

4th Memorandum of Understanding for Tender 2021-36 Framework agreement for purchase and delivery of traction power components for tram and metro rectifier stations

By mistake, a series of questions submitted for the third information round^e was not answered. Via this 4^e information note, the answers are still provided, together with our own corrections and additions, if any.

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This document has been automatically translated from Dutch. In the event of differences of interpretation between the Dutch text and the English text, the Dutch text shall prevail.

Answering questions

Question No.	Subject/Document	Page /paragraph	Topic	Question	Answer
358	Tender Guidelines	3.2	Planning	The Candidate once again requests that the CFP include an option to issue a Notice of Information within the current schedule in order to gain sufficient insight into the SLA.	GVB is not going to adjust the schedule. There has already been an opportunity to ask questions about the SLA and to suggest alternatives. Moreover, the final SLA will be determined after the contract is awarded, among other things, on the basis of the tender,
359	Annex 11 Framework agreement for the supply of traction components	Art. 10	Invoicing and payment	In accordance with the CFP's answer to question 283 of memorandum of information 2, the Candidate asks that it confirm that an advance payment of 15% is possible for each subcontract provided that it is offset by a bank guarantee. Can the CFP confirm this? Can the CFP also confirm that the payment schedule must be included in the separate offer?	CFP can confirm this (2x)
360	Annex 11 Framework agreement for the supply of traction components	Art. 39.1	Collateral	This article refers to Annex V for the parent company guarantee, but Article 18.2 refers to Annex XIV. Can CFP amend this if necessary?	GVB will change this in the final contract documents to be signed
361	Annex 11 Framework agreement for the supply of traction components	Art. 39.1	Collateral	The Candidate asks GVB to confirm that the parent company guarantee is only valid for the term of the Framework Agreement and does not apply to the maintenance (SLA) period.	GVB can confirm this. A separate bank guarantee is requested for the maintenance and guarantee period.
362	Annex 11 Framework agreement for the supply of traction components	Art. 39.2	Collateral	The Candidate requests that the Moody rating be adjusted (also in the Tender Guidelines) to at least a BAA3 rating. The Candidate also requests that this rating be adopted for offering a new bank guarantee if the bank or insurer falls below this rating.	GVB sticks to the existing text.

363	Annex 11 Framework agreement for the supply of traction components	Art. 39.1 (in connection with Annex 02) / Art. 39.2 (in connection with Annex 04)	Collateral	In accordance with Article 39.2, it is stated that the Contractor must have been reminded repeatedly in writing by the Client and given a reasonable period of time to remedy the failure before the bank guarantee is called in. The Candidate asks GVB to include in the bank guarantee that the guarantor has the same rights as the Contractor. The Candidate also asks that it be included that the guarantor has the same rights as the Contractor in the parent company guarantee (Article 39.1 and Appendix 02), so that it cannot be drawn only after the first written notification. If CFP is not prepared to do this, can CFP provide an explanation of the rejection?	CFP maintains the existing text. Rationale: Contractor must provide a performance and not CFPB. Drawing up a bank guarantee is an extreme measure and GVB will exercise restraint in using this remedy. Therefore, it has already been added to the agreement that GVB will first give the Contractor several written reminders. This is a case of staggered liability, in which there will also first be several written reminders. Therefore, a call on the parent company guarantee can never take place unexpectedly. CFP maintains the existing text.
364	Annex 11 Framework agreement for the supply of traction components	Art. 34.15	Collateral	The Candidate does not understand what rights and obligations result from the last sentence of Article 34.15. In view of this lack of clarity, the Candidate requests that this sentence be omitted. If GVB is not prepared to do so, can GVB explain the rejection?	Very practical explanation: The technical lifetime of a component is about 20 years. After 12 years the component, based on normal use, shows such wear and/or defects that it must be replaced. In such cases this article applies. We cannot indicate how this will work out because it can take many forms. GVB could, for example, consider a discount in proportion to the missed lifespan on the purchase of replacement equipment or partial compensation of repair costs.
365	Tender Guidelines	Art. 4.2.1 letter D	Bank guarantee	Does the applicant ask CFP to accept German or Swiss law when the bank guarantee is issued by a European financial bank?	A German bank agrees, a Swiss bank does not.
366	Annex 11 Framework agreement for the supply of traction components	Art. 43	Availability and penalty	The Candidate asks GVB to maximise the penalty to 10% of the contract value per Subcontract. If GVB is not prepared to do this, can GVB provide an explanation of the rejection?	GVB is willing to maximise the fine at 10% of the contract value. This will be included in the framework agreement to be signed.

367	Annex 11 Framework agreement for the supply of traction components	Art. 34.4	Warranty	In principle, maintenance is carried out independently by the GVB. The Candidate cannot bear any responsibility for this. The Contracting Party therefore requests that the guarantee be limited to two (2) years in accordance with Article 34.4 and that the period stipulated in the special guarantees in Article 34 be dropped. If GVB is not prepared to do this, can GVB give an explanation of the rejection?	GVB carries out maintenance in accordance with the instructions of the Contractor. Furthermore, the Contractor shall train and educate personnel of GVB. In case of issues or bottlenecks in the maintenance, the Contractor will be called in (against payment!). GVB is therefore of the opinion that this is not an unreasonable stipulation.
368	Tender Guidelines	Art. 1.3	Contracting Authority	The Tender Guidelines indicate that the City of Amsterdam's Spatial Planning and Economic Affairs cluster and the Amsterdam Transport Region wish to use this Framework Agreement. Will the Framework Agreement also be signed by these parties?	Yes these parties will also co-sign the agreement. (see also the draft framework agreement)
369	Annex 11 Framework agreement for the supply of traction components	Art. 16.1	Transfer of rights and obligations and use of third parties	In accordance with Article 16.1, the Contracting Authority is given the opportunity to form a new entity within this framework. The Candidate requests GVB to include that the Candidate receives an additional (financial) guarantee if the Client's financial position deteriorates as a result.	GVB does not agree with this. The Contractor has primary obligations towards the Client and not vice versa. This is not a reasonable and logical request.
370	Appendix 04 Letter of intent Bank guarantee & Model bank guarantee	Model bank guarantee	Model call (bank) guarantee CFP	CFP proposes a deadline of seven calendar days in which the Candidate must have a bank guarantee posted after notice is given. The Candidate asks that this be changed to 'a reasonable period of time'.	CFP agrees with this proposal with the addition that the bank guarantee must always be posted at the latest when the delivery/acceptance has taken place. If the bank guarantee has not been provided by then, GVB may withhold the last instalment of payment until the bank guarantee has been provided. This will be inserted into the final framework agreement.
371	Annex 11 Framework agreement for the supply of traction components	Art 23.3	Parts supply	The applicant asks GVB to maximise the fine to EUR 3 000. If GVB is unwilling to do so, can GVB explain its refusal?	GVB is not prepared to do this. The damage caused by the aforementioned incident is potentially very considerable. The client also has a great deal of influence on preventing such problems, because it advises GVB on the spare parts to be stocked. In this way, the risk can be transferred back to GVB.

