
- Automatic announcement of bus stops
- Infotainment
- Passenger display - LED display (showing time, zone and stops). On routes without infotainment systems, a passenger display will be installed instead.

The above functionalities will be provided by the tenderer. The systems may be mutually embedded and integrated into other functions installed and operated by the tenderer for its own use and may share communication lines, positioning systems, driver's control panel, etc.

If IT equipment is to be installed in certain buses only, it will be stated under the specific system requirements

In the following sections, the general requirements and terms applicable to all IT systems and IT equipment will be described. Then the technical requirements (section 6.3) are described, followed by a description of the specific requirements for the respective IT systems (section 6.4).

6.2.1 Bus depots

The tenderer will arrange for bus depots/bus parking areas. Movia must be informed of the address of the depot no later than six months prior to the start of operations to allow Movia to order WLAN for travel cards etc.

When a new bus depot is being built, Movia's Travel Card partner needs to make a site survey. In this connection, Movia's Travel Card partner must have physical access to inspect the bus depot/facilities no later than six months prior to the start of operations. Moreover, the tenderer will send the following drawings of bus depots/facilities no later than four months prior to the start of operations:

- Drawing of existing conditions
- Drawing of any alterations (new buildings etc.)
- Drawing of service area (where the buses are to park)

For the operation of the travel card system, interior and exterior signage and electronic reporting of information on operations etc., the tenderer is required to install, operate and use a connection to the Internet at bus depots, offices and in buses. For the individual functions (including travel card driver management and supervision), only the Internet Explorer browser can be used.

For the Travel Card System, Movia will install a separate MPLS connection at the bus depot. All costs of installing and operating this connection will be paid by Movia.

From the commencement of the contract, Movia's IT equipment at every bus depot and office for which the tenderer is responsible includes:

- WLAN and router: One for the Travel Card system and one for the passenger counting system
- Back-up equipment for the Travel Card system.

Movia's IT equipment at each works office for which the tenderer is responsible also includes:

- Emergency radio (two portable radio units)

6.2.2 Number of buses with IT equipment(Model A)

In Appendix 5, the tenderer must state how many in-service and spare buses are to have IT equipment to deliver the required functionality

For each type of IT equipment under Model A, Movia will lend a maximum number of units per tender unit for installation in spare buses at no extra charge.

The maximum number of units for spare buses is calculated as follows:

- 1 – 10 in-service buses = units for 2 spare buses
- 11 – 20 in-service buses = units for 3 spare buses
- 21 – 30 in-service buses = units for 4 spare buses
- 31 – 40 in-service buses = units for 5 spare buses

etc.

If the tenderer needs to fit more buses with Movia-owned equipment than described above, the tenderer may rent additional equipment from Movia. The rent will be agreed on a case-to-case basis.

The tenderer will pay all costs associated with the installation and de-installation of rented additional equipment.

If the tenderer wants more spare buses during the contract period, e.g. because of an increase in the number of buses in service under the contract, the question must form part of the negotiation of the increase in number of buses.

6.2.3 Installation of IT equipment (Model A)

Movia will deliver equipment, system documentation and installation guide for the IT systems under Modal A. Unless otherwise agreed, Movia will deliver any fittings for the IT equipment in question.

The tenderer is to provide other IT components, including IT cabinet and cables ducts.

Movia's installation guide must be approved by the tenderer. The placing of driver-operated IT equipment and any other IT equipment in the bus that may have an impact on the driver's operation, view and safety must be approved in writing by the tenderer for all types of buses before installation.

The tenderer must give notice of readiness when the installation has been completed and approved by the tenderer. The notice of readiness must be given no later than two weeks before the start of operations.

Subsequently, Movia's IT service provider will install, connect and test the IT equipment in the IT cabinet of the bus and the driver's terminal, if any.

Preparation and final testing of the IT equipment in the bus will be carried out by the IT service provider. Movia will pay the fees of the IT service provider for installation, connection and testing of IT equipment in the IT cabinet.

The tenderer is obliged to take part in a final test and acceptance of the IT equipment installed. This applies whether or not the IT equipment is installed from the commencement of the contract or during the contract period.

Any IT malfunctions attributable to the tenderer's installations or IT cabinet must be rectified no later than five working days before the start of operations.

6.2.4 Installation of IT equipment (Model A)

On termination of the contract or in case Movia decides to phase out or replace IT equipment in the contract period, the IT equipment must be de-installed and returned to Movia. This also applies to various documentation and educational material.

Immediately after the termination of the contract, the tenderer must place all buses at disposal free of charge for the time required to de-install IT equipment – but no more than one weekday per bus. The date and hour of the de-installation must be agreed with at least one week's notice.

Hidden cables (which are insulated) and aerials must stay in the bus after de-installation. Movia will not pay for any subsequent repairs.

The de-installation of IT equipment will be carried out by Movia Customer and Traffic Service or a firm selected by Movia. The costs will be paid by Movia.

If the reinstallation and repair work is required because of a decision made by the tenderer (e.g. the renewal of a bus), the tenderer will pay all costs associated therewith.

6.2.5 DE installation of IT equipment (Model B)

If Movia requires this type of equipment to be de-installed in the contract period, the costs will be paid by Movia.

6.2.6 Relocation of IT equipment in the contract period (Model A)

The bus

If the tenderer wants to replace or move a bus, and that implies the transfer of IT equipment to another bus, the tenderer must pay all costs associated therewith. In some cases, Movia may be able to give price information. The tenderer must give notice in writing of its requests no later than thirty days before the desired date of transfer. The tenderer is further responsible for all practicalities relating to the transfer of IT equipment.

In case the tender includes the renewal of IT and Travel Card equipment in buses in the contract period, the costs associated therewith will be paid by Movia.

Garages

The terms applicable to the transfer of IT equipment in buses also apply in case the tenderer wants to move IT equipment and/or communication lines at the garage.

See also the system-specific sections.

6.2.7 Liability for damages re. IT equipment (Model A)

The tenderer is liable for any loss of or damage to all IT equipment (Model A) while it is in the tenderer's care. The liability includes equipment, any spare part stored at the tenderer's premises, and all costs of repair. The liability also applies to interruption of services caused by the failure to meet the requirements for EMC, see section 6.2.5.

Unless otherwise agreed, the tenderer will assume the above liability from the date when the components concerned are physically in the tenderer's care. The tenderer will assume such liability without further notice.

Information on the value of Movia's IT equipment kept at the tenderer's premises is contained in the sections on the respective systems.

If the parties agree that the tenderer may use IT equipment (Model A) in excess of the functions required by Movia, the tenderer will be liable for any consequences of such use, including operating costs.

All contact to Movia's IT service provider must go through Movia unless otherwise agreed.

6.2.8 Operational responsibility re. IT equipment (Models A and B)

The tenderer is responsible for full IT functionality on contract bus services. This responsibility covers IT systems introduced from the commencement of the contract and during the contract period.

Unless otherwise agreed, the tenderer is responsible for all operation of the relevant IT equipment. The daily operational responsibility includes:

- Correct system start-up (e.g. login/log off, acceptance of journeys, choice of route number and departure, etc.) and operation and visual control to ensure that the IT system of the bus is ready to run services according to the timetable.
- Reporting faults in equipment immediately if a fault is detected/indicated. The tenderer is required to report faults as advised by Movia. Deadlines or other terms for fault and other reporting are laid down in the procedures agreed between the parties.
- Workshop workers, traffic managers and drivers being able to operate and report faults in the IT equipment in accordance with Movia's instructions and user's manuals. Unless otherwise agreed, Movia will deliver teaching material to the tenderer no later than two months before the start of operations.

The tenderer must performance test each system or cause each system to be performance tested in accordance with the instructions given by Movia and/or the systems supplier. The tenderer is obliged to ensure that all IT equipment located at the tenderer's premises or in the tenderer's buses is fully functional at all times.

Movia is entitled to consider any journey not logged on to, or incorrectly logged on to, the IT system as a cancelled journey which will not be paid (Movia does not receive position data for such journey). The tenderer may, however, receive payment for the journey if he can otherwise demonstrate that the journey has been completed.

Any costs payable to Movia's suppliers or external service partners as a result of incorrect fault reporting or failure to fulfil agreements on access to work on buses must be paid by the tenderer.

In case of operational tasks and training imposed on the tenderer after the commencement of the contract, separate agreement on payment therefor must be made with Movia. When determining the payment, any benefit that the tenderer may enjoy from the new systems must be taken into consideration.

Movia will performance test IT systems in connection with its quality assurance.

In connection with the installation of new IT systems or functions, the parties must agree on functionality and system uptime requirements and penalty provisions if such requirements and provisions are not already included in the contract documents.

6.2.9 Maintenance responsibility re. IT equipment (Models A and B)

Unless otherwise agreed or required to be included in the tender price, Movia will pay the costs of maintaining the IT equipment required and installed by Movia (Model A).

Movia's maintenance of IT equipment (Model A) is directed towards errors, defects or damage caused by fair wear and tear only. Any fault report concerning vandalized equipment must specify that it is a case of vandalism.

All IT equipment which Movia has placed at the disposal of the tenderer in the contract period must be in functional and undamaged condition (fair wear and tear excepted) on expiry of the contract.

Maintenance of IT equipment (Model A) will be performed by a service partner having an agreement with Movia.

Movia may require the tenderer to enter into a service agreement acceptable to and paid by Movia, providing for speedy and correct repair/replacement of faulty components. Subject to prior agreement, Movia may elect to store spare components at the tenderer's premises and let the tenderer handle and be responsible for the replacement of components.

The date and hour of the repair, which the tenderer agrees with Movia's service partner, must usually be on the day following the day when the bus is reported faulty and no later than on the day following the day when the bus is reported faulty between 6 am and 9 pm on weekdays. The tenderer will place the buses at disposal free of charge. If the tenderer fails to meet the agreed dates of repair, the tenderer must pay for any additional substantiated costs incurred by Movia. If Movia's suppliers fail to meet the agreed dates of repair, Movia will pay any substantiated additional costs incurred by the tenderer.

The tenderer is obliged to place buses at disposal free of charge for testing and service for a maximum of three hours in the daytime (9.00 am - 3.00 pm) on weekdays twice a year. The testing and service plan must be agreed subject to at least thirty days' notice from Movia or from Movia's service partner.

Any IT system owned by the tenderer (Model B) and being a sub-system in a customer information, bus operation or security system must be maintained and kept fully functional by the tenderer at no expense to Movia.

Electronic signals which are already fitted in the bus and which Movia wants to use (e.g. stop signal, odometer pulsar and door function) must be maintained and kept fully functional by the tenderer at no expense to Movia.

It is further the duty of the tenderer to provide documentation for and maintain information on the allocation of PIN codes, choice of protection and permitted use on the individual PIN codes where Movia is to connect equipment.

When the tenderer receives reports from Movia on faults in electrical signals from the bus which is used by IT equipment required by Movia (Models A and B), the tenderer is obliged to rectify such faults no later than on the second working day after having received the fault report.

6.2.10 Right to information

Movia has all rights to all tenderer-specific information which is registered by IT systems (Models A and B) and which is relevant for Movia's planning, operation and passenger information as well as follow-up and control. It may be agreed not to disclose certain information to others.

The principle is that Movia must be able to publish information relevant to the public directly to passengers and drivers immediately whereas other information may only be used by Movia and the individual tenderer.

The tenderer must retrieve data for traffic information from Movia's web services (section 6.3.7).

The tenderer gains access to extracts of reports concerning the drivers' sale of cash bus fares and to other administration in the travel card system, including the monitoring of the operation of the buses.

6.2.11 Amendment of existing and introduction of new IT systems

The expectations of our surroundings change over time, and the technological opportunities develop at an increasing pace. Consequently, it is highly likely that it will be necessary to make changes to IT equipment (Model A), to install new IT equipment (Model A) or to buy and install new IT equipment (Model B) during the contract period as a result of new functionality requirements from Movia.

Movia has the right to make, or request the tenderer to make, such installations or changes to IT systems during the contract period.

Technical, physical and other matters relating to the future IT equipment are described to the extent known at present.

Information on the value of future IT equipment (Model A) in the care of the tenderer will be given when it is known .

Payment for the tenderer's expenses for the purchase, installation, operation and maintenance of future IT equipment (Model B) will be determined after negotiation of an addendum to the contract.

If the tenderer wants "to add on" to an IT system delivered by Movia e.g. to exchange login/route/journey information, it (including specification of the solution) must be approved by Movia in writing and be paid by the tenderer.

If the tenderer's request implies a need for additional power capacity, more room in IT cabinet or cable ducts, the tenderer must arrange for the necessary extensions.

6.3 Technical requirements of IT systems and equipment

Movia sees a value in the IT infrastructure in the buses being regularly standardised and is making efforts to implement EBSF_2 (<http://ebsf2.eu/>) – or parts thereof - in future contract conditions. In the long view, the advantages of using standards are more robust and cheaper systems. The requirements in this section may be derogated from if it leads to an approximation to EBSF_2, and the functional targets of the contract conditions are otherwise taken into account. In case of such derogation, the tenderer is required to describe what it being derogated from and how it is compensated.

In the following sections, the general requirements and terms applicable to all IT systems and IT equipment will be described.

6.3.1 IT cabinet

All IT equipment (Model A) must be placed in an IT compartment in the bus. Exempt are driver's terminal, card readers and printer for the travel card system as well as sensors and other equipment for passenger counting. It must be agreed with Movia if IT equipment owned by the tenderer (Model B) is also to be placed in the IT cabinet.

An IT compartment can be a conventional IT cabinet or an IT room with the same functionality as the conventional IT cabinet. Below the compartment will be referred to as a cabinet. The IT cabinet, including conduit ducts, is to be delivered and installed by the tenderer. The following requirements must be met:

- The IT cabinet must be designed to accommodate the following types of equipment:
 - Passenger counting equipment - takes up one rack shelf
 - Travel card equipment takes up one rack shelf – up to six card readers.

- It must be fitted with a 19" rack with mounting rails in each side, both in the front and rear, in the full height (Movia will deliver shelves)
- Each rack shelf measures 19" in width, 50 cm in depth and must fit equipment measuring 20 cm in height in the entire depth.
- Where space makes it necessary to divide the cabinet into several cabinets, the interior height of each cabinet must be at least 20 cm. Requirements for cables and the running of electric wiring and electric signals from the bus apply to all cabinets. If two cabinets are installed, there must be PIN terminals in one cabinet and access to PIN from the other cabinet.
- The IT cabinet must be placed so as to ensure that the cable to the travel card reader at the driver's compartment is not more than 9.90 metres long.
- The IT cabinet must be placed so as not to cause inconvenience to passengers or the tenderer's maintenance of the bus, and it must be easily accessible when the equipment is to be installed or repaired.
- The IT cabinet must be lockable. Movia will deliver lock and keys.
- The tenderer will choose whether to install IT equipment in a cabinet or in a room. It is the responsibility of the tenderer to ensure that the ventilation and temperature in the room allow for full functionality of all installed equipment.
- Conduits (Ø 50mm) for cables for aerials on bus roof. Other sizes of conduits for the cabinet appear from the figure in the following section on cable routing
- Terminal strips with routing and clear marking of plus, bay and all electronic signals (see section thereon) are fitted at the top of the IT cabinet and as far ahead as possible and must be shielded and protected against short-circuiting
- Electricity for terminal strips must be taken from the two power supply cables in the IT cabinet through a fuse box.
- In the IT cabinet, there must be documentation of the connection on/to the terminal strips. It is further the duty of the tenderer to provide documentation for and maintain information on the allocation of PIN codes, choice of protection and permitted use on the individual PIN codes where Movia is to connect equipment.
- As to equipment under Model A, there must be room for two aerials on the bus roof. Buses must be delivered with the cables delivered by Movia from each aerial to the IT cabinet in the conduits mentioned.

The terminal strips of the IT cabinet (with 6.3 mm split) must be connected to the following electronic signals:

Placing at terminal strip (no)	Signal	Cable (mm ²)	Comment
1			
2			
3			
4			
5	Reverse gear	0.75	Low level: 0-3 VDC, high level: 4-36VDC
6	Odometer signal	0.75	5-32 VDC min. 200 mAMP 12 signals per metre
7			
8			
9			
10	Charging voltage	0.75	18-32 VDC
11			
12	24V +/- 7%	0.75	After main switch/ignition and not from the bus control board
13	24V	2.50	Before main switch and not from the bus control board
14	Chassis	2.50	
15			
16			
17			
18			
19			
20			
21			
22			
23	Travel card loudspeaker wiring	0.50	Drawn to driver's seat
24	Travel card loudspeaker wiring	0.50	Drawn to driver's seat

The following cables must also be drawn to the IT cabinet:

- Main current (24V above main switch)
- Main current (24V above emergency main switch)
- Earthing
- - 2 cables for aerial/GPS (travel card and passenger counting equipment). Delivered by Movia.
- 1 LVDS cable for travel card screen. Delivered by Movia.

All signals refer to BUS GND.

The tenderer must deliver open communication interfaces and complete documentation for the above electronic signals.

Placement and design of the cabinet and cabling and electronic signals, documentation etc. must comply with the pre-cabling requirements of Movia (available from Movia, IT) and subsequently be approved by Movia.

Power supply

Two power supply cables must be drawn to the IT cabinet. One power supply cable must run round the main switch of the bus. The cable will be fitted with a fuse (max amperage, see below + 25%). The other cable must be connected to the main switch. It must be possible to connect each power supply cable to six installation cables. A negative charge must run to the IT cabinet.

The power supply from the bus to the IT cabinet must be 24 volt. The voltage may at no time deviate from 24 volt +/- 7%, including start and stop of the bus engine. The tenderer is responsible for all damage to IT equipment that may arise if the voltage deviates from the 24 volt +/- 7%.

The buses must deliver a total output to IT systems required by Movia which meets the following criteria:

	Ordinary bus (max. 15 m)
In service (runs or stands still to allow passengers onto the bus)	47 amp
Stand-by (runs outside out of route or stands still without allowing passengers onto the bus). Main switch turned on	15 amp
Back-up (parked, main switch turned off)	4 amp

6.3.2 Installation of aerial

It must be possible to install up to an aerial for travel card and passenger counting equipment and the necessary number for the tenderer's equipment. The aerials must be installed at distances of at least 50 cm.

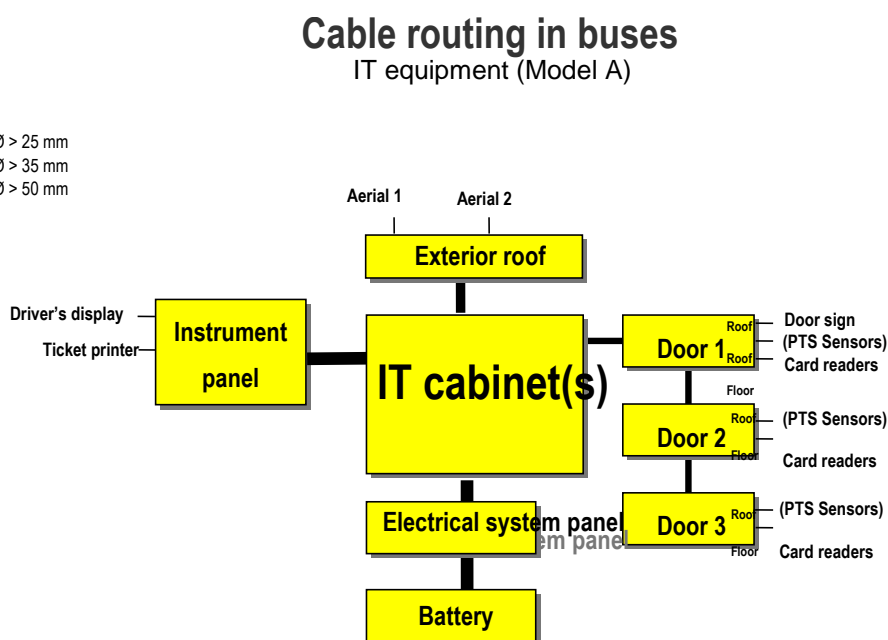
In the bus roof, there must be an earth plate for the aerials, also when they are installed on non-metal bodywork parts.

6.3.3 Cable routing for (Model A)

The below figure shows cabling and size requirements for cable routing (conduits) between the IT cabinet and the equipment of the bus as well as IT components. IT components in brackets are not required from the commencement of the contract, but are considered introduced during the contract period. All cable routes shown must be installed in all buses from the commencement of the contract.

All conduits must have a smooth inside and easy bends with an angle of no more than 90 degrees. Conduits not delivered with wires inside must be equipped with a drawstring for subsequent wiring. The destination of the conduits must be clearly indicated in the IT cabinet. Cables for IT equipment (Model A) must be drawn in conduits.

For the travel card system, it should be taken into account that it is necessary to install up to two card readers per door and up to four card readers at double doors. The card readers must be fitted on existing stanchions at the doors or on the wall.



6.3.4 Operating environment

The owner of the IT equipment is fully responsible that it does not adversely affect the functionality of any other equipment in the bus.

6.3.5 Electrical noise

The owner of the IT and electrical equipment of the bus is liable for any costs associated with meeting the EMI and EMC requirements and providing documentation therefor.

Once a year, Movia may make changes to the infotainment web service or in the design guide for infotainment that may require adaption of the tenderer's software.

- General electromagnetic compatibility (including any electrical propulsion unit) under Council Directive 2004/108/EC implemented in Denmark by Act No. 260/2016
- ECE Regulation No. 10 (concerning EMC standards for electric vehicles)
- ECE Regulation No. 100 (concerning construction and functional safety of battery electric vehicles)

6.3.6 Integration with the electrical system of the bus

The tenderer must deliver an open communication interface and documentation of the telegram interface for e.g. odometer, door and STOP signals as well as main switch and loudspeaker system.

6.3.7 Data supplies (web services)

Data for the real time system, infotainment, bus stop announcements, destination signs, information displays, etc. will be delivered by Movia in the form of web services. It is a requirement that the buses are constantly on-line, also while in transit, to allow for continuous receipt of data. The tenderer is consequently required to retrieve all data to be used for passenger information purposes in the buses from the infotainment web service.

You can gain access to web services by contacting Movia Service Desk that issues username and password.

Movia has produced a guide which is available at ekstranet.moviatrafik.dk under "Værd at vide"/"IT dokumentation og vejledninger" or by clicking on Data for the real time system, infotainment, bus stop announcements, destination signs, information displays, etc. will be delivered by Movia in the form of web services. It is a requirement that the buses are constantly on-line, also while in transit, to allow for continuous receipt of data. The tenderer is consequently required to retrieve all data to be used for passenger information purposes in the buses from the infotainment web service. Data for help to log the bus onto the correct journey can be retrieved from the assignment web service.

You can gain access to web services by contacting Movia Service Desk that issues username and password.

