Project on new NTS developments for taking over Black Sea gas

TRANSGAZ's project for Romania and Europe

INFORMATION LEAFLET

for the Project

"Extension of the Romanian transmission system for taking over gas from the Black Sea shore"

(Reference number in European Union PCIs List: 6.24.10-3)

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1. PROJECT DESCRIPTION AND PROJECT SCOPE

Considering the recently discovered Black Sea gas, Transgaz plans to extend the National Gas Transmission System (NTS) to create an additional gas point for taking over gas from the Black Sea offshore blocks.

The Project "*Extension of the Romanian transmission system for taking over gas from the Black Sea shore"* (hereinafter referred to as „the Project") consists of the construction of new gas transmission pipeline sections to connect the the Black Sea shore to Transit 1 international gas transmission pipeline on the direction Black Sea shore – Corbu – Săcele - Cogealac - Grădina.

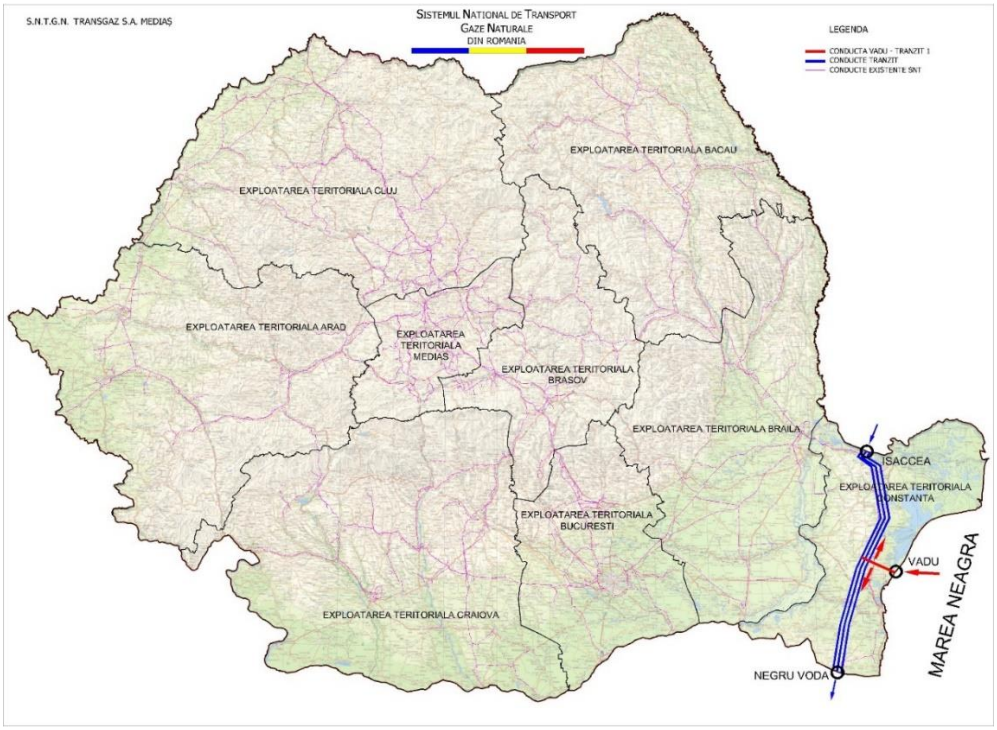

Figure 1 – Objectives of the project "*Extension of the Romanian transmission system for taking over gas from the Black Sea shore"*

The approximately 24,37 km long pipeline will have the diameter of Ø20" (Dn 500), and designed to transmit gas at a pressure of 55 bar.

The implementation of the Project implies the performance of the following investment works:

- Gas transmission pipeline, 24.37 km long;
- Pig launching trap at the Vadu connection point and pig receiving trap at the Transit 1 connection point (the Grădina zone);
- Underground power supply installations for the cathodic protection station (CPS) and for the pig launching and receiving trap;
- Digital data telemetry system (optical fibre);
- Corrosion protection system

Within the area of the Grădina Territorial Administrative Unit (UAT), located along the DN 1000 Transit 1 pipeline route, the Transit 1 pipeline will be interconnected with the designed pipeline, gas from the Black See following to be taken over into the National Transmission System through the interconnection.

