

Chiren UGS Capacity Expansion Project - Bulgaria

Social Impact Assessment

July 2023

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1 Abbreviations

BTG	Bulgartransgaz EAD
AD	Joint-stock company
AGI	Aboveground installations
AGRS	Automatic gas regulation station
Aoi	Area of influence
IFC	International Finance Corporation
bcm	Billion cubic meters
BDDR	Basin Directorate Danube Region
BDS	Bulgarian Institute for Standardization
EN	European standards
BGN	Bulgarian lev
CESMP	Contractors Environmental and Social Management Plan
CHA	Cultural Heritage Act (CHA)
CS	Compressor station
DSP	Detailed spatial plan
DSP-CP	Detailed Spatial Plan – Construction Plan
DSP-PP	Detailed Spatial Plan - Parcelling Plan
DZZD	Company under the law on obligations and contracts
EA	Energy Act
EAD	Single-member joint-stock company
EBRD	European Bank for Reconstruction and Development
EIA	Environmental impact assessment
EOOD	Sole proprietorship with limited liability
EPA	Environmental Protection Act
EPC	Engineering, Procurement and Construction
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
EU	European Union
EUR	Euro
ExEA	Executive Environmental Agency
GIIP	Good International Industry Practice
GMS	Gas metering station
GR	Gas terminals
GRAO	Civil registration and administrative service
GTCUs	Gas turbine compressor units
H&S	Health and Safety
HEEC	High Expert Environmental Council (HEEC)
IFC	International Finance Corporation
IGB	Interconnector Greece-Bulgaria
IBS	Interconnector Bulgaria-Serbia

LAWS	Local Automated Warning System
MoEW	Ministry of Environment and Water
NGOs	Non-governmental organizations
NPP	Nuclear Power Plant
NSI	National Statistical Institute
OHS	Occupational safety and health
OOD	Limited Liability Company
PCIs	Projects of common interest
PS	Performance Standards
RoW	Right of way
SCADA	Supervisory control and data acquisition
SDA	Spatial Development Act
SEP	Stakeholder Engagement Plan
SIA	Social impact assessment
SLID	Single Largest Infrastructure Disruption (SLID)
UGS	Chiren underground gas storage
VPSHR	Voluntary Principles of Security and Human Rights
WWTP	Wastewater Treatment Plant

2. Key facts

- ✓ The Project for the Expansion of the Chiren Gas Storage Facility in Bulgaria has three main project components as summarized in this paragraph. 1) The expansion of the above-ground facilities of Chiren UGS will be implemented on a new site located in the land of the village of Chiren, Vratsa Municipality, Vratsa district and in close proximity to the existing one. The location of the new site is more than 1.2 km from the building boundaries of the village of Chiren. The field has existing technical infrastructure and tangible assets. 2) The other project component – the new connection gas transmission pipeline shall start from the existing DN1200 pipeline entitled “Expansion of Bulgartransgaz EAD gas transmission infrastructure parallel to the Northern (main) gas pipeline to the Bulgarian-Serbian border”. The tapping into the existing pipeline is at km 414+945.86. The end point of the route of the new pipeline is the site of Chiren Underground Gas Storage (UGS). 3) The exact location of the new wells is still to be determined at the time of drafting of this document, but the estimated location area is in vicinity of the existing wells in agricultural land. The Project (including all its’ components) will not affect nearby communities or sensitive receptors.
- ✓ The development, construction and operation of the Project will not result in any physical displacement of people.
- ✓ BTG aims to limit the economic displacement of affected persons as much as possible. For this reason, it aims at locating the project on municipal or state-owned properties as a priority and implements the mitigation measures described in the Land Acquisition and Livelihood Restoration Plan. It is important to note that the affected properties are all part of large agricultural plots for industrial production of agricultural goods and no livelihoods depend on the particular land plot affected by the easement rights of the construction slip. In addition, the effects of the project construction are with limited duration of about 1 year of actual construction activities in total.

Although some negative impacts related to temporary disturbance to agricultural activities along the RoW and construction areas and traffic-related disturbance are going to be experienced, based on the scale of the Project, the location and the characteristics of the existing social and socio-economic context, the socio-economic impacts of the Project are expected to be mainly positive.

- ✓ The Project will bring new investment and possibly some employment opportunities to the area. Through workforce training, it will enhance the skill base and promote economic activity through local content initiatives. Furthermore, Bulgartransgaz has a long-lasting approach to community investment over and above its impact mitigation obligations and will seek to make a positive and sustainable community development contribution.

Potential social risk areas identified include:

- Labour force management (recruitment, mobilisation and retention).
- ✓ The Project is not considered significant either in terms of resource requirements or duration. As far as existing local pool of workers (mostly semi-skilled and unskilled labour) can be used, it is anticipated that the contractors for the different project components will do so. For the expansion of the aboveground facilities there is already construction permit in place. The duration of the construction for this project component is envisaged to begin in second half of 2023 and last until

the end of 2024 involving appr. 383 people labour force. The construction of the connecting gas pipeline to the village of Butan is envisaged to start on December 2023 and involve about 325 People and the construction of the wells – envisaged start on May 2024, involvement of estimated 500 people. These plans and time schedules are to be updated when the process of developing the last two project components advances.

- Workforce accommodation.
- ✓ Since the village of Chiren does not have the possibility to host the workers, they will be accommodated in the nearest town of Vratsa (for the expansion of the aboveground facilities and the new wells) and also accommodation possibilities exist in the town of Kozloduy and surroundings (possible for the new connection gas pipeline component workers).
- Influx / induced in-migration.
- ✓ Based on the current Project schedule, it is expected that the Chiren Gas Storage Facility Bulgartransgaz Project will be the only notable construction activity in the area. Project labour as far as possible, goods and service requirements are expected to be sourced / serviced largely from within the area and therefore any Project-induced influx / in-migration impacts are expected to be negligible.
- Community safety and security.
- ✓ Recognising that the Project's activities may affect local communities, it will be important to engage regional and local authorities to ensure the welfare of the community and mitigate any potential conflicts.
- ✓ Risks to community safety are mostly likely to derive from the transportation and movement of heavy equipment to the site. Once the route analysis is completed, a *Transport Management Plan* for each project component will be developed to address the associated risks.

3. Introduction

This document is supplementary to the available documentation on the environmental aspects and social risks and impacts of the Chiren UGS Capacity Expansion Project prepared in accordance with national legislative requirements and aims to identify and assess, in accordance with the IFC Performance Standards, the Equator Principles and applicable international practices, the social risks and impacts of project implementation that arise and/or impact the project throughout its life cycle. This document addresses both the negative and positive impacts of the Project and provides background information on the social environment aspects in the impact area.

Social aspects, risks and impacts in the three project areas are identified and assessed:

1. Design, construction and commissioning of new above ground facilities – a compressor station with all of the auxiliary equipment to ensure a reliable and continuous operation for natural gas injection and withdrawal and a new gas metering station (GMS);
2. Design, construction and commissioning of a new gas pipeline in the section VA Butan - Chiren UGS
3. Design, construction and commissioning of underground facilities - ten new high flowrate exploitation and three observation wells, as well as new gatherings (gas

pipelines) connecting the exploitation wells with the above ground facilities, including the compressor station.

The supplementary SIA includes updated and additional social and socio-economic information pertaining to:

- ✓ The identification of closest receptors to all project components;
- ✓ Other planned local and regional infrastructure developments which may contribute to cumulative social impacts;
- ✓ Key local stakeholder groups, community demographics and social characteristics;
- ✓ Local social services and infrastructure;
- ✓ Labour force availability and composition and labour and working conditions issues in the country, including supply chain aspects;
- ✓ Local accommodation and housing;
- ✓ Land acquisitions and easement rights;
- ✓ Identification of human rights risk identification based on country specificity and project specificity related to the use of armed security.

Detailed Project engineering and design is currently underway and, as a result of this, it is expected there will be updates to the Project description and execution methodology (most notably, labour requirements, workforce accommodation solutions, transport and logistics, Ogosta river crossing). The Engineering, Procurement and Construction (EPC) Contractors for the different project components have been selected by Bulgartransgaz and their contracts have been signed.

A number of assumptions have been made in order to complete this supplementary baseline and impact assessment. As further social and socio-economic data is acquired during ongoing consultation efforts and additional Project information becomes available the Project risk register and management plans will be reviewed and updated accordingly.

4. Project Description and Objectives

The project is implemented by Bulgartransgaz EAD (hereinafter referred to as BTG or the Project Company).

Bulgartransgaz EAD is a sole joint stock company owned by Bulgarian Energy Holding EAD, whose principal is the Ministry of Energy of the Republic of Bulgaria. BTG is the owner and operator of the existing underground gas storage in Chiren.

4.1. Project objectives

The project in its integrity has the following objectives:

- a technical possibility will be created for increasing the working volume (expansion) of Chiren UGS, with the possibility to store up to 1 bcm of active gas;
- the necessary new, highly efficient and highly reliable compressor equipment meeting all modern requirements for environmental protection (low level of harmful emissions and noise) will be provided, ensuring the possibility to inject natural gas of up to 8.0 mcm/d;
- the operational safety, security and reliability of Chiren UGS, as a whole will be increased.




- In the context of the storage facility expansion and its transformation into a commercial storage facility of regional importance, the construction of a connecting gas pipeline will increase the capacity abilities of the storage from a commercial perspective, contribute to a greater flexibility, reliability, safety and opportunity for manoeuvres as regards the routes of trade and processes of withdrawal and injection. The construction of a new connection to the gas transmission system will further contribute to better integration of the gas storage facility into the overall gas transmission system of Bulgaria and the region.
- The envisaged gas pipeline branch will provide a possibility for gas supply of neighbouring regions in case of financial, economic and commercial interest. Creating a possibility to use natural gas will allow the replacement of currently used solid fuels, thereby contributing to the reduction of harmful emissions.
- The staged drilling of the new wells will increase the natural gas injection and withdrawal capacity of the gas storage facility. This will enable 8-10 mcm of natural gas to be withdrawn daily.

The following map shows the activities:

Figure 1: Activities Map



Legend:

-  **Underground gas storage**
-  **Pipeline Butan-Chiren 41km**
-  **Existing pipeline**

4.2. Project description

Activity 1: Design, construction and commissioning of above ground facilities

Design, construction and commissioning of new above ground facilities on the territory of Chiren UGS will be carried out within the Activity, including a compressor station (CS) with auxiliary equipment to ensure reliable and continuous operation in gas injection and withdrawal mode, a new gas metering station (GMS), other facilities and control systems.

The compressor station covers the installation of new gas turbine compressor units (GTCUs), including GTCUs equipment kit, connecting gas pipelines, inlet and outlet manifolds and entry/exit gas pipelines (gas gatherings), fuel gas preparation unit and the respective gas pipeline networks and installation on the CS site.

As part of the above ground facilities, a new reversible GMS will be built, which will operate in injection and withdrawal mode, as well as a number of other facilities such as units for gas separation and heating, gas regulation and drying, production and operation unit etc.

A control system for the new GTCUs connected to the existing control system of Chiren UGS, an optical connection system to the WAN network of Bulgartransgaz EAD, as well as other connections to the existing systems and facilities are envisaged to be built.

Description of the selected technology: When designing the above ground facilities, the contractor will develop two options of technological scheme for operation of the compressor stations, namely: 3 pcs. (2 in operation and 1 back-up GTCU) or 4 pcs. (3 in operation and 1 back-up GTCU) depending on the technical and economic analysis. Centrifugal compressors are envisaged since compared to piston compressors they have a simpler and more compact construction, secure continuous gas flows with no pulsation, and have high flowrate and low operating costs, since they have no oil-related costs. Two-staged GTCUs have been envisaged, which allows a higher level of compression. The new above ground facilities will be built in accordance with the national and European technical, social and environmental requirements, safety rules and observing the good international practices in the field of gas transmission.