Movia has produced guides which are available at ekstranet.moviatrafik.dk under "Værd at vide"/"IT dokumentation og vejledninger". The guides are also available here:

<https://wsilb.moviatrafik.dk/infotainment/v3/doc/README.html>

<https://wsilb.moviatrafik.dk/assignment/v1/doc/README.html>

Once a year, Movia may make changes to the infotainment web service or in the design guide for infotainment that may require an adaptation of the tenderer's software. The tenderer must make minor corrections and maintenance and roll out such changes with effect from an agreed date. Changes are subject to at least three months' notice.

6.4 System-specific requirements and terms for the individual IT systems and equipment

6.4.1 Travel card, electronic ticketing and fare collection equipment

The tenderer's responsibility and obligations in connection with the travel card system are described in these General Conditions of Contract and in the Operations Manual.

The value of IT equipment (Model A) is DKK 175,000 (not including VAT), card readers installation and commissioning.

Movia is generally responsible for the travel card system.

This section describes the installation of new buses, the transfer of buses, the relocation of equipment, the deinstallation of equipment, the tenderer's role and services for first line servicing of the travel card system and the travel card operational tasks which are vital to the daily work at the garages. The requirements in this section are supplemented by the requirements in Appendix f (Travel Card Manual).

Installation

Travel card installations at garages

Wireless communication equipment (WLAN) is to be installed at every garage. Wireless LAN is to be used for data transfer between travel cards in buses and the central travel card system. Movia will be in charge of this installation.

For the Travel Card System, Movia will install a separate MPLS connection at the bus depot. All costs of installing and operating this connection will be paid by Movia.

The tenderer is to contribute to clarification and decisions on the exact location of equipment, cabling and other issues relating to installation at garages. The tenderer's contribution must be at no charge to Movia.

It must be possible for Movia to install the wireless LAN no later than thirty days before the start of operations. Temporary solutions necessitated by e.g. conversions etc. are to be paid by the tenderer.

Travel card installation for buses

- The travel card system is the property of Movia when installed at garages and in buses.
- Movia will be responsible for the installation of the Travel Card in new buses for new bus service contract and if the bus service contract requires the use of additional buses or the replacement of existing buses.
- The deadline for submission of the design specification must be observed. It is the responsibility of the tenderer that the installation of the travel card equipment can be completed in time for it not to affect the operation.
- The parties must agree on the exact plan for the installation task on a case-to-case basis.
- In case of a delay attributable to Movia / the Fitter, the delay will not result in quality defects on the part of Movia.
- In the planning, due regard is also had to the day-to-day operation of the tenderer so as to minimise waiting times as much as possible.

Pre-installation

Where Movia requires IT equipment to be installed and tested in buses from the start of operations, such equipment must be pre-installed in new buses on delivery.

The tenderer is responsible for the installation of cables, aerial and for drilling the holes required for the installation, see Movia's pre-cabling requirements.

All costs incurred by the tenderer for installation, test preparation and acceptance test as well as delivery and pre-installation of IT cabinet and conduits must be included in the tender price.

The pre-installation includes all physical works concerning IT cabinet and cabling between the IT cabinet of the bus and the bus and IT components as well as pre-installation of aerials. The tenderer is responsible for rectifying any incorrect pre-installation outside or inside the IT cabinet. In case of pre-installation errors in/outside the IT cabinet, the tenderer will be liable for all costs of rectifying errors, including any costs payable to Movia's IT solution provider.

It is the responsibility of the tenderer to ensure that the buses meet all technology and documentation requirements for installation and subsequent operation of the required IT systems.

For each type of bus, it is the responsibility of the tenderer to prepare a design specification showing the exact location of equipment, aerial, cabling, etc. and describing how the tenderer intends all electrical specifications for interfaces to the travel card equipment to be observed. This applies in particular to voltage supply, speed signal and reverse gear signal. The tenderer's design specification is subject to Movia's approval before installation commences. The specification must be received by Movia 60 days before commencement of installation. The specification must contain a detailed guidance for/description of all current types of buses.

It is the responsibility of the tenderer that the equipment is installed in a manner that prevents safety hazards to drivers or passengers and facilitates easy operation by the driver (driver's console / touch screen) and passengers (card readers).

On request, Movia will hand out a pre-installation manual.

Final installation and testing

Movia will be responsible for the final installation of equipment, configuration and testing. The final installation may be carried out by a third party. The tenderer must place the buses at the free disposal of Movia for one day per bus and allow a sufficient number of working days for completion before the start of operations to ensure that the work is performed safely and properly - unless otherwise specifically agreed, the buses must be available for the final installation at least 30 weekdays before the start of operations.

The number and type of busses must be clarified at least six months before the start of operations.

In this process, Movia will install card readers complete with base, TCU, driver's terminal and printer in the ready bus. These components will remain the property of Movia. The installation must be completed at one of the tenderer's garages equipped with travel card wireless LAN.

Additional costs of driving the buses to the place of installation will be imposed on the tenderer. The tenderer will place an indoor track at disposal free of charge.

On completion of the installation, the tenderer will assume responsibility for the equipment, including insurance responsibility.

Transfer

If the tenderer wants to transfer buses with existing travel card equipment, the equipment needs to be reconfigured. Movia's Customer and Traffic Service will carry out the practical reconfiguration of the equipment. Movia must be given at least ten weekdays' notice before the date when the reconfiguration needs to be completed. The reconfiguration work must be completed at a garage equipped with travel card wireless LAN.

Relocation of equipment in the contract period

The bus

If the tenderer wants to replace or move a bus equipped with IT equipment required by Movia, and that implies the transfer of IT equipment to another bus, the tenderer must, according to section 6.2.6, pay all costs associated therewith. In some cases, Movia may be able to give price information. The tenderer must give notice in writing of its requests no later than 30 days before the desired date of transfer. The tenderer is further responsible for all practicalities relating to the transfer of IT equipment.

For Travel Card and Passenger Counting, Movia will be responsible for the transfer of the equipment. The bus must be at the disposal of Movia for one working day for the transfer of the travel card equipment. In case a bus type unknown to Movia is to be replaced during the contract period, an additional two months' time-limit is to be expected. The costs are to be paid by the tenderer.

In case the tender includes the renewal of travel card equipment in buses in the contract period, the costs associated therewith will be paid by Movia.

Garages

The terms applicable to the transfer of IT equipment in buses also apply in case the tenderer wants to move IT equipment and/or communication lines at the tenderer's facilities.

With respect to travel card equipment, the costs necessitated by relocation/closure or conversion of garages are payable by the tenderer. This applies if for instance the tenderer begins to use other garages than originally agreed or changes the location of buses in the garage, thus making the LAN coverage insufficient. It must always be possible to maintain normal operations, and it is the responsibility of the tenderer to facilitate the daily synchronisation of the buses on other wireless LANs in case there is no wireless LAN at the relevant garage for a period. The tenderer is required to give Movia five months' notice of the relocation of garage(s).

Deinstallation of IT equipment after the contract period

In case of the deinstallation of travel card equipment in buses taken out of service after the expiry of the contract or subject to agreement with Movia, the costs associated therewith will be paid by Movia. Movia will be in charge of the deinstallation of equipment, whereas cabling will remain in the bus.

No later than one week after the bus has been taken out of service, Movia's Customer and Traffic Service must be contacted to deinstall the travel card equipment.

Operation of the travel card system

Guidelines have been prepared for the day-to-day operation of the travel card system at technical and administrative levels. Most of the daily routines are described there. It is expected that the individual garages will follow the instructions given in this manual and other guidelines. For a more detailed description, the Travel Card Manual is available for download at Movia's extranet, see Appendix f.

During operation, the driver must make sure that the travel card system works as intended by logging on using driver ID and PIN code, choosing the correct route and journey and logging off after the end of its shift. On change of driver, the new driver must log on and choose journey again.

The driver must use the system for cash ticket sales and generally to operate the equipment in accordance with the guidelines issued by Movia. This applies not least in cases where the driver is required to help passengers use the travel card (e.g. when checking in several passengers using the same card or when changing customer type).

The driver must make sure that the passengers can check in and out correctly during the bus journey and that the GPS position of the bus is correct in relation to the bus stops. In case of acute/unintended changes to routes, it may be necessary for the driver to make a manual correction on the driver's console to ensure the continued correct ticketing.

The driver must make sure that there is paper in the printer and the tenderer must make sure that there is sufficient paper in the bus. Paper rolls are available from Movia. Only paper provided by Movia may be used. The tenderer must use the system user administration to make sure that all drivers/other staff have been registered in the system and assigned a login ID and PIN.

The tenderer gains access to extracts of reports concerning the drivers' sale of cash bus fares and to other administration in the travel card system, including the monitoring of the operation of the buses. This requires that the tenderer has a functional Internet connection at the site.

Fault reporting and the tenderer's own repair (first line servicing)

The tenderer must make sure that the travel card equipment is kept in good condition, including that it is cleaned and does not appear as scratched and tarnished. Cleaning must be carried out in accordance with Movia's instructions.

The tenderer must take part in biannual and annual counts of the spare parts store. The tenderer is required to report faults as advised by Movia (Movia's process for first line renewal of equipment must be followed. See appendix f Travel Card Manual).

Unless otherwise agreed, the tenderer is obliged to place buses which have been reported faulty at disposal free of charge for repair. If a bus is placed at disposal for repair between 6.00 am and 6.00 pm at a garage with Travel Card WLAN, it will be repaired within three hours from the time when the bus is at

disposal. The service mechanic will thus work until 9.00 pm on all weekdays. If the tenderer fails to meet the agreed dates of repair, the tenderer must pay for any additional substantiated costs incurred by Movia.

All travel card equipment will be repaired by the supplier of the travel card system or by a firm appointed by the travel card system supplier.

Appendix f (Travel Card Manual) to the contract documents describes the responsibility of the tenderer in connection with defects in the equipment.

It may be associated with substantial costs to drive buses for repair in vain when faults in the travel card equipment are reported. If that happens, Movia will therefore reinvoice the costs to the tenderer.

In the cases where the fault in the travel card equipment has occurred as a result of a serious neglect of normal operation, the costs of the repair will be imposed on the tenderer. The specific cases will be considered together with the tenderer on their merits.

Stock of spare parts

At each garage, the tenderer must maintain a secured stock of spare parts with relevant components for first line service. First line service currently includes printers and card readers. This stock must be accessible for collection and delivery of faulty/repared components 24/7 all days of the year even when the garage is not manned. For this use, keys and other access forms must be handed out to the (trusted) employees of the service mechanic.

The travel card supplier will deliver the necessary number of components to maintain a sufficient stock. There must be room for components representing between 5 and 10 % of the equipment installed. If, for example, a warehouse is to hold spare parts for 30 buses with five card readers in each bus, there must be room for about ten card readers and one or two printers.

As Movia regularly assesses the effectiveness of this stock process, changes may be made in the contract period. At small garages, it may be necessary to agree that a spare parts stock is shared with another garage. In this connection, Movia is open for negotiation of any transport costs.

The service mechanic will deliver the spare parts to the warehouse, and the tenderer then has the responsibility and duty to insure the travel card equipment in its care in both buses and spare parts warehouse. The tenderer must take part in biannual or annual stocktaking of spare parts.

The tenderer must follow the procedure in force from time to time (see the Operations Manual) for the maintenance of the stock of spare parts and compliance with agreements with Movia's supplier.

Synchronisation of buses

The tenderer must make sure that all buses in service synchronises and exchanges data with the Movia back office on a daily basis. To allow the customer to top-up their travel cards, synchronisation is required once in the morning before the bus is brought into service. Out of regard for the driver's settlement of the cash sales of the day, synchronisation should also take place in the evening when the bus returns to the garage.

In connection with the daily synchronisation, the tenderer must be aware that the travel card equipment becomes slower at low temperatures. At minus 10 degrees Celsius, a thermal sensor postpones the start-up of the equipment until it has warmed itself up to work optimally (15-20 minutes).

If a bus is taken out of service because of a fault in the bus, the tenderer must make sure that data from card readers etc. are transferred to the back-office on the same day. In cases where the bus is so damaged that the tenderer must send the bus directly to a foreign workshop which cannot synchronise the travel card, Movia must be given prompt notice, enabling Movia to provide for alternative reading of data from the bus.

Billing

When the statement of the driver's daily sale is available, Movia will as soon as possible send a statement to the tenderer in an agreed file format.

The statement must be sent once a day for the preceding day.

If Movia wishes to change the file format, Movia must reimburse the tenderer for substantiated additional costs that may be associated with such change.

6.4.2 Passenger counting solution

Movia continuously registers the number of passengers on all bus routes. The passenger counts will be by random samples, either using the passenger counting solution installed in buses (Model A) or by way of manual counts performed by the tenderer's drivers (Model B). Movia will use the passenger counts together with the local authorities and tenderer to improve bus coverage, to plan bus services and to distribute receipts from passengers with the other parties (DSB and Copenhagen Metro). Good and valid passenger figures are vital to Movia's business.

Model A:

Value of IT equipment owned by Movia: DKK 60,000 per bus, inclusive of VAT.

Movia is entitled to equip the tenderer's buses with counting equipment to automatically register the number of passengers (automatic passenger counting (APC) buses).

In section 2 of the list of units, it is specified how many APC buses Movia expects to be installed per tender unit at the commencement of the contract.

If a tenderer wins more contracts with several tender units within the same geographical area, Movia may reduce the number of APC buses. It is agreed with each individual tenderer after the award of the contract.

For the contract period, Movia may increase the number of APC buses.

For the purpose of installing APC equipment, the tenderer must place such buses at the disposal of Movia or its suppliers free of charge for approx. 24 hours per bus. This applies to all tender units.

The number of buses to be equipped with APC equipment must be fully installed and tested before the start of operations. It is the tenderer's responsibility to ensure that Movia's supplier has had access to the relevant buses to the extent necessary.

If a bus equipped with APC equipment is out of service for more than thirty days, the tenderer is to pay for relocation of the APC equipment to a comparable type of bus.

The tenderer may not sell or lease buses with automatic passenger counting systems without giving Movia at least thirty days' notice.

If an APC bus is relocated to a different garage or is taken out of service (within the contract period) and this is not done at Movia's initiative, the tenderer is obliged to pay all expenses associated with the deinstallation / reinstallation of the APC equipment.

The installation, de-installation and regular maintenance of the APC equipment will be paid for and carried out by Movia with the exceptions mentioned above. The tenderer is obliged to keep APC buses in the garage free of charge for installation, de-installation, inspection or repair of the APC equipment according to the instructions of Movia or a firm designated by Movia within 24 hours.

If the tenderer fails to place the bus at disposal as agreed, the tenderer must pay all costs associated with calling out a service technician etc. in vain.

In its management of bus departures, the tenderer must make sure that passengers on all journeys in the timetable are counted at least once a month (for weekday journeys) and at least once a quarter (for journeys on Saturdays, Sundays and bank holidays). Movia will support the tenderer's management of the operation of the APC buses by providing a number of follow-up reports. Optimum passenger counting management is to be achieved through a close and continuous collaboration between the tenderer and Movia.

For technical reasons, counting data may in some cases not be usable even though the journeys have been run as planned. In such cases the tenderer is obliged to procure new counts of the relevant journeys before the end of a month/quarter. The lacking counts will appear from the follow-up reports.

The use of APC buses must further take into account the following factors:

- The APC buses may not be used for services which may be confused with one of Movia's public routes in terms of route and time. For example, the training of drivers/new routes where the bus runs without recording passengers will be interpreted by the passenger counting system as a regular journey without passengers. This will adversely affect the calculation of Movia's share of the aggregate bus fare income.
- The APC buses may not run the same journeys in the timetable on exactly the same days month after month as it will create an imbalance in the collection of data. In case of doubts, Movia will assist with proposals on how to handle it.
- APC buses may not be used for any other form of bus services which are not planned or offered by Movia. For example, in case of breakdown or repairs of the Copenhagen Metro or parts of the electric train network of Greater Copenhagen.

Movia will process data from the APC buses and store the data in a central IT system. Subject to agreement, the collected data will be placed at the disposal of the tenderer e.g. as part of the collaboration on the timetable planning. Data will typically be provided in the form of pre-defined standard reports.

In the contract period, Movia is entitled to set up IT equipment at the tenderer's premises for communication of information to Movia about the operational management and from Movia about data processing and results in the passenger counting system. In this connection, the tenderer must designate an appropriate place for IT equipment etc. at the tenderer's premises.

The APC equipment will be checked periodically. In that connection, Movia's supplier will have access to the bus and the APC equipment in the bus.

Space requirement

Automatic passenger counting equipment will be fitted in the IT cabinet of the bus (see section 6.3.1) and panels and above entrance and exit doors.

Operation

The automatic passenger counting equipment will be serviced on a regular basis, and all APC buses will be serviced at least once a year. The dates at which the buses are to be brought in for service will be agreed with the tenderer and with due regard being had to the operation of the bus services. The tenderer will place buses with automatic passenger counting equipment at disposal free of charge.

Model B:

Manual passenger counts

Movia's preliminary assessment of which routes need to be counted manually appears from the list of the units put out to tender.

If there are reasons (equipment, operation etc.) why the passengers on certain journeys/routes cannot be counted automatically, the tenderer is obliged to provide for manual counts instead. This also applies if a route is included in a tender unit with a number of APC buses (Model A). Movia will assess any such exception to the rule requiring automatic counting in connection with the conclusion of the contract and regularly when timetables are changed.

If a route with automatic passenger counting changes to manual counting, the tenderer will receive compensation in the amount of DKK 500 per counting day.

Journeys/routes not covered by the automatic passenger counting system must instead be counted manually, and for such journeys/routes the following rules apply: Manual counts must as a minimum cover six whole calendar weeks in the course of a year - four weeks with boarding/disembarking passengers being counted per journey, and two weeks with boarding/disembarking passengers being counted per bus stop per journey. An exact plan for the counts will be delivered by Movia which will also deliver a counting template in Excel format in which the tenderer will enter counting data. The plan and template will be forwarded by e-mail. No later than 14 days from the end of a counting week, the completed Excel forms must be sent to Movia at mantal@moviatrafik.dk.

6.4.3 Destination signs

All buses must be equipped with destination and route number displays. For information on the requirements for design and number, see section 3. Technical requirements and requirements for integration with other IT systems are set out in this section.

Control and interface

Data for destination signs (destination and route) must be retrieved online from Movia's infotainment web service. The driver must also be able to control all destination signs manually. The driver must set destination signs manually when they are not set automatically, e.g. because of internet connection failures on change of journeys.

6.4.4 Loudspeaker system

The bus must be equipped with a loudspeaker system (PA) with the necessary speakers, amplifiers, etc. The speakers must be suitable for speak during driving. The speakers must be used for information given by the driver and IT systems (bus stop announcements, etc.).

Through periodic follow-ups on volume, the tenderer must ensure that it is at all times possible to hear the information coming through the loudspeakers.

The volume through the bus may not vary more than 5 dB. Speech intelligibility expressed in RASTI (Rapid Speech Transmission Index) must be above 0.75.

6.4.5 Real time system (RPS)

The real-time system will send data about the position, route and journey of the bus and a time stamp to Movia. Such data will be used to generate information on expected time of arrival at bus stops in Movia's customer-focused channels (forecasts) and control of signal systems for better passability through certain crossroads controlled by traffic lights. The system will also be used to document completed bus runs, see section 6.2.8.

The tenderer will purchase and operate the technical solution in the buses, and the tenderer is obliged to use the system where it is required by Movia.

The tenderer must pay all costs of installing the equipment such as aerial (GNSS and data communication) control unit, control screen with fittings and conduits for the real-time system.

It is expected that it will be possible to integrate the real time functionality with other systems. Consequently, Movia does not require the real time system to have a dedicated control screen, aerial, etc., but the driver must be able to select journeys and make other control options (such as setting signs manually in case of internet connection failures as described above).

Appendix c (RPS Requirements Specification) is available for download from the ITT website. Movia has produced guides which are available at ekstranet.moviatrafik.dk under "Værd at vide"/"IT dokumentation og vejledninger".

The costs of training staff in how to use, operate and maintain the system are payable by the tenderer.

The tenderer must, on a daily basis, see to it that the real-time system works faultlessly. In case of faults or indications of faults, it is the duty of the tenderer to replace faulty equipment as soon as possible and no later than when the bus is back at the garage.

The fault rectification process must be applied as and when required by Movia.

The fault must be reported to Movia with a description of the fault, the consequence of the fault and a specification of when the fault is expected to be rectified, and notice must be given to Movia when the fault has been rectified

Before beginning a new journey, the drivers must by choosing (logging on/accepting) the correct route and journey make sure that the real-time system transmits correct data so that the system works as intended.

Movia will deliver data to the real-time system using the web services mentioned in section 6.3.7.

Data from the real-time system in the tenderer's buses will be placed at the disposal of the tenderer free of charge for the possible use in the tenderer's own IT systems.

In connection with the development of RPS, Movia has also developed a client (the CMT client) which can be used on current contracts in a transition phase from the old real time system (speak/data radio) for RPS. The CMT client should be considered a replacement of the old OCA client.

The CMT client can be used by the tenderer for several different things, including operations management:

1. Monitoring buses, routes and journeys on the map and in list form, including highlighted delays
2. Monitoring the GPS system in the bus for number of faulty positions
3. Monitoring the active journeys of the individual bus routes for delays, arrival to and departure from bus stops
4. Report on interruptions in service broken down into journey, journey not run, journey not completed, automatched journeys, etc.
5. The option for the operating supervisor to log a bus onto a journey by right-clicking on the bus on the map or on the list
6. The option for the operating supervisor to cancel journey in progress by right-clicking on the bus on the map or on the list See also section 8.2.
7. Option to cancel/reversing multiple journeys in a separate menu item

Tenderers who are to drive according to the provisions of these contract documents will also be offered access to the client. However, Movia does not assume any obligations in this connection, and Movia may at any time (by given six months' notice) change or withdraw the client without offering the tenderer a comparable functionality for the tenders operations management or any other form of compensation.

6.4.6 Infotainment

Infotainment is a digital medium which enables communication directly with the passengers in buses via screens installed in the buses. The solution is online based to ensure constant updating of information – see section 6.3.7 on requirements for constant access to the Internet during driving.

In principle, the equipment consists of:

- Communication unit collecting data from Movia's web service, see section 6.3.7.
- Control unit reading Movia's web service, entering data into templates and combining screen images sent to the screens
- Infotainment screens

There will typically be functions for system surveillance and maintenance enabling rational operation and maintenance of screens and control unit.

The equipment may be integrated in one combined technical solution which, in addition to infotainment, also covers e.g. real time requirements and may also satisfy the tenderer's own requests for functionalities.

Technology and displays

A detailed description of technology and displays is given in Appendix e (Infotainment Traffic Information - Requirements Specification) which can be downloaded from the ITT website. The appendix also describes how to handle changes to Movia's displays, etc.

To collect data for all Movia information on infotainment services, use Movia's web services as described in section 6.3.7.

The data transfer for commercial content will be handled by the tenderer without assistance from Movia. Commercial content is shown on the left screen in the dual screen solution.

For further information on infotainment, see section 7.

