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NOVI SAD SOLAR THERMAL PLANT FEASIBILITY STUDY AND ENVIRONMENTAL AND SOCIAL ASSESSMENT

Novi Sad District Heating System



Non-Technical Summary (NTS)

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List of Abbreviations

CHP	Combined Heat and Power
CSOP	Construction Site Organisation Plan
DH	District Heating
E&S	Environmental and Social
EBRD	European Bank for Reconstruction and Development
EIA	Environmental Impact Assessment
ESMP	Environmental and Social Management Plan
EU	European Union
GHG	Greenhouse Gases
NTS	Non-technical Summary
OESMP	Operational Environmental and Social Management Plan
OHS	Occupational Health and Safety
O&M	Operation and Maintenance
PIU	Project Implementation Unit
PTES	Seasonal Pit Thermal Energy Storage
PUC	Public Utility Company
SEP	Stakeholder Engagement Plan

1 Introduction

Project Context. The European Bank for Reconstruction and Development (EBRD) is considering providing financing to the Public Utility Company (PUC) 'Novosadska toplana' (the "Company") for the **development, construction and integration of a solar-thermal system within the existing district heating (DH) network (the "Project")**. The main Project components are two pit thermal energy storages (PTES), a solar thermal plant, and a technical building with a heat pump system and e-boilers.

Currently, the heating system relies entirely on natural gas. The Project objective is to shift towards a more sustainable, modern energy system. The Serbian government has identified this Project as one of its top three energy projects for 2024.

The Project is categorised as 'B'¹ in accordance with the EBRD Environmental and Social (E&S) Policy (2019)².

Project Benefits. The proposed Project is expected to bring several E&S benefits:

- > Renewable energy production: Generating 60,842 MWh/year of clean energy, reducing reliance on fossil fuels.
- > Air pollution reduction: Lowering air pollutants emissions, primarily NOx and CO.
- > Job creation: The Project will create approx. 10 new positions to manage the solar-thermal system.
- > Stable heating costs: Providing a consistent pricing framework by integrating solar thermal technology, mitigating fluctuations in gas prices.

Legal Requirements. The preparation and control of technical documentation must adhere to the national *Regulation on the Content, Manner, and Procedure of Preparation and Control of Technical Documentation*. A Main Design, or 'Design for Construction Permit', will be developed. According to the *Law on Planning and Construction*, both a Construction Permit and a Use Permit must be issued. Under the *Law on Environmental Impact Assessment (EIA)* and the *Rulebook on Projects for Which an EIA is Mandatory or May Be Required*, the Ministry of Environmental Protection will provide an opinion on whether an EIA is necessary for the Project. Additionally, in accordance with the *Regulation on Energy Permits*, an Energy Permit will be required for the Project.

This document is the Non-technical Summary (NTS) of the E&S Assessment of the Project carried out in the period November 2023-September 2024. The NTS provides a Project summary in non-technical language covering the Project background and description, legal requirements, E&S impacts with mitigation measures needed to structure the Project to meet the EBRD ESP 2019, and the disclosure and communication requirements of the Project. This NTS is part of the Project's disclosure package developed during the E&S Assessment, together with the Stakeholder Engagement Plan (SEP).

¹ A project is categorised "B" when its potential environmental and/or social impacts are typically site-specific, and/or readily identified and addressed through effective mitigation measures.

² EBRD's ESP is available at: <https://www.ebrd.com/news/publications/policies/environmental-and-social-policy-esp.html>

2 Project Description

2.1 Project Development

In June 2020, the EBRD funded a **Pre-Feasibility Study** for a large-scale solar DH system in Novi Sad. Initially, the plan was to phase out the ‘TE-TO Novi Sad’ Combined Heat and Power (CHP) plant, but it was later decided to modernise it instead. The Study identified that the best approach includes a large thermal storage tank, extensive solar collector fields, and a high-capacity heat pump to meet the City’s heating needs. This solution has since been refined as part of a **Feasibility Study**, developed in parallel with the E&S Assessment.

In June 2021, the **Novi Sad DH System Development Strategy** was developed, emphasizing the solar-thermal system with thermal energy storage as a key objective. The City of Novi Sad has formally incorporated this Project into its **General Urban Plan** and **Development Plan for 2023-2030**.

2.2 Project Layout

Project Location. The Project location is within the City’s industrial zone, adjacent to the City’s existing DH system and the operational CHP plant ‘TE-TO Novi Sad’. The broader Project location is shown in [Figure 2-1](#).