The Project will enable the capitalizing of the Transit 1 and Onesti - Şendreni - Isaccea - Transit 1 pipelines potential with regard to Black Sea gas transmission if gas import from the Russian Federation is interrupted.

By implementing the Project the following objectives will be attained:

- Creating an alternative for supplying gas to Bulgaria, different from the one using gas from the Russian Federation, that is supply from the National Transmission System;
- Improving gas supply to different areas of the National Transmission System, especially during winter time, when, due to the low temperatures, the consumption increases (consumed flows) and the pressure in the system decreases;
- Increasing operational safety of existing pipelines and installations;
- Diversification of gas supply sources for consumers in Romania, by ensuring access to the gas volumes in the Black Sea;
- Through the Bulgaria – Romania – Hungary – Austria pipeline (the BRUA project) and the current NTS pipelines there is the possibility to create a route for the transmission of Black Sea gas to the Central European markets;
- Enhancing security of gas supply to Romania and Central European markets by access to new gas sources;
- Decreasing the dependency on gas imports from a single source, by covering the constant and predictable increase tendencies of the consumption in the European countries against the background of gradually gaining the market to lead to a constant medium and long term decrease of the gas deliveries from the area of the Russian Federation.

Thus the Project meets the specific criteria provided in Regulation (EU) No. 347/2013:

- ***Market integration*** as a result of the decreasing congestion of the energy infrastructure and the increasing of system interoperability and flexibility;
- ***Security of supply and competition*** by ensuring the proper interconnections, by the diversification of supply sources, transmission routes and stakeholders thus reducing the market concentration;
- ***Sustainability*** by reducing emissions due to the replacement of pollutant fuels with natural gas issuing less carbon dioxide per delivered energy unit.

According to the provisions of the Technical Norms for Design and Execution of Gas Transmission Pipelines, the width of the working strip for pipeline arrangement is 16 m for the pipeline DN500.

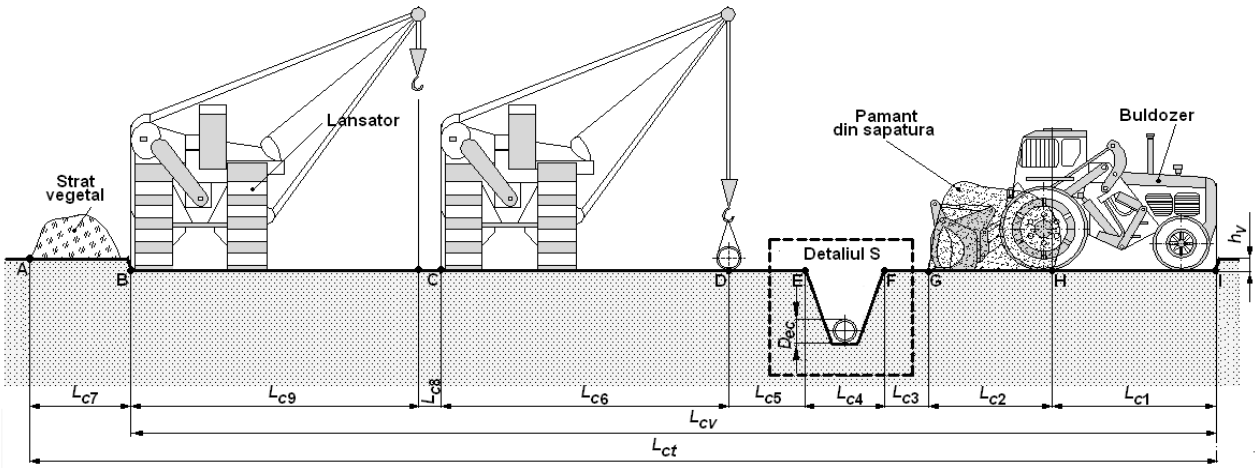

Figure 2 – Organization of the working strip

The total surface to be covered by the works for the construction of the investment objective is approximately 40.1 ha, of which the temporary occupied land surface is approximately 40 ha, and the permanently occupied land surface is approximately 0.1 ha.