6.4.7 Information display

See section 7 for more information.

6.4.8 Automatic bus stop announcement

See section 7 for more information.

7 Information, advertising and other services

It is important for Movia to ensure that it is at all time possible to reach the passengers, providing relevant traffic information, communal information, news, weather forecasts, etc. and marketing in a uniform and easily comprehensible fashion. The purpose of the following sections is to describe Movia's requirements in this respect and its functionality and design requirements as to technical equipment for traffic information.

Likewise, it is important for Movia to ensure that the advertising space that the tenderer can choose to sell to a third party will be used exclusively for advertising products, etc. that fall within current legislation and Movia's current advertisement rules.

In the light that passenger-focused information and marketing increasingly falls within the scope of DOT (Din Offentlige Transport (in English: *Your Public Transportation*)), the common platform for public transportation on Zealand, Lolland, Falster and Moen, the transport authorities have jointly developed and adopted a common communication platform which has resulted in a design guide for buses, trains and the Copenhagen Metro describing the use of the visual identity, including brand essence, graphical elements, colours, typography and co-branding.

The tenderer's passenger-focused communication, information and marketing on the buses must fall within the framework of DOT's design guide.

The design guide and the attendant graphical elements are available from Movia Marketing & Traffic Information.

7.1 Movia information

To ensure that relevant traffic information and marketing from Movia reach the passengers, Movia must always have the following space at its disposal free of charge:

- Two spaces for hanging signs between the front and middle doors. The signs must be suspended by hooks. See sketch and specifications in section 3.6.
- Two information boards on the partition just behind the middle door. See sketch and specifications in section 3.6.
- Three leaflet holders mounted under the information boards. See sketch and specifications in section 3.6.
- 50% of rear window advertising space all year round.
- 10% of all rear end advertising space all year round (rear windows, rear ends, AbriMobil, etc.)
- The 50% of rear window advertising space and the 10% of all rear end advertising space must be kept clear for Movia's disposal, and must be on buses, routes and facilities which will provide Movia with optimal coverage in the area in terms of geography and time (24 hours a day, 7 days a week). When selecting buses where all of the rear end advertising space is to be used, the suitability of the bus for being fully wrapped must be taken into account. Buses are to be selected in consultation with Movia for rear window advertising and for being fully wrapped.
- Left side window above the front wheel. Advertising with contra vision film.
- Movia may occasionally want to use this space on the buses. If so, Movia will buy the use other advertising space subject to agreement.
- Driver's back wall in reserve buses
- Display of traffic information, campaigns and other information on the infotainment equipment in the buses where infotainment is available, see specification in section 6.3.

Leaflets, folders and other information material (Net Guide and the like) for the leaflet holders under the information boards must be mounted by the tenderer after delivery by Movia and at no expense to Movia. The tenderer must also remove the material at its own cost when so requested by Movia. It is the tenderer's responsibility to continuously supplement all Movia information material to ensure that it is always available to passengers in the period stated by Movia.

As a general rule, exterior advertising, hanging signs and information board content will not be mounted or removed by the tenderer. Movia will ensure that this is done by one of Movia's business partners at no expense to the tenderer. The tenderer is obliged give the business partner designated by Movia access to the buses and garages. However, this provision may be departed from to allow the tenderer to mount or remove such items on the same terms as Movia's partners if so agreed with Movia.

Any other advertising or information material than that provided by Movia may not be handed out/made available in buses.

Movia reserves the right to sell the above information space for advertising purposes during periods when the space is not used for information purposes. Any income earned in this regard will accrue to Movia. In this connection, too, a Movia business partner must be given access to the buses and garages.

7.2 Advertising

Movia's advertisement rules must be based on current legislation and adhere to generally accepted advertising standards and codes of ethics, including see the ICC Code of Advertising Practice.

The advertising content must reflect the fact that bus advertisements are a strong advertising medium in the public space which the general public has no choice to opt out of. The advertising content must also reflect the fact that the advertisements shown rub off on the reputation of public transportation, Movia's reputation as well as commercial and financial interests.

With reference to the duration of the contract, Movia reserves the right to periodically adapt and adjust the current advertisement rules to the development of the advertisement market and the impact of the advertisements on the general public and the reputation of Movia.

7.2.1 Content of advertisements

Advertisements must be legal, decent, honest, and truthful and designed with a due sense of social responsibility. Advertising must comply with Danish law at all times, including the Danish Marketing Practices Act, and must also adhere to generally accepted advertising standards and codes of ethics, including see the ICC Code of Advertising Practice (2011).

The advertiser's identity must be clear from the advertisement.

Advertising must easily identifiable as such, regardless of form and media. The tenderer is responsible for ensuring that the recipients of the advertising message are made aware that it is an advertisement, and thus for preventing hidden advertising.

Advertising must not discriminate with respect to race, gender, religion, age or nationality, or offend people's religious or political beliefs.

Advertising must not promote behaviour which conflicts with safety at home, at work or in traffic, or otherwise promote dangerous, irresponsible, hazardous or environmentally harmful behaviour.

No direct or indirect advertising is allowed for religious views or movements, or for products offered by such movements.

Advertising targeted at children and young people must always be designed to make special allowance for their natural innocence and lack of both life experience and critical sense which make them easier to influence and more susceptible.

However, advertising targeted at children and young people may never directly or indirectly promote violence, use of intoxicants, including alcohol, or other dangerous or reckless behaviour, or make improper use of violence, fear or superstition as effects.

Advertisements for tobacco products or goods used mainly in connection with smoking are prohibited, see the Danish Prohibition of Tobacco Advertising Act. Also advertisements for e-cigarettes and refill containers with or without nicotine are prohibited, see the Danish Act on e-cigarettes.

Gaming advertising must comply with the relevant provisions of gaming legislation.

Advertisements for beverages with an alcoholic content of 2.8% or more must comply with the guidelines for marketing of alcoholic beverages which have been agreed by a number of organisations and which were most recently revised in 2010.

In any case, advertising targeted at children and young people must never, whether directly or indirectly, promote consumption of alcoholic beverages. Advertisements for medicinal products, healthcare services and medical devices must comply with Danish law at all times. Detailed rules can be found in the Danish Medicines Act, the Executive Order on Medicine Advertising, the Danish Health Services Marketing Act and the Executive Order on Medical Devices Advertising.

Please note that under the Danish Medicines Act, advertising is prohibited for medicinal products which are:

- Prescription drugs
- Unsuitable for use, unless the patient has consulted a doctor beforehand with a view to being given a diagnosis or undergoing supervised treatment
- Covered by the Danish Euphoriant Substances Act

Advertisements for foods and food supplements must comply with the relevant provisions of the Danish Food Act and the Executive Order on Food Supplements.

Advertising must respect Movia's commercial/political interests and customer relations in general at Movia's discretion.

7.2.2 Responsibility for advertising compliance

In the relationship with Movia, the tenderer is responsible for legal compliance and compliance with the above guidelines with regard to advertising.

As a service and if so requested, Movia will inform the tenderer in advance whether a particular advertisement complies with the above.

Advertisements affecting or concerning religious beliefs or movements, gender-related advertisements and advertisements which may directly or indirectly offend the modesty of persons, including children and young people, or otherwise likely to create a conflict are always subject to the prior approval of Movia.

Movia may also check existing advertisements of its own accord.

The tenderer must comply with Movia's decision as to whether an advertisement etc. can be shown, and will have no claim against Movia as a result of such decision and will have no legal entitlement to show an advertisement.

In cases where Movia decides to remove an advertisement from the buses which is contrary to Movia's advertisement rules, and the advertisement has not been approved by Movia in advance, the Tenderer will be liable to pay a penalty, see clause 18 of the Contract.

7.2.3 Termination of the right to use advertisements

At any time during the contract period, Movia wants to be able to terminate the tenderer's right to use the bus to show commercial advertisements.

Movia will be able to withdraw the right by giving six months' notice.

If Movia exercises this option, the tenderer will be compensated by up to:

- DKK 5,000 per bus per year for unit 1
- DKK 10,000 per bus per year for unit 2

- DKK 15,000 per bus per year for unit 3, 9

However, the tenderer will only be paid if the tenderer can provide evidence of actual revenue at the date of termination.

The compensation will be calculated in proportion to the actual number of buses at the date of termination.

7.3 Infotainment

Infotainment is a digital medium which enables communication directly with the passengers in buses via screens installed in the buses. The solution is online based to ensure constant updating of information. Infotainment is soundless.

In this ITT, infotainment solutions are required on routes 123 (unit 3), route 220 (unit 7) and on all the lines in unit 9. On other bus routes, Movia requests that infotainment solutions are incorporated in the tenders.

Whether an infotainment solution is required or requested, a dual screen solution should be offered. The infotainment solutions can be installed with or without financing through advertisements.

Movia may require minor changes to the infotainment display once a year. The changes may, for instance, concern colours, fonts, minor changes to graphical layout (but not changes to the basis division of the layout) or timing of content shifts or changes caused by fault rectification and optimization of the underlying web service. The costs of these changes are of no concern to Movia.

Guidelines and requirements apply to infotainment, whether the solution is installed according to tender requirements or at the request of the tenderer. This also applies to quality defects, see clause 18 of the Contract. The screen must not be turned off.

The technical specifications and the content/layout specifications of infotainment are described in Appendix e (Infotainment Traffic Information - Requirements Specification). See also section 6.3.7

7.3.1 Positioning of the infotainment screen in the bus

Two sets of screens must be placed in the bus so as to enable as many passengers as possible to read the information on the screens. This means that a set of screens must be placed at the front-end of the bus and a set of screens in the middle of the bus for passengers sitting at the back-end of the bus.

Cabinets must be positioned to allow the driver to drive safely and without inconvenience. Cabinets must not obstruct the driver's view, and must not prevent the driver from using the mirrors etc. The tenderer is required to ensure compliance with these requirements.

In addition, cabinets must be positioned so as to not inconvenience the passengers. Passengers must be able to walk unobstructed through the bus without bumping their heads into the cabinets, and therefore, Movia proposes a headroom of 2.10 metres from floor to cabinet. A headroom of 2.0 metres is acceptable.

Similarly, the cabinets must be positioned so as to ensure that passengers will not bump their head against the edge of the cabinet when getting up from their seat.

If necessitated by the design of the bus, the tenderer may agree with Movia to place the rear set of screens separately from each other on each side of the gangway. In such case, the principle of showing commercial messages on the left screen and traffic information on the right must be followed.

The screen solution may either be spilt into a left screen and a right screen next to each other or one large full screen. The display to the passengers must always be in two separate screen images.

All screens must be in 16:9 format. Dual screens are twice the 16:9 format and of the same size. Each screen image must be at least 17" and preferably larger. No visible black areas may appear at the top and bottom of the screen when adapting to a different screen format other than the 16:9 format.

The display must be divided so that advertisements, news, weather forecasts, entertainment, etc., Movia's campaigns and local authority information are shown in the left screen image, and traffic information to the right (see the above sketch).

On the left screen, the tenderer will provide advertisements, news, weather forecasts and entertainment, etc. whereas Movia will deliver traffic information and campaigns and local information from the local authorities. Movia and the local authorities will deliver in the same format as commercial content.

On the right screen, Movia will deliver traffic information (correspondence, etc.) as data in web services, see the Appendix entitled Movia's infotainment REST Service. See also section 6.3.7



7.3.2 Design

Design of screen cabinets

Screen cabinets must be designed to make them resistant to vandalism with "soft round corners" (rounded like those of hanging signs) and no sharp edges. The cabinet must have a harmonious and simple appearance without visible screws, clumsy fittings, etc. and without visible cables (cabling must be in stanchions and behind panels). The cabinet must be covered by cabinet or cover plates hiding the entire back of the screen and if necessary sides if there are large visible holes or openings because of installation or design. The back, cabinet and fixing devices must have the colour that fits the instructions given in section 3.6.3 of the contract documents.

Graphic lay-out

The graphical layout on the display of traffic information must follow the guidelines available at www.tusdesign.dk. At this site, the design guide for infotainment screen for junction station (password: tusse) specifying font and colour requirements. Please note that the design guide does not give examples of displays on the infotainment screen. Such examples are instead provided in this section and in Appendix e (Infotainment Traffic Information - Requirements Specification).

In addition, screen layouts on the right screen and the compliance of the mode of display of all content on the screen with must be approved by Movia.

Display modes

The infotainment screens of the bus must have different display/template options.

The presentation is based on different DisplayModes controlled by Movia via the online system.

The above image is an example of these displays. The complete list of displays with detailed description appears from the appendices on infotainment.

7.3.3 Distribution of content on screens/screen image

As described above, the display is divided into a left screen/screen image and a right screen/screen image.

The right side/screen of the dual screen fully controlled by Movia is used for traffic information, messages, etc. The tenderer may retrieve data for this display (including bus stop announcements, forecasted departure times and correspondence) from Movia's web services and present them as set out in Appendix e (Infotainment Traffic Information - Requirements Specification). The display on the right screen will be provided at no expense to Movia.

The left side/screen of the dual screen will be used by the tenderer, Movia and the local authority/ties in the areas where the bus is running. The tenderer will manage and put together the display where display time will be distributed as follows:

- Advertisements max. 25%.
- News, weather forecasts, entertainment, etc. 25%
- Movia's campaigns 25%
- Local authority info 25%

If the tenderer chooses an ad-free solution, the above distribution must subsequently be discussed with Movia.

Local authority information is a new display category where Movia wishes to allocate display time to the local authority/ties in the areas where the bus is running. The content of the category is defined as any information or campaign that the local authority wishes to show on the bus route(s) they are co-financing through Movia. The local authority information must have the local authority as sender and fall within the scope of content otherwise spread by the local authority.

The tenderer is entitled to sell advertising space (max 25%) and receive revenue from such sale.

The tenderer will deliver news, weather forecasts, entertainment, etc. at no expense to Movia.

Movia's display time on the 25% of the left screen/screen image will be provided by the tenderer at no expense to Movia, including 300 uploads per year at no expense to Movia. After this, Movia will pay for its own uploads. Movia will deliver its own campaigns, etc. and pay for their preparation.

The local authority's display time on the 25% of the left screen/screen image will be provided by the tenderer at no expense to the local authority, including 150 uploads per year at no expense to the local authority. The local authority will deliver its own campaigns, etc. and pay for their preparation.

If Movia does not use all 25% of the display time, the time can be used by the local authority. Any time not used by the local authority can be used by the tenderer for information focused at passengers/influencing behaviour, etc., own advertisements and advertisements sold on a flexible basis.

If the local authority does not use all 25% of the display time, the time can be used by Movia. Any time not used by Movia can be used by the tenderer for information focused at passengers/influencing behaviour, etc., own advertisements and advertisements sold on a flexible basis.

The tenderer's use of Movia's display time may at no time prevent Movia's display.

The tenderer's use of the local authority's display time may at no time prevent the local authority's display.

The tenderer's management of the display on the left screen must ensure that the display can be divided geographically on the bus route. For example, local authority information from the relevant local authority will be shown only within the area of the local authority. Possibly defined in terms of the first bus stop in the district of the local authority to the last bus stop in that district. It must also be possible to split up the display of Movia's campaigns on the basis of geographical criteria on the route, specifying that they will be shown only on one or more selected routes defined by way of route number.

The tenderer's management of the display on the left screen must ensure that it is possible to deliver a statement of the percentage display broken down into the criteria listed above.

The intention behind the statement is to ensure that at the request of Movia, it is possible to provide, on a monthly basis, a uniform per-journey display of the four display categories on the route, spread across the day of service/weekday/Sundays and bank holidays and in both directions of the route/route variants.

7.4 Information display

Buses on bus routes without infotainment are required to have information displays instead as described here.

The info display must show the destination of the bus, next stop, route number, current zone number, current time, and show STOP when passengers press one of the stop buttons. Movia would like an info display which is designed as shown on the photograph, where the colour of text and numbers is amber and STOP is red against a black background.



Numbers and text on the diode signs must appear with a uniform strength of lighting and must be readable in all lighting conditions. Defective diodes must be replaced immediately. Defect LEDs must be replaced immediately. Protective glass covering signs must be non-reflective. Please contact Movia Marketing for further guidance on screen layout, fonts, colours, etc.

Display image "Bus destination":

- "Destination of the bus". This image is shown from the bus stops at the bus stop and until the bus departs from the bus stop.

The display shows the route number and destination of the bus and scrolls down to show the current time and current zone number. In the right-hand side of the display, STOP is shown (lights up when a customer presses the button)

Display image "Next stop": "Next stop".

- "Next stop". This display image is shown when the bus departs from the stop and until the doors open again at the next stop. If the bus does not stop at the "next stop", B will change to show the new "next stop" when the bus drives past the stop where it is not stopping.

The display shows the next bus stop and scrolls down to show the current time and current zone number. In the right-hand side of the display, STOP is shown (lights up when a passenger presses the button and then disappears when the doors open at the bus stop)

At the front end of the bus, an information display must be installed in the ceiling to ensure that it is visible from most seats.

Cabinets must be positioned to allow the driver to drive safely and without inconvenience. The display must not obstruct the driver's view, the display must not prevent the driver from using the mirrors etc. The tenderer is required to ensure compliance.

The information display must be positioned so as to not inconvenience the passengers. For example, passengers must be able to walk unobstructed through the bus without bumping their heads into the display cabinet. Movia requests a headroom of 2.10 metres from floor to cabinet. A headroom of 2.0 metres is acceptable.

Display cabinets must be designed to make them resistant to vandalism with "soft round corners" and no sharp edges. The display cabinet must have a harmonious and simple appearance without visible screws, clumsy fittings, etc. and without visible cables (cabling must be in stanchions and behind panels). The colour of cabinets and fittings, if relevant, must be RAL 7024.

7.5 Bus stop announcements

7.5.1 Automatic bus stop announcement

Automatic announcement of bus stops is defined as an automatic call of the name of the next stop as well as the current zone number when the bus enters a new zone. Automatic announcement of bus stops is a requirement on all routes.

Drivers must announce all stops and zone changes manually if the automatic announcement system does not work as intended or if the information is incorrect.

A "ding" must sound before the name of the bus stop or a change of zone is announced. The next stop must be announced shortly after departure from the last stop and in reasonable time (at least 45 seconds or approximately 150 metres before the stop) before the bus arrives at the new stop. Similarly, when the bus enters a new zone, a jingle must sound before the new zone number is announced.

The tenderer will purchase and operate the technical solution in the buses. The bus stop announcement may not coincide with other announcements transmitted through the loudspeaker system.

Automatic reading of the name of the bus stop and the new zone can be based on natural or computer-generated speech. The tenderer must ensure that the language is clear, easy to hear and understand, and must be adjusted in volume to allow for the varying noise levels in the bus. The announcements must be in Danish.

Movia will deliver data to the automatic bus stop announcement using the web services designated.

Messages and bus stops will be announced using the loudspeaker system of the bus.

The announcement is subject to the approval of Movia.

8. Operations and traffic management under different traffic conditions

The tenderer is expected to monitor the flow of traffic in order to continually deliver the quality of services required by Movia – steady services.

In situations where traffic or other external conditions adversely affect the scheduled services, it is the tenderer's duty to insert any necessary service staff to ease the situation. The tenderer's actions must ensure that services return to normal as quickly as possible and that passengers are inconvenienced as little as possible.

It is the tenderer's responsibility to ensure that any capacity problems that have suddenly arisen on the agreed services are solved in the best possible manner. Movia expects that the tenderer will subsequently take an active part in identifying the reasons for the problems and in suggesting solutions to future capacity problems.

In its performance of bus services, the tenderer must expect the following situations:

8.1.1 Normal traffic situations

In case of usual and/or daily events in the normal traffic, the tenderer is expected to intervene immediately and actively in the performance of the bus services in order to ensure that services return to normal as quickly as possible. Usual and/or daily events include e.g. illegally parked cars, short-lived queues, minor road works, changing weather conditions, delayed interchanges and connections and other usual normal traffic events.

8.1.2 Unusual traffic situations

The tenderer and its drivers are expected to intervene proactively and immediately in the operation of bus services when unusual events occur and to meet operational directions given by Movia, Movia's Traffic Service or Movia's Traffic Centre so as to mitigate any inconvenience to the passengers as much as possible. The tenderer is further expected to initiate measures to restore services to normal as quickly as possible and to inform Movia's Traffic Centre about the unusual event. Unusual events include e.g. planned and unplanned demonstrations/processions, traffic accidents, fire, bomb threats, fallen trees and other forms of blockades of the route as well as unusual weather conditions such as freezing rain, snow storms etc. In case of exceptional events, temporary changes of short/long duration will typically be made to the bus routes.

8.2 Tenderer's duty of disclosure – operational irregularities etc.

The tenderer is obliged to establish electronic communication with Movia, including traffic controllers at Movia Traffic Service, on or before the start of operations.

The tenderer must immediately – and electronically – inform Movia Traffic Service of any irregularities, delays or the like which may affect Movia's replies to enquiries from passengers, the media or others.

At its own initiative, the tenderer must immediately provide Movia with details of all matters which may prevent, affect or threaten the tenderer's performance of the contract concluded.

In addition, the tenderer has a duty to inform Movia of all matters that may now or later affect the choice of the service area, service hours and structure of bus routes, if applicable, and/or planning of timetables.

The tenderer must report any operational irregularities according to Movia's directions.

Any cancelled and delayed journeys must be reported within the deadlines set from time to time, currently:

- In case of absent bus or driver: No later than at the time of departure from the terminal (0 minutes)
- In case of vehicle breakdown or delayed service on the route: No more than 10 minutes after the journey has been cancelled/is delayed. Cancellation or delay is to be reported only once per journey.

A bus is late on a route when it does not meet the timetable.

Failure to meet these deadlines will entitle Movia to apply penalties, see the Contract.

Cancelled journeys, etc.

Cancelled journeys are typically reported at Movia's extranet. Afløsning kan som hovedregel kun finde sted ved linjens endestationer, således at passagererne berøres mindst muligt. The detailed procedures must be agreed with Movia before the start of operations.

During the contract period, Movia may change the manner in which cancelled journeys are to be reported so as to make reporting automatic instead of manual.

In case of a road accident or assault on the driver, the tenderer must report the accident/assault to Movia Traffic Service as soon as possible. In this connection, the tenderer must state whether the incident has caused any injuries or extensive damage to buses and equipment, e.g. a fire in the bus. The information about the accident/assault must also be recorded on the extranet no later than the next weekday.

No later than the following weekday, the tenderer must file an electronic report on any bus stops where customers have not been picked up, see section 7.5. The tenderer must inform Movia as soon as possible if scheduled additional and relief services are needed or no longer needed.

8.3 Tenderer's duty of disclosure – customer enquiries

Written customer enquiries etc. to Movia regarding the tenderer or its staff will be answered by Movia following consultation with the tenderer.

Direct enquiries to the tenderer must be answered by the tenderer, and at the same time Movia must be notified by means of a copy of the enquiry and the tenderer's reply. Enquiries of a general or fundamentally important nature made directly to the tenderer must be forwarded to Movia for reply.