Location of activities: The new facilities are envisaged to be located in the lands of Chiren village, Vratsa Municipality, Vratsa District, close to the existing facilities of Chiren UGS.

The necessary area for implementation of the investment proposal, according to the technological, fire protection and construction requirements, is approximately 82.24 dka. Site dimensions will be 300 m to 320 m, located in an agricultural area. The affected land at site are owned by the municipality, private owners, and the state. The area required for purchase is about 82.24 dka. It is planned to establish a 10.0 m easement outside the design fence, which falls within this purchase area. The location of the new site is more than 1.2 km from the building boundaries of the village of Chiren. The field has existing technical infrastructure and tangible assets.

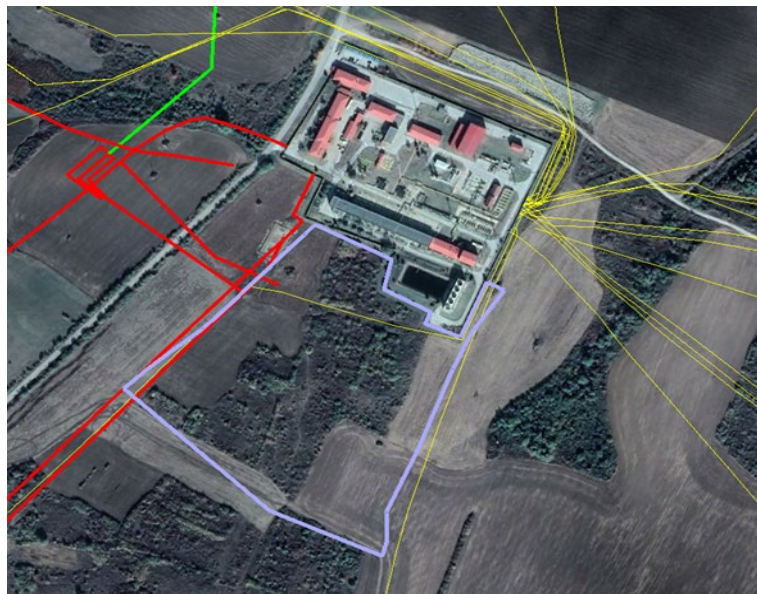


Figure 2: Current Chiren gas storage facility with the area of the expansion (purple) to the south

The existing Chiren site (see Figure 2) is located appr. 1,000 m North of the village of Chiren (2,200 m from the centre) and covers an area of 5.3 ha. The structures on the site, which cover 5,174 m², comprises: administrative building; gasoline station; compressor workshop; garages;

warehouses; service unit; gas metering point; fan cooling towers; gas drying plant; gas AVG and water-cooling plant; wastewater plant; storage tank for MC-20 oil and TEG, etc.

Activity 2: Design, construction and commissioning of a new gas pipeline in the section VA Butan - Chiren UGS

Design, construction and commissioning of gas transmission infrastructure from VA Butan to Chiren UGS will be carried out within the framework of the activity, which includes a gas transmission pipeline, together with the main facilities and an optical cable network for operational data transmission. The envisaged length of the gas pipeline is approximately 42 km, Dn 700 (711 mm outer diameter), maximum operating pressure 7.5 MPa.

Characteristics of the gas transmission pipeline route:

- Start: the existing site of valve assembly VA Butan of Bulgartransgaz EAD gas transmission network;
- End: Underground Gas Storage Chiren.

Technological sites and an optic cable line are envisaged to be constructed in the easement of the gas pipeline. Envisaged technological sites:

- Pigging Facility, Dn 700 at VA Butan;
- Valve assembly with a branch to provide an opportunity to supply adjacent areas in case of a financial, economic and commercial interest;
- Pigging Facility, Dn 700 at Chiren UGS;

Description of the selected technology: The gas pipeline will be constructed using proven methods, based on the experience gained in the construction of other gas pipelines, in compliance with the regulatory framework, in accordance with the permits to be issued and taking into account environmental and social factors. The gas pipeline is envisaged to be laid underground as well as pre-insulated steel pipes to be used - L450ME according to BDS EN ISO 3183 with a diameter of Dn 700 (711 mm outer diameter).

Location of activities: The route of the section from VA Butan to Chiren UGS runs through northern Bulgaria and the territory of Vratsa District. The designed pipeline route shall start from the existing DN1200 pipeline entitled "Expansion of Bulgartransgaz EAD gas transmission infrastructure parallel to the Northern (main) gas pipeline to the Bulgarian-Serbian border". The tapping into the existing pipeline is at km 414+945.86. The end point of the route of the new pipeline is the site of Chiren Underground Gas Storage (UGS). The route of the new gas pipeline is approximately 41.5 km in length. It passes through the following municipalities within the Vratsa district:

- Kozloduy Municipality;
- Mizia Municipality;
- Hayredin Municipality;
- Borovan Municipality;
- Krivodol Municipality;
- Vratsa Municipality.

The gas pipeline crosses municipal and republican roads as these are described below; concerning each crossing for the implementation of the construction and installation works a temporary organisation of the traffic shall be introduced to avoid accidents with people and vehicles travelling on the above roads:

- Gas pipeline crossing of republican road III-101 at km 75+541
- Gas pipeline crossing of republican road III-133 at km 24+273
- Gas pipeline crossing of republican road II-13 at km 29+027
- Gas pipeline crossing of municipal road VRC2163
- Gas pipeline crossing of municipal road VRC1035
- Gas pipeline crossing of municipal road VRC1036

The crossing will employ horizontal drilling with no traffic interruption in accordance with the attached situation and road cross-section. To carry out the horizontal drilling, a working and receiving trench is expected to be executed. The bottoms and slopes of the trench are outside the scope of the roadway.

Temporary signs consist of portable standard signs C4.4 (transverse to the axis of the road), alternating every 10 m and enclosing the working section. The signs are equipped with electric lamps with yellow flashing light for night time. The length of the working section is up to 30 m. The implementation of the construction and installation works shall not violate the clearance of the roadway and shall not affect the motor vehicles travelling on the road, as it is being worked outside the easement. All temporary traffic signs shall be placed at relevant locations and distances as per the attached drawing.

The temporary traffic organisation acts independently. It is necessary that all temporary road signs are standard, reflective, type size II, placed stably (against turning from wind or impact) and in a visible place, with the height of the lower road sign being 2.20 m from the ground. After completion of the works, all temporary road signs must be dismantled and collected.

The closest settlements to the gas pipeline are:

- Devene village, Vratsa Municipality - the pipeline route is 230m away from the last houses of the village and
- Kriva Bara village, Kozloduy Municipality - the pipeline route is 590m away from the last houses of the village.

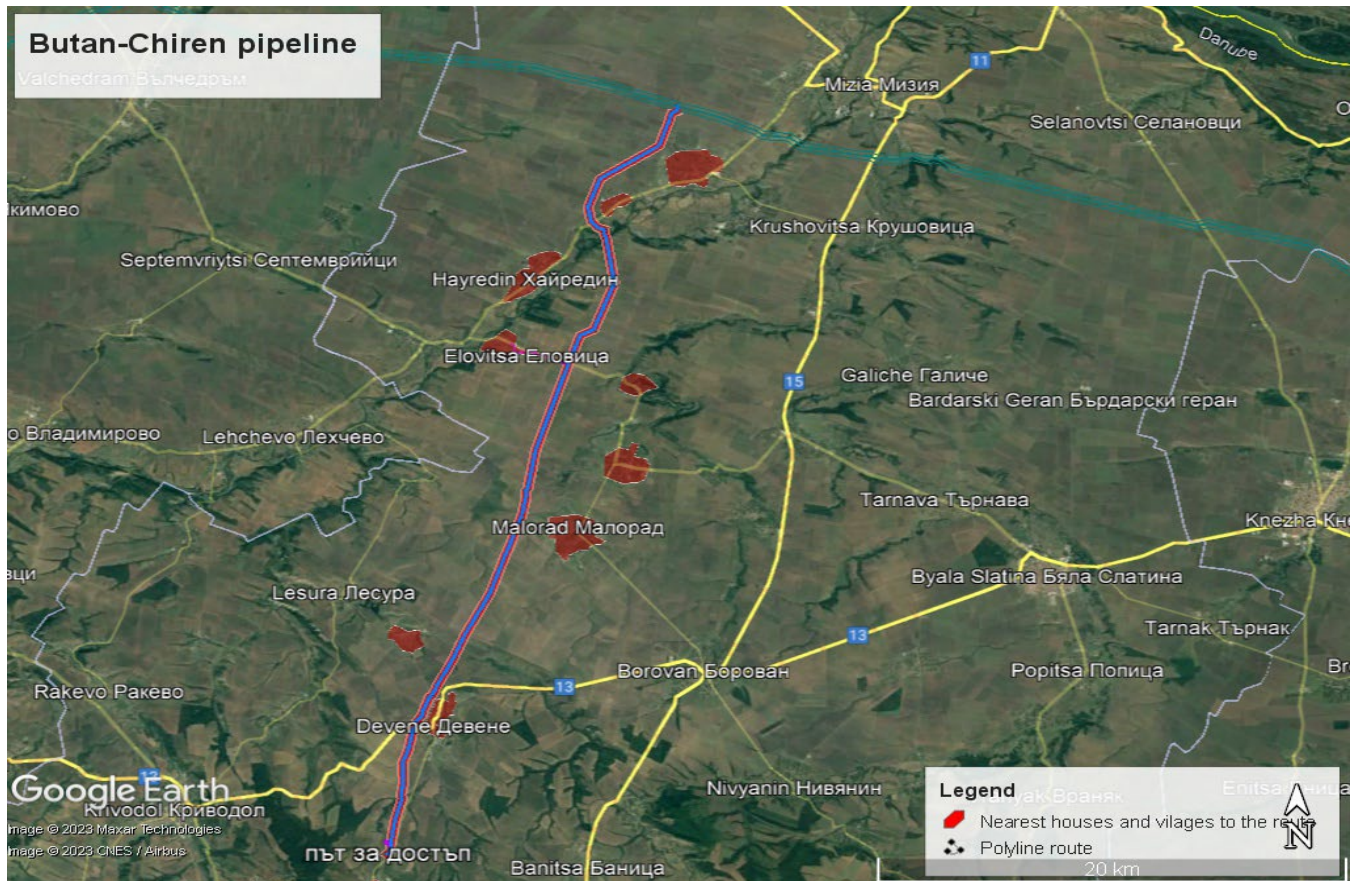


Figure 3: Gas pipeline connecting Chiren UGS to the existing gas transmission network of Bulgartransgaz in the area of Butan village

Activity 3: Design, construction and commissioning of new exploitation and observation wells

Ten new exploitation and three new observation wells will be designed and drilled within the activity. Geological, geophysical and 3D seismic surveys were carried out, the latter (3D surveys which were co-financed by the Connecting Europe Facility, Action No 6.20.2-0021-BG-S-M-15) was completed in the beginning of 2021. As a result thereof, a detailed geological model was created, which serves as a base for planning and implementing the capacity expansion of the gas storage facility to ensure its efficient and safe operation in market conditions. The available digital model (geological and tectonic) of the Chiren geological structure will compile with the information generated by the 3D seismic surveys. Thus, when designing the locations of the new wells this will enable to take into consideration specific parameters, determining their maximum efficiency.

The execution of each of the 10 individual exploitation wells consists of the following milestones:

- Design of the well and the auxiliary equipment.
- Borehole drilling, including the exploitation lift and well head completion. Hydrodynamic tests to determine the productivity of the well and its critical parameters, as well as other tests important for its future operation.
- Excavating of gas pipeline gathering system (gas pipeline) to connect the well with the site of CS Chiren. At the moment it is not known if the pipeline will cross any roads/lanes used by the public, but if this will be the case mitigation measures to prevent community risks will be taken into account.