Figure 2-1: Project location: Left – City of Novi Sad with the Project location marked with a red circle; Right: enlarged view of the Project location

Project Components. The key Project components are:

- > **two pit thermal energy storages (PTES)** – north and south,
- > **solar thermal plant**, and
- > **technical building**, housing the **heat pump** and **e-boilers**, as well as other supporting components.

The Project’s associated facilities include internal access roads to the technical building, PTES, and the solar collector field. As these are standard service roads requiring minimal construction, their design was not included in the FS and will be addressed in the next stages of Project design.

The layout of the Project components is presented in [Figure 2-2](#).

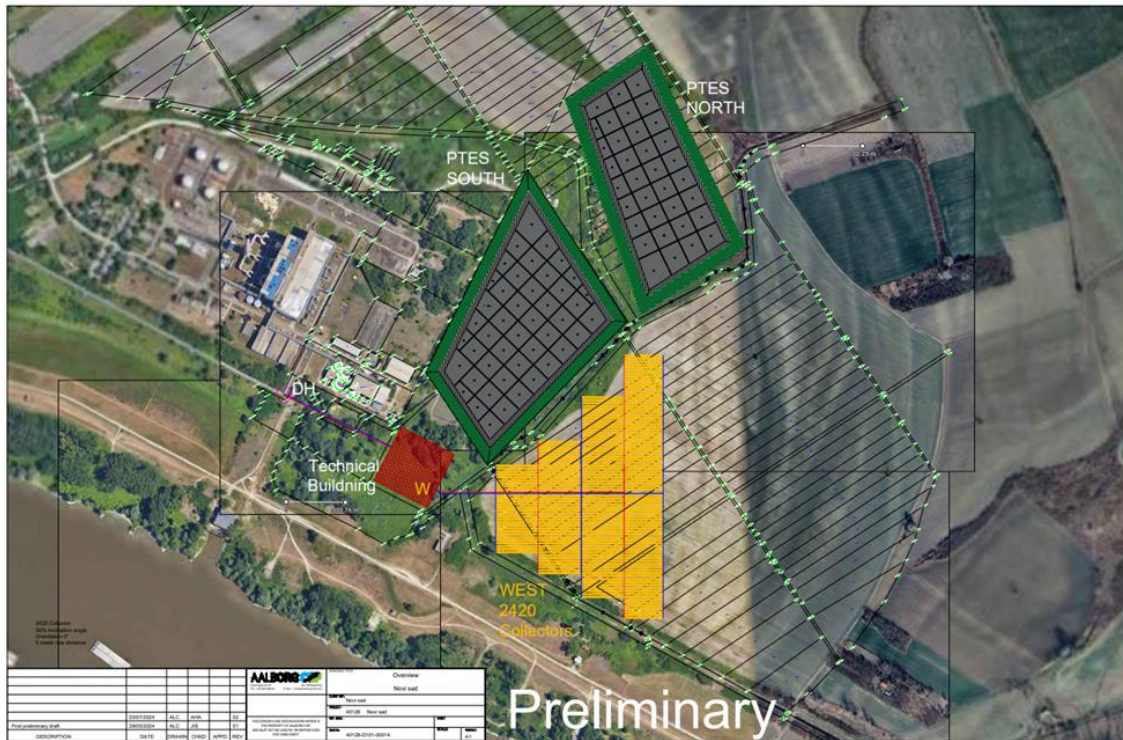


Figure 2-2: Overview of PTES (north and south), solar thermal plant (in orange) and technical building (in red)

A 3D visualisation of the future solar-thermal system is presented in the following Figure 2-3.