For customer enquiries, the response time must normally be three weekdays. In certain circumstances, however, Movia may demand that the tenderer replies within 24 hours. Failure to comply with this response time will entitle Movia to apply penalties, see the Contract. Movia may – under certain circumstances – extend the response time at the request of the tenderer. Responses will be transmitted directly between the tenderer and Movia via an electronic system.

Failure to comply with the duty of disclosure will entitle Movia to apply penalties, see the Contract.

8.4 Driver changeovers along the route

As a general rule, driver changeovers may take place at route terminals only so as to inconvenience passengers as little as possible. Where the facility is located along the route, e.g. at a large terminal, special agreement may, subject to an assessment in each case, be made with Movia for changeovers to take place at such particular facility. Moreover, changeovers along the route may be justified for occupational health reasons.

Changeovers along the route are subject to the tenderer guaranteeing that changeovers will take no longer than two minutes, excluding time for collecting fares from new passengers. In case of failure to

observe the above time-limit, Movia is entitled to apply the set-off provisions under the Contract or to terminate the agreement on changeovers along the route.

Any requests for changeovers along the route must be stated in Appendix 7 (Reservations and comments).

8.5. Digital cooperation initiative

The initiative to commence digital cooperation is the result of Movia's wish to increase cooperation on reducing quality defects and at the same time to ensure smoother communication between the tenderer and Movia.

This initiative has resulted in an online system generally referred to as the "Extranet". Movia makes this system available to all tenderers.

The Extranet is a system to which both the tenderer and Movia have access. The system must be used for communication between the tenderer and Movia.

No special hardware or software is required to use the Extranet. Internet Explorer 9 or Firefox is recommended for optimum use.

Movia makes staff available for the training of one person appointed by the tenderer. The training programme is expected to last a maximum of three hours, after which the tenderer must facilitate the training of other users itself.

A login is required to access the system.

Movia must be contacted as soon as possible in case of system failure.

The tenderer and Movia have unrestricted access to use data reported by the tenderer.

8.6 Miscellaneous

Movia must be able to get into contact with the tenderer or a representative of the tenderer at any time during service hours.

With respect to the scheduled timetable services for Movia, the buses may not stand/be parked outside the bus parks/terminals approved by Movia. Space at the terminals is likely to accommodate the planned number of in-service buses only. Consequently, space for parking spare buses and transfer vehicles at terminals is not to be expected.

The in-service buses may be used for other services outside the hours when services are performed for Movia, provided that the logos of Movia Trafikselskab are covered. Movia must be informed in writing prior to such other use. If Movia wants the buses to be available for Movia services, it must be possible to release the buses from the other services subject to two months' notice. The agreed spare bus park must always be available in case of breakdowns etc.

The tenderer must ensure that the buses are checked for lost property and that any lost property is collected and registered. Money, securities, particularly valuable jewellery and the like must be handed over to the police as soon as possible, whereas other lost property may be kept at the works office for up to 30 days, after which it must be handed over to the police. Lost property enquiries made to Movia's Help Desk will be referred to the tenderer, who will thus be able to respond to enquiries from passengers

during normal office hours, i.e. at a minimum between 9.00 am - 3.00 pm during weekdays. Office hours must be stated in the statement of operations.

9. Data logging

9.1 Automatic data logging

For all electric buses in tender unit 9, driving and battery data for power consumption, GPS coordinates, speed, battery level, etc. throughout the contract period should be logged automatically and saved in a database. Movia may not share data with a third party without prior agreement with the tenderer. The data recipient is obliged to treat all data confidentially and prepare a non-disclosure agreement.

Data is to be logged in a CSV format, see the standard RFC 4180 for the following parameters (sorted):

- GPS data content
 - DateTime: Date and hour with seconds granularity in UTC, see ISO 8601
 - VehicleId: four-digit bus number
 - Latitude: Latitude of position in WGS84
 - Longitude: Longitude of position in WGS84
 - Speed: Speed in km/h
 - DriverId: Unique Driver ID
 - Direction: Direction of the compass in degrees [0-360[, where 0 indicates north, turning in clockwise direction.
 - GPS quality parameter: Number of satellites (integer, e.g. 4, 7 or 11)
- CAN data content
 - StateOfCharge: State of Charge
 - Consumption: Current energy consumption, how many kWh used the last second
 - TotalConsumption: Total energy consumption, how many kWh used by vehicle in its entire life
 - TotalDistance: Total km driven by the vehicle in its entire life in km
 - TotalRegenerativeEnergy: Regenerative energy (braking energy) through the life of the vehicle in kWh
- Other data

- o SecondaryConsumption: Energy consumption for other purposes than propulsion, e.g. cabin heating through the life of the vehicle in kWh

Movia may grant exemptions for the logging of some of the above data parametres. In such case, leave the boxes empty.

9.2 Registering data for the operation of electric buses

Throughout the contract period, the tenderer is to collect data for all electric buses concerning:

- Breakdown and cause of breakdown
- Any consumption of fuel for the bus furnace (e.g. synthetic biodiesel for diesel heater)

At the request of Movia, the tenderer must share such data with Movia electronically. Movia may publish the data in processed form.

9.3 Registering energy consumption at garages

The tenderer is required to register the total consumption of electricity used to charge electric buses at the garage. The measurement of the energy consumption must include any energy lost in the charging station. The electricity consumption must be calculated on an hourly basis. Movia will have the right to extract data on the energy consumption.

9.4 Publication of data

Movia may publish analyses based on data procured by virtue of section 9.1, section 9.2, section 9.3 and section 4.2.8. In such analyses, data will appear in a processed and aggregated form.

9.5 Specification of the tenderer's investments

On or before deliver of bus equipment, the tenderer must inform Movia about the tenderer's aggregate investments in bus equipment and charging infrastructure. Movia will treat such information as confidential, but is entitled to disclose the information in aggregated form to the European Investment Bank.

10. Quality assurance

It is Movia's objective to deliver a good product that meets the passengers' quality expectations. Movia is thus continuously engaged in improving bus product quality and will thus reward the tenderers who deliver good quality.

For that purpose, Movia has developed a quality management system which manages and measures the quality of the tenderer's services – a system which measures the passengers' experience of quality.

The quality management system is linked to invitations to tender and contracts to the effect that the tenderers who deliver the agreed quality are granted the option to extend the contracts, see clause 3 of the Contract.

A bonus/set-off system is also linked to the quality management system.

The quality measurements are conducted through passenger interviews on the buses. Movia has out contracted the data collection.

The quality delivered by the tenderer is measured on a total of seven reference points. Six of these measuring points are measured through passenger interviews on the buses. One measuring point is for the time being measured through the tenderer's own reporting of cancelled services. In addition, Movia's quality is measured on six measuring points – these six measuring points are not tenderer-related measuring points and will thus not be used for the settlement of bonus/set-off – including in connection with a renewal of the Contract, see clause 3 of the Contract.

The purpose of the non-tenderer-related measuring points is to provide a better picture of the passenger's satisfaction with the bus product as a whole

Certain adjustments may be agreed during the contract period with respect to measurement scope, measuring points and quality targets, if so justified by experience, the statistical basis and regular follow-up made in cooperation with the tenderer.

The quality results will be available to the tenderer in electronic form on www.entreprenor.moviatrafik.dk. The level of bus services provided as well as the application of financial penalties in connection with quality defects must be reported on a regular basis to the tenderer.

The application of financial penalties in connection with quality defects is described in more detail in the Contract.

Movia requires the tenderers to appoint a QA manager who is to be Movia's contact person in all quality issues, see the statement of operations.

10.1 Customer satisfaction

Movia has fixed minimum requirements for customer satisfaction for the individual tender units and for the individual measuring points. The quality must be described as an index.

Quality measurements are made for units 1, 2, 4, 5, 6, 7 and 8, but they will not be included in the bonus/set-off system.

Quality measurements will be made for tender units 3 and 9, and the quality will be subject to a bonus/set-off system which will enable the tenderer to be rewarded for the delivery of good quality in the contract period. If the tenderer does not meet the agreed target, the payment will be reduced.

Movia is interested in tender securing the highest degree of passenger satisfaction in the quality measurements performed during the contract period in accordance with Movia's quality management system. On the tender form (Appendix 4), the tenderer is required to state the level of quality which the tenderer offers on tender units 1, 2, 3, 5, 7 and 9.

10.1.1 Targets

Movia has stipulated quality requirements corresponding to a Quality Index of 800 for buses operating in central Copenhagen, including A-buses, and 810 for buses operating elsewhere, S-buses, R-buses and A-buses in the province, corresponding to an average result of around 80 and 81, respectively, for each Measuring Point, see the below example.

Calculation of quality index of 810 index points:

<i>Measuring point</i>	<i>Target (m)</i>	<i>Importance (i)</i>	<i>Contribution to Quality Index (t* i)</i>
Noise reduction	81.1	0.61	49.5
Timetable compliance	81.1	1.83	148.4
Driver's standard of driving	81.0	1.83	148.2
Driver's service and appearance	81.1	1.94	157.3
Interior state and condition	81.1	2.44	197.9
Indoor climate	81.1	1.34	108.7
Total Quality Index			810

The importance indicates passengers' assessment of the importance of the measuring point. The targets indicate passenger satisfaction.

Movia will conduct a customer survey as and when needed in order to determine the passengers' opinion of the relative importance of the measuring points.

In order to adjust the results of the individual measuring points to account for the statistical uncertainty, a minimum target has been defined which is by definition 2.0 points lower than the agreed target for the measuring point. Where a result is at or below the agreed target but above the minimum target, no bonus payment or set-off will be made.

Example:

The agreed target for a measuring point is 81.0, and the minimum target is 79.0. Payment will be triggered at a result of 81, at a result ranging from 79.0 to 81.0, the measuring point is neutral, and at a result of 78.9 or below, the measuring point will give rise to a set-off.

The following minimum requirements to the Quality Index have been determined for the tender units in this ITT:

	Other Unit 1	Other Unit 2	Other Unit 3	Other Unit 4	Other Unit 5	Other Unit 6
Requirement	810	810	810	810	810	810

	Other Unit 7	Other Unit 8	Other Unit 9
Requirement	810	810	810

For information, it should be noted that the average of the quality measurements conducted over the last 12 months (01.01.2015 - 31.12.2015) on the units put out to tender has come out as follows:

Measuring point	Other Unit 1	Other Unit 2	Other Unit 3	Other Unit 4	Other Unit 5	Other Unit 6
Noise reduction	77.4	82.3	77.0	78.9	77.3	80.7
Timetable compliance	90.5	88.1	79.7	86.6	83.7	83.3
Driver's Standard of driving	89.1	90.5	87.1	91.5	86.0	86.0
Driver's Service and appearance	92.5	91.6	87.7	92.9	90.2	87.6
Interior state and condition	85.6	87.4	80.2	86.2	85.3	81.8
Indoor climate	85.2	85.3	80.3	86.2	87.6	83.0
Corresponding to index	878.55	882.19	825.64	880.30	858.20	839.80

Measuring point	Other Unit 7	Other Unit 8	Other Unit 9
Noise reduction	76.5	77.3	76.5
Timetable compliance	84.4	74.5	83.8
Driver's Standard of driving	88.3	85.1	88.8
Driver's Service and appearance	86.6	85.9	88.8
Interior state and condition	83.1	84.4	83.6
Indoor climate	86.7	80.9	81.9
Corresponding to index	849.65	820.22	484.54

10.1.2 Use of measurement results

The agreed level of quality per tender unit will be included as a target during the contract period and, similarly, quality bonus and any set-off against payments, respectively, will be calculated on the basis of the agreed level of quality per tender unit and measuring point. Payments will be effected on 1 September at the latest after the end of the measurement period. Tender units 1, 2, 4, 5, 6, 7 and 8 are not included in the bonus model.

The results will be continually available to the tenderer in electronic form – via the Internet – for use in the tenderer's own quality work.

The results will also be made public in connection with Movia's marketing activities.

For unit 9 in particular

For unit 9 package a, the requirements for entry and exit conditions on A-bus routes might be changed in the contract period. The tenderer is required to complete a quality schedule (measuring points) for bus services where passengers enter and exit the bus as follows:

- Entering the bus through the front door and exiting through the middle and rear doors
- Entering and exiting the bus using all doors

If during the contract period, changes are made to the requirements with respect to entering and exiting the bus, the relevant schedule will be used for the calculation of penalty and bonus. The level of the overall quality index will be the level set out in the tender form.

10.1.3 Measurement scope and period

The measurements are undertaken regularly throughout the year and are planned according to the scheduled services.

A quality unit is as a general rule defined as a tender unit.

The measurement scope is a minimum of 275 interviews for tender units 3 and 9 per measurement period. For tender units 1, 2 and 7, the measurement scope will, however, be reduced to a minimum of 160 interviews, and for tender units 4, 5, 6 and 8, the measurement scope will be reduced to a minimum of 120 interviews. The measurements on units 4, 6 and 8 will be used exclusively to monitor the quality of the bus route.

For tender units starting operations on 14 April 2019, the measurement period will be as follows:

01.07.2019 - 30.6.2020 – results must be communicated by 1 September 2020

01.07.2020 - 30.6.2021 – results must be communicated by 1 September 2021

etc.

Tender units 3 and 9 are subject to the following conditions: If the last part of the contract period – from the last measurement period and until contract expiry – is longer than six months, bonus/set-off will be effected on the same terms as the other measurement periods, always provided, however, that the number of interviews for this measurement period may be relatively lower than the contractual 275 interviews – subject to a minimum of 160 interviews for the remaining period. If the last part of the contract period is shorter than six months, this period will be added to the most recent measurement period, which may thus be up to 18 months. The number of interviews for this measurement period will increase by around 8-12 interviews on average per month in addition to the contractual 275 interviews. The results for this last combined measurement period (up to 18 months) will be available about eight weeks after contract expiry, which, however, may be later than 1 March.

For tender units 1, 2, 4, 5, 6, 7 and 8, measurements will stop at the end of the last measurement period.

10.1.4 Satisfaction

Passengers rate their satisfaction on a five-point scale, which will subsequently be "translated" into the quality system with the below weightings:

Customer satisfaction	Weight in the tender model
Very satisfied	100.00
Satisfied	83.33
Yes and no	66.67
Dissatisfied	50.00
Very dissatisfied	0.00

It is very important to Movia not to have customers who are very dissatisfied. Therefore, "very dissatisfied" customers have a very heavy weighting. "Don't-know" responses are not included in the total quality index.

An example of the calculation is provided below:

Customer satisfaction	Number (n)	Weight	Contribution to result (t)
Very satisfied	33	100.00	3300.00
Satisfied	50	83.33	4,166.50
Yes and no	10	66.67	666.70
Dissatisfied	5	50.00	250.00
Very dissatisfied	2	0.00	0.00
Don't-know	4	-	-
Total excluding "Don't-knows"	100		8,383.20

Satisfaction is calculated as (quoted in points to one decimal place):

Contribution to result (t)

Number (n)

In this case, satisfaction equals 83.832 ~ 83.8 index points.

Afterwards, a comparison is made with the agreed target for the individual measuring point.

10.2 Service level – level of services provided

The level of services provided means the completed percentage of the timetable hours.

Movia has fixed minimum requirements for services provided on the individual tender units. In this ITT, the minimum requirement for each tender unit has been fixed at 99.90%.

Movia wants the highest level of services provided, and the tenderer must state the completion level offered for each tender unit on the tender form (Appendix 4). The completion level offered will be included as a target.

For information, it should be noted that the average completion level on the tender units for the last 12 months (01.01.2016 - 31.12.2016) has come out as follows:

Tender unit	Level of bus service provided (service level)
1	100.00
2	99.81
3	99.93
4	99.95
5	99.97
6	99.94
7	99.93
8	99.95
9	99.94

10.2.1 Calculation of service level

Service level is calculated as the completed percentage of the scheduled timetable hours.

Formula for calculation of service level (expressed in % to two decimal places):

$$\frac{\text{Completed timetable hours} \times 100}{\text{Scheduled timetable hours}}$$

Completed timetable hours are calculated by subtracting cancelled timetable hours from scheduled timetable hours.

The amount of quality bonus becoming payable depends on the service level. The weighting is as follows:

<i>Level of service</i>	<i>Bonus value</i>
Agreed benchmark-100.00	100%
99.86-agreed benchmark	60%
99.81-99.85	30%
99.76-99.80	10%
99.75 or less	No payment

Example

The service level target offered is 99.92. If this target is reached, 100% of the quality bonus achieved will be paid and if a service level target of 99.91 is reached, 60% of the quality bonus achieved will be paid.

10.3 Quality bonus and set-off

10.3.1 Calculation of quality bonus

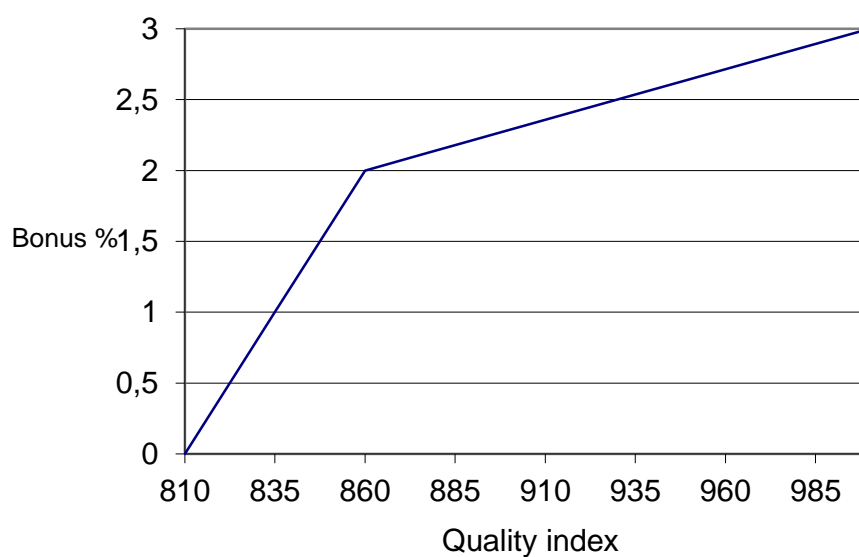
Quality bonus is calculated for each individual quality unit, see the Contract concluded with the tenderer. In order to receive the quality bonus, the agreed quality index level must have been reached during the measurement period. If this is the case, a bonus will be paid for all the measuring points achieving a higher result than the agreed targets.

A set-off against payments will be effected for the measuring points where the agreed targets have not been achieved, see section 10.3.2. Results in between the agreed target and the minimum target are neutral with respect to set-offs.

The bonus rate is variable and depends on the quality index. As can be seen from the below figure, the value of a single quality point may be calculated as follows:

In the range from 810.0 to 860.0, equal to 0.04% (2% bonus divided by 50 points)

In the range from 860.1 to 1000, equal to 0.0071% (1% bonus divided by 139.9 points)



The above figure illustrates that Movia's total bonus pool is subject to a maximum of 3% of the contract sum, depending, however, on the actual agreed level of quality. If, for example, a level of quality on quality index 835.0 has been agreed, the bonus pool will be subject to a maximum of 2% of the contract sum (1.0% in the range of 835.0 to 860.0 and 1% in the range of 860.1 to 1000).

Bonus is calculated according to the following formula:

(Contract sum x importance of actual measuring point x target performance x calculated bonus rate),
where

- The contract sum is calculated as: Completed timetable hours x the average hourly price.
- The average hourly price is the average of the price per timetable hour, bus- or facility-related costs and overheads.
- The importance indicates passengers' assessment of the importance of the measuring point.
- Target performance is calculated as: The result reached for a particular measuring point minus the agreed measuring point target.
- The calculated bonus rate is calculated according to the following formula:
 - a) if both the reached and agreed quality index is less than or equal to 860.0: 0.04%
 - b) if both the reached and agreed quality index is above or equal to 860.1: 0.0071%
 - c) if the quality index reached is above 850.0 and the agreed Quality Index is below 860.0:

$$\frac{(((\text{Quality Index reached minus } 860.0) \times 0.0071\%) + (860.0 \text{ minus agreed Quality Index} \times 0.04\%))}{(\text{Quality Index reached minus agreed Quality Index})}$$

Example 1:

The contract sum for a tenderer is DKK 24 million for a given year. The agreed Quality Index is 835 and the Quality Index reached is 844. The measuring point "indoor climate" has an importance of 1.34 and has scored 82.5 satisfaction points, where the agreed target was 81.3. The bonus calculation for the measuring point will be as follows:

$$\frac{24,000,000 \text{ kr.} \times 1.34 \times (82.5 - 81.3) \times 0.04}{100} = \text{DKK } 15,437$$

Example 2:

The contract sum for a tenderer is DKK 24 million for a given year. The agreed Quality Index is 825 and the Quality Index reached is 863. The bonus rate will be calculated as follows:

$(863.0 - 860.1) \times 0.0071$	= 0.02%
$(860.0 - 825.0) \times 0.04$	= 1.40%
Total	= 1.42%

Bonus on the entire quality unit will be as follows:

$$\text{DKK } 24,000,000 \times 1.42\% = \text{DKK } 340.800$$

10.3.2 Set-off against payments

If the tenderer fails to meet the agreed targets for the customer measuring points, a set-off will be made against the payment for the individual measuring point, even though the agreed Quality Index has been reached.

The set-off will reflect the target shortfall and the importance of the measuring point to the passengers.

The set-off rate is variable and depends on the Quality Index. The value of a Quality Index point is as follows:

In the range from 860.1 to 1000, equal to 0.0071% (1% bonus divided by 139.9 points)

In the range from 810.0 to 860.0, equal to 0.04% (2% bonus divided by 50 points)

In the range of 760.1 to 809.9, equal to 0.08% (4% set-off divided by 49.9 points).

Non-fulfilment of individual measuring point

When the Quality Index reached is above or equal to the agreed Quality Index, the set-off on an individual measuring point will be calculated according to the following formula:

(Contract sum x importance of actual measuring point x target performance x calculated set-off rate),
where

- The contract sum is calculated as: Completed timetable hours x the average hourly price.
- The average hourly price is the average of the price per timetable hour, bus- or facility-related costs and overheads.
- The importance indicates passengers' assessment of the importance of the measuring point.
- Target performance is calculated as: The result reached for a particular measuring point minus the agreed target for the measuring point minus 2.0.
- The set-off rates are applied. It is always the Quality Index reached which determines the set-off rate used.

Example 1:

The contract sum for a tenderer is DKK 24 million for a given year. The agreed Quality Index is 835 and the Quality Index reached is 844. "Indoor climate" has an importance of 1.34 and has scored 79.6 satisfaction points, where the agreed target was 81.3 (i.e. an agreed target of 83.3 minus 2.0 points). The calculated set-off rate is 0.04%. The set-off against payments will be calculated as follows:

$$\text{DKK } 24,000,000 \times 1.34 \times (81.3 - 79.6) \times 0.04 = \text{DKK } 21,869$$

Non-fulfilment of Quality Index

If the Quality Index reached is below the agreed Quality Index, the set-off for the quality unit is calculated on the basis of the total contract sum.

