



REQUEST FOR PROPOSALS

Rehabilitation of the main wastewater collector in Veliky Novgorod

Country: Russia

**Selection of Consultant for: Project Implementation Support for the
Rehabilitation of Main Wastewater Collector in Veliky Novgorod**

Client: NEFCO

14.01.2022

Section 1 – Letter of Invitation

Helsinki, 14.01.2022

Dear Sir/Madam,

Funds of up to EUR 250,000 will be allocated from the Sida-Nefco Russia Consultancy Trust Fund for consulting services to Nefco. This amount includes a 5% provision for contingencies.

The overall purpose of the assignment is to facilitate the timely and effective implementation of the Nefco/NDEP funded project by rendering assistance to Nefco and its client, Novgorod Vodokanal, in the implementation of the Project, including preparation of technical specifications and tender documents, tender evaluation, contracting, contract management and engineering supervision.

NEFCO now invites proposals to provide the following consulting services: “**Project Implementation Support for the Rehabilitation of Main Wastewater Collector in Veliky Novgorod, Russia**”. The details of the required services are provided in the attached Terms of Reference.

This Request for Proposals (“RFP”) has been published on Nefco’s webpage.

Indication of Interest

Any questions on the Terms of Reference or the other documentation in the RFP shall be provided in writing to Nefco by e-mail: procurement@nefco.int with copy to vitaly.artyushenko@nefco-ru.ru no later than **04.02.2022** after which all questions will be compiled by Nefco without any editing in the form they are sent to NEFCO. Answers to the questions are submitted by e-mail to all Consultants that have confirmed their intent to prepare a proposal.

Please inform NEFCO by e-mail: procurement@nefco.int with copy to vitaly.artyushenko@nefco-ru.ru, not later than **01.02.2022** whether you intend to submit a proposal.

Submission of Proposals

Proposals must be submitted to NEFCO no later than at **12.00 hrs (Helsinki time) on 18.02.2022** (submission date). NEFCO may at its discretion extend the deadline for submission of proposals. Belated proposals will be rejected and returned unopened.

The proposal shall be divided into two parts: a technical proposal and a financial proposal. The requirements for the proposals are described in detail in Section 2 – Instructions to Consultants. The attached standard forms are to be used for the purpose.

Proposals shall be submitted in English and must remain valid for 90 days. Consultants willing to prepare and submit a proposal are responsible for all associated costs.

The proposal shall be submitted to NEFCO using secure encrypted e-mails, in two separate emails:

Email A: Technical Proposal

The Technical Proposal shall be sent to NEFCO to email address procurement@nefco.int by using this link <https://www.securedmail.eu/message/procurement@nefco.int> . The password shall be sent as a SMS to number + 358 50 462 9780. Please indicate as title: “Rehabilitation of the main wastewater collector in Veliky Novgorod, Project Implementation Support Consultancy Services; Technical Proposal”.

For further information, please see the enclosed document in Annex 3.

Email B: Financial Proposal

The Financial Proposal shall be sent to NEFCO to email address nelly.eriksson@nefco.int by using this link <https://www.securedmail.eu/message/nelly.eriksson@nefco.int> . The password shall be sent as a SMS to number +358 50 5978028. Please indicate as title: “Rehabilitation of the main wastewater collector in Veliky Novgorod, Project Implementation Support Consultancy Services; Financial Proposal”.

For further information, please see the enclosed document in Annex 3.

A consultant will be selected under **quality and cost-based selection method** and procedures described in this RFP, in accordance with NEFCO’s [Procurement Policy and Procedures](#) available at www.nefco.int under Procurement.

This RFP includes the following documents:

- Section 1 - Letter of Invitation
- Section 2 - Instructions to Consultants
- Section 3 - Technical Proposal - Standard Forms
- Section 4 - Financial Proposal - Standard Forms

Annex 1: Nefco’s General Terms and Conditions for Consultancy Services


Annex 2: Terms of Reference

Annex 3: Securedmail manuals

Yours sincerely,



Trond Moe
Managing Director
Nordic Environment Finance Corporation



Mia Alén
Finance Manager
Nordic Environment Finance Corporation



Section 2 – Instructions to Consultants

1. Rules concerning nationality of consultants

The funds used for this consultancy assignment are made available from the Sida-Nefco Russia Consultancy Trust Fund through NEFCO. According to the terms and conditions on the operation of the Fund there are no limitations on the nationality of the firm/individuals or the subconsultants nor the project country expertise.

2. Preparation and Submission of Proposals

2.1. Consultants submitting proposals are expected to examine carefully and respect all instructions, forms, General Terms and Conditions, Terms of Reference and specifications contained in this Request for Proposals. Failure to submit a proposal containing all the required information and documentation within the deadline specified in the Letter of Invitation may result in rejection of the proposal. The standard forms in Sections 3 and 4 of this Request for Proposals shall be used as applicable.

2.2. Consultants shall submit technical and financial proposals in separate e-mails marked “**Technical Proposal**” and “**Financial Proposal**”, as appropriate. No financial data of any sort shall be included in the technical proposal. Only e-mails containing technical proposals shall be opened at the time of submission of proposals. The financial proposals will be kept unopened and in safe custody until the technical evaluation is completed.

2.3. Technical Proposal (not exceeding 15 pages, excluding CVs)

Consultant’s technical proposal shall demonstrate the firm’s knowledge of the requirements of the assignment and its understanding of the requisite tasks set forth in the scope of work of the Terms of Reference. Information must be provided on the firm and any subconsulting firm/individual associated with for the purpose of the assignment. Provision of the requested information, in full, must be presented as follows:

- (a) A brief description of the firm, an outline of the firm’s recent experience of assignments of a similar nature and specifically the firm’s/individual’s previous work, especially in the project country. Information on the current workload of the firm in the relevant areas of this assignment shall also be presented.
- (b) Comments or suggestions, if any, on the Terms of Reference designed to improve performance in carrying out the assignment.
- (c) Comments and elaborations on general approach and methodology.
- (d) Composition of the team which the firm proposes to provide in the field and in the home office, together with curricula vitae of each individual team member and the specific task(s) to which each team member would be assigned. The team leader and the key experts listed in

the evaluation criteria table (section 3.6 of the Instructions to Consultants) shall be specifically identified. Members of the team shall have requisite experience outside their own country, preferably under conditions similar to those prevailing in the project country. A good working knowledge of English is essential for the staff. Proficiency in Russian language is an additional merit. The language conditions for the assignment are stated in the Terms of Reference. If the firm proposes to have a member of the consultant's home office responsible for the supervision of the team in the field, similar details shall be given with the *curricula vitae* of that member.

- (e) Work programme including a bar chart and a staffing schedule. The bar chart shall indicate estimates of the duration and total staff days, weeks or months that would be provided for each task. The staffing schedule shall indicate clearly the estimated duration (in both the home office and in the field) and the probable timing of the assignment of each professional (both foreign and local).
- (f) Description of office space, vehicles, equipment, local counterpart support etc. required in the field for carrying out the proposed services.

2.4. Financial Proposal

- (a) The firm's financial proposal shall be denominated in EUR. The costs shown shall include a detailed breakdown of (i) *remuneration* for the number of days/weeks/months of each team member to be assigned and the related unit rates, (ii) *direct expenses* in respect of subsistence costs and housing allowances and (iii) *all reimbursable expenses*.
- (b) Financial proposals as submitted by the firm will be considered in the evaluation and selection of consultants. However, each element of the financial proposal of the selected firm will be reviewed during contract negotiations for determining the final contract price.
- (c) **Audit.** NEFCO retains the right to audit, both during and after the assignment, the selected firm's accounts and time and cost records relevant to the services provided, including such accounts and records as will enable verification of the costs related to the assignment.
- (d) **Funds.** The amount of funds allocated for this assignment is stated in the Letter of Invitation, exclusive of VAT. The financial proposal shall cover all foreign and local costs of services for this assignment including costs of staff in the field and in the home office. The financial proposal shall be based on a minimum of home office contribution during the assignment. It shall also cover international travel (economy class or equivalent), preparation of final reports, equipment, insurance, office supplies, subsistence, local transport, facilities, equipment, and all related expenses. The consultant shall be responsible for all direct and indirect tax liabilities (if any) arising out of or connected to the performance of the services wherever they arise.

The rates and prices shall be fixed for the duration of the assignment and no currency fluctuation or other adjustments will be made.

(e) **Contract.** A time-based contract will be concluded for the assignment.

3. Evaluation of Proposals

- 3.1. Evaluation of the proposals will be carried out by an evaluation committee appointed by NEFCO.
- 3.2. A two-stage procedure is adopted for evaluating the proposals. The technical proposals will be evaluated first, merit points awarded and the proposals ranked in order of their respective merit points, prior to the opening and evaluation of financial proposals. Quality of the technical proposal, particularly that of the staff proposed, shall be the principal criterion for evaluation of proposals and selection of consultants.
- 3.3. *Technical proposals* shall be evaluated and merit points awarded based on the following factors:
- (a) The firm's experience in the disciplines forming part of the total assignment, with specific reference to experience in Russia in general and in the region of the assignment in particular;
 - (b) The approach to the assignment, the suggested work programme and organisation and composition of the proposed team of experts, plus comments, if any, on methodology in response to the Terms of Reference; and
 - (c) The qualifications, experience and competence of the experts proposed for the assignment.

See further the scoring table below. All evaluations will be made relating to the Required Qualifications in the Terms of Reference.

- 3.4. A technical proposal may be treated as non-responsive if information with respect to any of the factors (a), (b) or (c) as requested above in section 3.3 is omitted. Only firm (i) awarded a minimum of 70 technical proposal merit points and (ii) having technical merit points within 15 points of the highest technical score will be considered for the second stage (financial evaluation). If no firm scores the required minimum of technical points, NEFCO reserves the right to negotiate with the firm scoring the highest technical points, or to reject all proposals.
- 3.5. A firm will be excluded from the evaluation if, at the discretion of NEFCO, the firm has been, or might be placed, in a conflict of interest position in the procurement process or the performance of the contract. Firms or individuals, which believe such a situation may exist, shall seek guidance from NEFCO prior to preparing the technical proposal.
- 3.6. The specific evaluation criteria are listed below:

PRINCIPAL FACTORS IN EVALUATION	Maximum points
1. Experience of Consulting firm/individual	
a) Experience from similar projects	10
b) Experience from Russia	10

Subtotal 1	(20)
2. Approach and methodology	
a) Relevance to the Terms of Reference	5
b) Suggested work programme	5
c) Staffing plan	10
Subtotal 2	(20)
3. Qualifications and competence of key experts	
a) Team leader	20
b) Civil Engineer/Procurement Expert	15
c) Supervision Expert	15
d) Pool of experts	10
Subtotal 3	(60)
TOTAL	100

3.7. *The financial proposals* will be opened and evaluated only after the technical evaluation has been completed and merit points awarded to each proposal. The financial proposal e-mails of only those firms that have qualified for the financial evaluation in accordance with section 3.4 above will be opened for financial evaluation. The financial e-mails of the remaining firms will remain unopened and will be returned, after NEFCO has awarded a contract to the selected firm/individual.

3.8. **Correction of Errors.** Activities and items described in the technical proposal but not priced in the financial proposal shall be assumed to be included in the prices of other activities or items, and no corrections are made to the financial proposal.

Time-based contract. The evaluation committee will (a) correct any computational or arithmetical errors, and (b) adjust the prices if they fail to reflect all inputs included for the respective activities or items in the technical proposal. In case of discrepancy (i) between a partial amount (sub-total) and the total amount, or (ii) between the amount derived by multiplication of unit price with quantity and the total price, or (iii) between words and figures, the former will prevail. In case of discrepancy between the technical and financial proposals in indicating quantities of input, the technical proposal prevails and the evaluation committee will correct the quantification indicated in the financial proposal so as to make it consistent with that indicated in the technical proposal, apply the relevant unit price included in the financial proposal to the corrected quantity, and correct the total proposal cost.

3.9. The financial proposal representing the lowest evaluated price will be given the score 100; others are rated as follows:

$$\text{Financial score of firm A} = \text{lowest evaluated price} / \text{price of firm A} \times 100;$$

If the financial proposal exceeds the indicated available funds it may be rejected at the discretion of NEFCO. Financial proposals including cost components in other currencies than EUR shall be converted to EUR according to the exchange rates published by the European Central Bank on the submission date of the proposal.

- 3.10. In the final evaluation combining the technical and financial scores, the technical merit score will be given a weight of 80 percent and the financial score shall be given a weight of 20 percent. The firm with the highest evaluated weighted score will be invited to contract negotiations.

4. Contract Negotiations and Award

- 4.1. NEFCO reserves the right to reject all proposals.
- 4.2. The consultancy services are expected to commence no later than within 10 days after the conclusion of the consultancy agreement. Contract negotiations will be carried out by representatives of NEFCO.
- 4.3. The costs of preparing a proposal and of negotiating and concluding a contract including the costs of travel to participate in possible pre-bid meeting are not reimbursable as costs of the assignment.
- 4.4. NEFCO expects to conclude a contract on the basis of the experts named in the proposal and will require, in the contract negotiations, assurances that these experts can, in fact, be made available. NEFCO will, at its sole discretion, consider substitutions only in case the commencement of the assignment would otherwise be delayed, for reasons unrelated to selected consultant, or, exceptionally, because of incapacity of an expert for reasons of health. The desire of a firm to use an expert on another project will not be accepted as a reason for substitution of staff and may result in the rejection of the firm in question.
- 4.5. The firm that submitted the first-ranked proposal will be invited to discuss technical and financial details of the proposal and the terms of the contract without delay. Discussions will commence with a review of the technical proposal, the proposed approach and work plan, staffing and any suggestions the consultant may have made to improve the Terms of Reference. Agreements will be reached, first, on the final Terms of Reference, work plan, time schedule, the staff to be employed, their periods of work in the field and in the home office, frequency and timing of home travel, housing costs, budget to be allocated for the provision of office equipment, and next, on the facilities and services to be provided by local counterparts. Thereafter, financial negotiations will begin with discussions of the proposed fee rates for each team member, and of other costs as indicated by the consultants. In subsequent negotiations, the reasonableness of each item included in the Financial Proposal of the selected firm will be assessed. Consultants shall be prepared to disclose during negotiation data backing up the consultant fees and other costs and be aware and accept that the proposed rates and other costs will be subject to scrutiny and possible negotiation.
- 4.6. The representatives of the consulting firm invited for contract negotiations must be authorised (on behalf of all bidding partners) to discuss and agree on the technical and financial aspects of the proposal as well as the terms and conditions of contract and to conclude a binding agreement. Should the discussions with the first invited firm prove unproductive and/or unsatisfactory, the firm submitting the next-ranked proposal will be invited instead (and so on, if necessary, until an agreement is concluded). As soon as the contract is signed with the finally selected consulting firm (the "Consultant"), other firms will be informed accordingly.