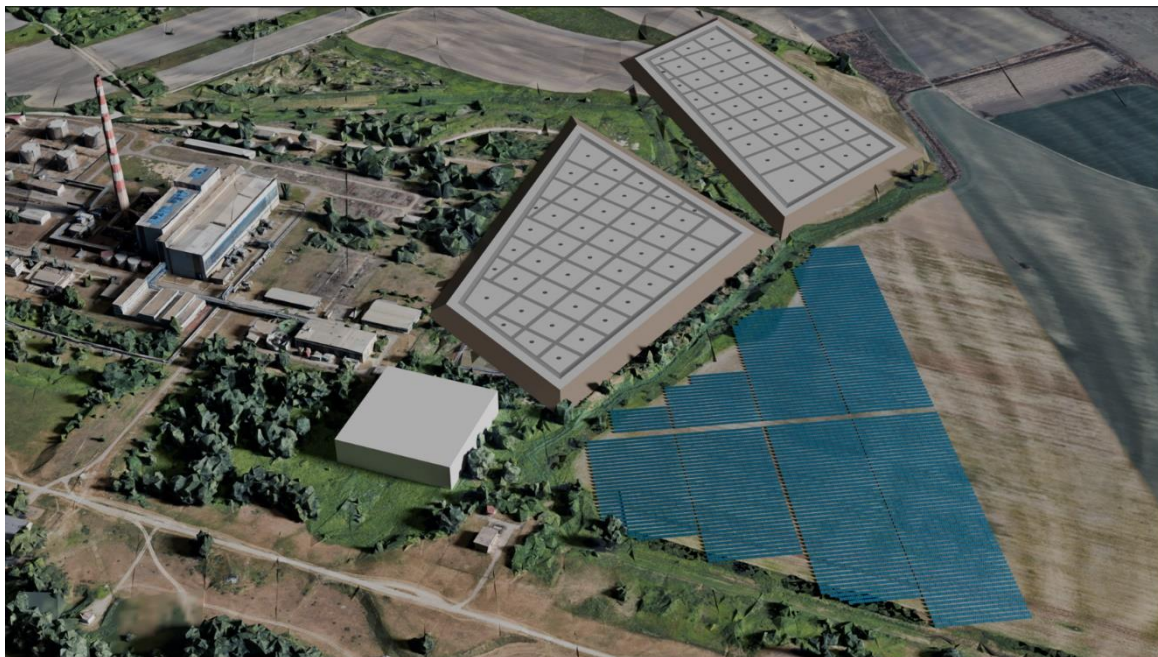


Figure 2-3: Visualisation of the future solar-thermal system (including north and south PTES, solar-thermal plant and technical building)

Site Description. The solar-thermal system will be built on a 53.7 ha plot, with approx. 15 ha allocated for the thermal storage (PTES), 7.4 ha for the solar thermal plant, and 0.45 ha for the technical building.



Figure 2-4: Site proposed for PTESs (left) and solar-thermal collector field (right)

The PTES area is situated between the City’s drinking water protection zone II and ‘TE-TO Novi Sad’. The area designated for solar thermal plant (solar collectors) falls within the City’s II water protection zone. Although this area is not currently used for water supply, there are future plans to incorporate it as an additional source. As the Project area is within this protection zone, the only permissible use of the land is for installing solar collectors³. The construction of PTES systems in this zone is prohibited.

The Project area can be accessed via a local road leading to the PTES, solar thermal plant and technical building plots, which is situated on an embankment designed for flood protection at an elevation of +8.00 m relative to the Danube River. Additionally, access is possible through roads used for the ‘TE-TO Novi Sad’ infrastructure, which borders the PTES plot.



Figure 2-5: Existing access road on the embankment

2.3 Main Technical Characteristics of Project Components

PTES. The North and South PTES will act as central components of the solar-thermal system, connecting all elements for flexible operation. Each PTES is a large excavation lined with a watertight membrane, filled with water, and covered by a floating insulated lid to prevent heat loss, evaporation, and contamination.



Figure 2-6: Examples of PTES layout

³ Confirmed by the *General Urban Plan of the City of Novi Sad until 2030*, adopted by the City Assembly of Novi Sad in July 2022.

The PTES will be lined with a protective membrane to ensure water tightness, and the insulated surface cover will also include a liner. The cover for Novi Sad's PTES is designed as a multi-layered, low-maintenance structure, featuring automatic rainwater handling and a diffusion-open system to minimise heat loss and prevent contamination.

The combined total volume of the North and South PTES is 869,829 m³. While material excavated from a depth of 3 meters below the terrain will be reused, an additional 303,132 m³ of soil will still be required for the construction of the 9-meter-high PTES embankments.

At the start of the Project, the PTES will be filled with treated water from the Danube River, produced within 'TE-TO Novi Sad'. The water within the PTES will remain stored throughout its lifetime, with only minimal losses due to evaporation, requiring occasional replenishment. However, these amounts are considered negligible.

Solar-thermal Plant. The plant will consist of: (i) a solar field with flat panels that heat a water-glycol mix, (ii) a storage tank to store excess heat during exceptionally sunny days, (iii) heat exchangers, (iv) as well as piping, pumps, and control technology. A total of 2,420 solar collectors will be installed as part of this Project. Galvanised steel piles will be used to mount the solar collectors.