The above set-off rates are applied. See also the example below, which illustrates the set-off calculation for agreed/reached Quality Indices with different ranges.

Example 2:

The contract sum for a tenderer is DKK 24 million for a given year. The agreed Quality Index is 863 and the Quality Index reached is 805. The set-off rate will be calculated as follows:

$(863.0-860.1) \times 0.0071$	= 0.02%	
$(860.0-810.0) \times 0.04$		= 2.00%
$(809.9-805.0) \times 0.08$		= 0.39%
Total		= 2.41%

The set-off on the entire quality unit will be as follows:

$$\text{DKK } 24,000,000 \times 2.41\% = \text{DKK } 578.400$$

If the Quality Index reached is below 760, Movia is entitled to exercise the remedies for breach available under the Contract.

Set-off will not exempt the tenderer from rectifying the unsatisfactory conditions. If the relevant conditions are otherwise fulfilled, Movia may also be entitled to claim compensation/set-off under the other provisions of the contract documents, see the Contract.

10.3.3 Suspension of quality bonus/set-off

Movia may "reset" a measuring point for a period of time due to circumstances beyond the tenderer's control. In order for a measuring point to be reset, the tenderer must contact Movia immediately and in writing with a detailed description and documentation of the relevant circumstances.

In case of force majeure, Movia is entitled to suspend the quality measurements for a period of time. This could mean that for a given year, there may be a skewed distribution of the measuring results across the year.

In case of a force majeure situation, Movia will inform the tenderer as quickly as possible.

11. Incentive for passenger growth

During the last few years, Movia has initiated several agreements on passenger incentives between Movia, various tenderers and local authorities. The aim has been to increase efforts to improve the bus product and attract more passengers based on the ideas of the tenderer, Movia and the local authorities.

Some of the rewards have been a shared view of the challenges and possibilities involved and more traffic services becoming available, not to mention a stronger shared commitment to the routes by the parties.

Based on past experience, the following initiatives may serve as inspiration: Cooperation on campaigns, experiments with set-downs between bus stops at nights, set-up/removal of bus routes/bus stops, selected drivers visiting businesses with potentially new passengers and extra departures in connection with events.

On the tenderer's initiative, Movia offers cooperation to develop the bus routes in tender units. The cooperation does not involve a financial bonus in case of an increase in the number of passengers, but offers the possibility of contributing to the development of the routes to the effect that the bus services can be maintained as well as the possibility of increasing motivation among drivers and shortening the distance from idea to action.

A main focus point will be to work out development initiatives which – depending on the complexity of the change – may either form part of the local authorities'/regions' traffic order process where the local authorities order changes, or be implemented in services in connection with timetable changes. Any development group will consist of planners from the tenderer, Movia and any relevant local authorities/regions as well as one or more representatives of the drivers. It is emphasised that the development group is an umbrella for the existing cooperation frameworks between the tenderer and Movia (including timetable meetings and status meetings with Traffic Service) so as to direct focus to development initiatives towards attracting more passengers on the buses.

The cooperation is an offer to the tenderer who will be the primary driving force, whereas Movia will contribute to the work and, if relevant, involve relevant local authorities/regions.

For unit 9 in particular

The tenderer must enter into a cooperation with Roskilde Municipality, Movia and possibly the system supplier within the auspices of the Urban Traffic Cooperation. If the tenderer installs charging station in urban space itself, any sub-supplier who is responsible for the operation of the charging station must take active part in the cooperation. The Urban Traffic Cooperation will begin immediately after the final award of the contract. In the period from the final award until delivery of electric buses, meetings will be held on as-needed basis. In the start-up phase, i.e. the initial phase after the electric buses are put into operation, the meeting frequency is high (meeting on a weekly basis or if necessary more often) and later on an as needed basis. After the initial phase after the electric buses are put into operation and for the rest of the first year of operation, the meeting frequency is expected to be about every other week. The system supplier or any sub-supplier who is responsible for the operation of the charging station is only required to participate in the Urban Traffic Cooperation on an as-needed basis, which means in case challenges in the charging of the buses require attention.

The duration of the meetings will depend on the issues to be considered. After the start-up phase, the meetings expect to take about one hour. All meetings will be held at the Town Hall of Roskilde. Movia is responsible for taking minutes of every meeting which will be distributed to all meeting participants.

The Urban Traffic Cooperation is a platform for the handling of all types of operational challenges. Movia and Roskilde Municipality are interested in finding solutions to operational challenges and other matters through dialogue and mutual understanding.

12. Changes to scope of bus services during contract period

12.1 Changes to number of timetable hours

12.1.1 The first six contract years

Movia is entitled to increase the agreed number of timetable hours by a maximum of 30% compared to the number of hours originally agreed. Billing will be based on the rates applicable from time to time for the costs related to timetable hours, see the Contract.

Movia is entitled to reduce the agreed number of timetable hours by a maximum of 20% compared to the number of hours originally agreed without compensation.

For unit 9 in particular

The period in which Movia is permitted to adjust the agreed number of timetable hours deviates from the above terms.

For the first seven years of the contract, Movia may increase the agreed number of timetable hours by up to 30% compared to the hours of driving originally agreed. Any increase of the hours of driving must be based on the bus's range and must respect the need for breaks to recharge the buses (applies only to electric buses).

Movia is entitled to reduce the agreed number of timetable hours by a maximum of 20% compared to the number of hours originally agreed without compensation. However, Movia may reduce the number of timetable hours by no less than 7.5% of the hours of driving originally agreed in the first year of contract, and in the second year of contract, Movia may reduce the number of timetable hours cumulatively by 15% of the hours of driving originally agreed. From the third year of contract to the seventh year of contract, Movia may reduce the number of time table hours by cumulatively 20% of the hours of driving originally agreed.

Example 1:

In the first year of the contract, Movia reduces the number of timetable hours by 0%. In the second year of the contract, Movia reduces the number of timetable hours by 3% of the hours of driving originally agreed. In the third year of the contract, Movia reduces the number of timetable hours by 16% of the hours of driving originally agreed to the effect that the accumulated reduction in the number of agreed timetable hours is 19%. In the fourth year of the contract, Movia reduces the number of timetable hours by 1% of the hours of driving originally agreed to the effect that the accumulated reduction in the number of agreed timetable hours is 20%.

Example 2:

In the first and second year of the contract, Movia reduces the number of timetable hours by 0%. In the third year of the contract, Movia reduces the number of timetable hours by 20% of the hours of driving originally agreed to the effect that the accumulated reduction in the number of agreed timetable hours is 20%.

12.1.2 The remainder of the contract period

The hours of driving in the sixth year of the contract will serve as the basis for Movia's possibility to make changes during the last six years of the contract (new basis).

Example:

If under the Contract, operations start on 14 April 2019, the sixth year of the contract will run from 14 April 2024 to 13 April 2025.

For the remainder of the contract period, Movia may again adjust the number of timetable hours based on the principles described in section 12.1.1.

For unit 9 in particular

The period in which Movia is permitted to adjust the agreed number of timetable hours deviates from the above terms.

In the last five years of the contract, Movia may increase the agreed number of timetable hours by 30% relative to the hours of driving in the seventh year of the contract. Any increase of the hours of driving must be based on the bus's range and must respect the need for breaks to charge the buses (applies only to electric buses).

In the last five years of the contract, Movia may, without receiving compensation, reduce the agreed number of timetable hours by 20% relative to the hours of driving in the seventh year of the contract. However, Movia may reduce the number of timetable hours by no more than 7.5% of the hours of driving originally agreed each year in the eighth year of contract, and in the ninth year of the contract, Movia may reduce the number of timetable hours accumulatively by 15% of the hours of driving originally agreed. From the tenth year of the contract to the twelfth year of the contract, Movia may reduce the number of time table hours by cumulatively 20% of the hours of driving originally agreed.

12.1.3 Compensation for reduction in the number of timetable hours

If Movia reduces the hours of driving by more than 20% of the hours of driving originally agreed, Movia will pay compensation to the tenderer equal to 60% of the rate for the costs related to timetable hours, see the Contract (not including K-factor adjustment and indexation) for the number of reduced timetable hours exceeding the reduction option. Compensation granted for:

- Six months if the tenderer has been given three months' notice in writing before the reduction is implemented;
- Five months if the tenderer has been given four months' notice in writing before the reduction is implemented;
- Four months if the tenderer has been given five months' notice in writing before the reduction is implemented;
- Three months if the tenderer has been given five months' notice in writing before the reduction is implemented;

If the remainder of the contract period is less than the above compensation periods, compensation will cease on expiry of the contract.

Compensation will be paid by way of a lump sum in the month following the commencement of the new timetable.

Example of calculation of the compensation (divided into two examples):

1. The starting point of the contract is 100,000 timetable hours.

There is a right to reduce by 20,000 timetable hours without compensation

Any new vehicle schedule has a normal year corresponding to 70,000 timetable hours.

The rate for the cost related to timetable hours is DKK 613.

The tenderer has been given three months' notice before the reduction.

The reduction has been exceeded by 10,000 timetable hours per normal year in the above.

Compensation is granted for six months which corresponds to a compensation for 5,000 hours.

The hours will be billed at a rate of 60% of the cost related to timetable hours, which corresponds to a rate of $613 \cdot 60 / 100 = \text{DKK } 367.80$.

The compensation is consequently $367.80 \cdot 5,000 = \text{DKK } 1,839,000$ which is payable as a lump sum.

2. Two months after the vehicle schedule with a normal year of 70,000 hours was put into operation, notice was given of a new reduction of another 5,000 hours per normal year. Four months' notice was given of this reduction. Consequently, compensation is granted for five months. This means $5,000 / 12 \cdot 5 = 2,083$ hours.

The compensation is consequently $2,083 \cdot 367.80 = \text{DKK } 766,250$ which is payable as a lump sum.

Regardless of any subsequent release of a new vehicle schedule resulting in a higher normal year than the lower limit, the compensations previously granted will not be adjusted even though the period for which compensation is paid has not "expired".

12.2 Changes to the number of in-service buses

Any changes to the number of in-service buses will be notified by Movia at least 3 months before the effective date.

12.2.1 The first six contract years (from start of operations and six years onwards)

Reduction

Movia may reduce the agreed number of buses by three in-service buses for every 20 in-service buses (three in-service buses in case of 4-20 in-service buses, six in-service buses in case of 21-40 in-service buses etc.) relative to the originally agreed number of in-service buses.

If the Contract concluded provides for 1-3 in-service buses, it is not possible to reduce the number of in-service buses originally agreed in the Contract. This means that Movia may reduce the number of in-service buses only if an extension has previously been made, see below.

If the tenderer's bus package on the unit includes bus equipment with different capacity, Movia will determine the bus to be taken out of service in case of a reduction. In case of a reduction in the number of buses, the level of the CO2 emission for the unit in the tender must be maintained.

For unit 9 in particular

The period in which Movia is permitted to adjust the agreed number of in-service buses deviates from the above terms.

For the first seven years of the contract, Movia may reduce the number of in-service buses for the entire unit 9 (i.e. the sum of electric and diesel buses) by three in-service buses. For the next five years of the contract, Movia may reduce the number of in-service buses by three in-service buses.

Extension

For the first six years of the contract, Movia may increase the agreed number of in-service buses by three in-service buses for every 20 in-service buses included in the contract (three in-service buses in case of 1-20 in-service buses, six in-service buses in case of 21-40 in-service buses etc.).

A contract may not be extended by more in-service buses than the number of in-service buses originally provided for in the contract. Consequently, a contract with two in-service buses cannot be extended to include more than four in-service buses.

Newly commissioned bus equipment is to meet the requirements in the contract documents for the unit to which the bus belongs, and to comply with any offered improvements, see the tenderer's tender for the original buses. The newly commissioned equipment may not be older than the other in-service buses in the unit.

As needs may change in the contract period, Movia's requirements as to the capacity of the newly commissioned bus equipment may, however, deviate from the other buses in the unit as long as the capacity requirements are reduced relative to the requirements in the contract documents for the unit in which the bus will be used and to comply with any offered improvements, see the tenderer's tender for the original buses.

Payment of the costs of IT and travel card equipment is subject to the same guidelines (see section 6) as if the bus had been offered from the start of operations under the contract.

If agreed with Movia, the tenderer may put in a temporary bus which does not meet the requirements in the contract documents for the unit in which the bus is used and comply with any offered improvements, see the tenderer's tender, for a period of up to about six months.

If additional buses are put into service later than agreed, the monthly contract price will be reduced by DKK 2,000 per bus per 24 hours until due delivery is made. The contract price will also be reduced as described above, if it is agreed that the tenderer may put in a temporary bus, and buses meeting the requirements above are put in later than agreed.

For unit 9 in particular

The period in which Movia is permitted to increase the agreed number of in-service buses deviates from the above terms.

For the first seven years of the contract, Movia may increase the number of in-service buses for the tender unit by three in-service buses. For the next five years of the contract, Movia may reduce the number of in-service buses by three in-service buses.

Movia must give notice of any increase of the number of in-service buses at least 3 months before the change becomes effective.

If agreed with Movia, the tenderer may put in a temporary bus for up to about ten months (the tenderer will then have 13 months to buy an additional electric bus). If Movia gives the tenderer more than three months notice of the change, the number of months in which the tenderer may use temporary equipment will be reduced 1:1 to the number of months earlier than three months with which Movia gives notice to the tenderer. If for instance, Movia notifies the tenderer six months before the change becomes effective, the period in which the tenderer may put in temporary equipment to seven months, and if Movia gives the tenderer notice ten months before the change becomes effective, the tenderer's right to use temporary buses will lapse.

If buses are put into service later than agreed, the monthly contract price of DKK 3,000 per bus per 24 hours will be reduced until delivery is made.

Billing

In case of a change in the number of in-service buses, the actual number of in-service buses will be used for the billing of the bus services at the prices set out in the contract. Neither an increase nor a reduction of the number of buses will lead to an adjustment of overheads.

For unit 9 in particular

In case of a reduction of the number of in-service buses on bus routes where electric buses are used, the tenderer is entitled to receive a lump sum compensation. The amount of the lump sum compensation is set out in Table 2. The tenderer must be aware that the compensation is given on the basis of a reduction of an in-service bus (based on the number of vehicles schedules for payment). The compensation will be paid when the bus is taken out of service.

Table 2: Compensation in case of a reduction in the number of in-service buses

Contract year	Compensation per in-service bus (DKK)
Year 1	2,887,183
Year 2	2,633,590
Year 3	2,424,548
Year 4	2,304,606
Year 5	2,184,663
Year 6	1,864,246
Year 7	1,655,204
Year 8	1,357,062
Year 9	1,058,919
Year 10	760,777
Year 11	462,635
Year 12	164,492

In case of an increase in the number of in-service buses on bus routes serviced by electric buses, the tenderer is entitled to compensation. The amount of the compensation appears from table 3. The tenderer must be aware that the compensation is given on the basis of the increase of an in-service bus (based on the number of vehicles schedules for payment). The compensation will be paid no later than in the month after the commissioning of the bus.

Table 3: The compensation in case of an increase in the number of in-service buses

Contract year	Compensation per in-service bus (DKK)
Year 1	371,250
Year 2	717,441
Year 3	1,038,572
Year 4	1,334,644
Year 5	1,359,276
Year 6	752,672
Year 7	366,312
Year 8	0
Year 9	0
Year 10	0
Year 11	0
Year 12	0

In connection with an increase or a reduction of the number of in-service buses, Movia wishes to make the amount of the compensation subject to negotiation.

12.2.2 The remainder of the contract period

The number of in-service buses at the end of the sixth contract year forms the basis of Movia's possibilities of making changes for the remainder of the contract period.

For the remainder of the contract period, Movia may again adjust the number of buses on the basis of the terms described in section 12.2.1.

For unit 9 in particular

See requirements under section 12.2.1 (for unit 9 in particular)

12.3 Terminated units

If a unit is closed down because it expires (see the Contract) or because an option to extend one or more units cannot be used, the hours of driving/number of in-service buses originally agreed or a new basis for them will be adjusted downwards. The originally agreed hours of driving/number of in-service buses will be adjusted by the number of hours/buses in the unit for date of the invitation to tender or for the date when a new basis is calculated. The adaption will be made at the time when the unit terminates.

13. Corporate Social Responsibility (CSR)

Movia has adopted a CSR policy to be observed when Movia purchases transport solutions. Movia's CSR Policy is based on the principles of UN's Global Compact. Global Compact builds on principles based on internationally adopted human rights, labour, environment and anti-corruption conventions. The tenderers agree to observe, promote and support the principal principles in UN's Global Compact in their daily activities by:

- Supporting and respecting the protection of internationally proclaimed human rights
- Making sure they are not complicit in human rights abuses
- Upholding the freedom of association and the effective recognition of the right to collective bargaining
- Eliminating of all forms of forced and compulsory labour
- Supporting the effective abolition of child labour
- Eliminating discrimination in respect of employment and occupation
- Supporting a precautionary approach to environmental challenges
- Undertaking initiatives to promote greater environmental responsibility
- Encouraging the development and diffusion of environmentally friendly technologies
- Working against corruption in all its forms, including extortion and bribery

Movia's CSR Policy further provides that in some cases a tenderer will not be able to observe the principles of Movia's CSR Policy due to the supplier's failure to provide documentation in its own supply chain. In such cases, it will be acceptable to do business with the supplier as long as the supplier warrants that all applicable national laws and agreements are complied with at all times.

Working environment and conditions in Movia's CSR Policy:

Movia works determinedly and systematically on currently improving the working environment. The tenderer undertakes to make sure that the working environment is of such a standard so as to protect workers from exposures or risks that may be detrimental to their health in the short and long view.

The tenderer agrees that he has established a programme to monitor the working environment and to currently work to improve the working environment.

The tenderer agrees that he complies with all collective bargaining agreements made within its field of activity. It should be pointed out that Movia is not the authority supervising compliance with collective bargaining agreements on the area. In general, reference is made to the Danish Transport, Construction and Housing Authority which is the relevant authority.

Green procurement in Movia's CSR Policy:

Movia works determinedly to reduce the impact of its activities on the climate, to achieve environmental improvements and to prevent pollution. Movia does so by making demands on its tenderers and suppliers.

These contract documents further describe the following related matters:

Employee-related matters:

- Movia makes demands on the working environment, referring to the relevant environmental guide, and asks the tenderer to carefully describe the measures it takes to ensure a good working environment on selected areas (section 15.5).
- It is a prerequisite that the employees of the tenderer are paid in accordance with the collective bargaining agreements applicable to the area. (This does not appear directly, but the licences and permissions required will not be granted unless this requirement is met).
- To protect the employees, it is a requirement that the principles in the Danish Transfer of Undertakings Act (in Danish: virksomhedsoverdragelsesloven) are applicable in connection with the change of tenderer regardless of whether bus equipment is being transferred. This is part of the terms agreed between Movia and the tenderer (section 14).
- The tenderer is encouraged to prepare an integration policy (section 15.5) on request.

Environmental protection matters:

- Requirement for the use of sulphur-free diesel (section 5.3.1).
- Movia makes demands on and bases its evaluation on the emissions and fuel consumption of the buses (section 5.3.2).
- The tenderers are required to have a form of environmental certification of the bus garages (section 5.1).

Anti-corruption matters:

- In connection with the pre-qualification, the tenderer has submitted a completed eESPD generated from Appendix 1, the European Single Procurement Document, stating that the tenderer has not been prosecuted for participation in a criminal organisation, bribery, fraud or money-laundering.

14. Transfer of undertakings

14.1 Employees' rights in the event of transfers of undertakings

The tenderer is required to comply with Consolidated Act No. 710 of 20 August 2002 on the rights of employees in the event of transfers of undertakings (in Danish: *lovbekendtgørelse nr. 710 af 20. august 2002 om lønmodtageres retsstilling ved virksomhedsoverdragelse*), including requirements for business procedures and deadlines.

The below applies regardless of whether equipment has been transferred and regardless of whether the Danish Transfer of Undertakings Act applies.

14.2 The tenderer's obligations on the transfer of undertakings

The tenderer who is awarded a contract and takes over the bus services from existing operator will be placed in the same position as a transferee of an undertaking within the meaning of the Danish Transfer of Undertakings Act. The tenderer will take over the rights and obligations to the employees attached to the unit who are, at the date of transfer, exclusively or essentially engaged in the unit transferred.

The existing operator and the tenderer will agree on the specific employees to be included in the transfer subject to the rules and principles of the Danish Transfer of Undertakings Act, see section 13.5.

The tenderer is consequently obliged to give the employees included in the transfer of the bus services put out to tender the same pay and employment terms as hitherto or better terms, respect their length of service, etc. Pay and employment terms must also correspond to or in all respects be better than the terms that will be applicable in the contract period under the below-mentioned collective agreements. The extent to which the tenderer will otherwise become a party to or obliged under such collective agreements is of no concern to Movia.

To Movia's knowledge, the tender units put out to tender and/or the Danish National Agreement for Bus Services and its Supplementary Agreement between the Federation of Employers for Public Transport - AKT (Arbejdsgiverforening for Kollektiv Traffic) and the United Federation of Danish Workers - 3F (Fagligt Fælles Forbund). However, Movia does not warrant that these and/or other collective agreements are applicable and bears no responsibility therefor. It is for the tenderer to investigate this matter and clarify such matters with the existing operator.

Movia has no knowledge of any workplace agreements and practises associated with the bus services put out to tender. At the time of the tender, the tenderer may thus assume that there are no local agreements or practises which involve considerable financial burdens with respect to the collective agreement. If it is subsequently determined that such agreements or practises did in fact exist, the tenderer concerned must prove that they are of considerable financial importance, after which the price during the period will be adjusted, until such agreements are terminable at the usual notice. The adjustment will be made so as to place the tenderer as if no such agreement or practice of material financial importance applied.

Where at the submission of the tender, the tenderer provides the bus services on the tender unit put out to tender, and there are workplace agreements/practises of considerable financial importance which have been factored in the tender prices, it must be stated in Appendix 7 (Reservations and comments). In such case, the appendix must be state in detail the agreements at issue and the amounts by which each agreement has been factored in the tender prices. In such circumstances, the tenderer must be prepared to explain in detail how the stated amounts have been calculated, and in connection with the negotiations, Movia will in such case distribute corrected information about the employment terms and conditions for the employees included in the transfer.

It is for the existing operator and the tenderer to prepare a usual completion statement in which the tenderer receives compensation for any earned, but not yet due claims relating to the period prior to the date of transfer under the relevant general rules and principles.

14.3 The tenderer's obligations on the termination of the contract or a new ITT

In case of termination of the contract and the reissue of the ITT, the tenderer agrees to comply with the rules in the Danish Transfer of Undertakings Act whether or not it is applicable according to its terms, and to contribute to the transfer to a new tenderer of employees attached to the unit who were exclusively or essentially engaged in the transferred unit at the date of transfer.