- Installation of an individual separation and gas measurement at the site of CS Chiren.
- Installation of well telemetry and its connection to the existing SCADA control and information system.
- Carrying out drilling and geophysical surveys.

The execution of each of the 3 observation wells consists of:

- Design of the well and the auxiliary equipment.
- Drilling of the well and well head completion.
- Installation of metering telemetric sensors.
- Carrying out drilling and geophysical surveys.

Description of the selected technology: The wells are planned to be executed using a deep oil drilling technology. The vertical part of the exploitation wells will be drilled by rotor drilling, and the deviated directional part will be drilled using a downhole turbine engine to accomplish the correct direction as per the angle and azimuth in accordance with the design of each well. The three observation wells that will be vertical will be drilled by rotor drilling.

Location of activities: In north-western Bulgaria, Vratsa District, Vratsa Municipality (the town of Vratsa, Chiren village, Devene village, Tri Kladentsi village) - the area of the Chiren structure (concerning the wells and gas gatherings) and the site of CS Chiren on the territory of Chiren UGS (for the individual separation, measurement and telemetry).

The nearest settlement to Chiren UGS Capacity Expansion - Wells is the village of Chiren and is approximately 970 metres from the settlement.



Figure 4: Expansion of Chiren UGS Capacity - Wells

5. Social Area of influence and receptors identification

5.1. Definition of the Area of Influence (Aoi)

As basis for identification of the Aoi IFC PS1 and IFC Good Practice Note Addressing the Social Dimensions of Private Sector Projects were followed. Summarized in this section are the key considerations and assumptions, on which the identification of the Area of Influence for the project is based.

In accordance with the above considerations and guidance specifications, the Project Area of Influence may be defined to include:

- i) the project site;
- ii) its related and associated facilities, and
- iii) the areas likely to be affected by the project.

In terms of conducting an environmental and social impact assessment, the latter areas may vary according to the type of project, its impacts and their receptors, and may extend well beyond

the project activities' footprint, especially with regard to effects from the traffic and various socio-economic aspects. Thus, the project Area of Influence is, indeed, a variable term that can only be established on a project-specific, impact-specific and receptor-specific basis.

Based on the above stipulations, the Area of Influence for the Chiren gas storage facility expansion project has to include the project sites identified during the construction and operation phases for all three project components – that is, the construction site/strip and buffer zone/servitude and right of way (RoW), the footprint of and access routes to all aboveground installations (AGI), as well as the traffic sections used during the construction, and the related or associated temporary and permanent facilities including: all construction camps and storage sites, power supply routes, access roads and other infrastructure. This project element-specific definition is further extended to include the characteristics of the impacts realized mostly during the construction of the pipeline – including the immediate territories, airsheds and watersheds, subject to pollutant and noise emissions during construction, as well as the settlements and municipalities, which inhabitants, communities, infrastructure, economic and livelihood activities and conditions may be impacted by the Project.

The social area of influence is usually more complex than the biophysical Aol as social impacts are often less direct and include public perception and economic influence. In this process, the team adhered to the philosophy and good practices described in the abovementioned guidance documents, which may be summarized as follows:

Social impacts typically extend beyond footprint overlays and may include indirect and induced impacts. It is therefore essential to analyze impacts in the wider context of the area or region....” (IFC Good practice Note addressing the social dimensions of private sector projects).

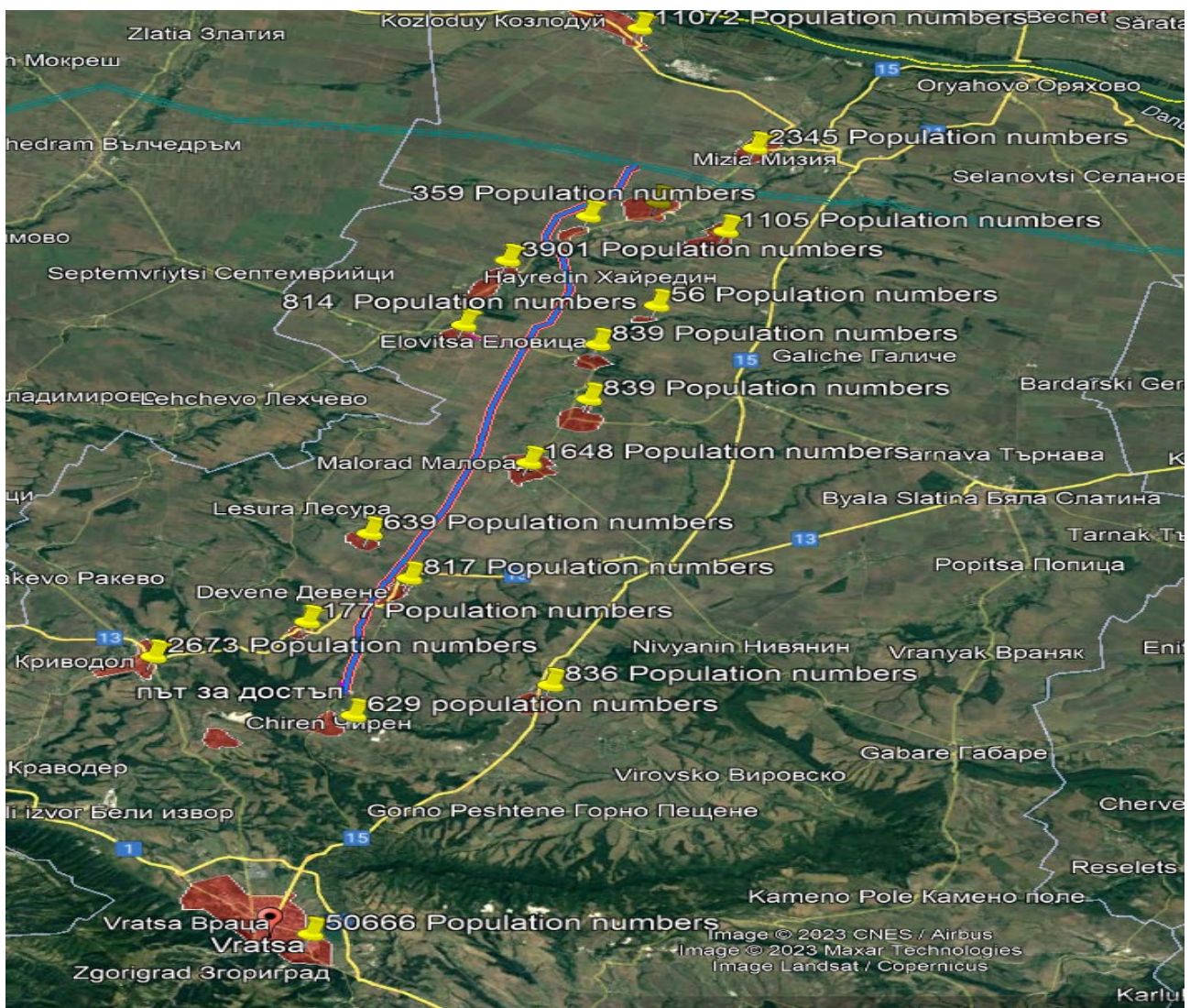
To determine the Aol the provided information about the three project component's locations was studied and the Aol was determined in the vicinity of the estimated locations of the new wells, the extension of the aboveground facilities including the safety buffer zone, as well as along the planned pipeline route, including the easement strip, RoW and the auxiliary facilities, cable lines, construction camps, access roads etc. As a result, 20 settlements and 6 municipalities within the administrative borders of Vratsa regional district (Vratsa is both the district centre and the municipal centre of the closest settlements to the Project) were identified as potentially, both directly and indirectly, affected. Thus, the Aol at the current stage of the Project contains a total of 20 settlements along with their adjacent territories as well as the wider area of their 6 municipalities. The data about the settlements and their overall population is included in the table below.

Table 1 Aol Map

No.	Municipality/ Settlement name	Population number*
	<u>Municipality Vratsa</u>	
1.	Vratsa town	50666
2.	Chiren village	629
3.	Devene village	817
4.	Tri Kladentsi village	637
5.	Lilyache village	717
6.	Mramoren village	514
7.	Banica village	836
	<u>Krivodol Municipality</u>	
8.	Krivodol	2673

9.	Osen village	177
	<u>Mizia Municipality;</u>	
10.	Sofronievo village	1105
	<u>Hayredin Municipality;</u>	
11.	Hayredin village	3901
12.	Manastirishte village	814
13.	Rogozen village	839
14.	Botevo village	56
15.	Barzina village	839
	<u>Borovan Municipality</u>	
16.	Malorad village	1648
	<u>Kozloduy Municipality;</u>	
17.	Kozloduy town	11072
18.	Butan village	2551
19.	Glozhene village	2345
20.	Kriva Bara village	359

*2021 census



6. Baseline Data Collection Methodology

The majority of the data currently contained in the supplementary SIA has been gathered from desk-based research as well as a site visit in June 2023. It also accounts for stakeholder feedback which was provided during the stakeholder engagement process, meetings and consultations carried out by BTG in the period 2021-2023.

Desk based research has primarily focused on publicly available information provided by the NSI (National Statistics), Municipal Integrated Management Plans, Ministry of regional development and welfare, Northwest region socio-economic profile, Information portal for non-governmental organizations in Bulgaria.

6.1. Data and Information

The quality and relevance of the social and socio-economic data and information collected to date are complete and well structured. Publicly available secondary data (i.e., census data) are available in publicly available registers and sources (GRAO, NSI)¹. Where up-to-date data is held by regional and local authorities, access to it is usually provided upon request to the local municipal authorities. Primary data collection was greatly facilitated by the Project company.

Information is available on:

- Local demographic characteristics (i.e., specifics of the population of the subgroups of the community);
- Gender roles and dynamics;
- Local housing and hotel stock and availability; and
- Unemployment, local and regional availability of skilled, semi-skilled and unskilled labor
- Labour conditions in the country
- Human rights risk identification on national level.

7. Stakeholder Identification & Analysis

The Project has drafted a *Stakeholder Engagement Plan* (SEP) which also includes a detailed stakeholder register.