374	Annex 11 Framework agreement for the supply of traction components	Art. 37	Prices delivery traction power components	The supplier proposes the following price escalation for DC switchgear: $P = P0 * [0.1 + (0.4 * L/L0) + (0.2 * M/M0) + (0.1 * Cu/Cu0) + (0.2 * T/T0)]$ P: Adjusted price P0: initial price L (L0): wages (Germany); ERA remuneration indices M (M0): the valid monthly published price (average settlement prices in EUR) for manufactured goods according to the German Federal Statistical Office ("Statistisches Bundesamt"). Base 2015 = 100. Evaluation: Producer price index for industrial products (GP = 28, Lfd.-No. 412). Cu (Cu0): The valid monthly published price (average settlement prices in EUR) for copper according to the German Federal Statistical Office ("Statistisches Bundesamt"). Base 2015 = 100. Evaluation: Producer price index for industrial products (GP = 24, then Index 302_GP = 2444) T (T0): the valid monthly published price (average settlement prices in EUR) for other sheet metal products according to the German Federal Statistical Office ("Statistisches Bundesamt"). Base 2015 = 100. Evaluation: Producer price index for industrial products (GP = 25, then Index 333_GP = 259)	CFP sticks to the wording as included in articles 37.1 and 37.2.
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375	Annex 11 Framework agreement for the supply of traction components	Art. 37	Prices delivery traction power components	The Supplier proposes the following price escalation for the Transformers: $P = P0 * [0.37 * (Pss / Pss0) + 0.22 * (Pal / Pal0) + 0.26 * 1.02^n + 0.15]$ P: Adjusted price P0: Initial price Pss: validly published Index for GOES Conv. as average of the last 3 months before the month of delivery, published by T&D Europe Transofer Commodities Indices for GOES Pss0: the validly published Index for GOES Conv. considered in the offer (3 months average) Pal: the valid published monthly average price for primary aluminium as an average of the last 3 months before the month of delivery, published by London Metal Exchange Pal0: the valid published monthly average price for primary aluminium taken into account in the offer (3-month average) n: number of initial years from offer date	CFP proposes to stick more to the wording used in Articles 37.1 and 37.2. In the case of transformers, the aluminium price will be more heavily weighted than is currently the case in 37.1. It is proposed to include an additional article in which the price adjustments for transformers will be laid down in a similar way as for traction power components. The starting point is article 37.1 but the weighting of alluminium will be relatively more important. This article will be drafted and added in consultation between the parties at the time of contracting.
376	Annex 11 Framework agreement for the supply of traction components	Art. 37	Prices delivery traction power components	Following NSA 2, Article 37 of the Framework Agreement was amended to include a new indexation clause. This amended indexation clause has recognisable elements for the AC-switchgear to calculate a correct indexation, however, the Candidate is of the opinion that the wage cost component from the CPI index (consumer price index) cannot provide a complete picture of wage cost developments in this industry. The Candidate therefore proposes using the CBS index 33 Metalektro for CAO wages and contractual wage costs (https://opendata.cbs.nl/statline/#/CBS/nl/dataset/82838NED/table?dl=59066).	GVB agrees with this proposal. It will be incorporated in the final agreement

377	Appendix 04 Letter of intent Bank guarantee & Model bank guarantee	Model bank guarantee	Model call (bank) guarantee CFP	The interested party asks CFP to state that upon expiry of the bank guarantee CFP must return the original guarantee within 10 working days.	GVB agrees with this proposal. It will be incorporated in the final agreement
378	Annex 11 Framework agreement for the supply of traction components	Art. 32.3	Delay	For the sake of completeness, the Candidate requests that the following sentence be amended: "[...] up to a maximum of 10 percent (%) of the total contract price of the Traction Supply Components under the relevant Subcontract."	CFP does not see the added value of this proposal and is sticking to the existing text
379	Appendix 09 Price list NVI 2	Tab 2. Standard range	Energy transformers	Can GVB indicate the transformer capacity for which the Candidate must fill in the price in the price sheet? The specifications for the power transformers mention several capacities (250 / 400 / 630 / 1000 kVA).	The price sheet has been adjusted. A price can now be entered for all requested powers.
380	Appendix 08 PVE Part 1D System Specification Recovery Unit_v1.0 and	L-M-31-029	Earthquake	GVB requests a vibration of 5 m/s ² for the switch machine. Does GVB indeed expect such vibrations in Amsterdam and what should the supplier do if it has not tested its installation for them?	The installation will be placed in the vicinity of the track. The foundation of the rectifier station will attenuate the effect of passing trains, however, limited vibrations or shocks may affect the equipment. The NEN-EN 50328 therefore prescribes for Electronic Power Converters for substations the requirements as described in requirement L-M-31-029.
381	Appendix 08 PVE Part 1D System Specification Recovery Unit_v1.0 and	L-M-31-032-33	Standards: IEC 62474	Is it sufficient if the inverter is built in accordance with EN60721-3-3?	Will
382	Appendix 08 PVE Part 1D System Specification Recovery Unit_v1.0 and	L-M-31-042	Sound	GVB requests a noise level of 80 dB for the switch machine. The Candidate considers this very ambitious. Is GVB prepared to raise the noise level to 88 dB?	The requirement of 80 dB was adopted because this would allow work to be carried out without ear protection. The requirement is retained.
383	Appendix 08 PVE Part 1D System Specification Recovery Unit_v1.0 and	L-M-31-008	Efficiency	CFP demands an efficiency of 97,5%. At which load (e.g. 50% or 100%) of the inverter should this efficiency be achieved?	This efficiency should be achieved at 100% load.
384	Appendix 08 PVE Part 1D System Specification Recovery Unit_v1.0 and	L-M-31-008	Efficiency	GVB requires an efficiency of 97.5%. The Candidate considers this very ambitious for a switch. Is GVB prepared to reduce this to 96%?	Market parties have indicated that this is a feasible requirement. Requirement remains.

385	NSA 2 and Annex 09 price sheet	Question 278	Fictitious number of maintenance hours	Supplementary to the answer to question 278 of NSA 2: Does the Candidate understand correctly that the fictitious number of hours is only included for the assessment of the tenders? In addition, does the Candidate understand that the (supporting) maintenance services will be settled on the basis of actual hours during the execution of the SLA?	That's right (2x)
386	NSA 2 and Annex 09 price sheet	Question 278	Fictitious number of hours (fixed organisational costs)	Supplementary to the answer to question 278 of NSA 2: Does the Candidate understand that the fictitious number of hours is only included for the purpose of assessing the tenders? The Candidate asks CFP to include an item for the annual fixed costs in Appendix 9, due to the need to maintain the organisation and the take-up that has not yet been established. The Candidate also asks GVB to explain how these fixed costs will be settled in accordance with Article 50 of the Framework Agreement.	That is correct. The requested additional item has been added. Settlement will take place on the basis of a fixed availability payment that will be settled on a monthly basis.