- 4.7. Payments will be made to the Consultant from the Sida-Nefco Russia Consultancy Trust Fund. The Consultant will be payed only for work performed based on the payment schedule finalised at the contract negotiations. Payments will be made in 30 days after receiving the Consultant's invoice.

Section 3 – Technical Proposal – Standard Forms

FORM TECH-1 TECHNICAL PROPOSAL SUBMISSION FORM

[Location, Date]

To: Nefco

Dear Sir/Madame,

We, the undersigned, offer to provide the consulting services for “**Project Implementation Support for the Rehabilitation of Main Wastewater Collector in Veliky Novgorod, Russia**” in accordance with your Request for Proposals dated 14.01.2022 and our Proposal. We are hereby submitting our Proposal, which includes this Technical Proposal, and a Financial Proposal sent in a separate e-mail.

[We are submitting our Proposal in association with: *[insert a list with full name and address of each associated Consultant/member of Consortium].*]

We hereby declare that all the information and statements made in this Proposal are true and accept that any misinterpretation or misrepresentation contained in it may lead to our disqualification.

If negotiations are held during the period of validity of the Proposal as defined in the Letter of Invitation, we undertake to negotiate on the basis of the proposed staff. Our Proposal is binding upon us during this period, and subject to the modifications resulting from Contract negotiations.

We undertake, if our Proposal is accepted, to initiate the consulting services related to the assignment not later than the date indicated in Clause 4.2 of the Instructions to Consultants.

We understand that you are not bound to accept any proposal you receive.

We hereby accept the General Terms and Conditions for Consultancy Services attached as Annex 1 to your RFP.

Yours sincerely,

Authorized Signature [*In full and the original copy initialized*]:

Name and Title of Signatory:

Name of Firm:

Address:

Section 3 – Technical Proposal – Standard Forms

FORM TECH-2 CONSULTANT'S ORGANISATION AND EXPERIENCE

A - Consultant's Organisation

Provide here a brief (max 3 pages) description of the background and organisation of your firm [as well as of each subconsultant] for this assignment.

B - Consultant's Experience

Please provide information on each assignment, relevant for this assignment, for which your firm [and each joint venture/consortium partner and subconsultant] was legally contracted either individually as a corporate entity or as one of the major companies within a consortium, for carrying out consulting services similar to the ones requested under this assignment (max 1 page per project and 5 pages in total) including information on contract value, contracting entity/client, project location/country, duration (months and years), expert months provided (if different from duration), main activities and objectives.

Section 3 – Technical Proposal – Standard Forms

FORM TECH-3 COMMENTS AND SUGGESTIONS ON THE TERMS OF REFERENCE

A – Comments and Suggestions on the Terms of Reference

Present and justify here any modifications or improvement to the Terms of Reference you are proposing to improve performance in carrying out the assignment (such as deleting some activity you consider unnecessary, or adding another, or proposing a different phasing of the activities). Such suggestions shall be concise and to the point, and incorporated in your Proposal.

Section 3 – Technical Proposal – Standard Forms

FORM TECH-4

DESCRIPTION OF APPROACH, METHODOLOGY AND WORK PLAN FOR PERFORMING THE ASSIGNMENT

Technical approach, methodology and work plan are key components of the Technical Proposal. You are suggested to present your Technical Proposal (max 8 pages, inclusive of charts and diagrams) divided into the following three chapters:

- a) Technical Approach and Methodology,
- b) Work Plan, and
- c) Organisation and Staffing.

a) Technical Approach and Methodology. In this chapter you shall explain your understanding of the objectives of the assignment, approach to the services, methodology for carrying out the activities and obtaining the expected output, and the degree of detail of such output. You shall highlight the problems being addressed and their importance, and explain the technical approach you would adopt to address them. You shall also explain the methodologies you propose to adopt and highlight the compatibility of those methodologies with the proposed approach.

b) Work Plan. In this chapter you shall propose the main activities of the assignment, their content and duration, phasing and interrelations, milestones, and delivery dates of the reports. The proposed work plan shall be consistent with the technical approach and methodology, showing understanding of the Terms of Reference and ability to translate them into a feasible work plan. A list of the final documents, including reports, drawings, and tables to be delivered as final output, shall be included here. The work plan shall be consistent with the Work Schedule of Form TECH-8.

c) Organisation and Staffing. In this chapter you shall propose the structure and composition of your team. You shall list the main disciplines of the assignment, the key expert responsible, and proposed technical and support staff.

Section 3 – Technical Proposal – Standard Forms

FORM TECH-6 CURRICULUM VITAE (CV) FOR PROPOSED PROFESSIONAL STAFF

CVs may be provided in any format you prefer, but shall as a minimum clarify the following issues for every member of the proposed professional staff:

1. Proposed Position [*only one candidate shall be nominated for each position*]:
2. Name of Firm/Individual [*insert name of firm/individual proposing the staff*]:
3. Name of Staff:
4. Date of Birth:
5. Nationality:
6. Education:
7. Membership of Professional Associations:
8. Other Training:
9. Countries of Work Experience:
10. Languages [*for each language indicate proficiency: good, fair, or poor in speaking, reading, and writing*]:
11. Employment Record Relevant to the Assignment:
12. Adequacy for the Assignment: Detailed Tasks Assigned [*list all tasks to be performed under this assignment*] and Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks:

Expert's contact information: (e-mail, phone.....)

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by NEFCO, and/or sanctions by NEFCO.

Section 3 – Technical Proposal – Standard Forms

{day/month/year}

Name of Expert

Signature

Date

{day/month/year}

Name of authorized
Representative of the Consultant
(the same who signs the Proposal)

Signature

Date

Section 3 – Technical Proposal – Standard Forms

FORM TECH-7 STAFFING SCHEDULE

For professional staff the input shall be indicated individually; for support staff it shall be indicated by category. Weeks are counted from the start of the assignment. Indicate home and field work separately - field work means work carried out at a place other than in the home office.

No	Name of Staff	Staff input (in the form of a bar chart)														Total staff-week input			
		1	2	3	4	5	6	7	8	9	10	11	12	n	Home	Field	Total		
Foreign																			
1		(Home)																	
		(Field)																	
2																			
n																			
														Subtotal					
Local																			
1		(Home)																	
		(Field)																	
2																			
n																			
														Subtotal					
														Total					

Section 3 – Technical Proposal – Standard Forms

FORM TECH-8 WORK SCHEDULE

No.	Activity	Weeks													
		1	2	3	4	5	6	7	8	9	10	11	12	n	
1															
2															
3															
4															
5															
n															

Indicate all main activities of the assignment, including delivery of report (e.g inception, interim, and final reports) and other relevant benchmarks. Duration of activities shall be indicated in the form of a bar chart.

Section 3 – Technical Proposal – Standard Forms

FORM TECH-9 COVENANT OF INTEGRITY

**to the Purchaser/Client/Employer/NEFCO
from a Tenderer/Contractor/Supplier/Service Provider/Consultant
to be attached to its tender
(or to the contract in the case of a negotiated procedure)**

“We declare and covenant that neither we nor anyone, including any of our directors, employees, agents, joint venture partners or sub-contractors (“the **Parties**”), where these exist, acting on our behalf with due authority or with our knowledge or consent, or facilitated by us, has engaged, or will engage, in any Prohibited Practices (as defined below) in connection with the tendering process or in the execution or supply of any works, goods or services for [*specify the contract or tender invitation*] (the “**Contract**”) and covenant to so inform you if any instance of any such Prohibited Practices shall come to the attention of any person in our organisation having responsibility for ensuring compliance with this Covenant.

We shall, for the duration of the tender process and, if we are successful in our tender, for the duration of the Contract, appoint and maintain in office an officer, to whom you shall have full and immediate access, having the duty, and the necessary powers, to ensure compliance with this Covenant.

If any of the Parties, where these exist and as applicable, (i) have been convicted in any court of any offence involving Prohibited Practices in connection with any tendering process or provision of works, goods or services during the five (5) years immediately preceding the date of this Covenant, or (ii) have been dismissed or resigned from any employment on the grounds of being implicated in any Prohibited Practices, or (iii) have been excluded from participation in a tendering procedure by Nordic Environment Finance Corporation (NEFCO) or by any national or EU Institutions or any international financial institution or other sanctions authority, which NEFCO deems relevant, or (iv) is under any investigation in relation to Prohibited Practice, we shall give details of any event in (i)-(iv) above together with details of the measures that we have taken, or shall take, to ensure that no Party will commit any Prohibited Practices in connection with the Contract [*give details if necessary*].

In the event that we are awarded the Contract, we grant the Purchaser/Client/Employer/NEFCO and auditors appointed by either of them, as well as any authority or body having competence under relevant legislation, the right of inspection of our records and those of all our sub-contractors under the Contract. We accept to preserve these records generally in accordance with applicable law but in any case for at least six (6) years from the date of performance of the Contract.”

For the purpose of this Covenant, “Prohibited Practices” includes:

- **Abuse** meaning theft, misappropriation, waste or improper use of property or assets related to the Contract, either committed intentionally or through reckless disregard.

Section 3 – Technical Proposal – Standard Forms

- **Coercion** meaning impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party for the purpose of improperly influencing the actions of a party.
- **Collusion** meaning an arrangement between two or more parties designed to achieve an improper purpose, including for the purpose of improperly influencing the actions of another party.
- **Corruption** meaning the promise, offering, giving, receiving, or soliciting, directly or indirectly, anything of value or any undue advantage, or any act or omission that involves the abuse of authority or functions, for the purpose of influencing or causing to influence improperly the actions of another party, or for the purpose of obtaining an undue advantage for oneself or for another party.
- **Fraud** meaning any act or omission, including misrepresentation or concealing a material fact, that knowingly or recklessly misleads, or attempts to mislead, a party for the purpose of obtaining a financial or other benefit or undue advantage for oneself or for a third party, or to avoid an obligation.
- **Obstruction** meaning
 - (i) deliberately destroying, falsifying, altering or concealing evidence material to an investigation;
 - (ii) making false statements to investigators in order to materially impede an investigation;
 - (iii) failing to comply with requests to provide information, documents or records in connection with an investigation;
 - (iv) threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to a NEFCO investigation or from pursuing an investigation; or
 - (v) materially impeding NEFCO’s contractual rights of audit or access to information; and
- **Money laundering** meaning
 - (i) the conversion or transfer of property, knowing that such property is derived from criminal activity, to conceal and disguise the illicit origin of the property, or assisting any person who is involved in the commission of such activity to evade the legal consequences of this action;
 - (ii) the concealment or disguise of the true nature, source, location, disposition, movement, rights with respect to, or ownership of property, knowing such

Section 3 – Technical Proposal – Standard Forms

property is derived from criminal activity;

(iii) the acquisition, possession or use of property knowing, at the time of receipt, that such property was derived from criminal activity; or

(iv) participation or assistance in any of the activities above; and

- **Financing of terrorism** meaning the provision or collection of funds, by any means, directly or indirectly, with the intention that they should be used or in the knowledge that they are to be used, in full or in part, in order to carry out terrorist activities (the "terrorist activities" shall have the same meaning as set out in Article 2 of the International Convention for the Suppression of the Financing of Terrorism).

Date:

Signature:

[Name and position]

for and on behalf of

[Name of the firm/individual or joint venture]

Note: When so required by NEFCO this Covenant must be sent to NEFCO together with a copy of the contract documents. In other cases, it must be kept by the Beneficiary and available upon request from NEFCO.

Section 4 – Financial Proposal – Standard Form

FORM FIN-1 FINANCIAL PROPOSAL SUBMISSION FORM

[Location, Date]

To: NEFCO

Dear Sirs:

We, the undersigned, offer to provide the consulting services for “**Project Implementation Support for the Rehabilitation of Main Wastewater Collector in Veliky Novgorod, Russia**” in accordance with your Request for Proposals dated 14.01.2022 and our Technical Proposal. Our attached Financial Proposal is for the **Total Cost of [insert currency and amount(s) in words and figure]**. This amount is exclusive of the applicable VAT.

Our Financial Proposal shall be binding upon us subject to the modifications resulting from the contract negotiations, up to expiration of the validity period of the Proposal as defined in the Letter of Invitation . We understand that any final rates and prices resulting from the contract negotiations will remain fixed until the end of the assignment.

Commissions and gratuities paid or to be paid by us to agents relating to this Proposal and execution of contract, if we are awarded the contract, are listed below:

Name and Address, Amount and Purpose of Commission of Agents, Currency or Gratuity

[If no payments are made or promised, add the following statement: “No commissions or gratuities have been or are to be paid by us to agents or any third party relating to this Proposal and Contract execution.”]