Project location

The project sites are locates in the south – east area of the country, in Constanța County, in the area of the Corbu, Săcele, Cogealac and Grădina administrative territorial units.

On the pipeline route there will also be two line valve stations as well as one cathodic protection station.

2. THE NATIONAL DEVELOPMENT PLAN

The Project is included in the third list of Projects of Common Interest adopted by the European Commission in November 2017 and approved by the European Parliament in April 2018 at position:

- ✓ ***6.24.10 - 3 "Extension of the Romanian transmission system for taking over gas from the Black Sea shore"***

and is part of the 2017-2026 TYNDP approved by the National Energy Regulatory Authority by Decision 910/22.06.2017, at the position 7.6 "*Project on new NTS developments for taking over Black Sea gas"*

Link:

http://www.transgaz.ro/sites/default/files/uploads/users/admin/plan_de_dez_2017_-_2026.pdf

3. IMPACT ON THE ENVIRONMENT

3.1. CROSSING PROTECTED AREAS

- ✓ Natura 2000 protected areas:

- The pipeline route crosses the European Community interest site *ROSPA 0031 Danube Delta and Razim - Sinoe Complex* between km 0.5 and km 10.5. The length of the pipeline sector crossing the European Community interest site is of approximately 10 km.

The pipeline is also located near natural protected zones as follows:

- km 0 of the pipeline is located at a distance of approximately 250 m from the *Danube Delta Biosphere Reservation* overlapping in this area *ROSCI 0065 Danube Delta* and *ROSPA 0031 Danube Delta and Razim - Sinoe Complex*;
- at km 13 pipeline route is at a distance of approximately 155 m from *ROSPA 0031 Danube Delta and Razim - Sinoe Lake Complex*;
- the route of the Project is at approximately 380 m (at km 16), and approximately 470 m (at km 19) from *ROSPA 0019 Dobrogea Gorges*;
- the route of the Project is at approximately 850 m (at km 20 - 21) from *ROSCI 0215 Cheia Jurassic Reef*.

3.2. ALTERNATIVE OPTIONS

Within the pre-feasibility study the following two alternative routes were considered:

- ✓ ***Option 1 (endorsed)*** located on the administrative territory of Corbu, Săcele, Cogealac and Grădina, 25 km long.
- ✓ ***Option 2*** located on the administrative territory of Corbu, Săcele, Mihail Kogălniceanu and Tîrgușor, 28.6 km long.

For both options the following scenarios were considered:

- **Scenario 1** – 1.00 billion Scm/y, DN 500 pipeline;
- **Scenario 2** – 2.00 billion Scm/y, DN 600 pipeline;
- **Scenario 3** – 4.00 billion Scm/y, DN 800 pipeline.

In view of the optimization and selection of the final option, the following aspects were taken into account:

- minimum impact on agricultural lands;
- avoidance of landslide areas;
- necessity of minimum land improvement as compared to other possible alternatives;
- technical, economical and construction related considerations, and the possibilities to monitor the stations and the pipeline during operation;
- minimum impact on the environment (and on all environmental aspects);
- assurance of conditions for mechanical digging and construction-mounting works;

- safety of operation;
- observance of safety distances to nearby objectives;
- minimum social impact.

For endorsed Option 1 the three gas transmission scenarios mentioned above were analysed in the Feasibility Study. Scenario 1 was endorsed, this scenario considering the construction of a DN 500 24.37 km gas transmission pipeline, the pig launching trap at the Vadu connection point and the pig receiving trap at the Transit 1 connection point (in the Grădina area), underground power supply installations for the cathodic protection station (CPS) and for the pig launching and receiving traps, digital data telemetry system (optical fibre), corrosion protection system.