387	Annex 08 PVE Part 2 process requirements and Annex 09 price sheet NSA 2	4.3 interaction with the assignment spring. For the following requirements: L-MT-091-008L-MT-091-009L-MT-091-010L-MT-091-011L-MT-091-012 6.3 Financial management. for the following requirements: L-MT-099-202L-MT-099-203	Hours	The PVE part 2 refers to at least the following: - every three months: drawing up a progress report relating to the Framework Agreement (L-MT-091-008); - every month: drawing up a progress report relating to the Further Agreements (L-MT-091-008)). Further agreements (L-MT-091-008); - Start agreement: Organizing a project start up meeting of 2 day parts, for all members of the MT, the contract managers and project leaders (L-MT-091-009); - Once every 2 years, a project follow up meeting with all members of each person's management team (L-MT-091-010); - Twice a week, a project meeting in the context of ongoing projects (L-MT-091-011); - Twice a year, a contract management meeting (L-MT-091-012); - Three monthly: Preparing a financial report for each subproject (L-MT-099-202); - Three months: preparing an Overall financial report for all ongoing subprojects (L-MT-099-203). In addition, the Supplier is expected to carry out work for the consultations in the form of preparing and chairing meetings, preparing (and providing) all kinds of documentation and reporting on the consultations, which in turn ensures administrative processing. How does this relate to the number of hours estimated by GVB in the price sheet in Appendix 9, under the tab: '3.	To clarify: All activities, reports and related hourly work by the supplier for projects must be included in the quotation issued by the supplier for the project concerned. Rates in this quotation must be based on the agreed hourly rates. Settlement will then take place via the project in question. All regular work, reports and related time spent by the Supplier on management and maintenance must be included in the fixed availability payment that the Supplier may charge. Rates shall be based on the agreed hourly rates. Settlement of this fixed fee shall take place on a monthly basis. Hours deployed on demand (for example, in the event of support during disruptions or for training programmes) are based on actual hours deployed. Rates must be based on the agreed hourly rates. Settlement takes place on a monthly basis. GVB considers the project startup to be an investment from both parties in a long-term cooperation. The costs of the meeting are shared. The costs for hours of work by the supplier are considered to be included in the rates. Recorded hours are indicative only and are intended to provide a good rate.
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388	Annex 09 price list NSA 2	Tab 3. Service Maintenance & Training, related price item 2.2	Rates Design, Consultancy, Testing and Project Management	How should the Candidate deal with adding roles not listed in Schedule 09, Tab 3?	GVB considers that the three requested functions should cover this need and invites tenderers to take them into account at this stage. To the extent that you believe that more differentiation is needed, you should base your calculation on these three functions. At a later stage, in consultation and if properly substantiated, agreements on more functions can be added.
389	Appendix 08 PVE Part 2 Process requirements	4.3 interaction with the command spring. For the following requirement: L-MT-091-008	Progress report	The Candidate requests that CFP amend the last sentence of this requirement to: "The Contractor shall submit its progress report to the Principal no later than the fourth business day following the end of the applicable period."	CFP agrees and will incorporate this proposal into the final documents.
390	Appendix 08 PVE Part 1A System Specification Traction Rectifier Station_v8.2	L-MT-000-016	The installations of the JS shall be protected against internal faults, overloads and short circuits.	The parameters of internal faults, overloads and short circuits should be verified by the system studies. Can CFP confirm that this system study is a required part of Supplier's scope? If not, can CFP specify the values of these parameters for the selection of corresponding equipment?	The system study for determining the security parameters is a required part of the supplier's scope.
391	Appendix 08 PVE Part 1A System Specification Traction Rectifier Station_v8.2	L-MT-010-008	The HVI must comply with the following specifications: - - Rail system - o Dynamic short-circuit current: to be determined by ON - o Thermal short-circuit current: to be determined by ON - Incoming and outgoing fields (circuit breaker) - o Rated short-circuit tripping current: to be determined by ON - o Rated short-circuit inrush current: to be determined by ON	With regard to the assessment of HVI as follows - Rail systemo Dynamic short circuit currento Thermal short circuit current - Incoming- and outgoing-fields (circuit breaker) - o Allocated tripping current at short circuito Allocated inrush current at short circuit - o Allocated short-circuit current These parameters cannot be determined and justified without the system studies and short circuit calculation. Can CFP confirm that this system study is a required part of the Supplier scope? If not, can CFP specify the values of these parameters for the selection of corresponding equipment?	The system study for determining the specifications of the HVI is part of the scope of the supplier.

392	Appendix 08 PVE Part 1A System Specification Traction Rectifier Station_v8.2	L-MT-020-022	The primary connection of the GS traction transformer shall be made with Elastimold connections or equivalent, suitable for the application of a work earth. Explanation: This only applies to oil-filled transformers.	The traction transformer is according to the requirements a dry type, not an oil-filled type. Can the CFP confirm this? If yes, can CFP therefore confirm that the requirements concerning the use of cable connectors or cable plugs for the transformer are 'Not applicable'?	The traction transformer must be of the dry type and Elastimold connections are therefore not applicable.
393	Appendix 08 PVE Part 1A System Specification Traction Rectifier Station_v8.2	I-MT-040-004	The GVI must be placed in accordance with the Installation Drawings in section 1.2.	In the event that the standard dimension of the panel of the Candidate is larger than specified in the layout drawings of the equipment (e.g. 500 mm for coupling field and 3-position switch), can the Supplier provide a combined SSI panel consisting of 2 sets of 3-position switches and 1 set of disconnecting switches? Indeed, this solution may save some space for installation work.	This is allowed.
394	Appendix 08 PVE Part 1A System Specification Traction Rectifier Station_v8.2	I-MT-040-010	The system's short-circuit protection must be demonstrably short-circuit proof. Verification method Document assessment Design calculation	Can CFP confirm whether or not the short circuit study or calculation is included in Supplier's scope? If included, the Candidate requests GVB to provide the input parameters during the preliminary design phase. However, the results of this study are not yet included in the sizing of the equipment for this tender phase.	The short circuit calculation is included in the scope of the supplier. This is mainly intended to determine the settings of the safety devices. The Candidate should include equipment with adequate dimensions in the tender phase.
395	Appendix 08 PVE Part 1A System Specification Traction Rectifier Station_v8.2	L-MT-041-007	The fast-acting switches must be able to carry the nominal operating current that occurs, taking into account the permissible overload of the rectifier, and also be able to switch the short-circuit currents that occur.	In order to confirm that the fast switch would be able to operate with the allowable overload, Applicant desires: - To provide the specific parameter of the rated load current, and/or; - To provide a DC system study for the proper selection of the fast switch rating. Can CFP provide this required information (as listed above)?	The value of the nominal load flow is supplied.