The following categories of stakeholders have been identified in relation to the construction and operation of the facilities of the Chiren UGS Expansion Project:

- Local community
- Owners/lessees/users of land properties
- Local authorities
- Competent authorities and organisations (control bodies, central government authorities and their agencies/directorates/local units, European institutions, audit bodies)
- The operators of transmission systems, network users and users of natural gas in Bulgaria and the entire region

¹ https://infostat.nsi.bg/infostat/pages/reports/query.jsf?x_2=2066
<https://www.grao.bg/tna/isnt41ob-15-06-2023-1.txt>

- Lenders
- Civil society and NGOs
- Bulgartransgaz EAD personnel
- EPC Contractors, Primary suppliers

The table below provides a specific list of stakeholders with an indication of which project component they relate to:

Table 2. Stakeholders' identification

Stakeholders' category	Name	Project component
EXTERNAL STAKEHOLDERS		
Local community	The population of Chiren village, the town of Vratsa	Above-ground equipment and wells
Local community	The population of Chiren village, the town of Vratsa, Butan village, Hayredin, Mizia, Kozloduy, Borovan, Krivodol municipalities	Gas pipeline
Vulnerable groups (elderly above 65 years of age living alone and Roma)	<ul style="list-style-type: none"> • Awareness of the risks of an accident with hazardous chemical substances and limiting its consequences • Awareness to possible increases in traffic/ dust/ noise and movement of heavy machinery in the area; • Awareness of possible temporary closures of roads during construction; • Awareness of jobs opportunities; Awareness of business opportunities and possibility to host workers in local places for accommodation;	<ul style="list-style-type: none"> • In addition to the communication to the local community a Roma mediator will be involved to facilitate the communication to them; Communication materials with visuals and easy text to comprehend will be hanged in each village's town hall.
Owners/lessees/users of land properties	An accurate list of all owners and those affected by easements is available in the Land Management and Restoration Plan.	All
Local authorities	Vratsa Municipality, Chiren village	Above ground equipment and wells
Local authorities	Chiren village, Vratsa Municipality, Butan village; Hayredin, Mizia, Kozloduy, Borovan, Krivodol municipalities	Gas pipeline
Competent authorities and organisations (control	- Ministry of Energy: Sofia	All

bodies, central government authorities and their agencies/directorates/local units, European institutions, audit bodies)	- Ministry of Regional Development and Public Works: Sofia Ministry of Agriculture: Sofia - Ministry of Environment and Water: Sofia Basin Directorate Danube Region: Pleven. Executive Environment Agency: Sofia	
The operators of transmission systems, network users and users of natural gas in Bulgaria and the entire region	Neighbouring transmission system operators in Romania, Greece, North Macedonia, Serbia, Türkiye Large commercial/industrial consumers of natural gas Population with gas supply access	All
Lenders	Citibank DFC	All
Civil society and NGOs	Public figures and public organisations National environmental NGOs Branches of international environmental NGOs	All
INTERNAL STAKEHOLDERS		
Bulgartransgaz EAD personnel	Employees at Sofia Headquarters -260 employees Employees at Chiren UGS - 66 employees.	All
EPC contractors, Primary suppliers	DZZD TECH ENERGY EXPANSION, including personnel of subcontractors and suppliers	Above-ground part
EPC contractors, Primary suppliers	DZZD STROYGAZSYSTEM, including personnel of subcontractors and suppliers	Gas pipeline
EPC contractors, Primary suppliers	DZZD UGS DRILLING CHIREN, including personnel of subcontractors and suppliers	Wells

Separate consultations with the affected parties have been conducted for each component of the Project. The Stakeholder Engagement Plan (SEP) details the consultation and various events undertaken to date to provide information to the public and all stakeholders under the Project. Bulgarian legislation provides for opportunities at various stages of the project development for broad participation of the public, NGOs, and all stakeholders. It should be noted that a number of national and international NGOs (their branches) are active in the country in the field of environmental

protection and biodiversity. The local community is also generally active in major infrastructure projects close to their residence.

The consultation process is at different stages depending on the progress of the individual project components. For Project components: Expansion of the Chiren UGS capacity - above ground part and a gas pipeline connecting the Chiren UGS to the existing gas transmission network of Bulgartransgaz EAD in the area of Butan village, consultations and other awareness raising and communication activities with the affected parties have been carried out on numerous occasions - both in the process of environmental procedures and in the process of elaboration of the DSP-Parcelling Plan and detailed spatial plan.

For Project component: Design, construction and commissioning of new exploitation and observation wells to date there have been activities carried out under this Plan at the time of the Investment Intention Notice sent to the MoEW, and the drafted Stakeholder Engagement Plan will be updated as this procedure progresses.

8. Social context and baseline

The following section outlines relevant social and socio-economic attributes of the affected communities, specifically the municipalities as listed in Table 1 (Aol map) in Vratsa district.

8.1. Human rights features and status

Bulgaria is a constitutional republic governed by a freely elected unicameral National Assembly. Republic of Bulgaria is a member of the EU, a member of the Council of Europe and has ratified the Convention for the Protection of Human Rights and Fundamental Freedoms and a number of other international conventions and instruments in the field of human rights. The country's Constitution and laws ensure:

- Right to work and ensuring fair remuneration, work and rest regimes, overtime pay, etc.
- Gender equality in all spheres of the country's social, economic and political life
- Freedom of association
- Right to peaceful protest
- Freedom of speech (for both the media and the individual)
- Protection of private property
- Prohibition of police arbitrariness by the state and municipalities
- Prohibition of child labour

Available reports, such as that of the US State Department, note that the state generally respects citizens' rights. There have been reports of sporadic violations regarding: police violence, including violations of freedom of association; arbitrary arrests; problems with the independence of the judiciary; restrictions on freedom of expression, including violence and threats of violence against journalists, and corporate and political pressure on the media; and intolerance and discrimination against Roma. The law allows individuals to seek civil remedies for human rights violations through national courts or the Commission for Protection against Discrimination. The State investigated complaints of discrimination, issued rulings and imposed sanctions on violators, including police officers, following reports of arbitrariness. The National Ombudsman is an independent constitutional body elected by the National Assembly for a five-year term. The Ombudsman deals with complaints from individuals against the government about violations of their rights or freedoms. One of the

National Assembly's standing committees deals with human rights, religion and citizens' petitions. The law also provides for the right of any person to challenge before a court the lawfulness of his or her arrest or detention, and the State generally complies with these requirements².

8.2. Local Government

Given the strategic importance of the Vratsa District for the project, the municipal authorities (mayors of individual municipalities and settlements in Aol) represent critical stakeholders under the project. Understanding and navigating the relationships with the multiple state and municipal institutions will be a critical factor for the project's success, given their significant powers as defined by the legislative framework. As the location of the project is in the north-western part of the country, which is of a lower standard and has poorer demographic and economic characteristics than other areas in Bulgaria, the Government is encouraging investment in the area, seeking to support employment and assist local communities in any way possible.

Therefore, the promotion of investments carried out in the north-western region of Bulgaria, part of which are the municipalities of Vratsa, Kozloduy, Hayredin, Mizia, Krivodol and Borovan, is expected to be fully supported by the state and local municipal authorities.

8.3. Planned Regional & Local Infrastructure Developments

There is public data on some planned Government and private infrastructure upgrades and new Projects across the Vratsa district.

New projects related to investments in the field of renewable sources, renovation of buildings, renovation of roads and others are expected to happen in the area.

The projects are small and local, with labour needs usually met by local firms. The timeframe of the projects is usually 6 months with up to 20 staff for each site.

With regard to the specific municipalities falling within the Project Area of Influence, based on the data that became available during the approval procedures of the Detailed Spatial Plan - Parcelling Plan, it can be said that there are no investment intentions that conflict or lead to a significant accumulation of external workforce during the envisaged project implementation.

8.4. Local Demographics & Societal Characteristics

Vratsa District is one of the 28 districts of Bulgaria, which together with four other districts - Vidin, Lovech, Montana and Pleven, make up the North-West Planning Region. The district has an area of 3,619.7 km² and population of 152,813 (2021 Census)³

As a result of demographic and emigration processes, the estimated permanent population of Vratsa District at the end of 2020 is 157,637 people or 2.3% of the population of the country. Compared to the previous year, it has decreased by 1,833 people or by 1.1%. Men in Vratsa District are 77,196 (49.0%) and women - 80,441 (51.0%), or 1,042 women per 1,000 men. As of 31 December 2020,

² https://bg.usembassy.gov/wp-content/uploads/sites/256/BULGARIA-2021-HUMAN-RIGHTS-REPORT_BG-TRAN.pdf

³ National Statistical Institute data.

92,639 people live in towns and 64,998 in villages, which shows that Vratsa is among the districts with a relatively low share of urban population - 59% compared to 74% in the country. The average family size is 2.7 members. As of 31 December 2020, the largest population is concentrated in Vratsa Municipality, where 63,033 people live, or 40% of the total population of the district. Compared to the end of 2019, the population in Vratsa Municipality decreases by 440 persons, or 0.7%. The smallest municipality in terms of population is Hayredin, with 4,049 people, or 2.6% of the total population of Vratsa district. 51,020 people live in the district center, the town of Vratsa, of whom 24,381 are men and 26,639 women. Compared to the end of 2019, the population of the town decreases by 654 persons, or 1.3%. The village of Chiren is located about 13 km north of the regional center of Vratsa. Municipal roads connect Chiren to the south with Vratsa, to the north with the village of Devene and to the west with the village of Liliache. In the population census as of February 1, 2011, the village has a population of total of 742 persons, 711 persons were listed as belonging to the "Bulgarian" ethnic group, 6 - to the Roma, and 24 have not answered.

According to IME (Institute for Market Economics) data, reflected in the Regional Economic Profiles, the natural growth rate for the region remains at a low level and in 2019 is - 11.4‰ (compared to - 6.7‰ in the country). Out-migration from the region is also relatively high, with the mechanical growth rate declining to -7.8‰. These processes also have a negative impact on age dependency ratios. Low fertility and intensive out-migration lead to a rapidly ageing population.

Education Levels

The data from the last national census in 2021 shows that of the population of the entire Vratsa district, the most educated are the residents of Vratsa municipality, where every fifth (21%) has a university degree, followed by Kozloduy and Mezdra municipalities, where the relative share of graduates is 17 and 13.5% respectively.

The share of people with university degree in Vratsa Municipality is above the national and district averages. The relative share of people with secondary education (50% of those over 7 years) is also higher than the national and district indicators. The share of people with elementary education is 19%, while the share of people with primary and lower education is nearly 10% of the population of Vratsa municipality. The number of illiterate persons in Vratsa district in 2011 was 2,219, while in 2021 it is 1,384.

Vulnerable Groups

Due to the generally poorer economic conditions in the north-western part of the country, the vulnerable group of the population of the Vratsa District can be defined as the elderly over 65 years, especially those who cannot rely on their relatives for support in everyday life due to the trend of intensive displacement of the younger population from the district. At the end of 2020, the persons aged 65 and over amount to 38,776 or 24.6% of the district's population. Compared to 2019, the share of the population in this age group increases by 0.1%. The average age of the population in Vratsa District is 45.8 years, 44.7 years in urban areas and 47.3 years in rural areas.

In 2019, the ratio of the population aged 65+ to that aged 0-14 rose to 178.1% (compared to 150.1% nationally), and to that aged 15-64 to 39.7% (compared to 33.8% nationally).

The ageing trend of the population has led to changes in its basic age structure - below, at and above working age. The working age population at the end of 2020 for Vratsa District is 90,535 people, or 57.4% of the total population. There are 43,749 people over the working age, or 27.8%, and 23,353 people under the working age, or 14.8% of the population in the district.

The municipalities within the Aol in general are above the districts' average for elderly population above 65 years of age. Only the municipalities of Vratsa and Kozloduy are below that average. The exact numbers and percentages for each of them is given in Table 3 below⁴.

Special attention was paid to the villages of Devene and Kriva bara⁵, as they are the closest locations to the project (gas pipeline component). The village of Devene has a total population of 817 people, out of which 314 people (38.43%) are aged above 65 years. The village of Kriva bara has a total population of 359 people, out of which 100 people (27.86%) are aged above 65 years.

Table 3 Data on age structure and Roma population in the affected municipalities

Affected municipalities	Population number			% of total population	
	<i>Total</i>	<i>over 65 years</i>	<i>Roma</i>	<i>over 65 years</i>	<i>Roma</i>
Kozloduy Municipality	18015	2952	1751	16.39	9.72
Mizia Municipality;	5692	1641	258	28.83	4.53
Hayredin Municipality;	3901	1256	600	32.2	15.38
Borovan Municipality;	4839	1260	95	26.04	1.96
Krivodol Municipality;	7638	2479	1120	32.46	14.66
Vratsa Municipality.	61742	14336	1888	23.22	3.06

Regarding the Roma population which can be identified as a vulnerable group as well due to higher unemployment levels and lower qualification levels than the average among the population in the area and their numbers, the average percentage of this group on district level is 5.4%, which is higher than the national average. It is evident from Table 3 that the most Roma population as percentage from the total population is situated in the municipalities of Krivodol and Hayredin. Kozloduy municipality also has around double than the average for the district. On the opposite side are Borovan and Vratsa municipalities, with a number of appr. 2 and 3% of the total population being Roma.⁶ There are no official data available for the villages of Devene and Kriva bara for the Roma population in these particular villages.