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

Authorized Signature *[in full and the original copy initialized]*:

Name and Title of Signatory:

Name of Firm/Individual:

Address:

Section 4 – Financial Proposal – Standard Forms

FORM FIN-2 SUMMARY OF COSTS

Type of cost	Costs	
	EUR	[currency]
Remuneration		
Reimbursable Expenses		
Subtotals		
Grand total in EUR		

The relevant grand total must coincide with the Total Costs of the Financial Proposal given in Form FIN-1. For each currency, Remuneration and Reimbursable Expenses must respectively coincide with the relevant Total Costs indicated in Forms FIN-3, and FIN-4.

Section 4 – Financial Proposal – Standard Form

FORM FIN-3 BREAKDOWN OF REMUNERATION

A. Remuneration _____								
No.	Name ²	Position (as in TECH-6)	Person-month Remuneration Rate ⁴	Time Input in Person/Month (from TECH-6)	{Currency # 1- as in FIN-2}	{Currency # 2- as in FIN-2}	{Currency# 3- as in FIN-2}	{Local Currency- as in FIN-2}
Key Experts								
K-1			[Home]					
			[Field]					
K-2								
Non-Key Experts								
N-1			[Home]					
N-2			[Field]					
Total Costs								

Section 4 – Financial Proposal – Standard Forms

FORM FIN-4 BREAKDOWN OF REIMBURSABLE EXPENSES

B. [Reimbursable] _____								
N°	Type of [Reimbursable Expenses]	Unit	Unit Cost	Quantity	{Currency # 1- as in FIN-2}	{Currency # 2- as in FIN-2}	{Currency# 3- as in FIN-2}	{Local Currency- as in FIN-2}
	{e.g., subsistence costs**}	{Day}						
	{e.g., International flights}	{Ticket}						
	{e.g., In/out airport transportation}	{Trip}						
	{e.g., Communication costs between Insert place and Insert place}							
	{ e.g., Reproduction of reports}							
	{e.g., Office rent}							
							
	{Training of the project owner's personnel – if required in TOR}							
Total Costs								



NEFCO'S GENERAL TERMS AND CONDITIONS FOR CONSULTANCY SERVICES

1 RESPONSIBILITY, PROFESSIONAL PRACTICE, INTEGRITY, IMPARTIALITY AND INDEPENDENCE

- 1.1 The Consultant shall be fully responsible for the Services and perform them in an objective and professional manner in compliance with best industry practice for similar services.
- 1.2 While providing the Services, the Consultant shall protect NEFCO's interests and act dutifully and transparently towards NEFCO.
- 1.3 The Consultant shall not receive or request instructions for the performance of the Services from any other party than NEFCO (unless otherwise explicitly instructed by NEFCO).
- 1.4 The Consultant shall during the Assignment remain financially and otherwise independent of other consultants, manufacturers, suppliers, contractors and other actors and/or factors that may prejudice the Consultant's objectivity. In particular the Consultant shall not accept any referral fee or other compensation from other consultants, manufacturers, suppliers, or contractors recommended by the Consultant.
- 1.5 The Consultant shall promptly inform NEFCO of any assignment or relation with a third party which might affect or be seen to affect the Consultant's impartiality or create a potential conflict of interest in relation to the Assignment.
- 1.6 The Parties are independent parties and the Parties agree that the Agreement shall not be deemed as an employment agreement and that the Consultant is not, nor any other person performing services under this Agreement, engaged by NEFCO as an employee but as an independent consultant and that relevant provisions of the Swedish Employment Protections Act (1982:80) shall not be applicable on the Parties' arrangement under this Agreement.

2 TIME SCHEDULE, INFORMATION, ASSIGNED PERSONNEL AND COOPERATION WITH THIRD PARTIES

- 2.1 The Services shall be provided in accordance with the time schedule in the Special Terms and Conditions and as possibly described in more detail in the annexes. The Consultant shall ensure that the agreed time schedule is adhered to.
- 2.2 The Parties shall keep each other timely informed about events or matters relevant for the performance of the Services. The Consultant shall without delay inform NEFCO Responsible person of any events which have had or are likely to have an adverse impact on the Consultant's provision of the Services within the agreed time schedule and/or otherwise negatively impact the Consultant's performance and/or fulfilment of the Services. Any delay or other underperformance in carrying out the Services shall be subject to the remedies set out in Sections 4, 5 and 17.
- 2.3 The Services shall be carried out personally by the Consultant or the personnel of the Consultant as set out in Section 1 of the Special Terms and Conditions and as possibly described in more detail in the annexes (the "**Assigned Personnel**"). If the Consultant should wish to engage a subcontractor to perform a certain part of the Services, the matter shall be discussed with NEFCO, including its possible effects on the Consultant's remuneration, and can only be done subject to NEFCO's prior written approval. Notwithstanding such approval, the Consultant shall remain fully responsible and liable for the performance of the Services, including any Services provided by its subcontractors as if they had been carried out by the Consultant.
- 2.4 The Consultant shall, without unreasonable delay and at no cost to NEFCO, be obliged to replace any Assigned Personnel performing the Services, who NEFCO reasonably considers is lacking the necessary competence, whom NEFCO finds it manifestly difficult to collaborate with or whose conduct is inconsistent with what NEFCO reasonably expects. The

identity of such replacing personnel as well as any other changes of the Assigned Personnel and any possible effects on the Consultant's remuneration, shall be subject to NEFCO's prior written approval (except if triggered by a *force majeure* situation). If approved by NEFCO, the replacing personnel shall become Assigned Personnel. Any changes in the Assigned Personnel shall not affect the agreed time schedule, in the absence of NEFCO's prior written consent.

- 2.5 If and to the extent relevant, the Consultant shall while providing the Services co-operate with other parties as may be determined by NEFCO.

3 CHANGE REQUEST

- 3.1 NEFCO and/or the Consultant may request the other Party to make changes to the Services to be provided.

- 3.2 In such case, the requesting Party shall submit a written request (the "**Change Request**"). The Change Request shall contain a description of the content of the proposed change as well as the reasons for the change and the effect the change is deemed to have on the Services.

- 3.3 The receiving Party shall within reasonable time review the Change Request in terms of its possible impact on the agreed Total Fee, time schedule and/or other agreed terms and conditions, and each Party shall be entitled to either approve or reject the Change Request.

- 3.4 If the Change Request is accepted by the other Party, the change shall be formalized through both Parties approving it in writing and the change shall thereafter be considered as an amendment to the Agreement.

- 3.5 The Parties agree and acknowledge that comments to form or substance, revision, adjustment, correction and/or supplemental requirements to bring the Services to a final and acceptable/agreed form (including all reasonable incidental work related thereto, such as meetings, telephone calls, correspondence etc.) shall not be considered as changes to the Services in terms of Sections 3.1 to 3.4 above.

4 ERRORS, OMISSIONS AND DELAY

- 4.1 The Consultant shall, at no cost to NEFCO, assume responsibility for correcting any errors and/or omissions in the performance of the Services.

- 4.2 In the event that the Consultant is delayed in performing the Services or a material error, defect and/or non-conformity occurs in the Services, and the situation upon NEFCO's request is not remedied or corrected within 30 (thirty) days to NEFCO's satisfaction, NEFCO shall (without prejudice to NEFCO's other rights under the Agreement, including, without limitation, the right to liquidated damages in accordance with Section 5) have the right to:

- (i) accept the Services in their then current form at a reduced price which corresponds to the value of the actually delivered part; or alternatively;
- (ii) complete itself or appoint a third party to complete the Services at the Consultant's sole cost and expense; or alternatively;
- (iii) terminate the Agreement in whole or in part with immediate effect, while reserving all other rights available to it under the Agreement and applicable law; and in addition to (i) - (iii)
- (iv) seek damages from the Consultant.

5 LIQUIDATED DAMAGES IN CASE OF DELAY

- 5.1 If the Consultant is not able to provide the Services within the agreed time schedule and this is not caused by *force majeure* or circumstances related to NEFCO, then the Consultant shall pay liquidated damages to NEFCO in compensation for the delay.
- 5.2 The liquidated damages shall amount to 0.2 percent of the agreed Total Fee excluding VAT, for each working day the Services are delayed, but in any circumstances limited to a maximum of 50 (fifty) working days. NEFCO shall be entitled to deduct such liquidated damages from any amounts owed by NEFCO to the Consultant under the Agreement.
- 5.3 If only parts of the agreed Services are delayed, the Consultant may request NEFCO to reduce the liquidated damages in such way that the compensation is proportional to the ability of NEFCO to utilise those parts of the Services that have been performed and delivered to NEFCO.
- 5.4 Any claims for liquidated damages shall be presented by NEFCO in writing to the Consultant at the latest 90 (ninety) days from the day on which the Assignment was completed or the Agreement was terminated. If NEFCO should not present a claim to the Consultant within this time limit, NEFCO's right to liquidated damages shall be deemed forfeited.

6 REMUNERATION

- 6.1 The remuneration to be paid by NEFCO to the Consultant in return for the Services shall consist of the fee agreed in the Special Terms and Conditions.
- 6.2 The Total Fee can be either fixed or variable. Variable fees shall be based on performance on a time and material basis.
- 6.3 If agreed in the Special Terms and Conditions, NEFCO shall, against receipts or written clarification, in addition to the Total Fee, pay compensation for the costs listed below:
- (i) reasonable travel costs in economy class including airport transfers;
 - (ii) reasonable accommodation costs in a standard hotel room including breakfast only; and
 - (iii) other expenditures required for providing the Services.
- 6.4 Notwithstanding Section 6.3, NEFCO will not reimburse (i) travel time, or (ii) travel costs within the Helsinki metropolitan area (meaning a range of sixty (60) kilometres measured from the centre of Helsinki).
- 6.5 NEFCO will not pay any daily allowances to the Consultant.

7 TERMS OF PAYMENT

- 7.1 Payment(s) will be made by NEFCO in accordance with the payment schedule agreed in the Special Terms and Conditions. If no payment schedule is agreed, the Consultant shall invoice NEFCO monthly in arrears after the Services have been performed by the Consultant and accepted by NEFCO.

- 7.2 According to Article 9 of the Agreement concerning NEFCO¹, NEFCO is in the Nordic countries exempted from taxation, including VAT, in relation to its official activities. Also, as an international organization, NEFCO is exempted from VAT within the European Union².
- 7.3 Invoices specifying the nature and extent of the Services performed will be paid by NEFCO within 30 (thirty) days from the date of receipt, subject to NEFCO's acceptance of the Services as satisfactory. Should an invoice or a part thereof be disputed by NEFCO, NEFCO will up-front pay the undisputed part.
- 7.4 The Consultant shall submit a written confirmation issued by the account-holding bank confirming that the Consultant is the legal owner of the bank account to which the payment is requested to be made.
- 7.5 At the latest within 90 (ninety) days after completion of the Assignment, the Consultant shall submit a final invoice specifying any outstanding payments with respect to the Services provided under the Assignment. NEFCO's payment of the final invoice will only take place once NEFCO has agreed to that the Assignment has been completed. Any subsequent claim for payment shall entail no more than the right of set-off of any payments owed by NEFCO to the Consultant, unless the Consultant, within the specified time, gives written notification to the effect that an outstanding payment, unknown to him at that time, may lead to a further claim, or can show that the claim is based on the outstanding sum that was unknown to him at the time.
- 7.6 If NEFCO should not make an undisputed payment on time, the Consultant shall be entitled to request interest on the overdue amount if the claim is presented within reasonable time not exceeding 45 (forty-five) days after the overdue date, at an annual interest rate of 9% p.a. (nine per cent per annum) from and including the due date to but excluding the date of actual payment.

8 LIABILITY AND LIMITATION OF LIABILITY

- 8.1 The Consultant shall, subject to the limitations specified below in this Section 8 and any additional provisions agreed in the Special Terms and Conditions, be liable for any damage that the Consultant, its subcontractors or any other party engaged by the Consultant for the performance of the Services, may cause NEFCO to incur as a consequence of the Consultant's wilful misconduct, negligence or breach of the Agreement.
- 8.2 NEFCO's acceptance of the Services shall not release the Consultant from liability.
- 8.3 The total aggregate liability of both Parties under or in relation to the Agreement shall be limited to the higher of (i) 50,000 euro; or (ii) the value of the Total Fee and possible costs compensation paid or payable by NEFCO to the Consultant under the Agreement.
- 8.4 The limitation of liability set out in this Section 8 shall not apply in case of gross negligence, fraud, wilful misconduct, death or personal injury, material breach of the Agreement or breach of the Agreement in relation to the intellectual property rights or indemnification provisions set out in Section 9 or in relation to the confidentiality provision in Section 12. Further, the limitation of liability set out in this Section 8 shall not apply in case the Consultant is liable for payments to any third party in accordance with Section 4.2.

¹Agreement between Denmark, Finland, Iceland, Norway and Sweden concerning the Nordic Environment Finance Corporation, available at NEFCO's website www.nefco.int.

² On the basis of Article 151(1), point b, of Directive 2006/112/EC on the common system of value added tax (as amended by 2009/162/EC) and Article 12(1), point b, of Directive 2008/118/EC concerning the general arrangements for excise duty.