396	Appendix 08 PVE Part 1A System Specification Traction Rectifier Station_v8.2	L-MT-060-001	ON shall conduct a selectivity study and submit it to OG for approval. The selectivity study must at least cover the following aspects - - Statement of expected maximum operating and design currents (10kV and DC side) - Short-circuit calculations for medium-voltage and DC side - Safety settings for medium-voltage and DC side - Safety settings on the network operator's side - Mutual adjustment in scaling diagrams - Thermal and dynamic short-circuit resistance of cables and installation parts in relation to short-circuit currents and tripping times must also be considered. - The above should be explained and described in a separate report.	The Candidate requests that CFPB further clarify and confirm the scope of the selectivity study as follows: 1) With respect to this requirement: - Expected maximum operating and design flows (10 kV and DC side) - Short-circuit calculations for medium-voltage and DC side: These parameters must be supplied by GVB or related parties. These parameters are also necessary inputs for a selectivity study. Can GVB confirm whether these parameters are available? 2) With respect to the requirement: "The above should be explained and described in a separate report.", please confirm if the Supplier can provide only one report for the setting of relay protection, which contains for example: - The safety settings medium voltage and DC side; - The protection settings on the network operator side; - The intermediate scaling in graduated diagrams; - The thermal and dynamic short-circuit resistance of cables and installation components with respect to short-circuit currents and tripping times should also be considered.	1) The maximum operating and design currents and the minimum short-circuit current in normal operation and N-1 operation are provided. 2) The inclusion of the various components of the selectivity study may be provided in one report.
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397	Appendix 08 PVE Part 1A System Specification Traction Rectifier Station_v8.2	L-MT-064-001	The traction rectifier must be equipped with the following protective devices : - trip (external trip on the respective HVI circuit breaker) AC side overvoltage protection triggered	Regarding the required disconnection signals from overvoltage devices on the AC and DC sides of the traction rectifier, in this case only an overvoltage protection device according to IEC 61643-11 (Low Voltage System Overvoltage Protection) for which remotely triggered signals are available, is appropriate. Can CFP confirm whether this surge arrester (IEC 61643-11) can be used instead of the surge arresters for railway applications according to EN 50526-1 (DC side) and IEC 60996-4 (AC side) which are metal oxide surge arresters? There is no type of metal oxide overvoltage protector on the market that includes this signalling function. If there is an example product that is currently used by GVB Amsterdam, please let us know.	The overvoltage protection devices are not required to have a signal function. The overvoltage protector should be equipped with a fuse that interrupts the current as soon as the overvoltage protector breaks through and no longer comes out of conduction. The tripping of this fuse must be indicated.
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398	Appendix 08 PVE Part 1A System Specification Traction Rectifier Station_v8.2	L-MT-065-007Typical SLD for GRS Metro. Typical equipment layout for Metro.	The DC distribution system must be equipped with a minus earth potential monitoring device according to the binding document: Principle design of minus earth potential monitoring according to EN 50122-1. Minus earth potential monitoring must be implemented with a VLD-O. The threshold values for the various signals are listed in the following table. Values must be in accordance with NEN-EN 50122: - Minus earth trip alarm: 90V - Minus earth trip: 120V - Minus earth trip alarm current: 20A - Minus earth trip alarm current: 200A	According to the requirement and basic design of the minus-earth potential monitoring concept, it should be mentioned that the Voltage Limiting Device (VLD) type VLD-O according to EN 50122-1 is required. However, it is not clear in the typical single line diagram for Metro that this device is to be fitted in a separate panel or that it is to be fitted in a DC panel, (combination) plus/minus panel. In the typical equipment layout for Metro, VLD is also presented as a separate panel. Can GVB confirm that this is a separate panel?	We assume that the VLD can be fitted into the DC panel.
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399	Appendix 08 PVE Part 1A System Specification Traction Rectifier Station_v8.2	L-MT-065-007Typical SLD for GRS Tram. Typical equipment layout for Tram.	The DC distribution system must be equipped with a minus earth potential monitoring device according to the binding document: Principle design of minus earth potential monitoring according to EN 50122-1. Minus earth potential monitoring must be implemented with a VLD-O. The threshold values for the various signals are listed in the following table. Values must be in accordance with NEN-EN 50122: - Minus earth trip alarm: 90V - Minus earth trip: 120V - Minus earth trip alarm current: 20A - Minus earth trip alarm current: 200A	According to the requirement and basic design of the minus-earth potential monitoring concept, it should be mentioned that the Voltage Limiting Device (VLD) type VLD-O according to EN 50122-1 is required. However, with regard to the typical single line diagram for Tram, no VLD is presented, unlike for Metro. Can GVB confirm whether a VLD device is required for Tram or not? If a VLD is required as a separate panel, Candidate requests that CFPB ensure that there is adequate space for this additional panel. Currently, equipment layout drawings indicate that, unlike Metro, there is no space set aside for this panel and all spaces are fully occupied by other equipment.	A VLD is also required for Tram. We assume that the VLD can be placed in the DC panel and no additional panel is needed.
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400	Appendix 08 PVE Part 1A System Specification Traction Rectifier Station_v8.2	Binding document for Part 1A - 1E: Proposal Minus Earth potential monitoring	Single line diagram of Voltage limiting Device.	From the single line diagram of the VLD device in the document "Proposal Minus Earth potential Monitoring", we can see that the VLD would be required as a bi-directional thyristor type only, or a VLD class 2.2 according to EN 50526-2. However, technically it is recommended to use VLD class 3 or 4 for metro where a track potential above 120V may occur several times a day, according to EN 50526-3. For tram, VLD class 2 should be sufficient. Can GVB confirm whether VLD class 2 is required for Metro? - If so, can GVB provide further clarification on the required maximum short circuit current for 1 second (alarm tripping time) or any other specific time period or continuous rating, so that the Supplier can select the correct VLD rating. (Data for tram and metro are both required) - If this is not the case, and instead VLD class 3 or 4 is required, then a separate panel for the VLD must be installed in addition to the installation.	The requirements for the Minus earth potential monitoring are laid down in Appendix 08 PVE Part 1A System Specification Traction Rectifier Station_v8.2 requirement L-MT-065-007. It is not expected that the rail-to-ground voltage will exceed 120 V several times a day. If the requirement is met, we rely on the supplier's advice.
401	Appendix 08 PVE Part 1B System Specification for Traction Switchgear_v5.2	L-M-000-014	The exterior sound level of SS shall not exceed 55dB(A) [LpA] at 10 m distance. Verification method Testing/measurement and report in accordance with IEC 60076-10	IEC 60076-10 is the standard for the noise level of Power Transformers. Can CFP confirm if this applies to switching stations consisting of DC switchgears only?	As a switching station does not contain a transformer, this standard is indeed not applicable. However, the requirement for the maximum outside noise level of 55 dB(A) [Lpa] at a distance of 10 metres is maintained, but it will not be a problem to comply with it. During the switching of the DC switchgears, the level may be briefly exceeded.