Historically, the Roma in communist Bulgaria have been culturally assimilated and obliged to attend school thus displaying literacy rates higher than their co-ethnic in other countries. Moreover, Bulgarian Roma are not nomadic - they are settled in fixed communities and own property, very often mixed with the population of Bulgarian ethnic origin. This process has been ongoing since over 70 years. In addition to national programs, since Bulgaria joined the EU, many international fundings have been devoted to promote Roma inclusion in national society. Every district has a program for inclusion of Roma as well.

Currently Roma population is speaking Bulgarian (together with Roma language), more than 58% of the Roma children between 3 and 6 years of age are included in the pre-school system, 86.2% of Roma children between 7 and 15 years of age attend school, but only 28% of the Roma ethnos between 20-24 years of age have gymnasium or higher education. Roma are also politically organised, although the Roma parties could not issue a clear face to unify the Roma minority and their votes are cast between the different major political players in the country.

⁴ Official NSI data as of 2021.

⁵ Official NSI data as of 2021.

⁶ Based on official NSI data as of 2021.

Due to the above, PS7 applicability has been scoped out as Roma are not especially impacted by the Project, although Roma people live in the Project Aol. There is also no data that Roma individuals are directly impacted by the Project so far. PS7 may be triggered though, depending on the impact on Roma communities, lives, languages, habits, and cultures, which may occur in the future project implementation. Having excluded PS7 applicability, we agree they are a marginalized group with restricted ability to profit of Project's opportunities, therefore they have been identified as vulnerable group and special attention shall be paid when engaging with them.

In the 2021 census, 7,686 people for Vratsa District were identified as being in poor health and 1,647 as being in very poor health, which is about 6.5% of the total population of the district. With respect to the municipalities falling within the Project Area of Influence, the health status data are⁷:

Table 4

POPULATION BY SELF-ASSESSMENT OF HEALTH, STATISTICAL REGIONS, DISTRICTS AND MUNICIPALITIES AS OF SEPTEMBER 2021

District / Municipality	2021							
	Population number							
	Total	Very good	Good	Poor	Very poor	I cannot determine	I do not wish to answer	Not shown
Vratsa	152813	33203	70970	7686	1647	1960	4998	2806
Borovan	4839	893	2442	351	72	51	109	115
Vratsa	61742	14106	27286	3003	724	921	2373	970
Kozloduy	18015	3912	9539	476	90	308	579	388
Krivodol	7638	1317	3212	627	108	62	472	143
Mizia	5692	970	3005	284	38	38	70	78
Hayredin	3901	961	1822	233	41	60	107	47

There is one health mediator in Vratsa municipality, 2 health mediators in Borovan municipality, 3 in Kozloduy, 2 in Krivodol, 1 in Mizia and 1 in Hayredin. Their main activity is to mediate and facilitate the process of providing access to health services to representatives of vulnerable groups and communities at risk, including Roma groups. For this purpose, the health mediator provides the link between the Roma community and health and social institutions, facilitates the process of access in the field of health and social services for people in need of health and social assistance.

It should be noted that persons aged 65 are protected by the national government by the provision of a retirement pension, with a minimum pension set at national level. The State, through state and municipal structures, also provides social benefits for persons at risk. Each local municipal administration has a unit that implements state and municipal social policy aimed at vulnerable groups. These are the Municipal Social Assistance Services providing assistance to citizens who are vulnerable (elderly, sick, alone) in the form of various social services (social patronage, hot lunch, transport services).

The project will not lead to the risk of vulnerable groups falling into greater poverty, especially as it is expected to create additional employment.

Religious Groups

⁷ Based on self-assessment of the individuals within the official information from the NSI

From the statistics collected, for the Vratsa region (2011), 61% of the population identified themselves as Orthodox Christians, an insignificant % identified themselves as Catholic, Protestant or practising Islam, 38% of the population did not have or did not identify their beliefs or did not indicate them.

8.5. Social Services & Infrastructure

Civil Society

The community in Vratsa District has built a stable and active civil society. Considering the support of state-provided social services, local NGOs play an important role in increasing social capital and supporting vulnerable groups.

As in many other parts of the country, youth represent an active part of the local population and working with and retaining youth in the region is important. There are three youth centers organized in the town of Vratsa i.e. Youth Center Vratsa - CENTER FOR YOUTH ACTIVITIES - VRATSA - Public Center, Youth Club Vratsa, and Kozloduy Day Center for Children and Youth with Disabilities (DCYD) is organized in the municipality of Kozloduy.

The centres' main objectives are:

Providing equal access to education, training and work. Involving parents in the process of educational, social and labour realization of children and students. Integration activities for children and young people through the organisation of joint initiatives. Changing public attitudes towards greater tolerance of young people at risk. Strengthening the motivation for social inclusion of children and parents from vulnerable communities.

There is also a center of the Bulgarian Red Cross - Social Services Organization in Vratsa. One of the main activities of the Organization is to assist elderly people with products of basic necessities. Many NGOs (more than 280) with different subject of activity are also represented on the territory of the district.

NGOs are active in the following areas:

Branch organisations, Ethnic issues, Patients' rights, Interest clubs, Culture and arts, International and European issues, policies and research, Local action groups, Youth issues, policies and research, promoting donation/volunteering, Promoting economic development, Education, Environment, Children's Issues, Women's issues, Professional organizations, Local community development, Social services, it development, Providing donations/grants, Library activities, Physical education and sport.

Communications

The residents of Vratsa District get information about news and local events mainly from local newspapers, radio and TV stations, social media (e.g., Facebook), as well as information from the municipal administration. There are more than 4 local TV stations and 6 national TV channels and more than 20 radios available. Each of the municipalities in Vratsa District publishes a municipal newspaper, available free of charge in the settlements of the municipality.

Social media is used by all ages for social communication including getting information about the local community. Most households have a mobile device and/or a laptop/desktop computer with an internet connection where they can get information about the processes taking place in the local community on the websites of the municipal administrations.

Digital access and competence

Bulgaria is among the top ranked EU countries for providing internet connectivity to the population. According to official data from NSI 80.5% of the households in Bulgaria are connected to the internet. Most households have a mobile device and/or a laptop/desktop computer with an internet connection. Overall percentage of internet users in the country is 69.2 %. From the group of people above 65 years of age 23.8% use regularly internet services. There is no separate statistic about the Roma population, but 41.7% of people with primary school education and 69.3% of people with middle school education use internet regularly and since the majority of Roma fall within these educational groups that data is estimated as applicable to the Roma as well. It is also worth to note that 98.8% of the unemployed have reported to use internet regularly.

Training Facilities

According to national statistics, there are 70 schools in Vratsa District. 58 of which are general education schools, 1 art school, 1 sports school and 10 vocational schools.

A total of 4,684 students are enrolled in vocational schools in Vratsa district, of whom 2,678 are male and 2,066 female.

Vocational schools have different focuses, such as foreign language, technical and applied sciences, arts. There are two branches of higher education institutions in the district, where nearly 1,000 students are enrolled.

Education in schools is free of charge, and as far as ownership is concerned, schools are municipal and state owned.

Healthcare

The settlements covered by the project are mainly served by hospitals and health centers located in the town of Vratsa and the town of Kozloduy Health care in the settlements is provided by local medical practitioners or by emergency teams located in the towns of Vratsa and Kozloduy.

According to the data from the Register of medical and health institutions providing medical and health services, as of 1 January 2021 there is a well-established health network on the territory of Vratsa municipality, which includes:

- First outpatient medical care provided by:
 - Individual primary care practices - 38 pcs.;
 - Individual and group dental practices - 73 pcs, including 64 individual dental practices, 8 group practices and 1 dental care center;
- Special outpatient medical care provided by:
 - Individual dual practices - 44 pcs.;
 - Groups and practices - 5pcs;
 - Medical centers - 15 pcs;
 - Diagnostic and Consultative Center (DCC) - 1 pc;
 - Independent medical and diagnostic laboratory - 4 pcs;
 - Independent medical and technical laboratory - 8 pcs.
- Hospital medical care provided by hospitals with beds - 7 pcs., including 2 multiprofile hospitals (Multifunctional Hospital for Active Healthcare Hristo Botev AD, the town of Vratsa

and First Private Multifunctional Hospital for Active Healthcare Vratsa); 2 specialized hospitals (Specialized Hospital for Active Treatment of Pneumo-Phthisiatric Diseases-Vratsa EOOD and Specialized Eye Hospital for Active Treatment - Ralchovski EOOD) and 3 centers for specialized treatment (Center for Mental Health Vratsa EOOD, Complex Cancer Center Vratsa EOOD and Center for Skin and Venereal Diseases Vratsa EOOD).

- The pharmacies registered on the territory of Vratsa municipality are 36 in total, of which 6 are hospital pharmacies.
- School and child health care

In Kozloduy Municipality:

In the current Register of Outpatient Care Facilities maintained by the Regional Health Inspectorate - Vratsa, as of 2019, there are 9 individual outpatient care practices in Kozloduy municipality, run by general practitioners.

The individual practices are: the town of Kozloduy (6 pcs.) and 1 in each village of the municipality (excluding Kriva Bara village). Patients from Kriva Bara village are included in the patient list of the practice in Butan village. Specialized outpatient medical care includes 13 dispensaries (offices) run by specialist doctors located in the town of Kozloduy and run by specialist doctors in surgery, midwifery and gynaecology, paediatrics, cardiology and nervous diseases, etc. In addition to dispensaries for independent practice for specialised medical care, specialist doctors are also available at the two Medical Centers (Daris EOOD and Zdrave 1 OOD). The medical centers have 2 beds each for observation and treatment for up to 48 hours.

Dental care is also organised in dispensaries for individual primary dental care.

Their number is 9. Dental care is also provided in one group practice. The dispensaries for dental care are mainly in the town of Kozloduy and in the villages of the municipality (excluding Kriva Bara village).

- Hospital medical care

On the territory of Kozloduy municipality hospital medical care is provided in the municipal Multifunctional Hospital for Active Healthcare St. Ivan Rilski EOOD. The capacity is in line with the population of the municipality. It has 105 beds with 13 paediatric beds and 92 beds (midwifery and gynaecological, surgical, therapeutic, etc.). The hospital has 4 functionally separated blocks - consultative and diagnostic, inpatient, operating and business and administrative.

- Emergency medical care

The emergency medical care of the population of the municipality is provided by a branch of the Emergency Medical Care Center - Vratsa. The branch of the Emergency Medical Care Center - Kozloduy serves the population of the entire municipality through 2 teams - one stationary and one mobile. As of 2019, the total number of health care personnel in the municipality is as follows:

- total number of employees in the health system - 167 people;
- total number of doctors - 57, including general practitioners - 8.;
- total number of dentists - 11;
- health care professionals - 99.

On the territory of Mizia Municipality operate, as follows:

- Dispensaries for primary medical care - individual practices - 5;
- Dispensaries for specialized medical care - individual practices - 1;
- Dispensaries for primary dental care - individual practices - 2.

On the territory of Hayredin Municipality, according to Infostat data, at this moment there are no registered medical institutions for inpatient and outpatient care of any kind. Health care for the population is provided by 2 physicians, 1 dentist and 6 health care professionals.

In Borovan Municipality, according to the data from the District Health Care Center - town of Vratsa and the Regional Health Insurance Fund - Vratsa there are four practices for prehospital medical care of the general practitioners.