9 RIGHTS OF OWNERSHIP, INTELLECTUAL PROPERTY RIGHTS AND INDEMNIFICATION

- 9.1 All rights, title, interest and all intellectual property rights in and to any pre-existing material, information, data, programs, models, methods and/or work created by a Party outside the scope of this Agreement or prior to the execution of this Agreement, shall vest in and remain the sole and exclusive property of that Party.
- 9.2 All rights, title, interest and all intellectual property rights in or relating to the Services shall vest exclusively in NEFCO. The Consultant may retain copies of documents and data, but shall not be entitled to use this material for purposes unrelated to the Services without NEFCO's prior written consent.
- 9.3 Equipment, vehicles and materials made available to the Consultant by NEFCO, or purchased by the Consultant wholly or partly with funds supplied or reimbursed by NEFCO under this Agreement shall be the property of NEFCO and shall be marked as such. Upon completion of the Services or termination of the Agreement, the Consultant shall make available to NEFCO an inventory of such equipment, vehicles and materials and shall dispose of same equipment, vehicles and materials in accordance with NEFCO's instructions.
- 9.4 For the avoidance of doubt, nothing in this Agreement shall limit a Party's right to use the general professional skills, experience and know-how acquired and/or applied by it under or in relation to this Agreement for the benefit of itself or a third party.
- 9.5 The Consultant shall indemnify, defend and hold NEFCO harmless from any and all claims, suits, actions or demands asserted against NEFCO world-wide, and against all liabilities, damages, losses, costs and expenses (including but not limited to attorney's fees) which NEFCO may incur when arising directly or indirectly from any infringement or alleged infringement of any patent, trademark, copyright or design or any other intellectual property right of a third party, if such claim, demand, suit or action may be attributable to the Consultant's provision of the Services. Should an intellectual property claim, or threat for such claim, arise, the Parties shall seek to agree on appropriate measures to address the matter. The cost for the defence against any such claim shall be entirely borne and covered by the Consultant as set out above.
- 9.6 No limitation(s) of liability set out in the Agreement or otherwise shall apply to the indemnification undertaking to hold NEFCO harmless as set out in Section 9.5 above.

10 INSURANCE

- 10.1 The Consultant shall maintain adequate insurance for any liability under this Agreement, including for safeguarding of the documents and other property of NEFCO, which may be in the Consultant's possession during the Assignment.
- 10.2 Unless otherwise agreed between the Parties, the Consultant shall maintain adequate professional liability insurance throughout the entire period of the Assignment.
- 10.3 The Consultant shall be responsible for insuring its Assigned Personnel, and for ensuring that any subcontractor(s) is similarly insured, against death, injury, loss of property and illness. The Consultant shall also be responsible for ensuring that adequate travel insurance is in place.
- 10.4 Upon NEFCO's request, the Consultant shall provide evidence demonstrating that sufficient insurance is in place.



11 LEGAL STATUS OF NEFCO

11.1 The Consultant expressly acknowledges NEFCO's legal status as an international organisation, vested with certain immunities and privileges, and the impact this special legal status has on NEFCO's contractual obligations as follows:

- (i) NEFCO is a legal person under international law and is governed solely by and operates under its constituent documents;
- (ii) NEFCO enjoys immunity from jurisdiction, which means that the chosen dispute resolution mechanism shall be arbitration and only a final arbitral award is binding upon NEFCO;
- (iii) NEFCO itself, its property and assets (wherever located and by whomsoever held) are immune from search, requisition, confiscation and expropriation by executive and legislative actions (including any interim court orders, injunctive reliefs etc.);
- (iv) NEFCO's premises, archives, and all documents belonging to NEFCO or held by NEFCO are inviolable and the communications of NEFCO are protected by bank secrecy and are confidential;
- (v) NEFCO has its own established governing and supervisory bodies and, therefore, NEFCO is exempted from audit inspections and disclosure requirements under national laws or as otherwise may be imposed on a party through a contractual relationship; and
- (vi) NEFCO is not bound by any national or EU legislation on protection of personal data. NEFCO's Global Privacy Policy (available at NEFCO's website) provides information on why and how personal data is processed at NEFCO.

11.2 Nothing in this Agreement shall be construed as a waiver, renunciation or other modification of any immunities, privileges or exemptions accorded to NEFCO pursuant to the Agreement concerning NEFCO, any international convention or any applicable law. Notwithstanding the foregoing, NEFCO has made an express submission to arbitration under Section 16 and accordingly, and without prejudice to its other privileges and immunities (including, without limitation, the inviolability of its archives), it acknowledges that it does not have immunity from suit and legal process in respect of the enforcement of a final arbitral award duly made against it as a result of its express submission to arbitration pursuant to Section 16.

12 CONFIDENTIALITY

12.1 The Consultant understands and agrees that as part of the Assignment, the Consultant may get access to information (in hard copy, electronic format or verbally) that relates to NEFCO's or NEFCO's clients' and cooperation partners' past, present or future operations, businesses, research, development, finances, services and technical know-how or knowledge (the "**Confidential Information**"). Any information related to NEFCO and its activities is protected by bank secrecy and shall therefore be treated as Confidential Information and be subject to the confidentiality obligation set out in this Section 12. Furthermore, all information contained in this Agreement shall be deemed Confidential Information.

12.2 The Consultant undertakes to keep confidential any Confidential Information it may receive from NEFCO, a client of NEFCO or any third party under or in connection with this Agreement and, save as specifically permitted below, not to divulge this information to any third party without NEFCO's prior written consent. The Consultant undertakes to use the Confidential Information solely for the purposes of this Agreement.

- 12.3 Save as may follow from statutory obligations of confidentiality, the above shall not apply to any information that:
- (i) is in the public domain at the time of disclosure or later becomes a part of the public domain through no breach of this Agreement;
 - (ii) is received by the Consultant in good faith from a third party who is under no obligation of confidentiality with respect thereto;
 - (iii) is known to the Consultant without any obligation of confidentiality prior to disclosure by NEFCO;
 - (iv) is independently developed by the Consultant without utilizing the Confidential Information as evidenced by the Consultant's written records;
 - (v) is expressly authorised to be disclosed by NEFCO in writing; or
 - (vi) is required to be disclosed by law or in accordance with the requirement of a supervisory or regulatory authority to which the Consultant is subject to. For the sake of clarity, the Consultant expressly acknowledges that NEFCO enjoys inviolability of its archives and communication, including any data, information and material, and therefore any disclosure in accordance with this subsection shall always be subject to NEFCO's prior written consent. Any such authorised disclosure shall only be made to the extent required.
- 12.4 The Consultant may give access to Confidential Information received from NEFCO to its Assigned Personnel and/or subcontractors (if any) only on a need-to-know basis, and provided that there is always a clear understanding of the confidential nature of the information as set out in this Section. The Consultant further represents and warrants that it will ensure that the Assigned Personnel and/or subcontractors (if any) will agree to be bound and adhere to the confidentiality obligations set out in this Section. The Consultant also accepts that all Assigned Personnel performing the Services shall, at NEFCO's request, be obliged to sign a separate confidentiality agreement.
- 12.5 The Consultant shall exercise its utmost care in safeguarding that the Confidential Information is appropriately processed, stored, handled and protected.
- 12.6 The rights and obligations set out in this Section shall survive the expiry or termination of this Agreement. Upon expiry or termination of the Agreement for any reason, the Consultant shall immediately cease using the Confidential Information and, upon NEFCO's request, destroy or promptly return all concerned material (and all copies thereof) to NEFCO and confirm to NEFCO, within 15 (fifteen) days after NEFCO's request, that all of the Confidential Information has been destroyed or returned.

13 PERSONAL DATA PROTECTION

- 13.1 The Consultant shall at all times comply with the applicable data protection laws in processing any personal data, including by procuring all requisite consents where necessary, including where explicit consent is required.
- 13.2 The Consultant
- (i) has introduced and applies appropriate data protection policies and procedures concerning the collection, use, storage, retention, transfer and security of personal data;
 - (ii) has implemented regular staff training, using testing, audits or other documented mechanisms to ensure and monitor compliance with those policies and procedures;



- (iii) has ensured that only authorised personnel has access to personal data and that such access has only been granted on a need to know basis; and
- (iv) maintains complete, accurate and up to date records of all of its personal data processing activities as required by the applicable data protection laws.

14 AUDITING, ANTICORRUPTION AND ETHICAL CONDUCT

- 14.1 The Consultant shall (i) keep accurate and systematic accounts and records with respect to the Services provided under the Agreement, in accordance with internationally accepted accounting principles and in a form and detail which clearly identifies all relevant charges and costs, and their basis; and (ii) upon request up to two (2) years from the expiration or termination of the Agreement, permit NEFCO or its designated representative to inspect these accounts and records and to make copies thereof as well as to have them audited by auditors appointed by NEFCO.
- 14.2 The Consultant acknowledges and confirms that it is aware of and undertakes to comply with NEFCO's Policy on Anticorruption and Compliance, available at NEFCO's website (the "**Anticorruption Policy**"), which includes specifically an undertaking to (i) not engage directly or indirectly in any abuse, coercion, collusion, corruption, fraud, obstruction, money laundering or financing of terrorism as defined in the Anticorruption Policy (the "**Prohibited Practices**"), and (ii) promptly, upon becoming aware of any suspected or alleged Prohibited Practices in relation to the Services or the Agreement, notify NEFCO in writing.
- 14.3 The Consultant acknowledges and confirms that it is aware of and undertakes to comply with NEFCO's Policy on Prevention of Sexual Exploitation, Sexual Abuse and Sexual Harassment, available at NEFCO's website (the "**SEAH Policy**"), which includes specifically an undertaking to (i) refrain from directly or indirectly participating or engaging in any form of sexual abuse, sexual exploitation or sexual harassment as defined in the SEAH Policy, and (ii) promptly, upon becoming aware of any suspected or alleged SEAH in relation to the Services or the Agreement, notify NEFCO in writing.
- 14.4 The Consultant undertakes while performing the Services to observe the highest ethical standards and to follow all applicable laws, including but not limited to those relating to payment of taxes and/or social security contributions in accordance with the laws of the country in which the Consultant is domiciled, operates or where the Services are performed.
- 14.5 The Consultant shall provide NEFCO or any designated NEFCO representative its full and timely cooperation during any integrity due diligence process or investigation relating to a suspected or alleged breach of the Anticorruption Policy or the SEAH Policy, and shall require its agents, attorneys, accountants or other advisers, to cooperate as reasonably required during any due diligence, audits or investigations carried out by NEFCO. The Consultant shall also make relevant personnel available for a meeting with the NEFCO representative.
- 14.6 NEFCO shall, in its sole discretion, have the right to terminate the Agreement with immediate effect, should it become apparent in the reasonable opinion of NEFCO that the Consultant, the Assigned Personnel or any other parties involved in the provision of the Services have engaged in Prohibited Practices or in SEAH, and/or have not adhered to the obligations under this Section 14.

15 REFERENCE RIGHT

- 15.1 The Consultant shall be entitled to use NEFCO name as a reference for marketing or other purposes subject to NEFCO's prior written consent in each individual case.

16 GOVERNING LAW AND DISPUTE RESOLUTION

- 16.1 This Agreement shall be governed by and construed in accordance with the substantive laws of Sweden.
- 16.2 Any dispute, controversy or claim arising out of or in connection with this Agreement, or the breach, termination or invalidity thereof, which has not been settled amicably by mutual agreement of the Parties within 60 (sixty) days after the other Party's receipt of a written request for negotiations by either Party to such effect, shall be finally settled by arbitration administered by the Arbitration Institute of the Stockholm Chamber of Commerce (the "SCC").
- 16.3 The Rules for Expedited Arbitrations of the SCC (the "**Expedited Rules**") shall apply where the amount in dispute does not exceed EUR 300,000. Where the amount in dispute exceeds EUR 300,000, the Arbitration Rules of the SCC (the "**Arbitration Rules**") shall apply. The arbitral tribunal shall be composed of a sole arbitrator appointed in accordance with the Expedited Rules or Arbitration Rules, as relevant. The amount in dispute shall be calculated as including the claims made in the request for arbitration and any counterclaims made in the answer to the request for arbitration. With reference to points 11.1 (ii) and 11.1 (iii) in Section 11 of this Agreement, Article 38 (Interim measures) of the Expedited Rules and Article 37 (Interim measures) of the Arbitration Rules shall not be applicable to NEFCO during the arbitral proceeding.
- 16.4 The legal seat and place of arbitration shall be Stockholm, Sweden. The arbitrator may, at /her discretion, hold hearings, meetings and deliberations at any other convenient geographical place in order to secure the efficient and cost-effective conduct of the proceedings.
- 16.5 The language to be used in the arbitral proceedings (including the documentation) shall be English.
- 16.6 The arbitral award shall be final and binding upon the Parties.

17 TERM AND TERMINATION

- 17.1 The Agreement shall become effective and binding upon signing by both Parties and shall remain effective until both Parties have fulfilled their respective obligations under the Agreement, unless terminated earlier in accordance with this Agreement.
- 17.2 NEFCO shall be entitled to terminate the Agreement with 30 (thirty) days prior written notice. In such case the Consultant shall be entitled to compensation, in accordance with this Agreement, (i) for the Services carried out until the notice of termination was made and (ii) for occurred verified necessary expenses which have not yet been reimbursed.
- 17.3 NEFCO shall be entitled to terminate the Agreement with immediate effect upon written notice, if the Consultant files for bankruptcy or is put into liquidation, receivership or becomes insolvent. In such case the Consultant shall be entitled to compensation, in accordance with this Agreement, (i) for the Services carried out until the notice of termination was made and (ii) for occurred verified necessary expenses which have not yet been reimbursed.
- 17.4 Either Party shall be entitled to terminate the Agreement with 30 (thirty) days prior written notice, if there is a *force majeure* event that continues for more than 30 (thirty) days or if the other Party is in material breach of its obligations under the Agreement and the breaching Party fails to remedy such breach within the notice period. Any unpaid fee that is disputed by NEFCO shall not constitute a material breach under this Section.
- 17.5 Upon termination, the results of work carried out shall immediately be handed over to NEFCO, unless otherwise agreed between the Parties.



18 AMENDMENTS TO THE AGREEMENT

18.1 Any amendments to the Agreement shall be made in writing and accepted and signed by the authorised representatives of both Parties.