3.3. CHARACTERISTICS OF POTENTIAL PROJECT IMPACT

Impact on population and human health

The impact on population and human health is insignificant because the construction-mounting works will be mainly performed outside town limits.

Due to the fact that the works execution team will observe the labour health and safety security, the possibility of technical or human accidents is reduced to minimum.

The potential impact on population and on human health may be caused by the following factors:

- Loss of income source following the permanent occupation of the land (direct, long term, permanent negative impact);
- Loss of income source following the temporary occupation of the land (direct, medium term, temporary, negative impact);
- Possible deterioration of local roads because of the construction site traffic (direct, short term, temporary, negative impact);
- Noise and vibrations caused by the construction site traffic (direct, short term, temporary, negative impact);
- Use of local work force (direct impact, during the construction works, temporary, positive).

Impact on fauna and flora

The potential impact on fauna is caused by the presence of devices and labour force in the working area and by the construction-mounting works.

The implementation of the project does not imply deforestation - trees were not identified at the working sites.

The land where the works are performed is agricultural land, pasture land, wind farm.

The following factors may have an impacton flora and fauna:

- Sound pollution in the working area (direct, short term, temporary, negative impact);
- Temporary loss of habitat because of the temporary occupation of land, preparation of land surface for the construction-mounting works, where the topsoil needs to be removed for the digging and pipe laying works (direct, medium term, temporary, negative impact).

Impact on soil and on land use

The project is carried out in accordance with the provisions of the "Technical Rules for the Design and Execution of the Gas Transmission Pipelines" approved by Order 118/2013 of the ANRE President.

The technical design provides for the separate removal of the topsoil on the working strip of the pipeline, so that after the completion of the works the land to be restored to its initial state.

The potential impact on the soil may be generated by the following factors:

- Soil pollution because of the inadequate waste disposal, waste water, and because of fuel and lubricant leakage during the operation and maintenance of the devices (direct, short term, temporary, negative impact);
- Alteration of soil structure that may lead to lower soil fertility because of the digging works needed for pipeline laying (direct, short term, temporary, negative impact).

Works will be performed with observance of the project execution stages, of the technological discipline during the construction-mounting works, of adequate waste storage and land reinstatement as specified in FEED. Impact on soil will thus be reduced.

The impact on land use may be caused by the following factors:

- permanent land removal from the Agricultural Land Reserve for arrangement of aboveground facilities (direct, long term, permanent, negative impact);
- temporary land removal from the Agricultural Land Reserve of some land areas (direct, medium term, temporary, negative impact).

Impact on water quality and quantity regime

The route of the gas transmission pipeline does not cross surface waters. The pipeline route crosses 7 channels, 3 of which are irrigation channels. These are crossed in open ditch, the pipeline being cemented (lested) and laid at a depth of at least 1.5 m.

The works will not generate a significant negative impact on the water environment factor if the the project measures and the execution technology are applied.

Impact on air quality and on climate

During pipeline mounting works the air pollution sources are represented by the engines of vehicles and machines, as well as the welding works for pipeline sections and paint coating protection works for fittings.

Under these circumstances the potential impact on air and climate is caused by the following factors:

- Pollutants caused by burning emissions (exhaust gas) from engines (direct, short term, temporary, negative impact);
- Dust pollution due to land stripping and excavation works and the handling of the excavated soil (direct, short term, temporary, negative impact);

- Air pollution due to the transportation of powdery materials (direct, short term, temporary, negative impact);
- Emissions of volatile organic compounds caused by paint coating operations (direct, short term, temporary, negative impact).

Devices at working points will work intermittently and, as a result, engines emissions will be punctiform and instantaneous, which makes the impact on air insignificant.