The following health care facilities operate on the territory of Krivodol Municipality:

- Emergency Medical Care Unit at the Vratsa Center in the town of Krivodol.
- 6 general practitioners.
- Clinical laboratory.

All municipal structures carry out prevention activities based on the guidelines of the National Prevention Programmes.

Contractors for the individual project components draw up Health and Safety Plans and any other necessary documents on the organization of the construction works, and will prepare a response plan in case of need. As the majority of the workers are expected to be accommodated in Vratsa, they will be able to benefit from the developed network of health care in the district city.

Transportation

Public transport is available on all main roads in and out of the area, and efficient taxi services operate in the towns of Vratsa and Kozloduy and can be reached by telephone. Public buses connect the settlements both with each other and with other towns of the country, including the capital city of the Republic of Bulgaria.

Two European transport corridors also pass through Vratsa District. Corridor 4 (Dresden/Nuremberg - Prague - Vienna - Bratislava - Gyor - Budapest - Arad - Bucharest - Constanta/Kraiova - Vidin - Vratsa - Sofia - Thessaloniki/Plovdiv - Haskovo - Istanbul) is a convenient link to the capital city and Danube Bridge 2, also Corridor 7 (Rhine River. Main River Danube River). There is a railway station in the town, which enables the transport of people and goods by rail. Through the existing railway line, access is provided to the entire railway transport infrastructure of the country.

In the town of Kozloduy there is a river port for cargo handling and tourist trips on the Danube River. The country's main airport is located in Sofia, about 110 km south of the town of Vratsa.

The contractors are expected to organise staff transport for the large groups of workers accommodated in the town of Vratsa.

Utilities

Vratsa District has a relatively well-established water supply network. In the municipalities of Vratsa, Mezdra and Krivodol a large part of the water supply comes from the Srechenska Bara dam, located

between the villages of Barziya and Slatina (Montana municipality), with a total volume of 16.5 mcm. The surface runoff of the rivers, streams and dry valleys in the territory of the Vratsa region is covered by numerous micro-dams, the waters of which, after retention and equalization, are used for various purposes. These dams have a small volume and local importance for irrigation, fishing and other local needs of each of the municipalities of the district. In terms of water supply network, Vratsa District has a 99.4% share of the population served by the water supply network, compared to the national average of 99.1%. There is also an established sewerage network for about 54.3% of the district's population. There is an established and operational Wastewater Treatment Plant (WWTP) in the town of Vratsa. Vratsa WWTP serves 31% of the district's population. The share of the population served by organised waste collection systems in Vratsa District is 96.7%.

Electricity supplier in the municipality is ERM West AD. Numerous substations, transformer stations have been built on the territory of the district. The district is well supplied with high, medium and low voltage power lines. 99.9% of the district population has access to electricity. Kozloduy Nuclear Power Plant, the largest electricity generation plant in the district, with a total capacity of 2000MB on both units, is also located in the district. On the territory of the town of Kozloduy there is also a district heating network, operated by Kozloduy NPP.

Three mobile operators of telephone services cover 100% of the territory of the district.

The Internet is available throughout the district, through various private operators (mobile and cable), including mobile phone service operators.

8.6. Workforce, economic activity and structure of the employed persons

The working age population at the end of 2020 for Vratsa District is 90,535 people, or 57.4% of the total population. Unemployment in the district is 12.5% and is above the national average according to the data of Vratsa District Government. The percentage of men/women registered in the labour offices is approximately equal with small variations on an annual basis. Of the registered women, those with low education and no speciality predominate, including also representatives of the Roma community and vulnerable groups. As they are not very competitive on the labour market, this leads to their relatively long registration in the labour offices. Another reason is that the unemployed with low qualifications and education are offered jobs involving heavy physical labour, which are unsuitable for women.

In the structure of the unemployed in terms of age, the group of unemployed aged up to 19 years is the smallest and the group of unemployed aged 55+ is the largest. In the age structure of the unemployed, **young people up to the age of 29** stand out as a disadvantaged group on the labour market. The total number of unemployed young people aged up to 29 varies according to the periods of education completed. Monthly average, 1 060 such persons are registered in Vratsa District. Their share in the total unemployed population is 14.4%. The unemployed with elementary and lower education in Vratsa Labour Office Directorate are 754. Unemployed without qualifications are 1,043.

The average annual number of persons employed under employment and service relationship is 38,130, which represents 1.6% of the total number of persons employed in the country. There is a decrease in ten out of 19 economic activities, with the largest share in "Professional activities and scientific research" (9.4%), "Real estate activities" (8.6%) and "Manufacturing" (6.3%). An

employment increase is registered in nine economic activities - most significantly in "Transport, storage and postal services" (23.2%) and "Creation and distribution of information and creative products; telecommunications" 19.2%). There is a decline in the demand for graduates in the primary labour market in 2020 is declining. The largest number of open positions is for graduate jobs for people with a teaching qualification, who are consistently the most in-demand occupational group in the structure of the open positions for graduates. However, the population of Vratsa, in terms of residents with a university degree is above the national average, as noted in section 8.4 Education above. Unemployed without a speciality are the most in demand on the labour market throughout the year. All open job positions outside the employment programmes in Vratsa District are meant for them. The seasonal factor has a strong influence on the demand for workforce without speciality. General workers in tourism, agriculture and forestry, construction and drivers, etc. are the most in demand. The ratio between the number of employees and the number of the open jobs in this group shows a high absorption rate, which is a confirmation of the significant labour market supply of workers with these characteristics.

According to the data collected, there is a range of technical experience and skills (engineers and technicians) in the community. Many of these semi-skilled and skilled individuals are currently employed in the energy or service sector, but with some additional general and technical training there appears to be an alternative number of local workforces that can be used.

The Labour Office Directorates are territorial divisions of the Directorate General of Employment Services. Labour offices keep a database of available resources of unemployed persons, respectively available skills and opportunities. This information will be made available to the project contractors. However, the labour market trends in the municipalities falling within the project area of influence, namely higher unemployment (especially among young people up to 29 years) than the national average, reduced demand for skilled personnel with higher education and hence increased out-migration of people of working age from the area, lead to a reduction in the available local workforce.

Tourism

The main elements defining the tourism infrastructure include: access and communications to the tourist site, communications within the tourist site itself and common elements without which basic and complementary services cannot be provided.

Starting from the concept of tourism resource, besides nature, cultural attractions and accommodation, agriculture (visits to local farms and guesthouses), protected areas and zones (for ecotourism, education, rare species observation), local traditions and crafts (schools for crafts and folklore, tourism during festivals and fairs), etc. can also be considered as tourism resources.

An important factor for the tourism development in the district is the strategic geographical location, the border with the Danube River and its proximity to neighbouring Romania.

Some of the natural resources in Vratsa District and significant cultural and historical heritage are valorised to varying degrees in the individual municipalities and are still poorly integrated into high added value tourism activities.

8.7. Places for accommodation

Availability of hotels in the area

According to the National Statistical Institute (NSI), the number of accommodation places (with more than 10 beds) in the period 2018-2020 in Vratsa District remains constant, with more than 30 accommodation places (including hotels) having more than 1,000 accommodation places available according to the national statistics. Access to hotel accommodation is available both through the websites of the specific establishments and through popular booking platforms (e.g., Booking). Living conditions in the accommodation are good and meet the requirements of the performance standards. The nearest accommodation for the project workers is in the town of Vratsa. Accommodation is also available in the Kozloduy municipality (if deemed appropriate during the pipeline construction). In the National Tourist Register of Bulgaria there are 9 accommodation places in the municipality of Kozloduy listed in total – all of them in the town of Kozloduy. These comprise 2 hotels, 4 guest houses and 3 hostels with a total capacity of 295 beds.

Private houses and apartments for rent

Residents of the district usually own their own houses (without mortgages), while newcomers tend to rent accommodation. A typical two-bedroom house costs between BGN 300-500 (USD140-250) per month depending on the level of furnishing. Buildings vary in height with single-family buildings typically up to 3 storeys, while multi-family (located in municipal centers 4 storeys and above). The buildings are in good technical condition, a large part of them modernized in recent years.

There are a total of 140,422 buildings in the district, of which 112,395 are houses, 2,231 are multi-family dwellings, 71 are mixed-use buildings and 18 are dormitories.

9. Social Impact Identification, Assessment & Evaluation

A supplementary social impact assessment has been conducted to identify potential impacts (both positive and negative) of the Project on the local social context and conversely, the way in which existing social attributes may impact the Project throughout its life cycle.

The below assessment includes the identification of potential social impacts and an evaluation of the likely significance of those impacts (*Refer Appendix A – Social Impact Matrix*).

Although some negative impacts related to temporary disturbance to agricultural activities along the RoW and construction areas and traffic-related disturbance are going to be experienced, based on the scale of the Project, the location and the characteristics of the existing social and socio-economic context, the socio-economic impacts of the Project are expected to be mainly positive

The Project will bring new investment and (albeit temporary) employment opportunities to the area. Through workforce training, it will enhance the skill base and promote economic activity through local content initiatives. Furthermore, Bulgartransgaz has a cooperative approach to community investment over and above its impact mitigation obligations and will seek to make a positive and sustainable community development contribution.

The below sections outline the key social impacts which may be generated as a result of the Project. As more detailed Project information and social data for the gas pipeline and especially the new wells become available these impacts will be further defined and managed through the Project risk management process and the social management plan framework.

9.1. Attracting, Recruiting and Retaining Workforce

It is expected that there will be a total construction workforce for all three project components of approximately 1200 and the intention is to source this workforce from the local community where possible. The final Project manpower profile and categorisation of the skills and capabilities required during construction is yet to be determined. The Project is working closely with the Vratsa, Kozloduy, Hairedin, Mizia, Borovan Mayors' offices, local Ministry of Labour representatives, which has significant outreach activities in the region, to determine local labour availability. Where possible, such staff will be employed during project implementation, but it should also be noted that a significant proportion of the Project activities require very specific and highly skilled staff (e.g. the preparation and implementation of the project component expansion of the existing wells, the construction of the connecting gas pipeline; each has legal requirements for relevant qualifications e.g. welders, etc.), and such specialists on site are very limited or such do not exist. Most often, project contractors hire local subcontractors to provide construction mechanics and non-specialist positions during construction.

The results of preliminary stakeholder consultation suggest that there is a pool of semi-skilled (technicians) and unskilled labour locally however the extent of the resources available, the location, skills and capabilities of those resources is yet to be determined.

Although the creation of employment opportunities will be temporary in nature, this is expected to have a net positive impact not only through the provision of direct Project employment opportunities, but also indirectly via an expanding local economy.

In order to enhance and leverage the positive impacts which employment will bring to the local community, it will be critical that the recruitment and retention of the workforce is managed by contractors and subcontractors in an equitable, fair and transparent manner.

Given the relatively small construction workforce and the assumption that part of it will be sourced locally, the risk that the area will experience any population influx or subsequent impacts to community health and safety, access to social services and local community cohesion is low. Potential influx and in-migration impacts are discussed further in section 9.3. below.

Recommended Management Measures

- Key local stakeholders will be consulted prior to recruitment and mobilisation on key human resource and recruitment procedures. Information provided by stakeholders will also inform a skills profile / database for the Project construction phase.
- Develop and deliver clear messaging regarding labour requirements and recruitment to ensure local community expectations are managed.
 - Construction contractors will be required to source as much labour as possible from the local community.
 - A database of local companies and service providers will be made available to construction contractors.

- As the contractors (and its subcontractors) will be responsible for recruiting and retaining the majority of the construction workforce, the above will be detailed by the contractor in a *Labour and Working Conditions Management Plan*.
- The *Labour and Working Conditions Management Plan* will form part of the Construction Contractors Environmental and Social Management Plan (CESMP). It will be aligned with Lender standards, Bulgartransgaz's Human Resource procedure, and the requirements of the company's ESMS.
- The Project will also put in place a Grievance Management Procedure covering all Project staff and contractors (including subcontractors).