402	Appendix 08 PVE Part 1B System Specification for Traction Switchgear_v5.2	L-M-040-007	The GVI must be equipped with a minus field to which the return cables must be connected.	In the case where the switching substation consisting of the quick switch field panel and the cable connection is only on the outgoing rail terminal of the quick switch (i.e. no connection from the main rail according to the typical single line diagram): Can Supplier suggest a direct minus cable connection to the negative bus bar in the Quick Switch field panel? If so, the minus field panel is not required for the switch substation. However, the minus field panel was included in the price list.	The minus connection is only used for measurement purposes and a possible VLD current. It is indeed not necessary to place a separate minus field for this.
403	Appendix 08 PVE Part 1B System Specification for Traction Switchgear_v5.2	L-M-041-004	For this purpose, the quick-acting switches must be equipped with safety devices which cut off the power supply to the contact line network in the event of an excessive current load.	In order to confirm that the high-speed switch can operate at the maximum overload rating, the applicant requires the following information: - The specific parameters of the rated load current; - A DC system study of the CFPB network for proper selection of the high-speed switch rating. Can CFP provide the required information (as listed above)?	See answer to question 396.

405	Appendix 08 PVE Part 1B System Specification for Traction Switchgear_v5.2	L-M-060-001	ON shall conduct a selectivity study and submit it to OG for approval. The selectivity study must cover at least the following aspects - - Statement of expected maximum operating and design currents (DC side) - Short-circuit calculations DC side - Protective settings DC side - Thermal and dynamic short-circuit resistance of cables and installation parts in relation to short-circuit currents and tripping times must also be considered. - The above must be explained and described in a separate report.	The Candidate requests that CFPB further clarify and confirm the scope of the selectivity study as follows: 1) With respect to this requirement: - - Expected maximum operating and design flows (10 kV and DC side) - Short-circuit calculations for medium-voltage and DC side: These parameters must be supplied by GVB or related parties. These parameters are also necessary inputs for a selectivity study. Can GVB confirm whether these parameters are available? 2) With respect to the requirement: "The above should be explained and described in a separate report.", please confirm if the Supplier can provide only one report for the setting of relay protection, which contains for example: - - The safety settings medium voltage and DC side; - The protection settings on the network operator side; - The intermediate scaling in graduated diagrams; - - The thermal and dynamic short-circuit resistance of cables and installation components with respect to short-circuit currents and tripping times should also be considered.	See answer to question 396.
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406	Appendix 08 PVE Part 1B System Specification for Traction Switchgear_v5.2	L-M-065-007	The DC distribution system must be equipped with a minus earth potential monitoring device according to the binding document: Basic design of the minus earth potential monitoring device. Minus earth potential monitoring must be implemented with a VLD-O. The threshold values for the various signals are listed in the following table. Values must be in accordance with NEN-EN 50122: - - Minus earth trip alarm: 90V - Minus earth trip alarm: 120V - Minus earth trip alarm current: 20A - Minus earth trip alarm current: 200A	According to the requirement and basic design of the minus ground potential monitoring concept, it should be mentioned that the Voltage Limiting Device (VLD) type VLD-O according to EN 50122-1 is required. However, with respect to the typical single line diagram, no VLD is presented. Can CFP confirm whether a VLD is required or not?	In the Single line, the VLD is indeed (wrongly) not included. VLD is required.
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407	Appendix 08 PVE Part 1B System Specification for Traction Switchgear_v5.2	Binding document for Part 1A - 1E: Proposal Minus Earth potential monitoring	Single line diagram for Voltage limiting Device.	From the single line diagram of the VLD device in the "Proposal Minus Earth potential Monitoring" document, we can see that the VLD would be required as a bi-directional thyristor type only, or a VLD Class 2.2 according to EN 50526-2. Can CFP confirm whether VLD class 2 is required for a Switching Substation? - If so, can GVB provide further clarification on the maximum short circuit current required for 1 second (alarm tripping time) or any other specific time period or continuous rating, so that Supplier can select the appropriate VLD rating. (Data for tram and metro are both required) - If this is not the case, and instead VLD class 3 or 4 is required, then a separate panel for the VLD must be installed in addition to the installation.	See answer to question #400.
408	Appendix 08 PVE Part 1C System Specification Separators_v1.2	L-M-046-003	When installing new track separators, fixed short-circuit points should be provided.	Does this requirement refer to the short-circuit points inside the rail circuit box? It is not clear to the Candidate whether this is being compared to I-M-046-074 in Section 3.10, which appears to require the fixed short-circuit points to be an external panel as in the following description: "Near the connection to the track separator's power rail, a fixed short-circuit point shall be provided, consisting of: - On the power rail a unique short circuit point number plate; - On the power rail an Arcus ball stud 515.015, 25mm ball, M16, straight; - On the minus leg of the track an Arcus ball stud 515.036, 25mm ball, M12, 45° bend, - At minus leg on other side execute ball stud with insulator.	Requirement L-M-046-003 has been mistakenly named as a supplier requirement. The requirement will be changed to an installer requirement. A new version of document Appendix 08 PVE Part 1C System Specification Separators will be delivered.

409	Appendix 08 PVE Part 1C System Specification Separators_v1.2	L-M-046-009	For the section voltage signal measurement, additional DI are required.	Can CFP confirm that the following are required for the signaling: - voltage measurement (AI) - voltage presence (DI) With respect to L-M-046-057, only voltage presence signals and no voltage measurement are required.	A voltage measurement is not required. The term section voltage signaling measurement in L-M-046-009 refers to section voltage signaling. The text in Appendix 08 PVE Part 1C System Specification Track Separators will be modified.
410	Appendix 08 PVE Part 1C System Specification Separators_v1.2	L-M-046-013	Load switch in accordance with NEN-EN 50123-4, category III and NEN-EN 50124: Appendix E	A load switch is intended for outdoor use (outdoor substation). Would GVB approve it if the Supplier instead provided the load switch in accordance with EN 50123-3 (indoor type) with the IP65 watertight enclosure?	Because of the robustness and availability GVB has deliberately chosen for a load switch according to NEN-EN 50123-4 category III. Therefore, CFP does not agree with this proposal.
411	Appendix 08 PVE Part 1C System Specification Separators_v1.2	L-M-046-037	A connection for a tripod safety device must be provided on the frame (frame) so that the frame can be connected to the minus by a 120 mm ² cable via the tripod safety device.	It is unclear to the Candidate whether the overvoltage protector is connected to the connection from frame to minus. Could CFP clarify this further? However, if Supplier proposes the voltage limiter (VLD-F) according to EN 50122-1 to prevent shocks due to the fault occurring at the frame or a positive fault at the frame, is this acceptable to CFP? or does this even meet the requirement? In this case, the specific value for the operating voltage will have to be specified to Supplier	The use of a trip switch does not constitute a VLD. If the circuit breaker frame or assembly comes into contact with the plus pole of the traction power supply, the trip resistor makes a connection between the circuit breaker frame and the minus pole. Incidentally, the supply of the decay security itself is not part of the supplier's supply.
412	Appendix 08 PVE Part 1C System Specification Separators_v1.2	L-M-046-042	The control and supply unit is used to supply power to the circuit breaker and to communicate with the CBI.	Can CFP indicate which communication protocol is desired between: - Local power and control panel and circuit breaker panel- Local power and control panel and CBI	I/O contacts are used between the control and supply cabinet and the busbar separator cabinet. Profinet is used between the control and supply cabinet and CBI via a fiber optic cable. The remote I/O unit and the OLM (Optical Link Module) are part of the scope of the supplier.
413	Appendix 08 PVE Part 1E System Specification Energy Supply Trafo_v1.0	L-M-022-012	The primary connection of the EV-transformer of the must be made with Elastimold connections or equivalent, suitable for the application of a work earth.	Can CFP confirm that if the EV transformer is of the dry type, the cable connector or cable plug is required in this requirement? This is in fact what is written in: "Appendix 08 PVE Part 1A System Specification Traction Rectifier Station_v8.2", requirement L-MT-020-022. It says there that the cable connector is only required if the transformer is an oil-filled type.	An Elastimold connection is not required for a dry EV transformer.