Technical Building, housing a Heat Pump and e-Boilers. The Technical Building will serve as the central hub for connecting the PTES, solar plant, and DH network. It will house the heat pump, heat exchangers, e-boilers, and a glycol tank.

The heat pump will boost efficiency by cooling the PTES during the heating season and extracting heat from the Danube River during the non-heating season. The existing 'TE-TO Novi Sad' abstraction system will be used to draw water from the Danube River.

The e-boilers, in conjunction with the PTES, will generate heat when electricity prices are low, making the heating process more cost-effective.

2.4 Project Implementation Arrangements

The Project will be managed by the already established **Project Implementation Unit (PIU)**, consisting of three members (employees of the Company), who will be supported by a representative from the City Administration for Environmental Protection of the City of Novi Sad.

The Project is planned to be implemented on a design-and-build basis, following the **Yellow FIDIC** guidelines.

3 Summary of Environmental and Social Baseline Conditions

Physical Environment

- > The Project site is located approx. 150 m from the Danube River. The PTES area is characterised by the presence of a drainage canal zone. The Public Water Management Company "Vode Vojvodine" has issued conditions requiring a minimum distance of 5 m between the PTES and the water drainage canal. The Ratno Ostrvo groundwater source is located adjacent to and partially within the Project area. The highest recorded groundwater level is 3.42 m.
- > The Project area experiences moderately continental to continental climate. The average annual air temperature is 10.9°C, with an average annual precipitation of 578 mm.
- > The main source of air and noise pollution are industrial facilities, including 'TE-TO Novi Sad' and the Novi Sad Oil Refinery and traffic.
- > Visual receptors within the study area include: (i) agricultural workers, (ii) workers at 'TE-TO Novi Sad', (iii) residents of the Sangaj urban neighbourhood, and (iv) visitors and hikers within city park on the slopes of Petrovaradin Fortress
- > Waste management is primarily handled by PUC "Cistoca", which operates the city landfill. Demolition and construction waste, as well as bulky waste, are disposed at the city landfill. Industrial and hazardous waste is handled by authorised operators. Used batteries are collected for recycling, waste motor oils are collected by registered companies, and waste tires are also recycled. Electronic and electrical waste is managed by licensed companies.

Biological Environment

- > The Project site and its surroundings are characterised by presence of non-irrigated arable land, meadows and sparsely distributed broadleaved vegetation.
- > Species of conservation concern have not been recorded on site and they are not anticipated due to active anthropogenic pressure.
- > The Project area is located within a potential Natura 2000 site Novi Sad but does not support high biological diversity.

Social Environment

- > The Project area is situated in the Work Zone "Sever 4", designated for work-business activities or industrial use.
- > There are no houses within or near the Project site. The nearest settlement is Sangaj, approx. 900 m away from the Project area.
- > There are no known cultural or historical heritage assets on the Project site or in the surrounding areas, including along the access roads.

4 Environmental and Social Impacts/Risks and Mitigation Measures

As part of the E&S Assessment of the Project, a detailed analysis of potential impacts and risks for the design (pre-construction), construction, operation and maintenance (O&M), and decommissioning phases was conducted. Based on the identified risks and impacts, mitigation measures were proposed and included in the Project's **Environmental and Social Management Plan (ESMP)**. The ESMP mandates the Contractor(s) to prepare a **Construction Site Organisation Plan (CSOP)**, incorporating all measures from the ESMP specified for the construction phase. The Company will prepare an **Operational Environmental and Social Management Plan (OESMP)** tailored to the solar-thermal system incorporating measures specified for the O&M phase in the ESMP. To effectively manage identified risks and impacts during decommissioning phase, the Company or the Decommissioning Contractor will need to prepare and implement a **Decommissioning Environmental and Social Management Plan (DESMP)**. Considering the Project nature, similar impacts can be expected during the decommissioning phase as those in the construction phase, with the exception of the release of water stored within the PTES and waste management. A summary of the impacts/risks and corresponding measures is presented in the table below.