19 TRANSFER OF THE AGREEMENT

19.1 The Consultant may not assign or transfer this Agreement or any of its rights or obligations under the Agreement without NEFCO's prior written consent.

20 NOTICES

20.1 Any notice to be given by one Party to the other shall be made in writing and deemed properly given or made when delivered to the recipient by hand, registered mail, courier or email during normal business hours to the address and contact person specified in Section 1 of the Special Terms and Conditions (or to such other address as may be notified in writing from time to time by either Party). If given by email, any notice shall promptly be confirmed by registered letter or courier.

21 SURVIVING TERMS

21.1 The following Sections of NEFCO's General Terms and Conditions for Consultancy Services shall survive any termination or expiry:

- Section 8, Liability and Limitation of Liability;
- Section 9, Rights of Ownership, Intellectual Property Rights and Indemnification;
- Section 11, Legal Status of NEFCO;
- Section 12, Confidentiality;
- Section 13, Data Protection;
- Section 14, Auditing, Anticorruption and Ethical Conduct;
- Section 15, Reference Right; and
- Section 16, Governing Law and Dispute Resolution.

REHABILITATION OF THE MAIN WASTEWATER COLLECTOR, VELIKY NOVGOROD, NORTH-WEST RUSSIA

CONSULTING SERVICES FOR IMPLEMENTATION OF THE PROJECT

TERMS OF REFERENCE

1 BACKGROUND

In 2009 Northern Dimension Environmental Partnership (NDEP) approved a EUR 3 million grant to co-finance Novgorod Water and Wastewater Services Project led by NIB and co-financed by NEFCO. Total project cost amounted to EUR 23 million, major part of which (EUR 15 million) came from local sources. Local and IFI financing was used to finance rehabilitation of water infrastructure while the NDEP grant was used specifically to support rehabilitation of a wastewater collector. At the time, a new collector was built to replace part of the old collector. The other part is still in function but is also in need of urgent rehabilitation. In June 2020, Novgorod Vodokanal approached NEFCO with a request to finance construction of the next section of the new collector to replace the second part of the old collector and thus complete replacement of the whole collector (hereafter “The Project”).

An independent Consultant was hired in August 2020 to assess the Project’s feasibility with regard to technical, economic and environmental aspects of the Project in order to make decisions regarding feasibility of further Project development and its presentation for the approval to the NEFCO Board and NDEP for, respectively, possible loan and grant co-financing. The report is attached to these Terms of Reference as Annex 1.

The Project was approved by the NDEP Assembly of Contributors and the NEFCO Board during 2020 - 2021 and shall consequently be financed by the NDEP grant of EUR 1.5 million and the Nefco loan of EUR 1.65 million. Novgorod Vodokanal is covering the costs of design and permit documentation in an estimated amount of EUR 60 thousand. Loan and grant agreements are currently in the final preparation stage and are expected to be signed in January 2022.

2 THE PROJECT

Veliky Novgorod, the capital city of the Novgorod Oblast, is located in North-West of Russia, on the River Volkhov draining to Lake Ladoga and further to the Gulf of Finland of the Baltic Sea. Novgorod Vodokanal, a municipal unitary enterprise owned by the City of Veliky Novgorod, is responsible for operation of the water supply and wastewater collection systems in the city. Population served by the systems is approximately 220 000.

2.1 Present Situation

Wastewater from the Western and Pskov regions of the city is collected to gravity collector no. 18 with the diameter of DN 1 200. This collector was taken in operation in 1974. Pipe material used is reinforced concrete with the installation depth varying from 5 to 7 meters. Existing condition of the collector is critical. As a result of long-term operation and internal gas corrosion, sewer pipes in some areas have been destroyed. Gas corrosion has destroyed the protective layer of the reinforcement resulting in loss of its bearing capacity. In addition, the inspection manholes along the collector are also in an emergency condition due to gas corrosion.

Due to poor condition breakdowns of the collector are frequent. In 2019 totally 20 breakdowns were reported causing overflow of wastewater through the storm water system to the recipient water body. Due to these breakdowns flooding starts and causes overflows by the following means:

- Direct overflows from wastewater collector to storm water sewers by overflows in manholes.
- Flooding of wastewater to basements of apartment blocks. In order to avoid flooding the basements are connected to storm water system.
- As wastewater and storm water sewers are usually in the same trench infiltration through the ground from wastewater sewer to storm water sewer is possible.

According to estimates prepared by Novgorod Vodokanal the total amount of wastewater discharged through storm water system to the recipient was 149 660 m³ in 2019.

In order to improve the situation with collector no. 18 a parallel new collector no. 20 was built in 2011-2012 along the end part of collector no. 18. The new collector no. 20 has diameter of 1 500 mm and total length of 1.3 km. The works were financed by a grant from the Northern Dimension Environmental Partnership (NDEP) as part of overall water and wastewater investment project for Veliky Novgorod.

A project design was prepared in 2009 for the whole section of collector no. 20. However, due to lack of sufficient financing only part of the collector based on this design was completed in 2011-2012. The works included construction of new collector using DN 1 500 PE pipes for open trench technology totally 1 112 m and using DN 1 500 concrete pipes (112 m) with internal PE coating and DN 1 500 PE pipes (30 m) for micro-tunnelling technology resulting that total length of new collector built was 1 254 m. In addition, the works included construction of seven PE manholes and two concrete manholes along the new collector.

2.2 Project to be implemented

The Project includes completion of the new wastewater collector no. 20 in order to convey all wastewater generated in Western and Pskov regions to District pumping station without using the existing collector no. 18, which is planned to be used only for collection of small amounts of wastewater from premises located along the collector.

The works include the following:

- Construction of collector no. 20 using open trench technology (i.e. opening a trench for installation of collector) for 1 320 m.
- Construction of collector no. 20 using micro-tunnelling technology (i.e. using boring technology to avoid open trenches) for 407 m.
- Construction of 11 manholes along the collector.

The project design and working documents from 2009 have been updated in 2021 including minor changes to the route of new collector due to new structures built since the design was prepared. The updated design does not require approval from the State Expertise as the changes (i) do not affect the design solutions, (ii) do not result in a change in the class, category and/or initial performance parameters of the facilities and (iii) do not result in violations of technical regulations, sanitary and epidemiological requirements, environmental protection requirements, requirements for state protection of cultural heritage, requirements for the safe use of nuclear energy, industrial safety requirements, requirements for ensuring the reliability and safety of power systems and power facilities, and requirements for anti-terrorist protection of the facility.

Nefco now wishes to engage a project management consultant (the “Project Engineer”) to provide assistance in the implementation of the Project to Nefco (the Financier) and Novgorod Vodokanal (the

Client) and provide advice and services as described in the following sections of these Terms of Reference (the “Assignment”).

3 OBJECTIVES OF ASSIGNMENT

The overall purpose of the Assignment is to facilitate the timely and effective implementation of the Project by rendering assistance to the Client in the implementation of the Project, including preparation of technical specifications and tender documents (including environmental, health and safety requirements), tender evaluation, contracting, contract management and engineering supervision.

With the involvement of the Project Engineer, the Client is expected to have access to the best practice in the implementation of the Project and procurement of works as well as advice on specific technical issues.

The Project Engineer shall provide assistance in the procurement of works and goods fully in accordance with the procedures, specifications and documentation of NEFCO and pursuant to all other provisions stipulated in the Loan and Grant Agreements signed between the Financier and the Client.

More specifically, the Assignment will include the following main tasks (as further outlined in Section 4 below):

1. Assist the Client in establishing the Project Implementation Unit.
2. Review the design documents and cost estimates prepared for the Project.
3. Prepare the Employer’s Requirements for the Contract.
4. Prepare tender documents for the Contract.
5. Assist the Client in procurement and contracting.
6. Provide contract and engineering supervision.
7. Provide training to the PIU in all aspects of project implementation.

4 SCOPE OF SERVICES AND SPECIFIC TASKS

4.1 Project Implementation Unit

4.1.1 Establishment of the PIU

The Client shall establish the Project Implementation Unit (PIU), which will be responsible for making decisions on behalf of the Employer. The PIU shall be operational for the whole implementation phase including (i) selection of the Project Engineer, (ii) tendering, tender evaluation and contract award for the Works Contract and (iii) implementation of the Works Contract.

The Project Engineer will:

- Analyse the PIU’s capabilities in view of the required PIU tasks and provide recommendations for further development, including preparation of job specifications, identify demand for additional PIU specialists and assist with selection of the additional staff.
- Identify demand for staff training and propose a training program of specific courses, seminars as needed.

The Project Engineer will provide on-the-job training to the PIU staff. The training program shall include *inter alia* the following:

- Procurement, contract administration and supervision, project management, team management etc.
- Accounting systems, financial management, regulations and financial reporting.

- Fulfilment of the Environmental and Social Action Plan, and reporting thereon, including compilation of the Annual Environmental and Compliance report in the NEFCO format.

4.2 Review of Design, Cost Estimates and Procurement Strategy

4.2.1 Review of the Design

The Project Engineer shall review the working documents prepared for implementation of the works and discuss with the Client whether any changes to the Scope of Works or the design documentation are needed. After the review, the Project Engineer together with the Client will decide what kind of revisions are needed to be incorporated in the final documents. Thereafter, the Designer is requested to make the necessary changes to working documents.

4.2.2 Preparation of Environmental and Social Action Plan

The Project Engineer shall in connection with the review of design prepare an Environmental and Social Action Plan (ESAP) for the project in compliance with the NEFCO's Environmental and Social Performance Requirements and makes sure that the Client is duly informed about these requirements.

4.2.3 Approvals and Permits

The Project Engineer shall review whether all permit requirements for the works have been received and are valid. In case design changes are needed the Project Engineer will check whether such changes require updating of the permits.

4.2.4 Review of Cost Estimates

The Project Engineer will review the cost estimates prepared for the Works Contract and conclude whether available financing matches the planned works. In case risks in financing the whole scope of works exist, the Project Engineer shall negotiate with the Client whether some works could be left as optional works in tendering phase so that final decision of the scope of works will be done in contract negotiation phase.

4.2.5 Review of Procurement Strategy

The Project Engineer shall review whether the proposed procurement strategy to implement the Project within one Works Contract is optimal taking into account the general cost efficiency and different financing sources. In case changes are required - develop an updated procurement strategy.

4.3 Employer's Requirements

After review of the working documents the Project Engineer shall prepare the Employer's Requirements, which includes but is not limited to the following documents:

- Scope of works
- General specifications
- Technical specifications for works, materials, mechanical and electrical equipment
- Technical schedules
- Working documents

Scope of works shall specify the contents of the contract in general including scope of works for services (surveys, design, training, testing, handing over etc.), for construction works and for mechanical and electrical equipment supplies.

General specifications shall specify but not to be limited to following:

- Labour safety requirements
- Environmental protection requirements
- Safety requirements for traffic and people
- Construction in phases if considered necessary
- Requirements for as-built drawings
- Manuals to be handed over and training of Client's staff
- Testing on completion
- Trial operation
- Taking over procedures

Technical specifications for works and materials include requirements for working methods, quality requirements for materials to be used and special testing to be made for completed works before taking over. Technical specifications for mechanical and electrical equipment determine the material requirements, capacities and sizes, operation, testing, training and manual to be handed over etc.

Technical schedules will be prepared for that type of works and/or equipment for which the Employer wants to get technical information together with the tender. The Tenderer will fill these schedules and attach them to their tender.

Employer's Requirements shall be prepared in English and Russian languages.

4.4 Tender Documents and Procurement Support

4.4.1 Tender Documents

The works are planned to be implemented as one Works Contract, which will be financed from two different sources: (i) from proceeds of NEFCO loan and (i) from NDEP grant. The Project Engineer will instruct in tender documents how the Tenderers will specify in their tenders the use of the above funds. Usually, NDEP grants are used for supply of mechanical and electrical equipment and for material supplies while NEFCO loan is used for civil and installation works.

The Project Engineer together with the Employer will negotiate with NEFCO which standard tender documents will be applied in this contract. NEFCO has own standard tender documents, but also FIDIC general conditions of contracts have been used. However, the tender documents contain the following documents:

- Invitation to tender
- Instructions to tenderers including evaluation and qualification criteria
- Template forms for letter of tender, covenant of integrity, price schedules, tender security, contractor's equipment, contractor's personnel and forms required to check if the tenderer fulfils the qualification criteria
- General Conditions of Contract
- Particular Conditions of Contract
- Template forms for letter of acceptance, contract agreement, performance security and advance payment security

All tender documents shall be prepared in English and Russian languages.

4.4.2 Procurement Support

The Project Engineer shall provide support to PIU throughout the procurement process. These services include but are not necessarily limited to the following:

- Draft and ensure that all procurement notices are placed in a timely manner in accordance with the NEFCO Procurement Policy and Procedures.
- Ensure that all approvals and “no objections” are applied for in a timely manner.
- Prepare draft responses and clarifications to tender enquiries, arrange for approval and issue and record the same.
- Assist the PIUs in site meetings, information meetings or other pre-tender events and prepare minutes.
- Draft addenda to tender documents as required, for the PIU approval and the relevant NEFCO’s “no objection”.

4.4.3 Evaluation Support

The Project Engineer shall take the lead in organising and managing the evaluation process. These services include but are not necessarily limited to the following:

- Arrange for meetings of Tender Evaluation Committee, attend as an advisor and record these meetings, presenting the minutes for approval by PIU.
- Train the members of the Tender Evaluation Committee in all aspects of evaluation under NEFCO procurement rules including public tender openings. Conduct public tender openings with relevant committee members and prepare minutes to be sent to the participants and to NEFCO.
- Undertake detailed evaluation of the tenders in accordance with the evaluation methodology set out in the tender documents, in cooperation with Tender evaluation Committee.
- Provide draft detailed evaluation report for the consideration of the Tender Evaluation Committee. Compile the evaluation report including all technical and financial analyses, records of consultation with external parties by the committee (ensuring that confidentiality of the evaluation process is respected) and clarifications requested and received.
- Document the evaluation committee’s deliberations in relation to the evaluation reports and compile the documentation and ensure that the PIU sends the report to NEFCO for “no objection”
- In cooperation with the PIU ensure that all queries and complaints are promptly attended to as appropriate and copy such inquiries as appropriate to NEFCO.