9.2. Workforce Accommodation

There are three workforce accommodation solutions under consideration including:

- a) Existing hotel stock.
- b) Existing local housing stock.
- c) A combination of the above.

For each of these solutions, there are a number of both positive and negative potential impacts which require due consideration. The optimal solution will depend on a number of factors including (but not necessarily limited to):

- Cost;
- The extent to which labour requirements can be met locally (i.e., workers sourced from local villages will be in existing accommodation with their families, migrant labour required from other parts of Bulgaria, foreign expertise – will use one of the near sites accommodation);
- Daily movement of the workforce to and from the site (distance, road traffic safety, workforce productivity);
- Simultaneous construction of other infrastructure Projects in the region (possible cumulative impacts);
- Availability of existing or newly constructed hotel stock;
- Housing availability and quality within the area of Chiren;
- Social cohesion and the potential to leverage community / economic benefits; and
- Views of key local stakeholders, specifically the district administration Vratsa and Cities' Councils.

Existing Hotel Stock

Utilising existing in proximity to the site may have considerable advantages for local tourism operators and be cost effective. Furthermore, offsite accommodation will require transportation to and from the site which will inherently increase the risk of road traffic incidents.

Existing Housing Stock

If the bulk of the labour requirements are able to be sourced from the local community, many should have access to local accommodation. Housing the remaining workforce within region will be dependent on availability and ensuring that Project demands do not artificially inflate housing costs for the local population and lead to displacement. Furthermore, issues of social cohesion, transportation (to and from the site) as well as community safety, security and access to social services need to be considered.

For the specific needs of the Project, the Contractor selected for the above-ground expansion activities of Chiren UGS and the contractors of the other two project components shall organize the workforce accommodation.

No large on-site worker camp is envisaged for the above-ground facilities. Since the living conditions in the accommodation facilities are good and comply with the national hygiene and sanitation standards for accommodation as well as the requirements of the IFC performance standards, and as there is a sufficient availability of accommodation (hotels, guest houses, private accommodation), the workers will be accommodated in existing facilities. The nearest accommodation for the project workers is in the town of Vratsa. Accommodation is also available in the Kozloduy municipality (if deemed appropriate during the pipeline construction). According to Bulgartransgaz data, during the implementation of a similar project two years ago, a group of about 200 workers was accommodated in different locations in the town of Vratsa and there have been no complaints from neither from the population nor from the workers about the sanitary conditions of the accommodation. On the basis of this experience, BTG does not expect a worker accommodation to be needed during construction phase nor that the presence of contracted workers for construction will cause negative impacts to local communities. Vratsa is the central city of the district and it has a developed health care system and social services, which are not likely affected by the number of workers expected to be involved in the project. This said, housing the workforce in the region would generate greater economic benefits for the local community as a result of the workforce utilising local goods and services.

Recommended Management Measures

- Irrespective of the solution proposed, any workforce accommodation provided by the Project will be in accordance with GIIP as per the IFC / EBRD Workers' Accommodation: Processes and Standards⁸.
- Where offsite accommodation is provided, transportation risk mitigation measures (including risks to community safety) will be detailed in the Contractors *Transport Management Plan*. This plan will form part of the ESMMP framework.
- As the Contractors (and their subcontractors) will be responsible for providing workforce accommodation where required, management measures pertaining to the establishment and management of the accommodation solution will be detailed in the *Workers' Accommodation Management Plan*. This plan will also detail workforce behaviour expectations and guidelines for the use of local community services and infrastructure. This plan will also form part of the ESMMP framework.

⁸ Available at https://www.ebrd.com/downloads/about/sustainability/Workers_accomodation.pdf

9.3. Influx / Project Induced In-migration

Mainly the village of Chiren, but also the other villages along the planned gas pipeline route are to be assessed as to whether they will experience project induced influx or in-migration as their population numbers are small and the foreseen workers number may lead to such effects.

There are a number of factors which have been considered in determining the probability of Project induced migration including:

The simultaneous development and construction of other infrastructure Projects in the region.

- There is currently limited data available on planned Government and private infrastructure upgrades and new Projects across region. Taken as a standalone Project (no other Projects are expected to be in construction simultaneously) and assuming a peak construction workforce of maximum 400 over a period of about 12-15 months, the Bulgartransgaz Project is not considered significant either in terms of resource requirements or duration.
- Roma people are one of the largest ethnic minorities in Bulgaria. Assuming construction workers will be Bulgarian national or nationals from neighbouring countries (given the limited size of construction works and limited length of the pipeline), we would not expect disproportionate influx impacts on the Roma people present in the area.
- In the unlikely event that there are several sizable Projects on parallel or overlapping construction schedules, there is likely to be a necessary influx of labour and competition for local resources, goods and services. In this case, a further risk assessment would need to be undertaken in cooperation with the regional and local authorities and appropriate mitigation plans put in place.

The extent to which Project labour, goods and service requirements can be meet locally.

- Assuming there are sufficient local labor resources, and provided the recruitment of personnel is well managed, Project related in-migration impacts on the local community will be limited.
- Considering the current state of the economy in the area, there are also a number of service providers (civil, logistics, etc.) already working in the Chiren area and in the district. A number of local service providers are expected to be retained to support construction activities on the project.

Population mobility.

- Evidence suggests that the Vratsa District experiences a higher than national average rate of immigration. There are no state imposed limitations on an individual's decision to relocate and freedom of movement is guaranteed by national and EU laws and regulations. Furthermore, in-migration is likely to be discouraged for purely economic reasons to the region.

Based on the current Project schedule, it is expected that the Bulgartransgaz Project will be the only notable construction activity in the area. Project labour, goods and service requirements are

expected to be sourced / serviced largely from within the other parts of the country and therefore any Project induced in-migration impacts are expected to be negligible.

If, however, there is significant local competition for labor, goods and services as a result of multiple Projects on simultaneous construction schedules, there are likely to be in-migration impacts which would require a detailed risk assessment and mitigation actions developed.

It should be noted that in the area it is not expected that the construction will overlap with other large infrastructure projects.

Recommended Monitoring Measures

- Based on current assumptions it is unlikely that there will be any influx or in-migration impacts resulting from the Bulgartransgaz Project. However, it is recommended that measures be put in place to monitor key local indicators which may identify early trends and issues.
- Ongoing stakeholder engagement with local NGOs and government authorities will be a key mechanism for the early identification of any potential issues or concerns.

9.4. Work Conditions and Ethical Norms along the Entire Supply Chain

Bulgartransgaz EAD shall ensure health and safety at work of all its employees and to employees of the primary suppliers engaged in the implementation of the Project.

The Project company is committed, together with the project contractors, to providing the necessary information on the risks to their health and safety and the measures taken to eliminate, reduce or control those risks.

On the other hand, the company takes all necessary actions and provides funds, including by planning trainings and increasing the qualifications of employees according to emerging needs, to ensure that the activities carried out under the Project are carried out in full compliance with the applicable regulatory requirements.

In accordance with the requirements of the health and safety management system at work of Bulgartransgaz EAD and the Bulgarian legislation, when working together with external organisations, an Agreement for ensuring healthy and safe working conditions is signed according to Article 18 of the Health and Safety at Work Act. Based on the signed agreement, Bulgartransgaz EAD and the Project contractors have exchanged risk assessments and safe work instructions. A health and safety plan, which is part of the investment design, is to be prepared, and the health and safety coordinator assigned to the site will monitor the implementation of the plan.

According to the requirements of its occupational health and safety management system, Bulgartransgaz EAD exercises control - current, periodic and inspection - over the Project implementation activities, carried out by the contractors.

Bulgartransgaz EAD, in its capacity as the Employer of the activities under the Project, has the opportunity to carry out audits of the contractor under the Project concerning the health and safety working conditions by another party. The Contracting authority may request to check the business ethics observed by each of the suppliers under the Project - within the so-called „ethical audits“ carried out by another party. In addition, each of the suppliers and contractors has declared compliance with obligations related to taxes and insurance, environmental protection, employment

protection and labour conditions, which are in force in the Republic of Bulgaria by signing a declaration. In this way, Bulgartransgaz EAD guarantees that the employees throughout the supply chain are provided with the applicable legislative and ethical working conditions.

There is a continuous exchange of information with the suppliers and contractors under the Project, including by receiving a periodic performance report. Each contractor/supplier's monthly report shall include risk assessment information and stakeholder engagements, as follows:

- Risk assessment regarding supplies of materials and equipment;
- Risk assessment evaluating the relationships with the subcontractors;
- Information on compliance with human rights and other social aspects of the environment and safety;
- Identification of risks and measures to overcome them;
- Indication of measures to provide or mitigate possible risks along the supply chain.

Bulgartransgaz EAD applies the requirements of the Public Procurement Act when selecting suppliers and contractors for the Project, as well as its internal Rules for the award of public procurement. In this regard, the Republic of Bulgaria, as a member state of the EU, NATO and the UN, complies with the general policy of these countries in relation to countries that are subject to economic sanctions and import restrictions for reasons of systematic violations of human rights, including labour rights. Thus, it is guaranteed that the main materials and components of the equipment used for the Projects of the company are not sourced from high-risk supply chain countries.

Recommended Monitoring Measures

- To include a commitment to follow also IFC PS 2 in the Agreement for health and safety labour conditions signed with the external contractors.
- To include the audits of the primary suppliers in the ESMMP framework and to monitor their control over their subcontractors as well.
- To include conformance/update of BTG monitoring audit templates to IFC PS1 and 2.

9.5. Community safety and security

9.5.1. Personnel and Community safety

With an opinion under Art. 103 of the EPA of the Minister of the Environment and Water, the classification of the underground gas storage Chiren as a high-risk potential storage facility. The following documents have been prepared for the safe operation of the storage facility:

- Major Accident Prevention Policy Report;
- Safety report of a high-risk potential storage facility, approved by EIA Decision No. 2-2/2022 of the Minister of Environment and Water, outgoing No. OBOC-17/ 07.11.2022;
- Internal Emergency Preparedness and Response Plan of the storage facility. The Emergency Preparedness and Response Plan provides for the relevant measures in the event of a major production accident, as well as the actions to deal with its consequences and the ways to connect and communicate with external units and structures of the Unified Rescue System and responsible institutions.

A thorough survey of the production processes and technologies, machines and equipment was carried out, and the conclusions drawn in the specified documents show that in the event of

technogenic events, accidents, explosions, fires, spillage of hazardous substances on the territory of Chiren UGS, **danger to life and the health of people from neighbouring settlements is practically non-existent**. An accident with a subsequent "domino effect" is not expected due to the lack of facilities or other production sites located in the immediate vicinity of the storage facility.

The operator Bulgartransgaz EAD has taken all necessary measures to prevent the risk of major accidents and limit their consequences at the operating site of Chiren UGS, the site of the flammable liquids warehouse and the exploitation wells.

The safety case for operational risks has been developed and given the main Project site is located distant from any communities the community health and safety risks in operations are considered to be well managed.

During construction BTG will ensure that its contractors have adequate plans that take into account community health and safety. Special attention will be paid to Devene village, Vratsa Municipality - the pipeline route is 230m away from the last houses of the village and Kriva Bara village, Kozloduy Municipality - the pipeline route is 590m away from the last houses of the village. Although this distances provide for a safe buffer zone, special securing of the construction trench (i.e., enclosure) will be used by the contractor/s and the Traffic management plan will include mitigation measures and take into account traffic risks, including accidents, noise, dust nuisance for the inhabitants and will take particular care for these locations and the cases where there will be crossing of roads/lanes used by the public.