Topic	Potential impacts and risks	Mitigation measures
<p>Water Resources</p>	<p>During the <u>pre-construction phase</u>, several potential environmental issues have been identified: (i) negative impact of groundwater on the PTES construction since excavation activities will be implemented to create a partially underground reservoirs with a depth of 3 m, (ii) contribution to global warming by inadequate selection of heat pump refrigerant, (iii) environmental pollution as a result of water discharge from heat exchangers, (iv) environmental pollution as a result of corrosion of steel piles and pipes, (v) water and soil contamination as a result of glycol leakage, (vi) release of untreated sanitary, faecal, and stormwater from the Project site.</p> <p>During the <u>construction phase</u>, the potential environmental impacts are related to ground and surface water pollution due to: (i) oil and oil derivative spills; (ii) waste and sanitary water spills; (iii) glycol spills in the event of physical damage to solar collectors; (iv) wastewater spills during concrete production and use; (v) inadequate waste disposal; and (vi) careless excavation and temporary disposal of excavated soil.</p> <p>During the <u>operation phase</u>, potential negative impacts on groundwater and soil quality may occur due to (i) accidental spills of fuel, oil, lubricants, or other hazardous substances during maintenance activities; (ii) damage to pipes from corrosion or cracking; and (iii) glycol spills resulting from physical damage to solar thermal plant components.</p> <p>During the <u>decommissioning phase</u>, project components will be dismantled, and water from the PTES will be released into the surrounding environment. There is a potential risk of negative impacts on the surrounding environment and the Danube River if large quantities of water are released suddenly.</p>	<p>To minimise potential negative impacts during the <u>pre-construction phase</u>, detailed geotechnical investigations should be conducted and the following measures should be included in the Main Design: (i) the maximum depth of the PTES below the terrain must not exceed 3 m, and it must maintain a minimum distance of 1 m from the highest expected groundwater table, (ii) only natural refrigerants with very low Global Warming Potential should be used, with no Ozone Depletion Potential, and no halogens or other agents that could degrade into substances harmful to groundwater, (iii) when selecting heat exchangers, the physical and chemical properties of the potential discharge water must be carefully considered, (iv) galvanised steel piles and pipes suitable for moist soils should be used, (v) blowdown tank for the glycol must be properly dimensioned, (vi) provisions for the collection and treatment of sanitary, faecal, and stormwater collected within the Project area before discharge into the natural recipient to be specified.</p> <p>To minimise potential impacts in the <u>construction phase</u>, <i>CSOP</i> to include specific measures for <i>hazardous substance management</i> (e.g., oils, lubricants and other hazardous substances used in construction should be stored in special closed and leak-proof containers (or boxes); daily visual control of oil and fuel leaks from the vehicles; clean vehicles and mechanic equipment before leaving the construction zone).</p> <p>To minimise potential impacts in the <u>operation phase</u>, <i>OESMP</i> to include specific mitigation measures regarding <i>hazardous substance management</i> (e.g., regular inspections of all equipment, including storage tanks and especially blowdown tank for the glycol; adequate management of hazardous materials (including storage in</p>