Evaluation report shall be prepared in English and Russian languages.

4.4.4 Contract Finalization and Administration Support

Following NEFCO’s “no objection” to the Evaluation Report, the Project Engineer shall provide support to the PIU during contract finalisation. These services include but are not necessarily limited to the following:

- Prepare a brief for the PIU indicating all the items to be resolved in the pre-contract clarifications, if any.
- Attend pre-contract discussions, if any, and document the discussions, updating the contract documents as required and seeking all necessary approvals.
- Ensure that copy of signed contract is sent to NEFCO.
- Advise on the validity of performance and other contract-related securities.
- Notify unsuccessful tenderers and return their tender securities.
- In cooperation with the PIU ensure that all queries and complaints are promptly attended to as appropriate and copy such inquiries and responses to NEFCO.

4.4.5 Environmental and Social Matters

During project implementation phase the Project Engineer shall monitor fulfilment of the actions included in ESAP and reports the results in the Quarterly Progress Reports.

4.4.6 Disbursements

The Project Engineer shall train the PIU to prepare all disbursement requests and obtain the necessary authorised signatures and to submit these in good time in accordance with the Finance Documents. The Project Engineer shall:

- Prepare or sum up cash flow forecast for the contract.
- Assist PIU with financial planning.
- Assist PIU in preparation and regular updates of the disbursement plan and schedule ensuring approximately parallel disbursement of grant and loan financing as required by corresponding agreements
- Verify the invoices and payment documents for the contract.
- Assist the PIU with preparation of disbursement applications according to the NEFCO requirements and verify disbursement requests submitted by PIU to NEFCO.

4.4.7 Cash Flow Forecasting

The Project Engineer shall set up a simple system of cash flow reporting for the Project, to reflect initial and actual cash flow projections for contract implementation. The cash flow forecast shall be part of the Quarterly Progress Reports. If the cash flow forecast indicate that payments will exceed the approved amounts, the Project Engineer shall notify accordingly.

4.5 Supervision during Implementation

The Project Engineer shall perform the duties of the Engineer/Project Manager or equivalent, as these may be attributable to, specified and/or implied by the works contract financed under the Project, in accordance with the laws, technical standards and construction norms and rules. The technical supervision services required by the Russian legislation will be provided by the Client. The Project Engineer shall in the inception phase agree with the Client how cooperation in the supervision phase will take place by preparing a responsibility matrix of tasks and description of cooperation to be used so that relevant requirements of the Russian legislation will be fulfilled.

In order to do so the Project Engineer shall carry out the following tasks:

- Administer the works and approve all materials, construction techniques and workmanship on a day-to-day basis in accordance with the Contract.
- Provide expert advice on all aspects of the works undertaken, especially regarding project management, measurement, contract monitoring and quality control.
- Ensure the proper programming, recording, measurement and accounting of the works by means of contemporary management and measurement techniques.
- Carry out monitoring of the Contract and promptly report details of any aspect that may jeopardize the progress of the works, as well as any implications such aspects may have on the original time of completion or cost of the works, and the measures being (or to be) adopted to overcome such factors.
- Approve the Contractor's work programmes and sources of construction materials and characteristics thereof.

- Approve adjustment of the works at a given location and instruct the Contractor on these issues.
- Determine by measurement the value of the works in accordance with the contract documents.
- Issue Interim Certificates for interim payments to the PIU for approval, certifying quality, etc. and completion of all, or parts of, the works.
- Determine the value and time impact of Variation Orders, Change Orders and Amendments to Contract and obtaining NEFCO's "no objection".
- Monitor that environmental and social protection and mitigation measures, in particular from ESAP, are implemented during construction and for all permanent works.
- Monitor that environmental, health and safety requirements (including on-site movements) are met and that the contract works cause minimum disruption to operations, worker health and safety and to the neighbouring communities.
- Facilitate arrangements between the Contractor and utility companies and owners of private apparatus sharing occupation of the worksite.
- Provide advice on dispute resolution.
- Participate in the interim and final acceptance of works.
- Agree the final measurement and payment on completion of contracts.
- Verify "as-built" drawings and operation and maintenance manuals supplied by the Contractor.
- Advise the PIU on all matters related to the execution of the Contract, including settlement of the Contractor's claims.
- Train the Employer's staff to carry out maintenance inspection visits to Contract during the Defects Liability Period.
- Participate in acceptance, testing and commissioning of equipment delivered and works completed ensuring that local regulations and approval processes are adhered to.
- Prepare acceptance certificates and other contractual documents.
- Undertake all other duties implied or expected of the Engineer under FIDIC/NEFCO conditions of contract.

The Project Engineer shall seek prior approval from the PIU before:

- Issuing any Variation Order/Change Order/Amendment to Contract with financial or time implications, except in an emergency situation, when the approval of the PIU shall be obtained as soon as practicable.
- Sanctioning additional items, sums or costs.
- Approving the sub-contracting of any part of the works.
- Approving any extension for the time(s) of completion.
- Obtaining NEFCO's "no objection" to variations, change orders and other contractual amendments.

4.6 Exit strategy

Three months before the end of the assignment, the Project Engineer shall develop an exit strategy. This strategy shall outline measures that need to be undertaken in order to ensure a smooth exit, and to ensure that the Employer is able to manage the remaining implementation tasks without any additional support following the end of the assignment.

5 IMPLEMENTATION ARRANGEMENTS AND DELIVERABLES

5.1 Implementation Arrangements

It is estimated that the overall Assignment will have a duration of 30 months in total including an estimated construction period of 20 months.

The Project Engineer will work closely with the General Director of the Client and the Head of PIU. Staff inputs should be concentrated on the implementation period up to the Defect Notification Period (“DNP”).

The Project Engineer shall provide accommodation for their specialists, and local and international transportation. The Project Engineer shall also be responsible for all salaries, fees, allowances, insurance, leave pay and taxes for the staff involved in the assignment. Where Key Experts are not fluent in Russian, suitable translation and interpretation must be provided for by the Project Engineer.

It is expected that the Project Engineer will be provided free of charge with furnished, serviced and maintained office space in premises of the Client in Veliky Novgorod. Communication within Russia shall be free of charge for the Project Engineer, while all international communication shall be the responsibility of the Project Engineer.

All available information, reports and documents relevant to the Project shall be made available for the Project Engineer by the Client.

All documentation related to the works is and will remain the property of the Client after completion of the Assignment.

5.2 Deliverables

All deliverables as required by this section and section 4 (“Scope of Works”) shall be prepared in the English and Russian languages.

The Project Engineer’s specific deliverables are the following:

- a. **Inception Report:** No later than within four weeks after the commencement of the services, the Project Engineer shall prepare and submit the Inception Report. This report shall include the information about the status in project preparation and implementation and the results gained specified in Section 4.2. The Inception Report should also include an updated budget breakdown and staffing plan including additional local experts if considered necessary and should address all general implementation requirements such as need for office space . The expected project Implementation Schedule adjusted in accordance with the real situation shall be attached to the report, as well as the detailed work plan for the next quarter.
- b. **All tender documents, including Employer’s Requirements and all other documents and materials** as required for tendering, tender evaluation, contract award of the Contract and final contract documents.
- c. **Quarterly Reports:** Throughout the entire period of rendering the services, the Project Engineer shall submit Quarterly Reports by the fifteenth day of the following quarter. Each report shall show events and progress of the Project Engineer’s activities for each of the main tasks. During the works implementation phase, the report shall show events and progress of the works for the previous quarter. The Quarterly Reports shall include, but not be limited to the following:
 - Project Engineer activities during the reporting period and planned activities for the next period.
 - Comparison of actual and planned progress of the Contract and other activities.

- Details of any aspects, which may jeopardize the completion in accordance with the Contract, and the measures being (or to be) adopted to overcome such aspects.
 - Safety statistics, including details of any accidents/fatalities and hazardous incidents. and activities relating to monitoring of environmental and/or social aspects related to ESAP and public relations.
 - Payments made to the Contractor.
 - Minutes of Monthly Progress Meetings as annex to the report.
 - Project Engineer's budget follow-up.
 - Other information to be agreed with Nefco.
- d. **Final Report:** The Project Engineer shall prepare a draft of the Final Report one month prior to the end of the contract. The Final Report shall present a review of the Project, the level to which the Project has been fulfilled and shall include all the necessary conclusions, recommendations and lessons learned. Upon receipt of comments and suggestions from all the parties, the Project Engineer shall prepare the finalized version of the report.

The Inception, Quarterly and Final Reports as outlined above are to be delivered to Nefco and Novgorod Vodokanal.

In addition, the Project Engineer may need to prepare any ad hoc reports needed to fulfill the requirements of the Project. These may include preparation and circulation of Minutes of any site visits (e.g. wrap up meetings in Veliky Novgorod after certain missions) in which they participate. Minutes will be circulated within one week of the meeting. The Minutes shall include list of participants, issues discussed, agreements made and consideration whether the agreements are according to the Contract and whether they need approval of any of the stakeholders.

5.3 Steering Group Meetings

The Consultant shall plan, call and arrange Steering Group Meetings in Veliky Novgorod for the relevant stakeholders of the assignment every 4-6 months.

The Consultant shall prepare all documentation related to the Meetings such as agendas, minutes and conclusions/recommendations. In the Meetings, the Consultant shall give presentations of the results and findings and receive comments and instructions for the further work from the invited stakeholders.

6 CONSULTANT TEAM PROFILE

The Consultant shall be a qualified engineering firm with proven experience in project management, procurement, design and supervision of similar construction works in Russia or other CIS countries under comparable climatic and geological conditions. The assignment will require extensive presence in Veliky Novgorod during the most intense periods of the implementation of the project

It is envisaged that the following key expertise will be needed for the purposes of this Project:

- Civil Engineer: an internationally qualified senior expert with at least 10 years' experience in similar construction management and supervision assignments with references in Russia. Russian language competence is considered as advantage.
- Procurement Expert: an internationally qualified senior expert with at least 10 years' experience in procurement according to internationally accepted guidelines in similar projects with references in Russia. Russian language competence is considered as advantage.
- Supervision Expert: local expert with at least 10 years' experience in similar projects in Russia and in working with IFIs. The expert shall i.a. act as the Engineer's Representative during the project implementation. Working knowledge in English and in Russian is required.

Either Civil Engineer or Procurement Expert shall take the role of Team Leader.

It is also anticipated that the Consultant shall have access to the following Pool of experts: Environmental Specialist to prepare and monitor the Environmental and Social Action Plan, Mechanical Engineer and Electrical Engineer. These specialists shall have at least 6 years' experience in similar projects and in working with IFIs.

Tenderers must provide a clear chart describing what tasks each team member will accomplish, at what stage of the Assignment, for what length of time and where.

7 BUDGET

Maximum budget available for the assignment is 250 000 EUR. The Consultant should include in the budget all direct costs that are considered to be necessary. These may include, but not be limited to, the following:

- Secretarial and administrative assistance
- Translation, interpretation
- Telecommunications, stationery, reproduction, etc.
- International and local travel

Appendix 1 Project Assessment Report, Enment Oy, September 2020.

FINAL REPORT

21.9.2020



REHABILITATION OF MAIN WASTEWATER COLLECTOR IN VELIKY NOVGOROD, NORTH-WEST RUSSIA

PROJECT ASSESSMENT REPORT

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1 PROJECT BACKGROUND AND OBJECTIVES

1.1 Background (extracted from the Terms of Reference)

In 2009 Northern Dimension Environmental Partnership (NDEP) approved a EUR 3 million grant to co-finance Novgorod Water and Wastewater Services Project led by NIB and co-financed by NEFCO. Total project cost amounted to EUR 23 million, major part of which (EUR 15 million) came from local sources. Local and IFI financing was used to finance rehabilitation of water infrastructure while the NDEP grant was used specifically to support rehabilitation of a wastewater collector. At the time, a new collector was built to replace part of the old collector. The other part is still in function but is also in need of urgent rehabilitation. In June 2020, Novgorod Vodokanal approached NEFCO with a request to finance construction of the next section of the new collector to replace the second part of the old collector and thus complete replacement of the whole collector (hereafter “The Project”).

1.2 Objective

The objective of the Assignment is to assist NEFCO in assessing the Project’s feasibility with regard to technical, economic and environmental aspects of the Project in order to make decisions regarding feasibility of further Project development and its presentation for the approval to the NEFCO Board and NDEP for, respectively, possible loan and grant co-financing.

1.3 Tasks

More specifically, the following Tasks shall be carried out by the Consultant:

- 1) Review and verify feasibility of technical proposal presented by Novgorod Vodokanal. If necessary, propose adjustments.
- 2) Estimate environmental benefits (reduction of phosphorus, nitrogen, and BOD, in particular) as well as energy savings (if any) from the investment.
- 3) Estimate economic benefits due to e.g. decreased need for repairs, energy efficiency improvements, reduced environmental payments, etc.
- 4) Verify cost estimation prepared by Novgorod Vodokanal.
- 5) Prepare Project’s financing plan, draft procurement, and implementation plan. In doing so the Consultant shall be guided by the assumption of grant to loan ratio being 1:2 and that local financing is required.
- 6) Provide recommendations with regard to project’s scope, structure and implementation arrangements aimed at maximization of Project’s efficiency and environmental benefits and minimization of any potential risks.
- 7) Prepare draft NDEP application.
- 8) Assist with various aspects of Project preparation as NEFCO may request in addition to the above Tasks 1-5 during the duration of the Assignment.