Paint coated surfaces will also be reduced

Impact of noise and vibrations

The sources of noise and vibrations are represented by the equipment needed to dig and cover the ditch, needed to transport and handle the pipeline, to transport staff during works execution and to operate the gas compressor stations after commissioning.

Since the devices and equipment used must be homologated, the noise and vibrations are considered to be within admissible limits and the impact is considered to be insignificant, namely within the admissible limits according to SR 10009:2017.

The location of the project outside the build-up area, at distance from the residential areas, reduces the possibility of a negative impact on them due to the noise and vibrations during the construction period.

Impact on landscape and scenery

The impact on landscape is caused by the following factors:

- change of use of land during the pipeline mounting works (direct, medium term, temporary, negative impact);
- the aboveground facilities of the gas transmission system (direct, long term, permanent, negative impact). Considering the small dimensions of these structures, the impact is not significant.

Impact on the interaction between environment components

Taking into account all the activities necessary to carry out the project we believe there is no impact on the interaction of such components if the execution technology and mitigation measures under the project are applied.

Impact on the historical and cultural patrimony

The potential impact on the historical and cultural heritage may be generated by the destruction / deterioration of an artifact during excavations (direct, local, permanent, negative impact).

By observing the measures of the competent authority, we estimate that the impact is low.

Cross-border impact

There was no environmental cross-border impact identified.

3.4. MEASURES TO AVOID AND REDUCE THE SIGNIFICANT IMPACT ON THE ENVIRONMENT

Measures to reduce the impact on population and on human health

Taking into account the potential impact on population and on human health, we propose the following measures to reduce the impact:

- compensation of affected land owners in line with the laws in force;
- rehabilitation of infrastructure affected by heavy traffic;

- reduction, to the minimum necessary, of running time for devices;
- reduction of speed for moving the devices on access roads to the working space in order to diminish dust emissions during draught times.

Measures to reduce the impact on fauna and flora

Considering the impact on flora and flora, we propose the following measures to reduce the impact:

- the execution of the project will consider all requirements and conditions of the trustees/administrators of the protected natural area and of the environmental permit issuer,
- assurance of legal limits for noise emissions of devices and correct maintenance thereof;
- observance of technical norms on design and execution of gas transmission pipelines with regards to the preparation of the land surface for the construction-mounting works;
- except for the surfaces of land that have permanently changed their initial use, the surfaces of land that are temporary affected will be brought back to their initial state when works are completed.

Measures to diminish the impact on soil and on land use

During the execution stage control is recommended by execution phases, and adequate storage of topsoil is recommended in order to reinstate land quality.

In order to avoid soil pollution the following measures will be taken:

- there will be no dumping, no burning, no storage on soil and no burying of garbage or other type of waste (used tires, oil filters, cloths, paint recipients, etc.);
- waste will be stored separately, by categories (paper, metal, plastic and glass, polyethylene packing, metals, etc.) in specially designed recipients or containers;
- any spilling of used oils or fuels is forbidden;
- only pre-set access ways and parking areas will be used for devices;
- any storage of tubing outside the working strip is forbidden.

During the project execution works the following works are envisaged for soil/subsoil protection:

- digging operations for pipeline mounting will be executed in correlation with the general flow of the pipeline mounting works so as to reduce the time when ditch is kept open and to avoid caving, water filling, infiltrations in lower layers, landslides;

- topsoil will be stored to be later used for soil reinstatement when works are completed;
- after pipeline is laid, ditch is to be filled and adequately compacted so as to avoid rain water infiltrations through the sandy ground of the pipeline ditch.

In case of permanent and temporary removal from the Agricultural Land Reserve the following measures are proposed to reduce the impact:

- sizing of the works to the minimum necessary surface;
- strict delineation of the working strip.

Measures to diminish the impact on water quality and quantity regime

Appropriate waste collection and disposal systems will be provided during the execution of the works. Evacuation of any categories of wastewater will be carried out in compliance with the applicable laws.