Topic	Potential impacts and risks	Mitigation measures
		<p>special closed and leak-proof containers (or boxes)) and timely response in case of spillage).</p> <p>To minimise potential impacts in the <u>decommissioning phase</u>, DESMP to include measures related to release of water from the PTES (e.g., monitoring of the water quality in the PTES prior to discharge, implementation of a phased discharge approach to gradually release water into the Danube River or the surrounding environment, assessment of potential impacts of water release on surrounding ecosystems (including water ecosystems)).</p>
<p>Soil and Land</p>	<p>During the <u>pre-construction phase</u>, the same impacts as previously defined under <i>Water Resources</i> above are expected.</p> <p>During the <u>construction phase</u>, potential impacts include excess excavated material (spoil) use and disposal, as well as the same impacts on soil quality, as described under <i>Water Resources</i> above in the case of accidental situations.</p> <p>During the <u>operation phase</u>, the same impacts as those previously defined under <i>Water Resources</i> in the case of accidental situations are expected.</p>	<p>In addition to the mitigation measures previously defined under <i>Water Resources</i> for the <u>pre-construction phase</u>, the Main Design must require that the embankments be constructed using soil capable of withstanding the outward pressure from the water inside the pit.</p> <p>To minimise potential negative impacts during the <u>construction phase</u>, for any temporary spoil disposal, the water protection zone, drainage canal, Danube River and its banks shall be considered as “no-go” areas. <i>CSOP</i> to include measures for <i>hazardous substance management</i>, as specified above under <i>Water Resources</i> and for waste management as specified below under <i>Materials and Waste</i>.</p> <p>To minimise potential impacts in the <u>operation phase</u>, <i>OESMP</i> to include specific measures regarding <i>hazardous substance management</i> as specified above under <i>Water Resources</i>, and for waste management as specified below under <i>Materials and Waste</i>.</p>
<p>Climate Factors and Climate Change</p>	<p>During the <u>pre-construction phase</u>, potential negative impacts identified include the risk of flooding, which could cause significant direct damage to equipment installed in the technical buildings during the Project's operational phase.</p> <p>During the <u>construction phase</u>, there may be small-scale GHG emissions from construction equipment, and potential damage to materials and equipment due to climate-related events like floods and wildfires.</p> <p>During the <u>operation phase</u>, potential negative impacts include damage to Project infrastructure from climate-related disasters like floods and wildfires. Additionally, fires generate smoke and ash in the air that can diminish the amount of sunlight reaching the modules, thereby reducing efficiency.</p>	<p>To minimise potential flood-related impacts during the <u>pre-construction phase</u>, the Contractor is responsible to include the in the Main Design comprehensive flood-resistant design principles, emphasising the consideration of water-resistant materials and the implementation of effective waterproofing measures.</p> <p>To minimise potential impacts during the <u>construction phase</u>, <i>CSOP</i> to include measures defined under <i>Air</i> issue below in the construction phase and specific <i>measures for reducing negative impacts of climate-related hazards</i> (e.g., development and implementation of an Emergency Preparedness and Response Plan and Fire Protection Plan; perform “hot work” like grinding and welding, away from combustibles).</p> <p>To minimise potential impacts in the <u>operation phase</u>, <i>OESMP</i> to include specific <i>measures for reducing negative impacts of climate-related hazards</i> (e.g., updating the existing Company-level Procedure on Emergency Preparedness and Response,</p>

Topic	Potential impacts and risks	Mitigation measures
		Procedure on Fire Safety, and Procedure on Risk Management to include emergency response and management protocols specific to the solar-thermal system; creation of defensible space around solar collectors).
Air Quality	During the <u>construction phase</u> , there is potential for temporary air pollution due to: (i) dust emissions from activities such as excavation, earth-moving, and vegetation removal and (ii) pollutants emission from diesel-powered construction machinery and vehicles.	To minimise potential impacts in the <u>construction phase</u> , <i>CSOP</i> to include specific measures regarding <i>dust and emissions management</i> (e.g., visual monitoring of air quality; avoid simultaneously performing activities that cause high levels of dust and emissions; development and implementation of a Construction Transportation Management Plan).
Noise and Vibration	During the <u>construction phase</u> , there will be increased noise levels due to the operation of construction machinery and the installation of Project components.	To minimise potential impacts in the <u>construction phase</u> , <i>CSOP</i> to include specific measures regarding <i>noise management</i> (e.g., prefer contractors with newer, low-noise and low-vibration machinery; limit construction to daytime hours; development and implementation of a Construction Transportation Management Plan).
Biological and Ecological Resources	Potential impacts during the <u>construction phase</u> include: (i) installation of solar collectors can cause an increase in shade coverage directly under panels and (ii) construction machinery and temporary structures, as well as increased worker activity on the site can cause a trampling effect.	To minimise risks to biodiversity in the <u>construction phase</u> , <i>CSOP</i> must include specific measures regarding <i>biodiversity management</i> (e.g. clearly mark areas for vegetation clearance with appropriate flagging or biodegradable paint; avoid vegetation clearance; restrict the movement of construction machinery).
Landscape and Visual Aspects	<p>During the <u>construction phase</u>, activities such as excavation, assembly of structures and the movement of heavy machinery will temporarily alter the visual character of the area.</p> <p>During the <u>operation phase</u>, Project components (PTES, solar thermal plant and technical building installations) will be permanent features in the landscape.</p>	<p>To minimise potential impacts in the <u>construction phase</u>, <i>CSOP</i> to include specific measures regarding <i>landscape management</i> (e.g., limit construction areas to the necessary minimum and use designated tracks for vehicles movement; use natural topography and existing vegetation to screen construction activities).</p> <p>To minimise potential impacts in the <u>operation phase</u>, <i>OESMP</i> to include specific measures regarding <i>landscaping management</i> (e.g., install shielded, downward-facing lighting to minimise light spill and enhance nighttime visual aesthetics; implement compensatory planting).</p>
Materials and Waste	<p>During the <u>construction phase</u>, activities will generate various types of waste including inert earth materials, excess cement and concrete, spoil from land excavation, insulation materials (soil protective membrane, insulated surface cover), electrical and electronic waste, broken or damaged piping components, packaging waste, municipal waste, waste tires, oils, and materials from liquid fuels.</p> <p>During the <u>operation phase</u>, most waste will result from the maintenance activities of Project components (PTES, heat pump, e-boilers, solar-thermal plant), as well as municipal and packaging waste, hazardous waste including packaging from chemicals used for water treatment in PTES, oil-contaminated filters, oils, lubricants, cleaning agents, and other maintenance fluids.</p>	<p>To minimise potential impacts during the <u>construction phase</u>, Contractor will be responsible to develop and implement <i>Construction Waste Management Plan</i> to include specific measures regarding <i>waste management</i> (e.g., provide on-site separation and selection of different types of waste; reuse excavated materials for PTES construction; etc.).</p> <p>To minimise potential impacts in the <u>operation phase</u>, the responsibility of the Company is to develop a <i>Waste Management Plan</i> and implement specific measures (e.g., all waste generated during operation/ maintenance must be classified and separated as non-hazardous or hazardous waste; recycling/re-use; waste to be delivered to licensed subcontractors; keeping records on amount of generated waste by type, etc.).</p>