The Assignment shall include both desk review of available and collected data and site visit to Novgorod.

2 BASELINE SITUATION

2.1 Visit to Veliky Novgorod

The visit to Veliky Novgorod took place on 25 August 2020. During the visit the Consultant visited the office of Novgorod Vodokanal and several sites along the collector. The persons met and interviewed during the visits were the following:

- Antipov Dmitry S. Deputy Director for Production, Chief Engineer
- Tarasov Valery G. Head of Network Facilities
- Sidorenko Inessa V. Head of Production Organization and Strategic Development Department
- Vysotskiy Eldar A. Head of Ecology Department
- Kalyagin Dmitry G. Head of the section of operation of sewer pumping stations
- Mihaylova Tatiana V. Leading Engineer of the Technical Department
- Andreeva Maria V. Leading Specialist of Procurement Department

2.2 Wastewater Collection System

Novgorod Vodokanal is responsible for operation of the wastewater collection system in the City of Veliky Novgorod. Population served by the collection system is approximately 220 000. The collection area covers the whole City (see Figure 2.1 on the following page).

The wastewater collection system is not fully separate. In the city centre area combined sewers for joint collection of wastewater and storm water exist. In addition, water from district heating pipes may be discharged to wastewater collection system in case need for their drainage exists.

Wastewater from the Western and Pskov regions of the City is pumped through the wastewater pumping stations nos. 17 and 23 via the pressure pipes to the pressure damping chambers. Further, the wastewater is discharged through the gravity collector no. 18 from the pressure damping chambers to the District pumping station.

The location of the existing wastewater collector no. 18 is shown in Figure 2.1 by blue line while the collection area is shown by green colour. Population served in the collection area is approximately 138 000 representing approximately 62% of overall population served.

The total wastewater amount collected from the City to the wastewater treatment was 23 908 670 m³ (65 503 m³/d) in 2019. The estimated amount of wastewater pumped from the collection area of collector no. 18 was 15 300 888 m³ (41 920 m³/d) in 2019. This amount is based on wastewater amounts pumped from pumping stations nos. 17 and 23 to collector no. 18.



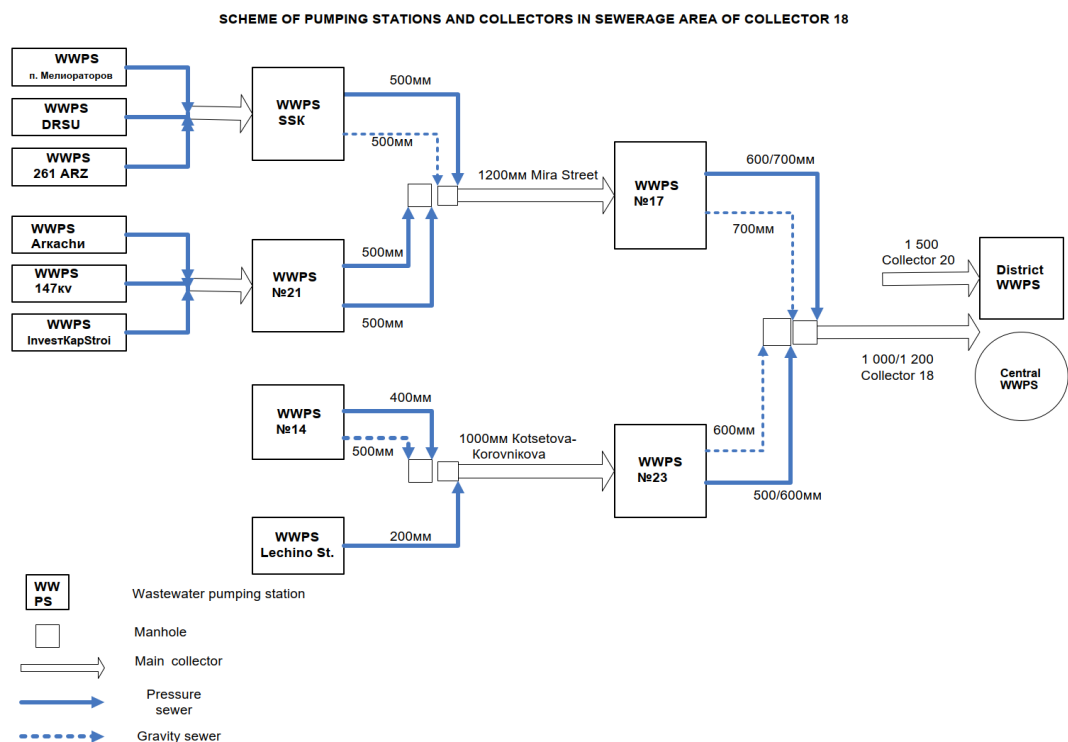
2.3 Wastewater Collection Area of Collector no. 18

Wastewater to collector no. 18 is collected from the Western and Pskov regions using totally 12 wastewater pumping stations (see Figure 2.2).

The gravity collector was built in 1974 with the diameter of DN 1 200. Pipe material used is reinforced concrete with the installation depth varying from 5 to 7 m. The design capacity of the collector is 2 100 m³/h using filling rate of 50% and maximum capacity 4 050 m³/h using filling rate of 80%.

The end part of collector no. 18 is switched to the parallel new collector no. 20, which was built in 2011-2012. It has been estimated that the wastewater amounts from the switching point to District pumping station are using approximately 70% collector no. 20 and approximately 30% collector no. 18.

According to statistics of pumping stations nos. 17 and 23 the maximum daily wastewater amount pumped in 2019 was 114 690 m³/d and the maximum hourly rate 5 900 m³/h. Proper operation of the collector during maximum flows is impossible and will cause the overflows of wastewater in the area of the pressure damping chamber. The overflows cause possible ingress of wastewater into ditches, storm water sewer system and flooding to railways of RZHD company.



In accordance with the General Plan of Veliky Novgorod, the volume of wastewater transported through collector no. 18 will increase by 600 - 700 m³/h reaching the average flow of 2 400 - 3 100 m³/h. **From this background, the existing capacity of the collector no. 18 is insufficient for the future needs.**

2.4 Condition of Collector no. 18

Existing condition of the collector no. 18 can be described as critical. As a result of long-term operation and internal gas corrosion, sewer pipes in some areas have been destroyed. Gas corrosion has destroyed the protective layer of the reinforcement resulting in loss of its bearing capacity. In addition, the inspection manholes along the collector are also in an emergency condition due to gas corrosion.

Due to poor condition of the collector breakdowns of the collector are frequent. In 2019 totally 20 breakdowns were reported causing overflow of wastewater through the storm water system to the recipient, the River Veryazha. Due to breakdowns in collector no. 18 flooding starts and cause overflows by the following means:

- Direct overflows from wastewater collector to storm water sewers by overflows in manholes.
- Flooding of wastewater to basements of apartment blocks. In order to avoid flooding the basements are connected to storm water system.
- As wastewater and storm water sewers are usually in the same trench infiltration through the ground from wastewater sewer to storm water sewer is possible.

According to estimates prepared by Novgorod Vodokanal the total amount of wastewater discharged through storm water system to the recipient was 149 660 m³ in 2019. This amount has been estimated based on average wastewater flow and hours how long the repair of the breakdown has taken place. All breakdowns are reported in Table 2.1 below.

Table 2.1 Wastewater Discharges to Storm Water System in 2019

Date	Address	Starting time	Completion time	Average Flow m ³ /h	Closed hours	Discharges m ³
15.01.2019	Rabochaya Street 27	08:00	19:00	985	11	10 831
17.01.2019	Syrkovskoe Highway	08:00	16:00	985	8	7 877
04.02.2019	Severnaya Street	08:00	16:00	985	8	7 877
04.02.2019	Severnaya Street	08:00	19:00	985	11	10 831
05.02.2019	St Petersburg Street 111	08:00	19:00	985	0	0
05.02.2019	St Petersburg Street 111	08:00	19:00	985	11	10 831
15.02.2019	St Petersburg Street 111	08:00	16:00	985	8	7 877
26.02.2019	Rabochaya Street	08:00	16:00	985	8	7 877
25.03.2019	St Petersburg Street 111	08:00	19:00	985	11	10 831
29.03.2019	Severnaya Street	08:00	16:00	985	8	7 877
12.04.2019	St Petersburg Street 111	08:00	16:30	985	8,5	8 369
15.04.2019	St Petersburg Street 111	08:00	16:30	985	8,5	8 369
23.04.2019	Syrkovskoe Highway	08:00	19:00	985	0	0
15.04.2019	St Petersburg Street 111	08:00	19:00	985	11	10 831
03.06.2019	Rabochaya Street	08:00	16:00	985	8	7 877
17.07.2019	Rabochaya Street 9-27	08:00	16:00	985	8	7 877
17.07.2019	Rabochaya Street 9-27	08:00	16:00	985	8	7 877
09.12.2019	Rabochaya Street	08:00	16:00	985	8	7 877
09.12.2019	Rabochaya Street	08:00	16:00	985	0	0
09.12.2019	Rabochaya Street	08:00	16:00	985	8	7 877
Total Discharges in 2019					152	149 660

2.5 District and Central Wastewater Pumping Stations

Wastewater from collectors nos. 18 and 20 is discharged to District and Central wastewater pumping stations, which pump the wastewater direct to wastewater treatment plant. In dry weather conditions District pumping station is operated while in wet weather conditions and in maintenance situations also Central pumping station is used. Central pumping station was taken in operation in 1967 but due to insufficient capacity the District pumping station was built and taken in operation in 1978. The estimated pumping amounts pumped from these pumping stations in 2019 were as follows:

– District pumping station	13 215 649 m ³ /year	36 207 m ³ /d
– Central pumping station	6 472 074 m ³ /year	17 731 m ³ /d
– Total	19 687 723 m ³ /year	53 938 m ³ /d

Comparing the above figures to the amounts pumped from pumping stations nos. 17 and 23 it can be concluded that these pumping stations collect wastewater also from areas other than the sewerage area of collector no. 18.

District pumping station is equipped with four pumps with the capacity of 2 700 m³/h each. Usually one or two pumps are used in operation resulting that the capacity of the pumping station is insufficient to pump all incoming wastewater to treatment plant. During night-time the incoming wastewater amount is so small that one smaller capacity (800 m³/h) at Central pumping station is used. During the peak flows both pumping stations operate with full capacity.

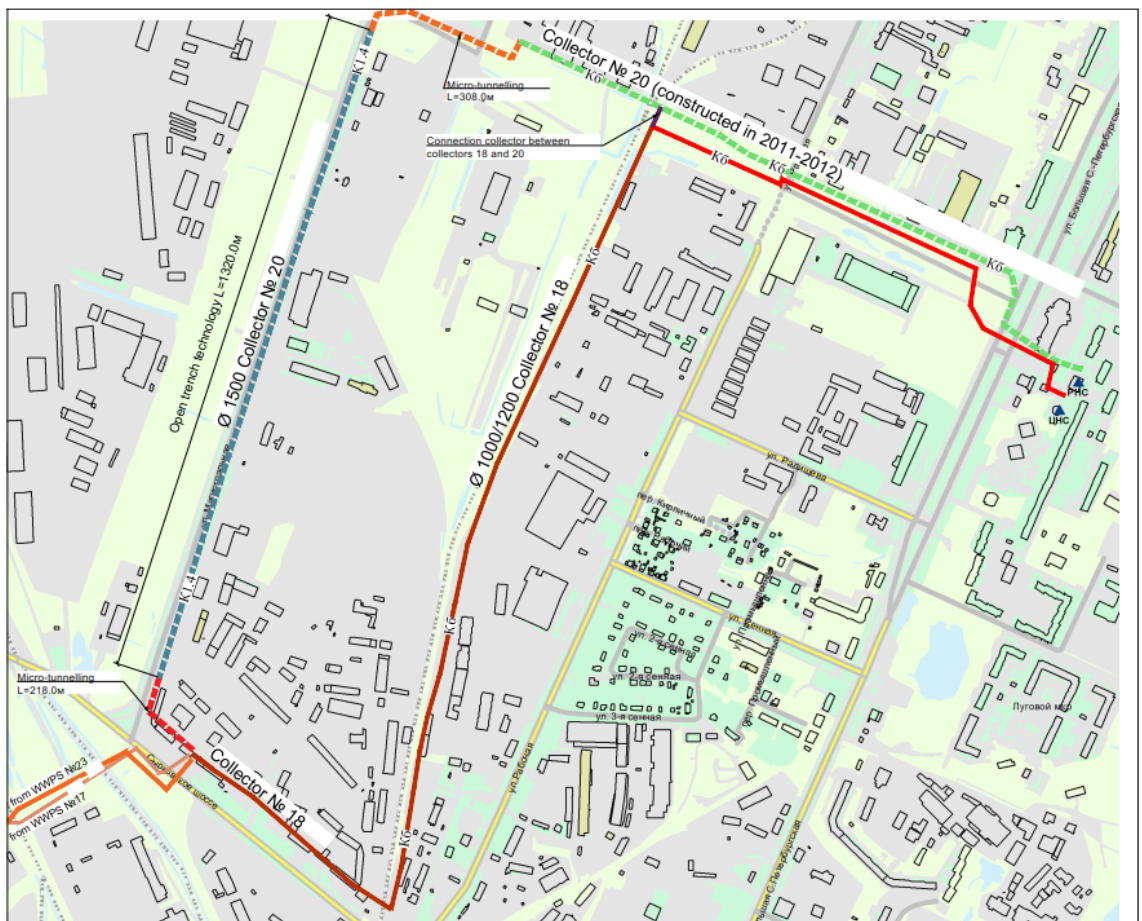
Pumps at District pumping station were replaced in 2014-2015 (see Figure 2.3). Although the pumps are relatively new the vertical shafts cause vibration and structural problems. In addition, the valves are old and require replacement. Condition of the pumping station requires rehabilitation, which is planned to take place during 2020's. The Consultant recommends replacing the pumps and valves together with other rehabilitation works to avoid further deterioration of concrete structures and to save energy using modern dry installed submersible pumps.