414	Appendix 08 PVE Part 1C System Specification Separators_v1.2	L-M-046-040	The section voltage signalling shall be included in the load switch box and comply with the following conditions. - Section voltage signal on outgoing section, setting (upper limit) 530 V ~ 53 V (1:10) with a proportional band (lower limit) of 8 % = 4 V ~ 49 V (1:10); - Section voltage relay shall be connected to the traction voltage by means of a A voltage divider (resistor) with a ratio of 1:10; - Branching of the traction voltage is to be made with a cable RMvL 3/6kV 1x 2.5mm² or equivalent; - Power supply 230 VAC / 24VDC, 24W, for section voltage signal relay. The cabling of the primary section must not be mounted directly against the frame, but must be insulated.	Can the Candidate propose an alternative design, if it meets the purpose of this requirement (detection of presence voltage)? Can CFP please confirm this?	The Candidate may propose an alternative but, since the Candidate has not provided any information about its design, we are currently unable to assess this alternative. If the Candidate is unable to demonstrate that the design satisfies the requirements, delivery shall be made in accordance with the requirement.
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415	Appendix 09 price sheet NVI 2, and Appendix 08 general requirements for traction components 1.0	Standard product range tab, "Tram" Column F5to F15 Variants and line 28 to 31; requirement L-T-000-010 (textual description and Table 6)	Variants composition components tram	The variant composition as described in Appendix 09 Price Sheet NVI 2 does not correspond with the textual description and the table in requirement L-T-000-010. The Candidate requests that CFP correct this to avoid an incorrect price sheet.	Appendix 08 of the Schedule of Requirements for the General Part of the Traction Components has been amended and included in Advice for Intermediate Vessels. This has also been adjusted in the price sheet. The updated price sheet is included with the GoI 3.
416	Appendix 09 price sheet NVI 2, and Appendix 08 general requirements for traction components 1.0	Tab Standard Range, "Metro" Column F88 to F100 Variants and Line 120 to 123; Requirement L-T-000-009 (textual description and Table 5)	Variants composition components metro	The variant composition as described in Appendix 09 Price Sheet NVI 2 does not correspond with the textual description and the table in requirement L-T-000-009. The Candidate requests that CFP correct this to avoid an incorrect price sheet.	Appendix 08 of the Schedule of Requirements for the General Part of the Traction Components has been amended and included in Advice for Intermediate Vessels. This has also been adjusted in the price sheet. The number of transformers and rectifiers for gs Spaklerweg and gs Verrijn Stuartweg is adjusted. The adjusted price sheet is enclosed with the Nvl 3.
417	Appendix 08 Schedule of requirements for general part of traction components 1.0	L-MT-010-10 and L-MT-010-11	PFAS	On 14 October 2020, the European Commission issued a publication titled "Chemicals Strategy for sustainability towards a toxic-free environment" regarding the use of PFAS and a possible phase-out. Is CFP going to ban PFAS as well?	GVB will follow the EC guidelines. If an alternative to PFAS-containing products is available, it should be applied.
418	Appendix 08 Schedule of requirements for general part of traction components 1.0	L-MT-010-10 and L-MT-010-11	SF6 / PFAS	Requirements L-MT-010-10 and L-MT-010-11 do not permit SF6. Does this exclusion also apply to all PFAS (per- and polyfluoroalkyl substances) containing substances such as Novac substances, Fluornitrile and Fluorzonet?	See reply to #417.
419	Appendix 12 Further agreement on supply of traction power components, version 1.1 27 August 2021	Article 6.1	Financial provisions	The list of price components does not correspond to all the components called for in the Framework Agreement. The Candidate also provides other price components. Can GVB confirm that the list can be freely adjusted? If this is not possible, how should the Candidate include the costs for other components?	The further agreement is always adapted to the scope of the project for which it is concluded.
420	Appendix 12 Further agreement on supply of traction power components, version 1.1 27 August 2021	Article 9.2	Protocol "Working together safely", implementation conditions with regard to the coronavirus.	Candidate assumes that the installer is responsible for following the protocol. Can CFP confirm this?	This is correct.

421	Appendix 08 PVE Part 2 Process requirements, Appendix 09 Schedule of NVI 2 prices and Appendix 12 Further agreement on delivery of traction power components version 1.1 27 August 2021	Article 5.7.1 and Tab: "3. Service Maintenance & Training".	Education, training and practice	The Candidate is expected to provide training to GVB staff. In accordance with price item 2.3 in Annex 09, an assumption is made in this respect. How does this relate to the price component 'Training' per subcontract in accordance with Article 6.1 of the Detailed Agreement? Is training to be provided for each subcontract?	This will not always be the case. The starting point is that basic training will be given to all performing personnel and basic training to administrators. Subsequently, for each subsection it will have to be assessed whether additional training is necessary. A reason for additional training may be that a new typical is installed or that a new component is applied (e.g. a recovery unit). This remains a customization and will not apply to every project.
422	Annex 08 PVE Part 2 Process requirements and Annex 09 Price sheet NSA 2	Article 5.7.2 and Tab: "3. Service Maintenance & Training".	Activities Education, training and practice	This paragraph defines the following: "The complete, safe and unhindered availability of the relevant infrastructure for the required period of three months". The Candidate asks GVB to state explicitly what is meant by 'infrastructure'. The Candidate also asked GVB to explain what is meant by the 'required period of three months'.	This means that GVB expects the training course to have been started at least three months before the installation concerned enters service.
423	Appendix 08 PVE Part 2 Process requirements	Article 7.3, Requirement L-MT-099-402	Quality assurance	The ten-day deadline is mentioned a number of times in the above requirement. Candidate asks CFP to amend this to: "ten Working Days"	CFP will adjust this. This will be included in the final documents.
425	Appendix 11 Framework agreement for the supply of traction components nvi2 version 1.2 27 Aug 2021	Article 23.3 and Article 23.6	Delivery time	Article 23.3 of the Framework Agreement states that the penalty will apply in the event of late delivery from a third working day. Does the Candidate understand in accordance with Article 23.6 that the delivery time of the components will be determined by the Candidate at the time of the Tender and, consequently, that delivery of spare parts must not take place within two (2) working days of the request for proposal?	This is not correct. Chapter 9.1 and 9.2 of Appendix 8 Part 2 Process requirements apply. On the basis of the requirements from these chapters, Supplier will draw up a list of critical spare parts that GVB will stock. This will be included in the final documents.