Likewise the tenderer is obliged to contribute in good faith to the preparation of forms of the employees thus transferred in connection with the transfer of the bus services to the new tenderer and to contribute with information that makes it possible to estimate the costs of the bus services put out to tender.

The tenderer further agrees to contribute in good faith to the preparation of a usual completion statement as at the date of transfer between the tenderer and the new tenderer.

Movia will not be responsible for a new tenderer's performance of its obligations or the transfer of the employees attached to the unit to the new tenderer by virtue of the Danish Transfer of Undertakings Act.

From the date when the tenderer is notified whether the contract is terminated and/or whether Movia intends to transfer back the unit or to transfer it to another supplier, the tenderer agrees not to make material changes to the composition of the staff or to the pay and other employment terms of the employees in the unit put out to tender unless there are demonstrable operational reasons for this.

14.4 Other terms and conditions

Forms are available at the ITT website providing information to the tenderer concerning the employees (not including drivers) which are expected to be transferred from the existing operator. Information on number of employees and their length of service is provided. The tenderer must procure information from the existing operator as regards the drivers.

When Movia discloses such information at the website, Movia takes no responsibility for the content, including the correctness or adequacy of the information. Movia is not able to verify the information provided in the forms. Any verification of the information submitted or the risk of lack of verification rests on the tenderer.

Movia expects the tenderer to disclose information in good faith. If information about employees proves to be incorrect and/or the employees mentioned rightly or wrongly refuses to transfer to the tenderer, it is of no concern to Movia, and any costs associated therewith is a matter between the existing operator and the tenderer.

Also any subsequent disagreement between the existing operator and the tenderer and/or with the union of the employee, including as a result of incorrect or inadequate information, is of no concern to Movia and solely a matter between the existing operator and the tenderer and/or the union of the employee.

The former and the new tenderer must cooperate in good faith about the fulfilment of any duty to disclose information to, or to consult, employees in relation to the ITT. These duties are of no concern to Movia.

If, at the commencement of the Contract, the average actual length of service determining the pay level is above nine years or below five years, Movia may adjust the payment related to timetable hours. Movia will only adjust the payments for the part of the average length of service which is above nine years or below five years. In such case, the adjustment will be so as to place the tenderer as if the length of service was five years if the average actual length of service is below five years, and nine years if the

average actual length of service is above nine years. It is, however, a condition for the adjustment that the tenderer is able to document the average length of service at the commencement of the Contract.

If the tenderer applies length-of-service principles in respect of its existing staff, e.g. when planning duty rosters or when assigning holidays, these standards must also be carried over for staff which are transferred to the tenderer in connection with the transfer of bus services.

At the request of Movia, the tenderer is obliged to report the drivers' length of service once a year according to guidelines laid down by Movia.

14.5 Procedures

Movia recommends that no later than one month from the award of the contract, the existing operator forwards a list of the members of staff included in the transfer to the tenderer. The list must state the employees' civil registration numbers (CPR nos), names, addresses, job functions, length of service and any particular conditions of employment.

Movia recommends that no later than seven days after the tenderer's receipt of the above list of the members of staff included in the transfer, the tenderer confirms/disconfirms in writing the continued employment of the staff members. The notice is to be forwarded to the existing operator.

The tenderer and the existing operator may, subject to agreement, deviate from these procedures if it is not to the detriment of the employees to be transferred. In such case, it is of no concern to Movia, and therefore, the existing operator and the tenderers will be obliged to indemnify Movia for any claim that may arise.

15. Staff matters

15.1 Fundamental requirements

The tenderer must ensure that the drivers are fully uniformed and that they appear clean and presentable in front of the passengers. On request, the tenderer must provide a description of the various parts of the uniform.

The drivers must collect fares from the passengers. If a bus is left unattended at a terminal stop, the driver must, when returning to the bus, make passengers aware that it is now possible to buy fares. It is the tenderer's responsibility to ensure that the drivers have the necessary print paper and change at all times.

Furthermore, the drivers must give passengers a correct and friendly service and be able to operate the bus correctly under all conditions as well as drive the bus in a passenger-friendly and energy efficient manner.

Bus stops and tariff zones must be announced in accordance with the rules provided by Movia. In addition, the drivers must be familiar with the overall traffic network so as to be able to advise passengers. Drivers must have acquired enough Danish skills to fulfil all of Movia's service requirements.

In order to ensure that the drivers are qualified to deal with conflicts, Movia demands the preparation of a staff policy which ensures that all of the tenderer's Movia drivers have the qualifications required to deal with conflicts. The staff policy must also include concrete tools for follow-up. On request, the tenderer must be able to give an account of this policy.

The following Movia literature contains Movia's service requirements with which the operations management and the drivers must be familiar:

- The Travel Handbook ("*Rejsehåndbogen*")
- The Driver's Service Manual ("*Chaufførens Servicehåndbog*")
- Vores Movia.

The Travel Handbook is available for reading or printing from the following link moviarejsehaandbog.dk/. The Driver's Service Manual ("*Chaufførens Servicehåndbog*") is available at www.voresmovia.dk.

All costs of training, further training, certifications, etc. must be paid by the tenderer.

Movia requires the tenderer to appoint a representative responsible for all questions concerning the communication of information from Movia to the drivers, see the statement of operations.

Relevant information material and news about operations, rates, etc. will be published regularly by Movia at www.voresmovia.dk.

For unit 9 in particular

In the period from 2011 to 2012, Movia implemented the project "Roskilde's Public Transport – Denmark's best" together with Roskilde Municipality and Arriva. As part of the project, Arriva trained drivers who operated the bus routes covered by the tender unit in environmentally friendly driving, better service and understanding of the bus product and increased job satisfaction among the drivers. The project boosted customer service and the drivers' job satisfaction.

Movia wants the tenderer to make sure that the drivers deliver a high level of customer service and encourages the tenderer to be inspired from the initiatives and results of the *Roskilde's Public Transport - Denmark's best* project. To read more about the results of the project, see: http://www.trafikdage.dk/papers_2014/237_JesperNygaardKristensen.pdf.

15.2 Training

Movia requires the tenderer to appoint a training manager to act as Movia's contact person in all training matters, see the statement of operations.

The tenderer must ensure that drivers and other affected staff are trained in Movia's tariff system so as to ensure correct and effective collection of fares. The tenderer is responsible for the correct collection of fares.

The tenderer is responsible for ensuring that all drivers and other staff members concerned are trained to operate and report errors in the agreed IT systems on the service and the buses falling within the scope of the Contract.

Furthermore, Movia would like to ensure that the drivers and middle managers have sufficient knowledge of Movia's organisation and the allocation of responsibilities between tenderers and Movia.

Movia expects that the drivers and middle managers are regularly updated on this information through further training. It will be possible to provide updates and further training on www.voreshmovia.dk. In this connection, the tenderer is obliged to co-operate with Movia on improving the further training.

15.2.1 Travel card

The tenderer is responsible for ensuring that all drivers are trained and able to operate the travel card equipment. Movia has electronic training material packages available for e.g. employee-to-employee training.

It is also currently possible to attend labour market training courses as travel card training (mid 2017) is part of the three-day course in the sale of tickets.

Movia will ensure that up-to-date training material is available to operate the travel card equipment at www.voreshmovia.dk. It will to a limited extent be possible to borrow training equipment (training suitcases). In addition, there will be unlimited access to a bus simulator at www.voreshmovia.dk.

In case changes are made to the travel card equipment or new functionalities are added which result in changes to the driver's operation of the equipment, Movia will prepare updated training material which the tenderer is required to communicate to the drivers.

The tenderer is further responsible for ensuring that other technical/administrative staff are sufficiently trained at any time to operate the travel card system and to ensure that such staff have sufficient knowledge of the travel card system.

It is of particular importance that the staff with technical responsibility for the operation of the buses, including for monitoring and reporting faults, are continuously informed about the current operational reports from Movia.

On conclusion of the Contract, the tenderer must appoint persons for the specific roles in connection with the Travel Card, e.g. service managers centrally and on the individual garage. These functions must be covered also during holidays, days off, etc.

15.3 Driver certification

The aim of the certification concept is to focus on the training and service requirements which Movia has assigned to the bus driver position. The most important qualification and service requirements to be met by the drivers are described in sections 13.1 - 13.3. The certification consists of technical questions prepared by Movia on the basis of the above requirements.

All drivers who are not certified must be certified within the two months from the commencement of the contract. All drivers recruited in the contract period who are not certified must be certified no later than one month after they have been employed. Certified drivers must be re-certified every five years.

All certification is available at www.voreshmovia.dk.

The tenderer must ensure that all drivers are registered as users on www.voreshmovia.dk.

Failure to observe the rules on certification of drivers is subject to Movia's penalty system, see the Contract.

15.4 Vores Movia – Academy system

"Vores Movia" is a so-called Academy system which is a social knowledge platform. Knowledge means that the system is to facilitate the certification of users and that the system is designed for easy and user-friendly communication of important information. The social aspect of the system is that it supports two-way communication. The users can give feedback to the system and the technical content that Movia presents.

The certification process will be available online where users are required to answer multiple-choice questions. Questions and training material in the form of driver's notices, instructions, videos, service manual, campaigns, etc. will be updated continuously by Movia.

15.4.1 Tasks and role assignment

Movia is responsible for program management and all vocational content.

The tenderer is responsible for:

- User management, i.e. that all drivers are registered as users, assigned to the right garage and deactivated on termination of the employment.
- PC, tablet or smartphone access for own drivers
- Follow-up on and support to own drivers
- That its own drivers complete the certification process every five years
- That its own drivers keep up to date on all news

15.4.2 Economy

The tenderer will pay Movia an annual fee of DKK 122 per driver (price level September 2017) registered in the system. This fee will be paid at the end of the year on the basis of the number of drivers registered in the preceding year.

15.5 Health and safety at work

Movia requires the tenderer to appoint a health and safety manager to act as Movia's contact person in all health and safety matters, see the statement of operations.

It is a requirement that all operations are carried out with due regard to health and safety at work and in full compliance with current working environment laws.

In this connection, Movia refers to the directions for the problem areas emphasised in the guide from the Working Environment Council for Transport and Wholesale entitled Industry Guide for Public Transport Buses and in Environmental Guide no. 30 for the transportation of passengers issued by the Danish Working Environment Authority in 2009.. The following problem areas are particularly emphasised in the Environmental Guide:

- Risk of accidents
- Psychical working environment

- Ergonomic working environment
- Noise
- Vibrations
- Indoor climate
- Workplace Assessment (WPA)

On request, the tenderer must be able to explain how he meets the requirements of occupational health and safety laws within special, important areas.

If the tenderer receives an enforcement notice from the Danish Working Environment Authority concerning matters handled by Movia such as road humps, timetable, etc., notice must be given to Movia.

Movia is aware that part of the drivers driving for Movia are non-ethnic Danes. Consequently, Movia requests that all tenderers who deliver bus services to Movia have an integration policy providing for an academic and social integration at the workplace. On request, the tenderer must be able to give an account of this policy.

The tenderer is obliged to provide health and safety at work for drivers and other staff of the enterprise. As documentation for fulfilment of this obligation, the tenderer must arrange for an annual review measuring the satisfaction of drivers and other employees with the working environment, including Movia's services such as driving hours/adjustment time, road passability, bus stops, etc.

The practical planning and implementation of the employee satisfaction survey will be agreed between Movia and the tenderer, as Movia wishes to define the basis for the employee satisfaction survey for comparability purposes.

Movia Contracts requests a continuously updated organisation plan from the tenderer, including also for the tenderer's health and safety and works committee. Movia must further be able to obtain all information about the working environment issues discussed in the tenderer's health and safety committee (e.g. the fitting-out of the driver's compartment, cleaning and maintenance of buses, the indoor climate of buses, etc.)

Movia expects the tenderer to inform its staff of the daily registrations made by the IT equipment used in the buses.

In connection with the purchase of buses, Movia makes special requirements for involvement of drivers with respect to the fitting-out of the driver's compartment, see section 3 on the fitting-out of the driver's compartment.

Movia will each year prepare a process plan for the co-operation on timetables. This process plan will contain deadlines and procedures for reporting proposed changes etc. The timetable process must be agreed between Movia and the tenderer at the annual timetable meetings, which will also be attended by trade union representatives, health and safety representatives and/or route representatives.

Special EU rules on driving time and rest periods (Council Regulation (EEC) 3820/85) apply to journeys of more than 50 kilometres. In this ITT, no bus routes have journeys which exceed 50 kilometres.

16. Driver's facilities

For most routes Movia has made driver's facilities – rooms and/or toilet facilities – available at route terminals. Where Movia has not made facilities available for the use of drivers, it is for the tenderer to ensure that the required facilities are available for the drivers' use.

Any costs incidental to relocating Movia's driver's facilities in connection with route changes will be borne by Movia.

Driver's facilities which can be used for routes in the individual tender unit are set out in section 2.7.x which also describes whether the use of the facility is without financial obligation or whether the administrator role described below is the obligation that the tenderer undertakes.

Movia expects that (whether the tenderer is an administrator or a user), the tenderer makes sure that a cooperation is established across the organisations. The tenderer must ensure that the drivers treat the facilities respectfully – regardless of whether the tenderer employing the drivers is the administrator or user of the facility.

16.1 Administration

With the award of bus services on the following tender units follows the responsibility as administrator of the driver's facilities set out below:

Tender unit	Driver's facilities
2	Blekinge Boulevard
4	Kirke Hyllinge mini terminal Hvalsø
7	Solrød Strand Station
9a	Roskilde Station Center Trekroner Station
9b	Veddelev Mark

The administrator must bear all costs incidental to the facility, including costs of all interior cleaning, exterior cleaning, interior maintenance, including any maintenance of ventilation systems, consumption to operate the facility (such as water, electricity, heating, refuse collection, service charges), TV and radio licence fee, emptying of waste water tank, filling of utility water, repairs due to vandalism and burglary, theft protection, etc.

Exterior maintenance costs will be borne by Movia, see section 16.4.2.

The administrator must pay for electricity, water and heating consumption directly to the utility company. In particular circumstances, Movia will lay out and subsequently collect the amount from the administrator.

Operation and maintenance costs incidental to the driver facility are not an integral part of the principal services related to the ITT, but will be paid separately. The amount will be paid quarterly according to an invoice issued by the tenderer and stating the applicable amount of VAT. The tender amount entered in the tender form must be inclusive of VAT.

For more information about the facilities, please see under the individual tender units in section 2.7.x, including information about the total amount of current operating expenses estimated on the basis of the operating expenses that the tenderer has had each year and an annual average of the expenses incurred by Movia for the facility in 2014 and 2015. The expenses set out in section 2.7.x are estimates and may vary from year to year.

Based on the September 2017 price level, the tenderer must pay DKK 6,383.82 annually per bus to Movia towards rent as well as exterior maintenance works. The payment will be included in the monthly billing and adjusted in accordance with the provisions in section 17.

Movia must ensure that buildings/facilities are insured against fire and property damage. The excess is currently DKK 25,000 per event for which the tenderer is liable. The tenderer must take out other insurances, e.g. contents insurance, at its own cost.

If, during the contract period, a situation arises where neither the tenderer itself or other users use the facility, Movia may decide that the tenderer's obligations in connection with a facility cease to apply and thus also Movia's payment to the tenderer.

The tenderer is further obliged to disclose the most recent year's operating costs with regard to Movia's staff facilities.

16.2 Layout, contents, etc. of the facility

Depending on whether the facility is a room or a toilet, the administrator must ensure that the facility is equipped at any time with the required number of chairs, tables, lamps, kitchen facilities and the fire-fighting equipment, etc. based on the size, use and the level of use of the facility, see section 2.7 and section 16.3.

On takeover, the facility must be equipped with the number of chairs and tables required for the number of drivers at any one time using the facility and for which the facility is designed, as well as lamps and any kitchen facilities. The tenderer must take over the contents, which will subsequently become the tenderer's property. The price for the contents of the individual facilities is specified in section 2.7.x. The amount will be set off in the first invoice. Subsequent purchases of furniture etc. are payable by the tenderer.

Furniture must be in a good working order throughout the contract period.

In case of termination of the Contract, and if tenders are once again invited for the facility, the administrator may decide to resell the contents to a new administrator (if the new tenderer so desires).

If an administrator makes special requests with respect to one of Movia's facilities which is not available in the existing or planned facilities, the additional cost incidental thereto will be payable by the administrator – also in case of demolition and restoration. Alterations are, however, subject to the approval of Movia's Construction Team. The administrator will be responsible for the restoration works. No reimbursement will be available on termination of the contract. On termination of the contract, the administrator must restore the facility and remove lockers etc. unless otherwise agreed.

All fixed installations complying with regulatory requirements during normal use of the facility are included.

Ventilation systems have been installed in a few facilities owned by Movia. The administrator is responsible for maintaining the ventilation system and undertakes to either take over Movia's current service contract or to enter into a similar contract to replace the one Movia has. The ventilation systems for which Movia has no servicing agreement are small ventilation systems which do not require servicing agreements. However, they must be maintained. If the tenderer wishes to take over Movia's service contract, the tenderer must contact the Construction Team no later than two months before the start of operations. System replacement due to age is subject to negotiations with Movia.

Heat converters have been installed in a few facilities. Heat converters are subject to the same conditions as ventilation systems.

Section 2.7 describes whether a ventilation system or heat converter is installed at the individual facility.

On conclusion of the Contract, the facility is equipped with a locking system. Any changes thereto are subject to written agreement with the other users and Movia.

Structural changes or special arrangement of the facility requested by the tenderer are payable by the tenderer subject to the written approval of Movia. If this includes special requirements for fire installations or the like, these will also be payable by the tenderer in accordance with regulatory requirements. Unless otherwise agreed, Movia may for the tenderer's account demand that special installations, special arrangements, etc. procured by the tenderer for its own account be removed in whole or in part on termination of the Contract.

Special arrangements and technical installations are considered the property of Movia, regardless of whether such special arrangements or installations have been paid for by the tenderer or Movia. No reimbursement will be available on termination of the Contract of the additional cost for structural changes or special arrangements.

Front signs, advertisements, radio/TV aerials and the like posted or attached to the outside of buildings are subject to Movia's written acceptance. The same applies to signs and advertisements posted in windows.

If such acceptance has been granted, the tenderer must ensure that the installation is in compliance with regulatory requirements and bear all costs incidental to the installation thereof. On vacation, the tenderer must at its own costs remove the installations and every trace thereof if so required by Movia.

16.3 Users

Unless otherwise agreed, driver's facilities are for the sole use of the people employed by Movia's tenderer or employees of companies running special bus services/contract bus services for Movia.

Movia's staff is entitled use the facility free of charge on the same terms as the tenderer's staff of drivers.

The tenderers being awarded the tender units described in section 2.7 undertake to make driver's facilities available free of charge to the drivers of other tenderers throughout the contract period, regardless of whether the administrator no longer needs the facility as a result of route changes.

The administrator must establish cooperation with other tenderers concerning the need for and matters concerning the individual facilities. Where the administrator no longer needs the facility, the administrator must be particularly attentive to this cooperation.

Similarly, other tenderers undertake to contribute to a reasonable cooperation and to ensure that those of their drivers who use facilities which are administered by other tenderers use the facilities in a respectful manner.

A degree of use for the individual facility is provided in section 2.7.x. The degree of use indicates how many drivers use the facility on a daily basis.

Degree of use 1:	Premises used by 40 employees or more on a daily basis
Degree of use 2:	Premises used by 40 employees or less on a daily basis
Degree of use 3:	Toilets in general
Degree of use 4:	Premises/toilets used by less than 40 employees on a weekly basis

The administrator must expect the number of users to vary over time.

16.4 Maintenance etc.

The administrator must provide for all interior cleaning, exterior cleaning as well as all interior maintenance of the facility.

Failure to observe the duty of cleaning and maintenance is subject to Movia's penalty system, see clause 18.8 of the Contract.

16.4.1 Interior maintenance

The tenderer assumes the duty to carry out regular interior maintenance, including maintenance as a result of ordinary wear and tear of floors, windows, walls, ceilings and the installations, etc. of the leased premises, including renewal and maintenance of the visible installations for the supply of electricity, heating and water to the facilities as well as drainage.

To this is added maintenance and renewal of interior building components, including – but not limited to – locks, doors, door handles, keys, glass panes, hinges, cisterns, water taps, toilet pans with seats, washbasins and water traps.

The tenderer must, for its own account, maintain radio, TV, aerials, etc. the installation of which has been procured by the tenderer or Movia or which the tenderer has taken over from the former tenant.

In addition, the tenderer assumes the duty to maintain the relevant fire-fighting equipment available for the employees' use in case of fire.

16.4.2 Exterior maintenance

Movia retains the duty to maintain the exterior of the building such as the foundations, façades, roofs, etc.

The tenderer has a duty to regularly report defects in the facilities as regards the exterior maintenance to Movia's Construction Team.

Movia's Construction Team may be contacted on weekdays between 8:00 am and 3:30 pm at byggeteam@moviatrafik.dk or on telephone no. +45 36 13 20 25. In urgent matters, please call the skilled craftsmen named on the Extranet directly. Any costs to Movia as a result of incorrect fault reporting must be borne by the tenderer.

16.4.3 Interior cleaning

The individual facility must be cleaned at least once every day. In case of only very limited use of the facility, there may be a few exceptions to this general rule.

Areas to be cleaned are toilets, entry areas, including any stairways, walkways, primary communal rooms, secondary communal rooms, wardrobes, lockers, changing rooms, depots, telephone boxes, towers, etc.

Daily cleaning includes airing, emptying of waste bins, wiping of tables, cleaning of toilet pans, washbasins, vacuuming/sweeping, washing of floors, filling of toilet paper, toilet soap and towels.

Other cleaning must be carried out when needed. This includes furniture, refrigerators, ovens and coffee makers, etc.

Washdown of grids, taking down and washing of lamps, washdown/wiping of walls, interior washing of cupboards in the kitchen units, washdown of ceilings, interior washing of lockers, scrubbing and "saturation" of floors, washing of window frames as well as base frame, washing of curtains and radiators at least once every year in connection with a complete cleaning.

The administrator is responsible for ensuring that the facilities are clean and cleared at all times to the effect that the facilities comply with sound health standards and the requirements under occupational health legislation.

16.4.4 Exterior cleaning

All exterior cleaning of the facility is the responsibility of the administrator. This includes, for example, roofs, gutters, downpipes, cesspools, windows, skylights and lighting fixtures, etc.

Exterior cleaning of the area surrounding a building, including snow clearing, salt application, gravelling, sweeping, removal of graffiti as well as garden work, is also included under the tenderer's duties if such duties do not rest with a third party. The tenderer is responsible for ensuring that the facility, including its outdoor areas, is presentable at any time.

If the administrator has not carried out the exterior cleaning (e.g. emptying of gutters), the administrator will be liable for the expenses that Movia may incur as a result of the duty of maintenance.