2.6 Completed Works

In order to improve the situation with collector no. 18 a parallel new collector no. 20 was built in 2011-2012 along the end part of collector no. 18 (see Figure 2.4). The new collector no. 20 has diameter of 1 500 mm and total length of 1.3 km. The works were financed by a grant from the Northern Dimension Environmental Partnership (NDEP) as part of overall water and wastewater investment project for Veliky Novgorod.

A project design was prepared in 2009 for the whole section of collector no. 20. However, due to lack of sufficient financing only part of the section based on this design was completed in 2011-2012. The contract price for construction of end part of collector no. 20 was 2 497 895.66 EUR (green dotted line in Figure 2.4 below). The works included construction of new collector using DN 1 500 PE pipes for open trench technology totally 1 112 m and using DN 1 500 concrete pipes (112 m) with internal PE coating and DN 1 500 PE pipes (30 m) for micro-tunnelling technology resulting that total length of new collector built was 1 254 m. In addition, the works included construction of seven PE manholes and two concrete manholes along the new collector.



Construction of the new collector was complicated and time consuming. In the course of the construction works, it was necessary to change the layout and relocate the existing water supply lines and engineering networks, which complicated and increased the scope

of works. The pipe was laid at a depth of about 6 m, construction was carried out all year round without interruptions, both in conditions of the soil freezing and during rain periods.

3 PROJECT PROPOSAL TO NEFCO

3.1 Project Proposal

A project proposal to NEFCO was submitted in June 2020. The proposal includes completion of the new wastewater collector no. 20 in order to convey all wastewater generated in Western and Pskov regions to District pumping station without using the existing collector no. 18, which is planned to be used only for collection of small amounts of wastewater from premises located along the collector.

The proposed works to be built are the following (see Figure 2.4 on previous page):

- Construction of collector no. 20 using open trench technology (i.e. opening a trench for installation of collector) for 1 315 m.
- Construction of collector no. 20 using micro-tunnelling technology (i.e. using boring technology to avoid open trenches) for 526 m.
- Construction of 11 manholes along the collector.

Pipe materials to be used in construction works are the same as in already completed section of the collector being PE pipes for open trench technology and concrete pipes with internal PE coating for micro-tunnelling technology.

3.2 Assessment of the Project Proposal

3.2.1 Capacity of the Collector

The present estimated wastewater amounts (2019) pumped from pumping stations nos. 17 and 23 were 15 300 888 m³/year (41 920 m³/d) and maximum identified flows 114 690 m³/d and 5 900 m³/h. In addition, according to the General Plan of Veliky Novgorod the volume of wastewater transported through collector no. 20 will increase by 600 - 700 m³/h. From this background Novgorod Vodokanal has selected the maximum design flow of 6 910 m³/h for the collector.

On the other hand, the present dry weather flow in collector no. 18 based on billing statistics is 985 m³/h. From this background, the maximum capacity of the new collector (DN 1 500) has been compared with the existing and future maximum flows and the velocity in dry weather conditions has been assessed with the following results:

- | | |
|----------------------------------|-------------------------|
| – Internal diameter of collector | 1 500 mm |
| – Assumed slope of collector | 1.2‰ |
| – Maximum capacity of collector | 8 410 m ³ /h |
| – Maximum velocity | 1.32 m/s |
| – Maximum design flow | 6 910 m ³ /h |
| – Present dry weather flow | 985 m ³ /h |
| – Velocity during dry weather | 0.72 m/s |

As the conclusion from the above comparison it can be confirmed that the capacity of the new collector is sufficient to transport all present and projected future maximum flows to District pumping station without flooding. In addition, it can be concluded that during the

dry weather conditions the velocity in collector is sufficient to avoid sedimentation of suspended solids.

3.2.2 Technical Solutions

Novgorod Vodokanal mentioned that some minor changes to the route of new collector have to be made due to new structures built since the design was prepared. They are planning to hire a design institute to do the necessary changes and to prepare working documents for the collector. The updated design shall pass the State Expertise before construction can be started. Cost estimate for hiring a design institute to prepare necessary designs is approximately 60 000 EUR (RUB 5.3 million).

The technical solutions proposed have already been tested in the previous project and therefore they can be considered feasible.

3.3 Cost Estimates

The breakdown of contract price of the contract completed in 2011-2012 are presented in Table 3.1 below. The table shows also the unit prices for different components of the works.

Table 3.1 Breakdown of Contract Price of Contract completed in 2011-2012

No.	Item	Volume	Unit	Price	Unit Price	Unit Price
				EUR	EUR/unit	RUB/unit
1	Open trench technology	1 112	m	1 211 847	1 090	44 137
2	Micro-tunnels	112	m	373 724	3 337	135 141
3	Micro-tunnel under railway	30	m	42 891	1 430	57 903
4	Manholes					
	PE manhole	7	pcs	68 293	9 756	395 122
	Concrete manholes	2	pcs	82 927	41 463	1 679 268
5	Material costs					
	PE pipes	1 142	m	518 537	454	18 389
	Concrete pipes	112	m	74 423	664	26 912
6	Other works			87 195		
7	General items			38 060		
	Total			2 497 896		

The cost estimate prepared within the project documents in 2009 were updated by Novgorod Vodokanal for the works to be completed within the new contract. Novgorod Vodokanal used the same volumes as in original design and updated the unit prices using construction indexes for this type of works. The updated cost estimate for the new contract is presented in Table 3.2.

In February 2020, a local contractor gave a cost estimate for the new contract. The estimated contract price was approximately RUB 334 million. The difference between Vodokanal's updated cost estimate and the Contractor's cost estimate can be explained by the official changes (new regulatory frameworks for FER 2020 DIZ 3) made to unit price of micro-tunnelling works, which was issued in July 2020. Unit price for micro-tunnelling technology was reduced from 320 000 RUB/m to 92 000 RUB/m due to

development of micro-tunnelling construction technology. Taking into account this reduction in unit price and the length of micro-tunnelling section (526 m) the total reduction to Contractor's cost estimate would be approximately RUB 120 million. Therefore, the comparable cost estimate prepared by the Contractor would be approximately RUB 214 million, which is in line with Vodokanal's estimate of approximately RUB 234 million.

Table 3.2 Updated Cost Estimate for the new Contract

Item	Description	Volume	Unit	Price RUB	Unit Price RUB/m	Price EUR
1	Open trench technology	1 315	m	50 565 105	38 453	574 603
2	External networks	1 315	m	45 141 731	34 328	512 974
3	Manholes	6	pcs	11 613 516	1 935 586	131 972
4	Micro-tunnels	526	m	72 683 053	138 181	825 944
5	Waterproofing of manholes	11	pcs	291 048		3 307
6	Asphalt works			153 021		1 739
7	Landscaping			1 355 458		15 403
8	Access roads			9 663 136		109 808
	Sub-total			191 466 068		2 175 751
	Contingencies, 2%			3 829 321		
	VAT, 20%			39 059 078		
	Total			234 354 467		

As there are no experience whether the Contractors are ready to tender the micro-tunnelling works using the lower unit prices it was jointly agreed with Vodokanal to add 20% as contingencies on top of the above cost estimate prepared by Vodokanal. Therefore, the final cost estimate is the following:

– Costs based on norms including VAT	234 355 000 RUB
– Contingencies, 20%	46 870 000 RUB
– Total costs	281 225 000 RUB

Using the exchange rate of 1 EUR = 89 RUB the total costs of the contract are estimated at 3 150 000 EUR.

3.4 Implementation Plan

Updating the designs and approval in the State Expertise is expected to take approximately four months. For international tendering commercial tender documents shall be prepared. This task is proposed to be carried out by an international consultant. The international Project Engineer to be selected to the project shall also be responsible for the following tasks:

- Review and, commenting if necessary, of the design documents
- Preparation of commercial tender documents for tendering
- Assistance to the Employer during tendering, tender evaluation and contract award
- Supervision of the works as FIDIC Engineer

The Project Engineer assignment is expected to last approximately 30 months with the estimated budget of 300 000 EUR.

The proposed works are planned to be implemented as one Works Contract, where the Contractor is responsible for implementation of the works based on working documents prepared by the Employer. Open international tendering will be organised to select the contractor for the works contract. The contract implementation is estimated to take 18 months.

Tentative time schedule for project implementation from the financing agreements is the following:

– Updating of design and approval in state expertise	4 months
– Selection of Project Engineer	4 months
– Preparation of documents for tendering	3 months
– Tendering, tender evaluation and contract award	5 months
– Contract period	18 months
– Total implementation period	30 months

3.5 Environmental and Economic Impacts and Benefits

3.5.1 Environmental Impacts during Construction

The collector will be built in the industrial area of the city. There are no residential buildings in the area and office buildings are located at a considerable distance from the construction site.

In order to mitigate the environmental impacts during the construction period the following measures have planned to be taken:

- Construction works do not have major impacts on traffic as the collector will be located outside the streets and when passing the street areas micro-tunnelling technology will be used.
- During the entire construction period, the minimum amount of equipment will be used. Downtime of equipment at the facility is excluded. No more than 2-3 mechanisms will work at the facility at the same time.
- Daily waste disposal (pipe residues, trimming boards, etc.). The accumulation, storage of waste on the territory of the construction site is not planned.
- Constant monitoring of the state of equipment for leaks of fuel and lubricants on the soil.
- Construction site for workers will be provided with mobile dry toilets. Accommodation of employees on the site is not planned. Organization of workers' meals will be organized outside the construction site.
- Upon completion of the work, the restoration of the improvement of the territories disturbed as a result of the work will be carried out.

Possible noise impacts shall be within the limits of environmental and epidemiological legislation of the Russian Federation.

3.5.2 Environmental Benefits

The environmental benefits to be achieved by construction of the proposed project are related to closure of overflows from collector no. 18. The estimated wastewater loads to be closed based on statistics from 2019 are presented in Table 3.3 below.

Table 3.3 Environmental Benefits by closing the Overflows

Parameter	Present		Post Investment		Reduction
	mg/l	t/a	mg/l	t/a	t/a
BOD ₅	269,0	40,3	4,0	0,6	39,7
tot-N	47,6	7,1	14,3	2,1	5,0
tot-P	6,7	1,0	0,8	0,1	0,9

The above calculation has been prepared as follows:

- Present pollution: Total amount of overflows (149 660 m³/year in 2019) has been multiplied by average concentrations in inlet of wastewater treatment plant and changed to tons per year.
- Post investment pollution: Similar calculation as above but used concentrations are after treatment at wastewater treatment plant.
- Reduction: Present pollution minus post investment pollution.
- As influent concentration of nitrogen to treatment plant is measured as ammonium ion, total nitrogen has been estimated by multiplying ammonium ion by $0.75 * 1.25 = 0.94$.
- For reduction of total nitrogen 70% rate has been used.
- As influent concentration of phosphorus to treatment plant is measured as phosphates, total phosphorus has been estimated by changing the phosphates first to phosphate phosphorus multiplying the result by 1.6.
- Effluent total phosphorus has been estimated by adding into the effluent phosphorus phosphate concentration the phosphorus escaping with suspended solids ($=0.02 * \text{effluent suspended solids concentration}$).

The actual environmental pollution reduction is quite small due to the reason that overflows represent only approximately 1.0% of wastewater flows transported through collector no. 18 to District pumping station.

When considering the relevance of the proposed project it has to be kept in mind that the capacity of existing collector no. 18 has been reduced by repairing it with smaller diameter collector (i.e. installation of smaller diameter collector inside the existing one) resulting that the capacity of smaller diameter collector is insufficient for the future flows and will cause increased amounts of overflows even without any breakdowns. In addition, in case operation of the collector no. 18 will continue, a longer section of the collector may be collapsed causing long repair works and much higher environmental pollution than caused in 2019. From the above background, the proposed project is urgent and important to be implemented to avoid all the time increasing environmental pollution.

3.5.3 Economic Benefits

Continuous repair of the collector causes expenses to Vodokanal. The expenses used for repair of the collector in 2019 are estimated at 15 500 EUR (1 373 871 RUB). In case a longer section of the collector may collapse the expenses are manifold.

In addition to expenses caused by the repair works Vodokanal has also paid environmental fines due to direct discharges to the recipient. The fines paid to environmental authorities during the first half of 2020 have been approximately 5 600 EUR (500 000 RUB).

After completion of the proposed project economic benefits to be achieved by Vodokanal are estimated at approximately 21 000 EUR per year. In case the project will not be implemented the above expenses are expected to increase due to higher overflows caused by the smaller diameter collector no. 18 and most likely more frequent and longer breakdowns in the collector.

4 FINANCING OF PROPOSED PROJECT

The possible financing package from NEFCO can be formed using the following principles:

- NEFCO loan for investments
- NDEP grant 50% of the loan amount for investments
- IFI grant for consulting services

Using the above principles, the financing package could be as follows:

– NEFCO loan	2 100 000 EUR
– NDEP grant	1 050 000 EUR
– IFI grant	300 000 EUR
– Updating the design	60 000 EUR
– Total	3 510 000 EUR

Vodokanal's own contribution for the project is updating the project design, which is estimated at approximately 60 000 EUR. In addition, Vodokanal will establish a project implementation unit for the project and participates in supervision of the works.

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