Measures to reduce the impact on air and climate quality

During the construction-mounting works the impact on air is represented by the flue gas from engines and devices, by insignificant emissions of volatile organic compounds from valves and fittings painting jobs.

In order to reduce flue gas emissions devices and/or vehicles will be stopped during the breaks.

To reduce the impact on the air we propose rigorous checking of vehicles engines and devices used for project works.

Measures to reduce the impact of noise and vibrations

The undertakers have the following obligations:

- to assure the adequate quality of their own quality system designed and created by own staff, with certified technical staff;
- to use the products and equipment specified in the project for works execution;
- to observe the execution details as specified in the project.

Construction control and quality are performed by investors through their site supervisors or through expert consultants.

For observance of the maximum noise level at inhabited dwellings, as set by Order No.119/2014 on the approval of the public hygiene and public health regarding the population's way of life, namely 55/40 dB day/night, the Project's design will provide for adequate measures.

Measures to reduce the impact on landscape and scenery

Considering the potential impact on landscape and visual environment the proposed measure to reduce the impact is the restoration of the temporary occupied land to its initial state upon the completion of the works related to the Project.

Measures to mitigate the impact on the historical and cultural heritage

Considering the potential impact on the historical and cultural heritage, the measures established by the notice issued by the competent authority for culture will be applied.

4. PROJECT PRELIMINARY SCHEDULE

Development and implementation stages	Period
Pre-feasibility study	Completed

Feasibility study	Completed
Environmental Impact assessment	Completed
FEED and permitting documentation for the construction permit	Completed
Construction of pipeline	2019 – 2021
Technological probes and commissioning	2021
Start of operation	2021

Note: The schedule is indicative and may be changed. The actual implementation depends upon the development of the Black Sea offshore blocks.

5. SUMMARY ON PROJECT STATUS

The FEED for the "NTS extension by the construction of a gas transmission pipeline from the Black Sea gas overtaking point (the Vadu area) – to Transit 1 (the Grădina area)" is completed.

The project obtained the status of project of national importance by Government Resolution 563/04.08.2017.

Construction Permit 4/20.12.2017 was obtained based on Law 185/2016.

On 31.05.2018 the documents necessary for issuing the Government Resolution for the taking of the land affected by the route of the Project out of the agricultural circuit, according to Law 185/2016, was sent to the Ministry of Energy.

Transgaz will submit to the Competent Authority for Projects of Common Interest (A.C.P.I.C) the ***Notification to initiate the procedure prior to the submission of the candidature for the project "Extension of the Romanian transmission system for taking over gas from the Black Sea shore".***

According to Regulation (EU) 347/2013 on the Company's website it was created the project web page containing an information leaflet providing clear and concise information on the project, a non-technical summary, as well as contact details.

6. PUBLIC CONSULTATIONS

According to the provisions of Art. 9 (7) under *Regulation (EU) 347/2013 of the European Parliament and European Council, dated 17 April 2013 on the guidelines for trans-European energy infrastructure and repealing Decision No. 1364/2006/CE and amending Regulation (EC) No.713/2009, Regulation (EC) No. 714/2009 and Regulation (EC) No. 715/2009,* S.N.T.G.N. Transgaz S.A. invites the interested public to take part in the public consultations. The times and locations for such consultations are published on the company's webpage.

The interested public may get additional information on the Project from the following contact:

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7. OTHER RELEVANT INFORMATION

The Page of the Project:

http://www.transgaz.ro/ro/extinderea-sistemului-de-transport-din-romania-pentru-preluarea-gazului-de-la-tarmul-marii-negre

For information on European Union PCIs access the following link:

https://ec.europa.eu/energy/en/topics/infrastructure/projects-common-interest

The manual of procedures for the permit granting process applicable to PCIs and elaborated according to Regulation (EU) No. 347/2013 has been published for public consultation purposes by the Competent Authority for PCIs and may be found on the Ministry of Energy webpage:

http://energie.gov.ro/manual-privind-procedura-de-autorizare-a-proiectelor-de-interes-comun/