16.5 Transfer of a facility

The administrator's responsibility for the facilities ceases on termination of the bus service contract for the relevant tender unit. On termination of the Contract, the facility must be returned in the state and condition it was in when it was taken over (ordinary wear and tear excepted).

If objects such as secondary windows, doors, fire-fighting equipment, etc. disappear in the contract period, the administrator is responsible for the re-installation of various defects before the facility is transferred to a new administrator.

Before takeover, the tenderer must have inspected the facility with Movia.

On vacation, the administrator must contact Movia no later than 30 days before termination of the contract to arrange for inspection of the facility for purposes of transfer to the new administrator, to the effect that the transfer inspection has taken place before termination of the contract.

The former administrator, the new administrator and Movia will take part in the transfer inspection meeting which will be held at the relevant driver's facility.

17. Payment

Payments between Movia and the tenderer must be made via a bank account designated by the tenderer. Payments will be adjusted as set out in section 17.4 and sections 2.5 and 2.6.

17.1 Contract payment

The agreed tender price is payable to the tenderer monthly in areas on the fourth weekday of the following month, divided into the agreed overheads and costs relating to bus, facilities and timetable hours. Financial penalties imposed for quality defects, cancelled bus journeys, etc. will be set off against the payments for the preceding month.

Before the 10th day of each month, the tenderer must submit a statement of the number of cancelled bus journeys in the preceding month, specifying the reason. Special forms drawn up by Movia must be used for the submission of information about cancelled services. The tenderer's manager in charge or other duly authorised person must sign all reports and statements. During the contract period, Movia may change the reporting method.

Adjustments for cancelled services are not included in the payment until for the subsequent month.

Payment for driver's facilities is not included in the monthly billing, but is settled quarterly according to invoice issued by the tenderer. VAT must be separately stated on the invoice.

In case of accepted combination tenders involving units with different dates for start of operations, the settlement will only take place for units put into operation.

17.2 Sale of tickets etc.

All income from the sale of tickets etc. will accrue to Movia.

The sale of one-way tickets on the bus is recorded by the travel card system and data are sent to the Back Office upon bus synchronisation. Movia will settle accounts with the tenderer on the basis of such data.

The tenderer is entitled to extract reports of such sale.

When a driver logs out of the bus, a receipt showing the sale effected for this part of the duty will be printed. This receipt covers only the sale effected for the period during which the driver was logged in on the relevant bus. A driver may thus have two or three receipts for any given day.

These receipts may also be used as a basis for the driver's settlement towards the tenderer. If the driver's receipts or till money shows a higher sale than the amount registered by the Back Office, the tenderer is advised to charge the full amount from the driver, as Movia may make corrections on account of data arriving late.

Movia may on request provide a daily list of the recorded sale per driver. This list, which is based on Back Office data, must be forwarded by e-mail. Please note that data may arrive late for any given driver. As mentioned above, the typical scenario is that the driver has more receipts on any given day than accounted for by the recorded data.

17.3 Terms of payment in connection with cancelled services

In cooperation with the road authorities, Movia is responsible for ensuring that under normal conditions (see section 8) operations can be carried out according to the timetables and has a duty to discuss any discrepancies with the tenderer. Normal conditions means normal Danish weather conditions and normal road conditions, i.e. the designated routes, disregarding road works etc., are accessible and roadworthy for bus services.

On disruption of bus services, irrespective of the reason – other than by force majeure etc. – the tenderer will receive normal payment related to timetable hours. This is also the case for cancelled services, always provided, however, that the set-off against payments for cancelled services will be calculated according to fixed rates per timetable hour in an ascending scale on the basis of the cancelled services for the month in percentage terms, see the Contract. This percentage is calculated on the basis of the cancelled services of the month expressed in terms of timetable hours relative to the driving hours scheduled in the vehicle schedule for payment.

If a bus service is cancelled or delayed because the bus is being held back by Movia or because the tenderer is re-establishing traffic regularity, the cancelled service must be registered for purposes of any customer enquiries, but there will be no set-off against payments.

If a service disruption is caused by a traffic accident or extreme weather conditions, the disruption will sometimes entail very big delays, possibly with short suspensions of operation. In such cases, the set-off for the cancelled service will be subject to a maximum of the price per timetable hour, and the cancelled service will not be included in the calculation of the percentage of cancelled services for the month.

To ensure that a cancelled service is not included in the monthly calculations of the percentage of cancelled services for the month, the tenderer must prepare a report describing the reasons for cancelling the service and the measures taken by the tenderer to keep up operations. Movia will then make a specific assessment in each individual case.

If the non-performance is attributable to negligence on the part of the tenderer or its staff, or if the cancelled services repeatedly affect the same journeys/routes, Movia is entitled to exercise the remedies for breach available under the Contract.

On disruption of bus services due to force majeure, including labour disputes, a set-off will be made against payments for cancelled services on the basis of the fixed rates specified in the Contract with respect to overheads and costs related to buses and timetable hours.

No payments will be made for overheads or costs related to buses and timetable hours for such cancelled services.

The payment relating to timetable hours will be set off by deducting the payment for the timetable hours not performed.

Overheads and bus-related costs for whole days are offset by 1/30 per day. For parts of days or parts of the Contract, a proportionate share is offset, corresponding to the cancelled services as a percentage of scheduled driving hours for the month at contract level.

If such disruption of services lasts for more than seven days and is attributable to external factors beyond the tenderer's control, the issue of partial compensation of overheads and bus-related costs or other compensation may be open for negotiation subsequent to a specific assessment in the individual case. Cancelled services caused by such circumstances will not be included in the percentage calculations of total cancelled services.

17.4. Adjustment of payments

Adjustment must be made according to developments in a joint cost index for bus services in Denmark. Depending on the fuel used, adjustments will be made on the basis of different indexes.

17.4.1 Diesel

The cost index based on the use of diesel is calculated on a monthly basis by the Danish Public Transport Authorities in Denmark (*Trafikselskaberne i Danmark*) and are published on

<http://www.trafikselskaberne.dk/trafikselskaberne.dk/Udbud/Omkostningsindeks>

The joint cost index is calculated on the basis of developments in the following index published by Statistics Denmark. In this context, it should be noted that the stated weightings are regularly adjusted according to the relative developments in the individual indices:

- The wage index for the private sector (DS ILON2 – Total - Seasonally adjusted), *60% in January 2008*
- Total consumer price index (SD PRICE 6 - Total), *8% in January 2008*
- Consumer price index for diesel oil - (DS PRIS 6 – Diesel and lubricants), *17% in January 2008*
- Price index for national supply of materials - (DS PRICE 11 – Vehicles and parts for vehicles - Total), *9% in January 2008*
- Average bond interest rate - (DS MPK3 – all series), *6% in January 2008*

The cost index for January 2008 was fixed at 100.

17.4.2 Synthetic diesel (BtL, HVO, GTL or the like)

The adjustment follows the above diesel index. If, in the contract period, Movia develops a HVO index (index for synthetic biodiesel), it will be possible to enter into an agreement for the contract period on the use of the index if acceptable to both Movia and the tenderer.

17.4.3 Gas index

If the bus services are carried out using gas-powered buses:

The calculation of the gas cost index, the consumer price index for diesel oil will be replaced by a special gas price index. Such gas price index is calculated on the basis of the development as follows:

- Monthly spot price from Gaspoint Nordic two months earlier
- Costs of distribution, from the natural gas price index of the Danish Energy Regulatory Authority (Eltilsynet) five months earlier
- Energy taxes (Mineral oil tax, CO2 tax, NOX tax), current rates from the Danish Ministry of Taxation

The gas cost index is calculated so that for January 2015 it will be 109.1 like the ordinary cost index.

<http://www.trafikskaberne.dk/trafikskaberne.dk/Udbud/gasomkostningsindeks>

17.4.4 Electricity index

The cost index based on the use of electricity is calculated on a monthly basis by the Danish Public Transport Authorities in Denmark (Trafikskaberne i Danmark) and are published on

<http://www.trafikskaberne.dk/trafikskaberne.dk/Udbud/>

The joint cost index is calculated on the basis of developments in the following index published by Statistics Denmark. In this context, it should be noted that the stated weightings are regularly adjusted according to the relative developments in the individual indices:

- The wage index for the private sector (DS ILON2 – Total - Seasonally adjusted), 68% in January 2008
- Total consumer price index (SD PRICE 6 - Total), 9% in January 2008
- The net price index for electricity - (DS PRIS 114 – 04.5.1 Electricity), 6% in January 2008
- Price index for national supply of materials - (DS PRICE 11 – Vehicles and parts for vehicles - Total), 10% in January 2008
- Average bond interest rate - (DS MPK3 – all series), 7% in January 2008

Electricity cost index for January 2008 is 100, and the January 2017 level is 112.0.

17.4.5 Calculation - example

The cost index for a specific month is calculated on the basis of the sub-indices two months earlier – but the wage index six months earlier. For example, the cost index for June 2011 is calculated at 107.9 on the basis of the sub-indices for April 2011 – but the wage index for December 2010, applying for Q4 2010. The cost index is rounded off to one decimal place according to the 4/5 rule.

The agreed tender price is adjusted on a monthly basis according to developments in the joint cost index for the relevant month relative to the cost index for September 2017 stated as price level in the contract documents.

There will be NO subsequent adjustments. However, if an index is so delayed that it cannot be included in the above model within the time stated, subsequent amendment may be made.

If the sub-index included in the joint adjustment index lapses or the contents thereof change during the contract period, Movia reserves the right to insert another corresponding index figure, taking into account the existing weighting of the development in the relevant sub-index.

Illustration of principles

The principles are illustrated by the below example.

Tender submitted in June 2011 price level.

Tender is for DKK 100,000 per month.

The payment for December 2011 must be adjusted relative to changes in the adjustment index for June 2011 to December 2011.

$$\frac{\text{Tender price} \times \text{December 2011 price level}}{\text{June 2011 price level}} = \text{Payment for December 2011}$$

Payment for December 2011:

$$\frac{\text{DKK } 100,000 \times 108.0}{107.9} = \text{DKK } 100,093$$

Appendix 1 Overview of amendments to contract

Below is a list of important changes and issues to be noted compared to ITT A15. The list is only intended as an aid to the tenderer, and it is emphasised that the list is not exhaustive and that the changes are not listed in any particular order.

- The time of the decision of whether or not the contracts are extended, see section 10.1.3
- Changes to seats and distance between seats, see section 3.3.7
- Please note conditions relating to the test of front door swing, see section 3.3.4
- Fixed hourly rate, see section 2.6
- Changes to IT cabinet, see section 6.3.1
- Requirement for two aerials instead of five aerials, see section 6.3.2
- Special penalty provisions for unit 8, see clause 18 of the Contract
- Use of CMT client, see section 6.3.7
- Special bonus plan for unit 9, see clause 18 of the Contract
- Free uploads, see section 7.3
- Penalty for late delivery of vehicle schedule for payment, see section 2.2.1
- Request for relocation of bus equipment, subject to 30 days' prior notice, see section 6
- Determination of combinatorics see section 1.4
- Evaluation of tenders, see section 1.4
- Penalty – "In case of failure to meet the final date for submission of operating vehicle schedules, descriptions of bus runs or other agreed form of description of service conditions (DKK 500 per day per bus run or other described operating unit by which the final date for submission is exceeded)" has been deleted from the contract documents.
- Indexation adjustments, see section 17.4
- Access to facilities six months before, see section 6

CONTRACT

A16 - XX

Concerning

Internal no.:

THE PROVISION OF REGULAR BUS SERVICES IN THE AREAS OF TRAFIKSELSKABET MOVIA

beten

TRAFIKSELSKABET MOVIA
TOFTEGÅRDS PLADS
GL. KØGE LANDEVEJ 3
2500 Val by
CVR NO.: 29896569
("Movia")

and

.....
(hereinafter the "Tenderer")

1 Purpose/Assumptions

(1)

The purpose of this Contract is to govern the relationship between Movia and the Tenderer in connection with the provision of the bus services set out in clause 4.

This Contract is the result of a negotiated procedure commenced and carried out by Movia in accordance with Directive 2014/25/EC of the European Parliament and of the Council of 26 February April 2014 (the Utilities Directive) as implemented by Executive Order No. 1624 of 15 December 2015.

(2)

The Parties agree to cooperate throughout the process taking a positive, professional and responsible approach and making very significant efforts to achieve the best possible results. The Parties will be flexible to the extent deemed reasonable and usual for the performance of comparable contracts.

2 Contractual basis

(1)

The contractual basis for the agreement between the Parties is this Contract and the following appendices:

<u>Contract Appendix A:</u>	Movia's total contract documents: contract documents for " <i>A(specify) - invitation to tender for regular bus services</i> " dated [date] and corrections and Q&As etc. to the contract documents available for download at Movia's ITT website
<u>Contract Appendix B:</u>	List of buses covered by the Contract
<u>Contract Appendix C:</u>	The tender submitted by the Tenderer, including various filled-in schedules, etc.

(2)

The appendices mentioned in clause 2.1 form an integral part of this Contract. The Contract prevails over the appendices. In case of discrepancy or disagreement between the appendices or documents subject hereto, the interpretation of the contractual basis will, in accordance with the general principles of interpretation in Danish law, seek to ascertain the intention of the Parties with respect to the relevant documents

In the interpretation, the contract documents will take priority over the tender submitted by the tenderer, always provided that the specifications of the tender prevail in cases where the tender submitted by the Tenderer places Movia in a better position than the requirements contained in the contract documents.

3 Term

(1)

This Contract becomes effective when signed by both parties and continues until:

- April 2025 with respect to units 1, 2, 3, 5 and 7
- Autumn/winter 2020 with respect to units 4 and 8
- Autumn/winter 2019 with respect to unit 6
- Spring/summer 2029 with respect to unit 9

Operations are expected to start on 14 April 2019.

When the Contract becomes effective, Movia will not be able to state the exact expiry date of the Contract, as it will not be possible to plan the local authorities' scope of services and the related timetables not until shortly before expiry of the Contract. In this connection, all of the bus services covered by the Contract will not necessarily terminate with effect from the same date.

The exact expiry date of the Contract will be notified by Movia at least six months before expiry.

On expiry of the Contract, Movia is not obliged to take over any part of the tenderer's real property, buses, installation site/garage, radio, IT or telephone equipment or other assets.

Neither party may terminate the Contract for the entire contract period, but see clauses 6 (Ownership), 14 (Bankruptcy etc.) and 17 (Breach and termination of the Contract).

The term may be extended under sub-clauses 2, 3, 4, 5 and 6.

(2)

Does not apply to units 1, 2, 3, 5, 6, 7 and 9

Movia is entitled to renew the Contract in respect of units 4 and 8 by up to two years. The Contract may be renewed twice.

The exact date of timetable change will be notified at least six months in advance.

(3)

Does not apply to units 4, 6 and 8

On the condition that the Tenderer delivers the agreed quality for the individual unit, the Tenderer is entitled to extend the contract period. The Contract may be renewed for terms of two years. The Contract on units 1, 2, 3, 5 and 7 may be renewed for three terms only, and the Contract for unit 9 only once to the effect that the maximum contract period is twelve years in total – always provided that the expiry of the contract period is coordinated with an invitation to tender planned by Movia.

The terms and conditions for an extension of the contract period for units 1, 2, 3, 5 and 7 are that the average outcome of the first three, five and seven measurement periods respectively (measurement periods are specified in section 10.1.3):

- meet the agreed measurements with respect to customer satisfaction (quality index), degree of bus service performed (service level) and

- does not exceed the average maximum penalty of DKK 5,000 per bus per year in case of quality defects.

In case of adjustments of the number of buses set out in the Contract in the contract period, and there has been a differentiated number of buses in a measurement period, the average financial penalties will be calculated on the basis of the highest number of buses in the measurement period.

Whether the tenderer is entitled to extend the unit, will be decided after expiry of the third, fifth and seventh measurement period. The final agreement to extend the contract period shall be in place no later than the first month after the publication of the quality results. In this context, reference is made to section 10.

The terms and conditions for an extension of the contract period for unit 9 are that the average outcome of the first seven measurement periods

- meet the agreed measurements with respect to customer satisfaction (quality index), degree of bus service performed (service level) and
- does not exceed the average maximum penalty of DKK 5,000 per bus per year in case of quality defects.

In case of adjustments of the number of buses set out in the Contract in the contract period, and there has been a differentiated number of buses in a measurement period, the average pecuniary penalty will be calculated on the basis of the highest number of buses in the measurement period.

Whether the Tenderer is entitled to extend the unit will be decided after expiry of the seventh measurement period. The final agreement to extend the contract period shall be in place no later than one month after the publication of the quality results. In this context, reference is made to section 10.

The Contract may only be extended for the tender unit contained in the Contract where the agreed targets are met.

(4)

Does not apply to units 4, 6 and 8

If the Tenderer fails to deliver the agreed quality for a unit, but meets the minimum requirements with respect to customer satisfaction (quality index) and the degree of bus service performed (service level), Movia and the Tenderer may agree to extend the contract period.

The Contract may be renewed several times, but for no more than twelve years in total. The expiry of the contract period is to be coordinated with Movia's planned change of timetable(s).

(5)

Applies to all units

In order to adapt the expiry of a contract to future timetable changes, invitations for tenders, etc., Movia reserves the right to extend the contract period on unaltered terms for the entire or part of the Contract (i.e. one or more units covered by the Contract) by up to one year, but for a maximum of twelve years in total.

The exact date of timetable change will be notified at least six months in advance.

(6)

Applies to all units

In case of the renewal of only parts of the Contract, payment will be made for the bus service actually performed. The Tenderer's overheads will be adjusted proportionately with the number of in-service buses in the renewal period. In combination tenders, the price quoted in the combination tender for each unit will still be used notwithstanding that only the bus service contract covered by one tender unit is renewed.

4 Services to be delivered by the Tenderer

(1)

The Tenderer shall provide approx. timetable hours per year for Movia.

At commencement of this Contract, it has been agreed that the service shall be provided on routes

.....

The service shall be provided using in-service buses and spare buses, as described in more detail in Appendix B.

With regard to the scope of services, changes to the scope of services, buses and equipment, bus facilities/depots, etc., reference is made to Appendix A.

(2)

The Tenderer shall ensure that bus depots/bus parking space are available for the requisite number of buses and will pay the associated costs.

The Tenderer's headquarters are situated at the address of, and the bus services covered by this Contract shall be provided from the Tenderer's bus depot at

5 Price / Payment / Adjustment

(1)

For the agreed bus services, the following payment will be made:

Unit X:

Overheads	DKK per month
Bus-related costs	DKK per bus per month.
Costs related to timetable hours	Price per timetable hour
Driver's facilities	DKK per month.

All prices are quoted at the price level as at September 2017.

(2)

With regard to payment, payment terms, adjustment, set-offs for income from the sale of tickets, if applicable, reference is made to Appendix A.

(3)

The amount for driver's facilities (see clause 5.1) is inclusive of VAT and shall be billed using an invoice.

6 Ownership

(1)

The Tenderer is registered as a company – "....." - (CVR no.).

(2)

If the Tenderer is organised as a public or private limited company (A/S or ApS), Movia may demand to be given notice of the name of the owner of the shares. Any shareholding below 10 % of the share capital is not subject to a duty of disclosure unless special circumstances give such shareholder a controlling interest in the company.

(3)

In case of changes to the shareholding specified in the contract period, notice shall be given to Movia in writing without undue delay.

(4)

In case of any material changes to the ownership of the shareholdings during the term of this Contract, including any changes to the controlling interest in the company, Movia is entitled to terminate this Contract by giving three months' notice in writing, provided that such notice is given within one month of Movia becoming aware of the event(s) giving rise to termination.

(5)

Notwithstanding the above, Movia is not entitled to terminate under clause 6.4 without good reason.

7 Assignment of rights

(1)

The Tenderer's rights and obligations under this Contract may not be assigned to a third party in whole or in part without Movia's prior written approval. The Tenderer is entitled to assign its claim for the agreed contract price to its financial institution.

(2)

Movia is entitled to assign its rights and obligations under the Contract to another public institution or an institution wholly or partly owned by public authorities or essentially operated by public funds on unaltered terms.

8 Sub-suppliers

(1)

If the Tenderer uses sub-suppliers to fulfil its obligations, the Tenderer guarantees fulfilment of the Contract to the same extent as if the Tenderer had performed the service itself. The use of sub-suppliers will not release the Tenderer from any obligation to Movia.

(2)

No later than at the start of operations will the Tenderer notify Movia in writing of the name, contact details and representative of each of its sub-suppliers, specifying the parts of the service to be performed by the relevant sub-supplier. The Tenderer is obliged to ensure that Movia has, at all times, up-to-date current information thereon.

(3)

Any use of sub-suppliers who are not expressly covered by the Tenderer's tender is subject to the approval of Movia. Any change of sub-suppliers after commencement of this Contract and any other changes relating to sub-suppliers is subject to prior written approval from Movia before the change is implemented.

(4)

Any sub-suppliers shall be duly licensed for the bus services put out to tender. At the request of Movia, the Tenderer shall present documentation showing that that is the case.

(5)

Movia is entitled to withhold approval of a new sub-supplier or a change in the mutual allocation of responsibilities for the performance of the Contract.

(6)

If a sub-supplier is subject to mandatory grounds for exclusion, Movia is entitled to demand replacement of the sub-supplier.

(7)

Movia's contact goes through the Tenderer.

9 Control procedures

(1)

Movia is entitled to supervise the Tenderer's performance of this Contract by carrying out inspections of the buses used while they are in service. Such supervision will not release the Tenderer from its responsibility for ensuring that the buses meet the agreed conditions.

(2)

At the request of Movia, the driver shall be able to provide identification in the form of a driver's licence and to present evidence of the courses required by Movia and of the taxi driver course approved by the Danish Transport Authority. At the request of Movia, the driver shall further show all necessary licences and permissions.

(3)

Movia is further entitled to supervise the Tenderer's compliance with and performance of its obligations under the Contract by visiting the Tenderer's business premises, including a detailed inspection of the Tenderer's operating equipment. The Tenderer is obliged to assist in connection with such inspections at no extra charge.

(4)

If the Tenderer has appointed sub-suppliers to perform this Contract in whole or in part, the Tenderer is obliged to include a provision in the contracts with the sub-suppliers entitling Movia to carry out inspections at the sub-suppliers' premises to the extent described in clauses 9.1, 9.2 and 9.3.

10 Quality measurements

(1)

Movia will carry out continuous quality measurements and the measurement period for defects in quality, service level and quality index of the services covered by this Contract will run from 1 January 2018 to 31 December 2018, from 1 January 2019 to 31 December 2019, etc.

The measurements will be made on a per unit basis.

The results will be published approximately three months after the expiry of each measurement period.

The agreed measurements for extension of this Contract:

Unit X:

Quality index	at least XX
Service level	at least XX

Financial penalties in connection with quality defects
(DKK 5,000 per bus, see section 3.)

no more than DKK XX.