426	Appendix 08 PVE Part 1A System Specification Traction Rectifier Station_v8.2	L-MT-000-013System rectifier station - RAMS: MTTF requirements for components	The electrical components must comply with the MTTF values shown in the RAMS limit values overview in section 1.2.	The Candidate shall commit to the confirmed values for MTBF and MTTR. The Candidate shall not, however, be responsible for corrective maintenance of the installation. Improperly performed maintenance may adversely affect the MTBF and MTTR. Does GVB agree that GVB must demonstrate that failure to meet the MTBF and MTTR values and the associated compensation claims must be demonstrated by GVB and not by the Candidate?	CFP will demonstrate the maintenance performed in the event of an MTBF or MTTR claim.
427	Annex 11 Framework agreement for the supply of traction components	Art. 49.1	Change in maintenance	The interested party asks GVB to include in the reimbursement the costs already incurred that are necessary to meet the obligations.	CFP will always issue an annual order in advance for fixed maintenance obligations. Your proposal therefore adds nothing and is not accepted.
428	Appendix 08 Schedule of requirements Part 2 process requirements 1.0 and	L-MT-095-009	Requirements Factory Integration Test (FIT)	Does the FIT have to be carried out with all the equipment to be supplied or is a limited set of components sufficient? For example, is it sufficient to have only one protective relay to demonstrate that the communication is working or must all protective relays including the switchgear be present at the FIT?	The traction transformer is not required for the FIT. In order to demonstrate proper (joint) operation of the protection system, it is necessary for all IEDs and switchgear to be present.

429	Appendix 08 PVE Part 1A System Specification Traction Rectifier Station_v8.2	L-MT-060-001	ON must carry out a selectivity study and submit it to OG for approval. The selectivity study must cover at least the following aspects : - Statement of expected maximum operating and design currents (10kV and DC side) - Short-circuit calculations for medium voltage and DC side - Security settings for medium voltage and DC side - Security settings on the network operator's side - Mutual scaling in scaling diagrams - Thermal and dynamic short-circuit resistance of cables and installation parts in relation to short-circuit currents and tripping times must also be considered. The above should be explained and described in a separate report.	Applicant requests that CFPB further clarify and confirm the scope of the selectivity study as follows: 1) With respect to this requirement: - Expected maximum operating and design currents (10 kV and DC side) - Short circuit calculations medium voltage and DC side These parameters should be supplied by the client or related parties. These parameters are necessary inputs for selectivity study (i.e. relay coordination study). Confirm whether these parameters are available or not. If these values are not provided by CFP, DC simulation for the entire network should be performed at the beginning and then repeated for each new substation or substation to be replaced. A short-circuit study should also be conducted. 2) Regarding the requirement of "the above should be explained and described in a separate report", please confirm if the supplier can only provide one report for relay protection setting, which includes for example: - The safety settings medium voltage and DC side; - The protection settings on the network operator side; - The intermediate scaling in graduated diagrams; - The thermal and dynamic short-circuit resistance of cables and installation components with respect to short-circuit currents and tripping times should also be considered.	See answer question #396.
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430	Appendix 08 PVE Part 1D System Specification Recovery Unit_v1.0 and	L-M-31-004	working voltage. The maximum working voltage of the recovery unit is determined by the maximum voltage at braking, $U_{d,max1}$ according to EN50163.	The no-load voltage of the rectifier transformer is given as 614 V, which gives an absolute no-load peak voltage of $615 * 1.414 = 869$ V. To ensure that the inverter is not fed by the rectifier, its minimum operating voltage (where it starts to recover energy) should be set to a slightly higher value, e.g. 875 to 880 V. In addition, the maximum DC voltage at braking is specified as U_{dmax1} acc. EN 50163. U_{dmax1} is 900 V. This gives a very low operating voltage range for the inverter of $900 - 880$ V = 20 V. Considering a voltage drop along the third rail / running rails / cables from the substation to the track, this means no energy recovery is possible, or only at negligible currents. Is the maximum braking voltage of the rolling stock only 900 V? U_{dmax1} is the highest permanent voltage, but for short periods of time (max. 5 min.) the voltage can be between U_{dmax1} and U_{dmax2}, which is 1000 V. The Candidate requests GVB to further specify the voltages within its network and those of the vehicles.	In Amsterdam, the no-load voltage at the metro is approximately 850 Volts. So the minimum operating voltage of the inverter will indeed have to be set above that. The maximum recovery voltage of the rolling stock is currently 900 V, but may be increased to 1000 V in the future.
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431	Appendix 08 PVE Part 1D System Specification Recovery Unit_v1.0 and	L-M-31-007	Duty cycling	The applicant would like confirmation as to whether a Recovery Unit of up to 1 MW is the maximum power for all scenarios, including two trains braking at the station at the same time. Our understanding of this requirement is 30 s of load followed by 2.5 min of no load. Please confirm. Does this also apply to one direction or both directions? The inverter sees the load from both directions, so this should be taken as the basis for defining the load cycle. Additionally, since the minimum no-load voltage for the metro system is 869 V (calculated in the previous question), an operating range of the inverter up to 750 V will not occur. Please reaffirm the specified range. (based on L-M-31-006 The recovery unit should only be activated above the no-load voltage)	The Candidate cannot guarantee that more braking energy than 1 MW will occasionally be available. In that case, the Recovery Unit must limit its capacity to the value that the unit can supply, but at least to 1 MW. The excess braking energy will in that case be absorbed by the brake chopper on the vehicle. The requirement for 30 sec of full load followed by 2.5 min of no load is correct. However, braking must be assumed from both directions, so 40 braking cycles per hour can occur.
432	Appendix 08 PVE Part 1D System Specification Recovery Unit_v1.0 and	L-M-31-013	Recovery Unit	The applicant would like to receive additional information from GVB about which frequencies, bandwidths and limits could affect the rail safety system.	The old ZUB protection system operates at 50 Hz. The Recovery Unit must not produce 50 Hz components in the DC current to avoid interference with the protection system. The new CBTC system has no direct coupling with the traction or return current, but should not be disturbed by EMC.
433	Appendix 08 PVE Part 1D System Specification Recovery Unit_v1.0 and	L-M-31-037	The availability of the recovery unit will be at least 99.9%.	Can the applicant base the availability on the MTTF values of the equipment?	That's okay.
434	Appendix 08 PVE Part 1D System Specification Recovery Unit_v1.0 and	L-M-31-038	Preventive maintenance should be limited and should only be needed once every 2 years.	Claimant recommends that the recovery unit and all of our other equipment be checked once a year as a preventative measure. Is this acceptable to CFPB?	In addition to this requirement, chapters 9.1 and 9.2 of Appendix 8, Part 2 Process requirements are also applicable. The Supplier shall determine a maintenance strategy in consultation with GVB, based on the requirements from these chapters. The maintenance frequency is determined on the basis of product-specific maintenance requirements and a risk acceptance profile. This will be incorporated in the definitive documents.