Topic	Potential impacts and risks	Mitigation measures
	<p>During the <u>decommissioning phase</u>, removing project infrastructure may generate various wastes like waste soil, concrete, metals, insulation materials, solar collectors, electronic waste, support structures, foundations, packaging waste, and municipal waste.</p>	<p>In the <u>decommissioning phase</u>, the Company or Decommissioning Contractor to develop <i>Decommissioning Waste Management Plan</i>, which will cover mitigation <i>measures regarding waste management</i>.</p>
<p>Occupational Health and Safety (OHS)</p>	<p>During the <u>construction phase</u>, in addition to general construction site risks such as falling, slipping, machinery accidents, and electrical hazards, this Project presents specific risks. Workers may be at risk of falling into the PTES during water filling and surface cover installation, which could lead to drowning. There are also risks associated with machinery operation during embankment construction, requiring special attention to safe machinery use. Workers installing waterproofing inside the embankment must follow protective measures to avoid falls. During the installation of the solar-thermal system, while the risk is lower due to ground-level work with prefabricated components, personnel must still wear appropriate personal protective equipment (PPE) to prevent injuries.</p> <p>During the <u>operation phase</u>, introducing new technology, equipment, or processes requires updated safety measures. New roles will be created for staff maintaining the PTES thermal cover and monitoring water levels, with risks such as falling and drowning during tasks near the water surface. Additionally, there are risks of electric shocks and burns from working with live electrical components or tools, particularly if safety protocols like lockout/tagout are not followed.</p>	<p>To minimise potential impacts during the <u>construction phase</u>, Contractor will develop and implement an <i>OHS Plan</i>.</p> <p>To minimise potential impacts in the <u>operation phase</u>, the responsibility of the Company will be to include OHS measures in the OESMP. The Company will also update its internal OHS policies to address specific risks relevant to the solar thermal plant.</p>
<p>Labour and Working Conditions</p>	<p>During the <u>construction phase</u>, the exact number of workers needed for the solar thermal power plant construction is currently unknown. Due to seasonal work, subcontracting and potential cost-cutting, there is a risk of labour regulation non-compliance, such as undeclared work or excessive hours. On-site worker accommodation is not expected to be necessary during the construction phase.</p>	<p>To minimise potential impacts during the <u>construction phase</u>, the Contractor will submit a statement confirming compliance with national labour regulations and commitment to adhering to these regulations throughout construction. The Contractor will also establish a worker grievance mechanism as required by EBRD Policy. Induction training will be organised for the Contractor’s workers. If worker accommodation is required, the Contractor will develop and implement a Workers’ Accommodation Management Plan.</p>
<p>Community Health and Safety</p>	<p>During the <u>construction phase</u>, no significant impacts on the Sangaj neighbourhood are expected, except for potential noise and traffic disruptions from heavy vehicles, mostly affecting the settlement’s periphery. The unclassified intervention road to the site, built on an embankment, may be damaged by heavy trucks, requiring consent from authorities and regular maintenance. Unauthorised access to the site will also need to be managed for security.</p> <p>During the <u>operation phase</u>, emergency situations such as fires may arise due to improper equipment handling, malfunctions, or failures caused by natural hazards such as heatstroke or wildfires.</p>	<p>To minimise potential impacts during the <u>construction phase</u>, the Contractor will need to plan for community health and safety measures such as developing and implementing a Construction Transportation Management Plan, regularly assessing the condition of the access road and carry out timely repairs to ensure safe access and transport, preventing unauthorised public access to construction sites and contact, etc.</p> <p>To minimise potential impacts in the <u>operation phase</u>, the Company will conduct annual inspections of fire systems and equipment as required by the Law on Fire Protection.</p>