11 Accounts and budget

(1)

Regardless of how the Tenderer's business is organised, the Tenderer is, for the contract period, obliged to submit accounts to Movia on request. The accounts shall have such a level of detail and provide such information as required under the Danish Companies Act (in Danish: *selskabsloven*) with regard to accounts to be filed with the Danish Business Authority. The accounts shall be drawn up by a registered accountant or a state-authorised public accountant.

(2)

Regardless of how the Tenderer's business is organised, Movia is entitled to see the budget for the first full year of operation. The budget shall further show how necessary new acquisitions as well as day-to-day operations are funded.

(3)

The financial information mentioned in clauses 11.1 and 11.2 shall be treated as confidential information.

12 Injury and damage

(1)

If, in the performance of their obligations under this Contract, the Tenderer or its sub-suppliers cause injury to persons or damage to property to be transported by the Tenderer or to a third-party person or third-party property, whether by act or omission, the Tenderer or its sub-suppliers alone are be liable for such injury and/or damage.

(2)

In the event that the injured party raises a claim against Movia on account of the injury or damage described in clause 12.1, the Tenderer shall indemnify Movia for any claims and expenses, including legal costs, interest, etc., incurred by Movia as a result of such claim.

(3)

It is the obligation and responsibility of the Tenderer to take out the necessary insurance, including general liability insurance, etc. in accordance with Contract Appendix A. At the request of Movia, the Tenderer shall present documentation for the continued existence of the general liability insurance cover.

13 Confidentiality

(1)

The Tenderer and Movia are subject to a mutual duty of confidentiality with regard to each other's business affairs and any other information which may reasonably be said to be confidential. But see clause 1.6 of Contract Appendix A on duty of confidentiality, access to information and publication.

(2)

This duty of confidentiality shall survive the termination of this Contract, howsoever caused.

14 Bankruptcy etc.

(1)

If the Tenderer files for bankruptcy or restructuring proceedings, goes bankrupt or enters into liquidation or becomes subject to restructuring proceedings, Movia will be entitled to terminate the Contract with immediate effect unless the estate in bankruptcy becomes a party to the Contract as a result of its right of subrogation. Movia shall without undue delay be given notice in writing of any filing for restructuring or bankruptcy proceedings etc., issue of bankruptcy order, appointment of supervisors, etc.

(2)

Movia may terminate the Contract with immediate effect if the Tenderer is a company dissolved by the Danish Business Authority.

15 Replacement of drivers

(1)

If one of the Tenderer's drivers gives rise to serious or repeated criticism justifying dismissal or summary dismissal, Movia is entitled to require the driver removed from the bus service covered by this Contract.

16 Damages

(1)

The Tenderer is liable to Movia under the general rules of Danish law for any documented financial loss caused by the Tenderer, including breach of this Contract, unless such breach is caused by weather conditions which the Tenderer cannot reasonably be required to overcome or by force majeure.

(2)

Force majeure means extraordinary events which prevent the performance of this Contract and which occur through no fault of the Tenderer under circumstances beyond the Tenderer's control and circumstances which the Tenderer ought not to have foreseen.

(3)

Payment of penalty will not reduce any claim for damages for the same event or circumstance.

17 Breach of contract and termination for breach

(1)

If the Tenderer is in breach of its obligations under the Contract, Movia may demand that the Tenderer remedies the breach within a reasonable time limit defined by Movia. If the Tenderer fails to remedy the breach within the defined time limit, Movia is entitled to give notice that Movia will terminate the Contract for breach (in whole or in part) unless the breach is remedied within another five business days. Any failure to remedy the breach within such additional time limit of five business days will entitle Movia to terminate the Contract for breach (in whole or in part). If Movia terminates the Contract for breach under this clause, the Tenderer is entitled to payment for the services delivered prior to the termination for breach.

Any termination of the Contract for breach will not prevent Movia from claiming damages under clause 16 on Damages.

(2)

If Movia is in breach of its obligations under the Contract, the Tenderer may demand that Movia remedies the breach within a reasonable time limit defined by the Tenderer. If Movia fails to remedy the breach within the defined time limit, the Tenderer is entitled to give notice that the Tenderer intends to terminate the Contract for breach (in whole or in part) unless the breach is remedied within another five business days. Any failure to remedy the breach within such additional time limit of five business days will entitle the Tenderer to terminate the Contract for breach. The Tenderer may not terminate the Contract for breach in part. If the Tenderer terminates the Contract for breach under this clause, the Tenderer is entitled to payment for the services delivered until the termination for breach. Any termination of the Contract for breach will not prevent the Tenderer from claiming damages under clause 16.

(3)

Serious or repeated breach of the provisions of this Contract – in the absence of material breach, if viewed separately – will be deemed to constitute a material breach.

(4)

In case of the withdrawal of the Tenderer's licence or permission to perform the bus services covered by this Contract, the entire Contract will be terminated without notice.

18 Penalty/Set-offs against the payment (penalty)

(1)

If the breach is not such as to justify termination with immediate effect, Movia may impose financial penalties. This may in the form of the below penalties for failure to comply with individual clauses of the Contract which is of inconvenience to the customers or contributes to non-conformity with the presupposed standard of the bus services or repeated non-compliance with other requirements set out in the Contract where Movia is entitled to impose similar penalties.

(2)

The Tenderer will be imposed financial penalties in case of defects established by Movia during an inspection of and in the buses or otherwise registered or documented, including data extracted on installed IT equipment.

It is not Movia's intention to punish the individual defects in a well-working cooperation. Instead, penalties will be imposed if the Tenderer fails to take the necessary measures to minimise the number of defects and the number of defects thus represents a trend, i.e. reaches the level set out in Table A below.

Movia's approach will primarily be – by contacting the Tenderer – to have the defect remedied and, if possible, prevent it from occurring again. Where possible, Movia will contact, for example, the driver directly to work with him/her to have the matter rectified on site.

In the following situations, Movia will always impose a financial penalty and make a set-off of DKK 3,000 for each of the following confirmed defects:

- Failure to replace defective ticketing equipment before the time-limit set out in the IT section and where correct ticketing is rendered impossible by the defect. It must be possible to use all types of tickets. This includes incorrect and unclear stamping of tickets/passes.
- Failure to check tickets
- Log-on failure concerning the Travel Card System (correct log-on includes that the driver has logged in and selected the correct route and journey)
- Failure to report operational irregularities
- Lacking, ineffective or incorrectly maintained safety equipment. Safety equipment includes holding brake, door safety system, lighting and noise when doors open and close, TV surveillance of exit doors, video surveillance, automatic fire extinction, reversing alarm, reversing camera and blind spot mirrors, etc.

(3)

A trend will be deemed by Movia to exist if the number of quality defects reaches the level shown in Table A below.

Quality defects for which an agreement has been made with regard to the extranet will be excluded from the calculation of recorded defects.

Quality defects are divided into categories and sub-categories.

The number of quality defects will be recorded on a per sub-category basis (i.e. A1 and B2 and so on).

If the Tenderer reaches the number of recorded defects per sanctionable sub-category, Movia will set it off against the monthly fees. Subsequently, a new registration cycle will begin and the next time the Tenderer reaches the sanctionable number of recorded defects, Movia will make a set-off again.

Recorded defects will also be reset at the end of each calendar year.

Defects will be recorded and penalties imposed as shown in the table below. The categorisation will be based on the number of in-service buses in the Contract most favourable to the Tenderer or the number of in-service buses existing at the date of calculation.

Table A

Defects Category	Number of recorded defects giving rise to a penalty (per calendar year)			Amount of penalty
	1-15 in-service buses per tender unit	16-30 in-service buses per tender unit	31+ in-service buses per tender unit	
A1, A2	8	16	24	40,000
B1, B2, B3, B4	8	16	24	20,000
CF1, CF2	8	16	24	10,000

Defects Category A:

A1 Speak-Data Radio login

- Failure to log onto real time system (correct log-on includes correct selection of run and journey).

A2 Timetable compliance

- Left the final destination/check point too early.
- Departing the final destination more than 120 seconds too late.
- Using more than 120 seconds to replace driver on the run.

Defects Category B:

B1 Driver behaviour

- Failure to wear presentable uniform.
- Incorrect bus signage.
- Failure to advertise zones and bus stops.
- Incorrect time and zone in combination sign.

B2 Use of bus

- Using a different type of bus than agreed.

B3 Maintenance of bus

- If the bus does not meet the contractual requirements with respect to appearance, state of repair and maintenance and functions, including noise, heating and inadequate lighting. Defects in safety equipment will be set off separately.
- Failure to replace defective ticketing equipment before the time-limit set out in the IT section and where correct ticketing is rendered impossible by the defect. It must be possible to collect fares correctly using all types of cards and tickets.

B4 Cleaning of bus

- Unacceptable cleaning of the exterior or interior of the bus.

Defects Category C:

C1 Operational irregularities

- Late reporting of operational irregularities, see Contract Appendix A, clause 8.2.

C2 Customer information material

- Lack of customer information material in the buses or customer information material which is not up-to-date. This includes folders, rate posters, hanging signs, route panels and infotainment screens.

For unit 9 in particular

B2 Use of bus

- Using a different type of bus than agreed.

The first two years of operation after the electric buses for package a are put into service, the below terms and conditions apply. The terms and conditions are subject to the condition that the buses used for the bus services meet the requirements for temporary bus equipment corresponding to the requirements for the temporary equipment on package b, see section 2.7.9.

First year of operation

The first year after the putting into operation of the electric buses for package a, the below terms and conditions for insertion of a type of bus which differs from an electric bus.

The first 11,916 registered defects do not give rise to any penalty.

If the Tenderer puts electric buses in service for package b in the first year after the putting into service of electric buses for package a, the number of registered defects which do not give rise to penalties is increased by up to 15% (in proportion to the number of electric buses put into service) of the total number of planned bus departures according to the timetable for the period after the putting into service of electric bus services for package b and until the end of the twelfth month after the putting into service of electric buses for package a.

α = the total number of registered defects for packages a and b which do not give rise to penalties.

If the total number of registered defects for packages a and b (called R) from putting into service of electric buses for package a and until the end of the twelfth month thereafter is less than $0.6 \cdot \alpha$, Movia will pay a bonus to the Tenderer. The bonus rate is shown in the below table.

The total number of registered defects for packages a and b (R)	Bonus
$0.3*\alpha \leq R < 0.6*\alpha$ (\approx at least 91% electric bus services)	DKK 100,000.
$0.1*\alpha \leq R < 0.3*\alpha$ (\approx at least 95,5% electric bus services)	DKK 200,000.
$0.05*\alpha \leq R < 0.1*\alpha$ (\approx at least 98,5% electric bus services)	DKK 400,000.
$R < 0.05*\alpha$ (\approx at least 99,2% electric bus services)	DKK 500,000.

Second year of operation

The second year after the putting into operation of the electric buses for package a, the below terms and conditions apply to the use of a type of bus which differs from an electric bus.

The first 7,944 registered defects do not give rise to any penalty.

If the Tenderer puts electric buses in service for package b into operation in the first year of operation, the number of registered defects which do not give rise to penalties is increased by up to 6,244 (in proportion to the number of electric buses put into service).

If the Tenderer puts electric buses in service for package b in the second year after the putting into service of electric buses for package a, the number of registered defects which do not give rise to penalties is increased by up to 10% (in proportion to the number of electric buses put into service) of the total number of planned bus departures according to the timetable for the period after the putting into service of electric bus services for package b and until the end of the 24th month after the putting into service of electric buses for package a.

α = the total number of registered defects for packages a and b which do not give rise to penalties.

If the total number of registered defects for packages a and b from the beginning of the 13. month after the putting into service of electric buses for package a and until the end of the twelfth month thereafter is less than $0.6*\beta$, Movia will pay a bonus to the Tenderer. The bonus rate is shown in the below table.

The total number of registered defects for packages a and b (R)	Bonus
$0.3*\beta \leq R < 0.6*\beta$ (\approx at least 94% electric bus services)	DKK 100,000
$0.3*\beta \leq R < 0.6*\beta$ (\approx at least 97% electric bus services)	DKK 200,000
$0,05*\beta \leq R < 0,1*\beta$ (\approx at least 99% electric bus services)	DKK 400,000
$R < 0.05*\beta$ (\approx at least 99.5% electric bus services)	DKK 500,000

Failure to log data, etc.

For a commissioning period of thirty days from the start of operations with electric buses for package a, Movia will exempt from payment of penalties in case of failure to log data. In such case the below terms and conditions apply. Movia may exempt from payment of penalties and intends to do so if the Tenderer presents action plans for the correction of defects in data logging and the Tenderer implements the planned measures to the effect that problems with the data logging are dealt with satisfactorily.

Defects Category	Number of recorded defects giving rise to a penalty (per calendar year)	Amount of penalty
D1, D2, D3	20	10,000

Defects Category D:**D1 Defects in the logging of data from electric bus**

Failure to log data from electric bus automatically or incomplete registration of agreed data parameters.

D2 Defects in the logging of data from charging stations in urban space

Failure to log data for charging station in urban space automatically or incomplete registration of agreed data parameters. Applies only to charging stations the operation of which is the responsibility of the Tenderer.

D3 Defects in the logging of data for energy consumption for garages

Failure to log data for the energy consumption for charging stations at garages automatically.

Defects Category	Number of recorded defects giving rise to a penalty (per calendar year)			Amount of penalty
	1-3 charging stations	4-5 charging stations	6+ charging stations	
E1	9	15	21	20,000

Defects Category E**E1 Charging station not maintained**

If the Tenderer installs a charging station in accordance with section 4.2 and the visible parts of the charging stations are not maintained, see section 4.2.6, registrations and penalties will be implemented as described in the below table.

(4)

Penalties in connection with cancelled journeys:

If some of the journeys under this Contract are not completed as scheduled, Movia will make a setoff against the payment.

Movia will also regard a journey as cancelled in case of a delay which – regardless of its cause – is longer than the service frequency on the route according to the timetable and in any case – regardless of the route frequency – when the delay exceeds 20 minutes.

Movia will make a setoff against the payment for cancelled journeys according to the following rates on a per contract basis:

- DKK 350 per timetable hour when a journey is cancelled up to 0.05%
- DKK 700 per timetable hour when a journey is late from 0,05 % up to %
- DKK 1,400 per timetable hour when a journey is late from 0,10 % up to 0.15%
- DKK 2,100 per timetable hour when a journey is late from 0,15 % up to 0.20%
- DKK 2,800 per timetable hour when a journey is late from 0,20 % up to 0.25%
- DKK 3,500 per timetable hour for cancelled journey from 0.25% and above

For unit 9 in particular

Movia understands that in an implementation phase, the operation of electric buses may, compared to the operation of conventional buses, imply more cases of cancelled journeys and delays which makes it impossible to keep the timetable. For a period of up to six months from the putting into service of electric buses on package a, Movia intends to exempt from penalties for cancelled journeys and non-compliance with the timetable, if the Tenderer presents action plans, through the Urban Traffic Cooperation, for rectification of defects which result in cancelled journeys and/or non-compliance with the timetable and that the Tenderer implements the contemplated measures to the effect that problems are dealt with satisfactorily

(5)

In the following situations, Movia is entitled to make a setoff of DKK 500 for each recorded case:

- If the Tenderer fails to inform Movia of complaints of fundamental importance or information for use when responding to complaints, etc.
- If the Tenderer does not comply with the response times for customer enquiries etc. stated in section 8.3 of Contract Appendix A.
- If Movia repeatedly receives complaints regarding the Tenderer's responses to customer enquiries as well as handling and administration of lost property etc.
- If bus service descriptions or other agreed reports are inadequate (DKK 500 per day per run or other described service unit by which the deadline is exceeded).
- Failure or incorrect use of, or failure to report faults in the IT equipment in buses, including bus radios, bus computers, in-bus surveillance cameras, passenger counting equipment, IT for travel cards and the Tenderer's work stations, for which an actual agreement has been concluded with the Tenderer (DKK 500 per recorded occurrence/journey, respectively)

(6)

If the Tenderer fails to ensure the completion of agreed or compensatory runs with APC buses, see Contract Appendix A, Movia is entitled to make the following set-off:

- DKK 100 per journey per month for agreed runs not completed

(7)

If the Tenderer fails to ensure the completion of an agreed passenger count on tender units without APC buses, Movia is entitled to have a third party carry out such count and then set off the associated expenses against the payment to the Tenderer.

(8)

If the standard of cleaning, clean-up and maintenance of Movia's drivers' facilities is clearly unsatisfactory, Movia is entitled to impose the following penalty:

- DKK 2,000 for each recorded case

(9)

If a random check shows that a bus exceeds the agreed level of emissions, Movia is entitled to impose a penalty of DKK 3,000 for each recorded case.

(10)

Movia will continually calculate the number of certified drivers. Any failure to fulfil certification requirements will entitle Movia to impose a penalty once a year of DKK 5,000 per non-certified driver after two months from the contract period.

(11)

Movia is entitled to impose the below penalties:

If, on acquisition of new buses, the Tenderer fails to acquire standardised additional environmental equipment or if such equipment or other environmental equipment such as, for example, a noise kit, is dismantled during the term of this Contract, Movia is entitled to reduce the bus-related costs by an amount equivalent to 150% of the calculated savings achieved by the Tenderer in this regard.

- If the Tenderer fails to use environmentally friendly fuel or fails to secure the agreed fuel reserves at the beginning of a crisis situation, Movia is entitled to reduce the payment to the Tenderer by 150% of the calculated savings achieved by the Tenderer.

(12)

At the written request of Movia, the Tenderer shall submit written documentation of continued environmental certification of the enterprise's administration as well as the bus garages and workshops which will form part of the provision of the services put out to tender, see the requirements listed in Contract Appendix A.

If the Tenderer fails to fulfil the environmental certification action plan, see the requirements described in Contract Appendix A, or submit the above-mentioned documentation for continued certification, Movia is, subject to a notice of 30 days, entitled to charge a penalty of DKK 1,000 per calendar day per bus departing from the facilities which do not fulfil the requirements in question where the bus is included in this tender.

After an additional 30 calendar days, Movia is entitled to terminate this Contract without further notice, see clause 17. Movia will continue to charge penalties until the certification requirement has been fulfilled or the bus service agreement has been terminated, see clause 17.

(13)

The above penalties may be imposed even if Movia cannot render probable/document that it has suffered a financial loss. If Movia is capable of documenting a loss, Movia is entitled to claim compensation under clause 16. Any penalty paid will not be set off against Movia's damages. The fact that the Tenderer will have to tolerate the penalties provided for above does not exempt him from an obligation to remedy immediately. If the Tenderer fails to do so, the Tenderer shall accept that additional penalties are imposed, also for the same matters, and other penalties available under the Contract may also be imposed.

(14)

Movia is entitled to suspend any penalties in special circumstances such as force majeure etc. However, the suspension of penalties for cancelled journeys will not result in payment related to timetable hours for non-performed services.

(15)

In cases where Movia decides to remove an advertisement from the buses which is contrary to Movia's advertisement rules, and the advertisement has not been approved by Movia in advance, the Tenderer will be liable to pay a penalty.

The amount of the penalty will be determined by Movia with due regard to the seriousness of the violation and the circumstances in general. The penalty is subject to a maximum of DKK 50,000 per campaign per contract.

19 Termination of the Contract (for cause or convenience)

(1)

Movia is entitled to terminate the Contract without further notice if a competent public authority issues an order or a judgment determining that Movia has violated the procurement rules in connection with the tender process or Movia becomes aware thereof. In such case, the Tenderer is not entitled to damages or any other type of compensation. The same applies if the Contract is declared null and void. Movia's right to terminate the Contract under this clause will not be affected of any appeal of the order/judgment to a higher court.

(2)

On termination of the Contract (for whatever cause) the Tenderer is, at the request of Movia, obliged to handle the deliverables under the Contract for a transition period until the Contract can be assigned to a third party with reasonable notice.

(3)

On termination of the Contract, the Tenderer is obliged to use its best endeavours to secure a smooth transfer of the project to a third party.

In that connection, the Tenderer shall transfer all relevant materials, information, data, etc. for the purpose of ensuring that the project can continue without causing inconvenience to Movia.

20 Performance bond

(1)

To ensure the Tenderer's performance of the Contract, an unconditional and irrevocable demand guarantee of DKK 100,000 per in-service bus shall be provided through a reputable bank/bonding company. The guarantee shall be provided no later than 14 days after Movia has officially awarded the Contract for the bus services and will be in force until three months after the expiry of the contract period, unless a claim has been made on the guarantee.

In case of any changes in the number of in-service buses during the term of this Contract, the amount of the guarantee provided will be adjusted accordingly to ensure that the total guarantee amount always reflects the current number of in-service buses.

At the request of Movia, the guarantee shall be released to Movia, without Movia having documented its right to such release by an out-of-court settlement, a final and conclusive judicial decision or an arbitral award.

Payments under the guarantee will be made to Movia on demand within five working days after receipt of a written demand.

The legal relationship between the guarantor and Movia is governed by Danish law.

This guarantee shall be returned to guarantor on its termination.

21 Renegotiation

(1)

If, in the contract period, regulatory intervention or similar measures result in material financial changes to the assumptions underlying the submission of the Tenderer's tender, either party is entitled to demand renegotiation for the purpose of placing the parties as if the change had not occurred.

(2)

If the Tenderer and Movia cannot reach an agreement on whether or not the conditions for an adjustment of prices exist, or if the Tenderer and Movia cannot reach an agreement on the result of a price adjustment, either party may bring the matter before the courts.

22 CSR

The Tenderer is required to meet Movia's environment and CSR policy as set out in Contract Appendix A.

23 Confidentiality

The Tenderer shall not disclose to any third party information received by the Tenderer during the tender process or information which is not in public domain.

The Tenderer shall ensure that any sub-suppliers also assume the duty of confidentiality.

Movia will make sure that any external consultants or other external parties who may perform tasks for Movia during the tender process to Movia agree to treat information confidentially.

When making announcements to the public, including statements to news media, the Tenderer and Movia shall act loyally to each other. Public announcements, including statements to news media, regarding general traffic policy issues relating to Movia's area should be made by Movia alone, if possible.

24 Disputes and choice of law

(1)

This Contract is governed by Danish law.

(2)

Any dispute or disagreement between the Tenderer and Movia will not entitle either party to suspend or postpone the delivery of agreed services.

(3)

All disputes shall, to the extent possible, be solved amicably by negotiation between the parties. Subject to agreement between the parties, an independent mediator may be appointed to resolve the dispute. The costs of the mediator shall be divided equally between the parties unless otherwise agreed between the parties at the time when the mediator is appointed.

(4)

Any dispute concerning the existing contractual relationship or the understanding of the Contract which cannot be resolved amicably may be brought before the courts by either party – Movia's home court being the court of first instance.

25 Amendments

(1)

This Contract may be amended only by an addendum signed by both parties and appended to the Contract.

26 Signatures

(1)

This Contract is executed in two identical counterparts, either Party receiving one counterpart.

..... ,

Copenhagen,

.....

(for the Tenderer)

.....

(for Movia)