435	Appendix 08 PVE Part 1D System Specification Recovery Unit_v1.0 and	Single lineL-M-31-072	Recovery Unit isolation switches shall be motor-operated switches.	Our recovery unit is equipped with a quick-switch in the L+ flow path and a linear manually operated 2-pole horizontal separator which is built with a contact finger system on the swap car for L+ and L- flow paths (standard panel just like the trackfeeder panels, only an additional L- flow path). Can we replace the requested panel with our standard panel as described above?	This is agreed, provided that the quick-switch is remotely operable.
436	Tender Guidelines Traction Components 1.0 and Appendix 09 price schedule NSA 2	Article 2.5 Scope of the commission	The total scope in Figure 1 (Scenario 2 mbt Metro)	The table of scenario 2 for the underground refers to 1 new substation and 1 buffer station. Can GVB indicate which stations are meant here in the price sheet? Is a buffer station the same as a station where a recovery unit is installed?	The new Parnassusweg rectifier station has been added to Appendix 09 of the NVI 4 price schedule. A buffer station is a switching station with energy storage in batteries or supercaps. SS Gaasperplas will possibly be expanded with an energy storage unit in the future. This energy storage unit is not part of the framework agreement and therefore does not need to be offered.
437	Tender Guidelines	Article 2.5 Scope of the commission	The total scope in Figure 1	The numbers of substations to be built and the spare parts required do not match. For example, in Scenario 2 for the tram, 11 substations have to be replaced and 3 new substations are built. This brings the total to 14 tram substations. However, only 13 spare parts need to be offered. Can GVB explain and/or correct this?	Your observation is correct but at this stage we will not change the tender instructions. The actual prices will be determined in due course when the various subprojects are tackled.
438	Appendix 08 Schedule of requirements for general part of traction components 1.0	L-MT-000-016 Testing activities composition of components	The components in table 7 must also be tested as acomposition during the FAT.	Is an in-line test of the transformer, rectifier and GVI sufficient or do all other components such as HVI and control panel also have to be present?	The HVI and the control panel must also be present to demonstrate proper operation. If necessary, the transformer can be tested separately.
439	Appendix 09 Price list NVI 2	Tab 2. Standard range	Number of Minus/Plus field panels for Tram	The numbers of the plus and minus fields are not displayed consistently. For example for GS Vlietstraat and GS Lijnbaansgracht only 1 plus and 1 minus field are requested while 2 rectifiers per station are planned. Can GVB provide the correct numbers?	This has been adjusted in Appendix 09 Pricing Sheet NVI 4.

440	Appendix 09 Price list NVI 2	Tab 2. Standard range	Number of Minus/Plus field panels for Metro	The numbers of the plus and minus fields are not displayed consistently. For example, for GS Ringvaart, GS Spaklerweg and GS Verrijn Stuartweg only 1 plus and 1 minus field are requested while 2 rectifiers per station are planned. Can GVB provide the correct numbers?	This has been adjusted in Appendix 09 Pricing Sheet NVI 4.
441	Appendix 09 Price list NVI 2	Tab 2. Standard range	Number of Minus/Plus field panels for Metro & Tram	The price sheet lists the plus and minus panels separately. In Appedix 08 Part 1A, there is a request for a combined plus / minus panel. Can GVB indicate which variant is desired? If CFP wants a combined field, at what position should the applicant enter the price?	This has been adjusted in Appendix 09 Pricing Sheet NVI 4.
442	Appendix 09 Price list NVI 2	Tab 2. Standard range	Number of SSI panels for Metro	The Candidate requests that CFP better specify the scope of delivery of the SSI including the 3-position switch and the coupling fields. The Candidate has not found a document that describes these panels, nor is there a single line available. Can CFP provide at least a single line of technical data for the SSI?	The SSI with 3-position switch is specified in Annex 08 PVE Part 1A System Specification Traction Rectifier Stations. The single line diagram is shown in the Appendix to this PVE: Single line diagram typical Rectifier Station.
443	Appendix 09 Price list NVI 2	Tab 2. Standard range	Test work and support installer	Only one position in the price schedule is available for stating the costs of supporting the assembly firm in testing and commissioning. In the Candidate's opinion, at least six different variants can be distinguished that are widely separated in terms of costs. 1) Full traction substation; 2) Full traction switching station; 3) Supplying separate transformers; 4) Supplying three recovery systems; 5) Supplying 25 track separators for the metro; 6) Supplying power transformers for the metro stations. Can GVB indicate for which variant we should include the costs in the price sheet?	We ask you to take into account the replacement of a full traction substation because this is by far the most common variant;

444	Annex 11 Framework agreement for the supply of traction components	Art. 24	Obsolescence management	The Candidate requests that GVB apply this Article only to the list of critical spare parts.	This is not acceptable. In view of GVB's need to standardise installations as much as possible, GVB wants to be able to consider alternatives or the creation of its own stock for each component purchased via the framework agreement.
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Amendments and supplements to tender documents by the client

The following changes have been made:

At the request of interested parties, GVB has again extended the period for registration.

The deadline for receipt of tenders under 3.2 of the Tender Guidelines is replaced by 15 November 2021 at 13:00 hours.

Expired tender documents

The following tender documents have lapsed:

- Appendix 08 PVE Part 1C System Specification Separators_v1.2 and
- Appendix 08 PVE Part 1C System Specification Separators_v1.2
- Appendix 09 Price list NVI 3-EN
- Appendix 09 Price list NVI 3

Amended or new Tender Documents

The following tender documents have been added:

- Appendix 08 PVE Part 1C System Specification for Track Separators_v1.3 and
- Appendix 08 PVE Part 1C System Specification Separators_v1.3
- Annex 09 NVI 4-EN price schedule
- Appendix 09 Price list NVI 4

***** End of Information Memorandum*****