Topic	Potential impacts and risks	Mitigation measures
Cultural Heritage	There are no known cultural or historical heritage assets within the Project site or surrounding areas. However, there is a potential risk of uncovering unknown assets during excavation for the PTES and cable installation, which could be disturbed if not properly managed.	The Contractor will develop a Chance Find Procedure detailing the necessary steps to be taken should any culturally significant assets be found during excavation works, and to train its workers on the procedure (as part of the induction training).

5 Additional Activities to be Undertaken for Project

In addition to mitigation measures proposed in the previous chapter, the Company will implement the following activities (described in detail in the Environmental and Social Action Plan) to meet local and EBRD/EU requirements:

STRENGTHEN CAPACITIES FOR E&S PROJECT MANAGEMENT:

- > Develop and implement a Project-specific Environmental and Social Management System, with an appropriate E&S Policy.
- > Prepare and submit 6-monthly E&S reports to EBRD during construction.

OBTAIN PROJECT PERMITS:

- > Opinion on whether an EIA is needed (and EIA Study approval, if required),
- > Energy Permit,
- > Construction Permit
- > Use Permit.

SUSTAINABLE MATERIALS SOURCING

- > During the procurement of materials, especially solar collectors, the Company to include contractual clauses requiring suppliers to comply with the specified E&S requirements throughout the contract duration.

SUPERVISE THE WORK OF CONTRACTOR:

- > Require from the Contractor(s) to submit and implement a CSOP, and to comply with all requirements specified in the Project design and Project ESMP for all project components, as well as to implement construction mitigation measures and monitoring plan as per obtained permits.

CARRY OUT STAKEHOLDER ENGAGEMENT:

- > Implement the Stakeholder Engagement Plan (SEP) for the Project and update it a regular basis throughout the Project duration.
- > Implement the grievance mechanism as defined in SEP to ensure stakeholders are able to raise their concerns about the Project and that these concerns are addressed promptly.

6 Disclosure and Communication

A Stakeholder Engagement Plan (SEP) has been developed to identify stakeholders, outline engagement methods and establish a grievance mechanism specific to the Project. The SEP aims to transparently communicate the stakeholder engagement program throughout the entire Project cycle, facilitating timely decision-making and encouraging active involvement of stakeholders.

The PIU will disclose this NTS, the SEP and the Project Grievance Form as early as possible in the Project development process. These will be available in Serbian and English language on the Company's website (www.nstoplana.rs). In addition, printed copies will be made available at the Company's User Centre (located at 1 Vladimira Nikolića Street, Novi Sad).

The PIU will organise at least one public consultation meeting in the pre-construction phase (during or after the Main Design is developed) to engage with stakeholders and present the Project (the design, the objectives, anticipated benefits, how specific issues will be addressed, etc.) and facilitate a platform for stakeholders to express their opinions and concerns. The PIU will consider and address all comments and proposals received. A summary report of the comments/proposals and the PIU's responses will be published on the Company's website within 10 days after the meeting.

The PIU will provide clear information about the planned construction activities, including location, start date, duration, potential traffic disruptions, and other public inconveniences.

Throughout operation and maintenance, the PIU will include the results of the stakeholder engagement process in annual E&S Reports to EBRD, summarising E&S impacts, health and safety performance, disclosure and consultation performance and implementation of the external grievance mechanism. A summary of these E&S Reports will be posted on the Company website annually to ensure regular reporting to stakeholders.

A Project-level grievance mechanism will be set up as a process for receiving, evaluating and addressing grievances from affected communities. The Company will implement the grievance mechanism to ensure that it is responsive to any concerns and complaints. Both the PIU and the contractors/supervision engineers on site will accept grievances associated with the Project. The PIU will monitor the way in which grievances are being handled and ensure they are properly addressed within deadlines specified within the mechanism presented below.

PIU contact information:

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