When performing the activities to ensure the safe flow of technological processes in Bulgartransgaz EAD, Regional Unit - Chiren Underground Gas Storage, the Company's Management is committed to comply with the following principles:

1. Bulgartransgaz commits to maintain safety buffer zones from any receptor;
2. To develop its activity in accordance with the main requirements of the risk mitigation policy of major accidents and failures and mitigation of their consequences by a safety management system.
 - preventing accidents that could cause harm to people, destruction of material assets and lasting adverse effects on the environment;
 - compliance with national legislation and European directives;
 - assessing and reporting accidents that have occurred and accidents that have been avoided.
2. To develop its activity for implementation of a risk mitigation policy of major accidents and failures, and mitigate their consequences by a safety management system described in the Safety Report.
3. The policy mitigating the risk of major accidents and limiting their consequences is the responsibility of:
 - all employees of the company, as this is reflected in their job descriptions and work instructions;
 - all individuals and legal entities employed by the operator, and the conditions therefor are entered in the contracts for the execution.
4. To develop its activities with a commitment to the safe operation of Chiren UGS.
5. To manage the activities of protecting the health of the personnel, the quality of the environment, ensuring the safety of the technological processes and the healthy and safe working condition.

6. To develop its activities without causing any harm to the workers, the population and the environment in the area of the enterprise, in compliance with the conditions for the safe operation of machinery and equipment.

7. To build a company culture through which all Bulgartransgaz EAD employees share the commitment to the major accident prevention policy.

In order to implement that policy, Bulgartransgaz EAD shall:

1. Implement a Safety Measures Management System that ensures a high level of protection of human life and health and environmental protection

2. Perform careful selection, training and annual evaluation of personnel, which is a prerequisite for ensuring long-term sustainable operation of production processes.

3. Carefully evaluate the abilities of everyone working on behalf of Bulgartransgaz EAD, including partners, suppliers, contractors or other third parties.

4. Create an organisation and control for strict compliance with labour and technological discipline, for fulfilling the requirements of all instructions and regulatory documents regarding the nature of work.

5. Work with clearly defined parameters that guarantee a sufficiently low level of technological risk through:

- regular evaluation and management of changes in operating processes, equipment, organization and personnel;
- risk management related to non-routine operations.

6. Report accidents/avoided accidents and continue to:

- take the necessary actions to improve work;
- undertake the necessary corrective and preventive actions;
- maintain emergency plans, appropriate equipment, facilities and trained personnel;
- protect the public, protect environment and Bulgartransgaz EAD employees in the event of failure or accident.

7. Perform thorough investigation of all actual and potential incidents. Maintain contact and promptly notify interested parties.

8. Carry out an assessment of the technical condition and maintenance of the wells in Chiren Underground Gas Storage, in order to maintain a high safety standard of the exploitation and observation wells, gatherings, Christmas tree/spring fittings, gas fittings and other above ground and underground equipment.

9. Prepare an Investment and Maintenance Programme secured by means of financing, aimed at construction and run into operation of new, contemporary facilities and installations and rehabilitation of the existing ones in order to increase capacities, develop gas market and increase reliability of the system as a whole, with a view to preventing accidents that would lead to interruption of natural gas supply, as well as endangering life and health of people, and environmental protection.

10. Require from contractors, subcontractors and all involved in the economic activity of Bulgartransgaz EAD to control and develop their activities in accordance with the company policy, maintain a high standard of safety, production discipline and healthy and safe working conditions.

11. Promote safe practices in work discipline and individual self-awareness in order to avoid potential accidents.

12. Require engagement and active support of the entire Company management regarding the major accident prevention policy.

The operator has provided the potentially affected public with information about the planned safety measures and the behaviour and action in the event of an accident on the territory of Bulgartransgaz EAD-Chiren UGS. The information is also available on the company's website.

Bulgartransgaz EAD, Chiren UGS has developed an internal Emergency Preparedness and Response Plan, which provides for the respective measures in case of emergencies, the ways to alert and inform the affected population and external structures and critical units of the unified rescue system, as well as the actions to deal with the consequences.

The Plan aims to:

- create an efficient organization for taking measures to protect the life and health of people, the environment and to identify the necessary actions of the management bodies and response forces in the event of expected crises caused by disasters;
- set up an organisation to take measures to combat natural disasters, incidents and industrial accidents, to protect human life and material assets and to ensure the trouble-free operation of facilities;
- provide organisational and technical support for the activities;
- set up an organisation for early forecast and analysis of the nature and consequences of the most frequently occurring disasters;
- implement preventive measures and preventive control to avoid or reduce the consequences of disasters on the territory of the gas storage facility;
- introduce European standards and best available techniques for local risk assessment;
- allocate the responsibilities and the authorities and persons responsible for implementing the measures envisaged;
- envisage means and resources for disaster prevention and recovery;
- organize the work and actions of the management and staff in the event of disasters and accidents threatening their lives and health, after assessing the situation, circumstances and category;
- identify measures to reduce the risks of disasters, accidents, catastrophes and fires;
- preserve the life and health of staff and the potentially affected population.

Main tasks of the plan are:

- Developing and updating a disaster, emergency and fire action plan.
- Immediately notifying the company management in the event of a crisis situation and destroyed facilities (wells, gas pipelines, power lines and water lines).
- Providing due information in the event of a crisis situation.
- Restricting the access of people to the affected area, redirecting the traffic by detour routes.

- Taking immediate measures to protect staff and visitors at the site.
- Making arrangements for prompt identification, removal and first aid of casualties.
- Prompt warning and, if necessary, evacuation of workers and employees in the area of radioactive contamination.
- Providing individual protective equipment and iodine prophylaxis products and organizing the shipment and distribution in the shortest possible time.
- Providing the necessary protective equipment and its adjustment.

The operator has submitted the necessary information to Vratsa Municipality for the development of an External Emergency Plan by the Municipal Administration of Vratsa.

The External Emergency Plan is part of the Municipal Disaster Protection Plan of Vratsa Municipality and is being developed in order to:

1. Ensure control and reduce the incidents so as to minimise their impact and limit adverse effects on human health, the environment and property;
2. Implement measures necessary to protect human health, the environment and property;
3. Communicate the necessary information to the public and ensure effective communication between the competent authorities and the operator;

Specific measures to reduce the risk of major accidents and to protect the public

The specific measures to reduce the risk of major accidents that Chiren UGS implements as part of Bulgartransgaz EAD structure are as follows:

- Hazard identification and assessment, major accident risk assessment, detailed assessment of the consequences of the accident on people, facilities and the environment.
- Careful selection, training and regular assessment of the staff competence to maintain smooth and safe operation.
- Skills assessment in the selection of external organisations, such as commercial partners, suppliers and other stakeholders.
- Maintaining technical facilities and vehicles to such a level that the risk an accident is minimized.
- Developing and updating an emergency plan for the UGS to minimise the consequences of the accident to people, facilities, neighbouring sites and the environment.
- In-depth awareness of the staff on the potential accident hazards of the facilities in UGS. Regular training of all staff members to act appropriately and effectively in an emergency and in dealing with the consequences of an accident.
- Demanding staff to strictly adhere to the measures to ensure safe operation of the facilities, awareness and adherence to all major accident prevention policy.
- Evaluating any necessary changes to the technological equipment and processes, production organisation and personnel from an accident prevention perspective.
- Reporting and investigating accidents and prevented accidents and taking corrective and preventive actions to improve the performance.
- Providing the affected public with the necessary information on potential accident hazards, possible consequences and protective measures.
- Planning and implementing the tasks set out in the Chiren UGS Annual Investment and Maintenance Programme;
- Organization and control of strict compliance with the labour and technological discipline, the implementation of the requirements of the *Ordinance on the Structure and Safe Operation of the*

Transmission and Distribution Gas Pipelines, of the Facilities, Installations and Instruments for Natural Gas (State Gazette 67/2004), as well as any additional instructions and regulatory documents specific to the nature of the work;

- Systematic monitoring of all equipment and installations and, in the event of difficult weather conditions, additional inspections. In the event of deviations being detected, emergency measures shall be taken in accordance with the emergency plan in order to prevent major accidents.
- Compliance with the requirements of the Technical Requirements to Products Act (prom. SG issue 86 of 1 October 1999) and *Ordinance on the Structure and Safe Operation of the Transmission and Distribution Gas Pipelines, of the Facilities, Installations and Instruments for Natural Gas* - (prom SG issue 67 of 2 August 2004) on the safe operation of gas facilities and installations.
- Keeping technical files containing the technical documentation, drawings, calculations and documents for carrying out repairs to the relevant facility.
- Filling in inspection logs for all gas pipelines, gas equipment and installations, in which the technical supervision authorities record the results of the performed supervision activities and prescriptions for removal of the identified discrepancies.
- Continuous monitoring by the operating staff for compliance with the technological regime of production facilities, machines and devices, which is reflected in the relevant technical documentation. Hazardous equipment and facilities are subject to periodic technical supervision by Directorate General of State Technical Surveillance Inspectorate or by licensed persons, according to the current legislation.
- Control of compliance with internal departmental regulations and instructions regulating the activity of safe operation and repair of gas equipment and installations. The instructions define the tasks, functions and responsibilities of the service staff/operators, the procedure for commissioning, servicing/operation and shut down of facilities, the actions in case of emergency shut downs and in the event of failures and accidents.
- Carrying out mandatory trainings, briefings and inductions in accordance with the requirements of Ordinance No. PД-07-2/16.12.2009 on the terms and procedure for holding regular training and induction to workers and employees under the rules of providing occupational health and safety;
- Annual examination of the technical staff knowledge of the mechanism and safe operation of gas pipelines, gas equipment and installations.
- Compliance with the requirements for the safe performance of gas-hazardous, repair, fire and earth works.
- Carrying out an assessment of the technical condition and safe operation of the wells in Chiren Underground Gas Storage, in order to maintain a high safety standard of the exploitation and observation wells, gatherings, Christmas tree/spring fittings, gas fittings and other above ground and underground equipment.
- Periodic inspection of fire-fighting equipment and fire alarm installations, as well as measurement of grounding and lightning protection equipment by accredited laboratories.

Following approval of project documentation and construction of the site of UGS expansion, based on the design documentation, a Local Automated Warning System (LAWS) will be built in accordance with the requirements of Article 35, para 3(5) of the Disaster Protection Act, which will be integrated with the National Early Warning and Notification of the Potentially Affected Public System, pursuant

to the requirements of the *Ordinance on the conditions and procedures for operation of the national early warning and notification system to the executive authorities and the population in case of disasters and for notification in case of air hazard*.

The operator Bulgartransgaz EAD has taken all necessary measures to prevent the risk of accidents and limit their consequences at the operating site of Chiren underground gas storage and the exploitation wells, protection of the employees and the potentially affected population.

9.5.2. Security related impacts

BTG has a contract in place with a private security company selected through a thorough public procurement procedure for the security of the Chiren gas storage facility and the Project company reported no accidents with the security so far, as well as no violations by the population of the safety buffer zone established around the facility. The Chiren natural gas storage facility has been existent for about 50 years, the population is generally aware of the high risks in case of accidents and is not willing to violate the safety zone. For this reason, no structures, sheds or houses are found in the safety zone or any intended violations are reported.

It will also be a requirement of the Contractor to ensure that security arrangements comply with the spirit of the Voluntary Principles of Security and Human Rights (VPSHR). While developed with the extractive sector in mind, the VPSHRs provide a robust framework for most infrastructure projects to appropriately manage security arrangements in such an operating context.

The Project grievance procedure also provides a mechanism for community members to express concerns about Project security arrangements and the actions of security personnel.

During construction, a significant amount of heavy equipment will be transported to the site from different parts of the country. The Contractor is currently undertaking a detailed route assessment of the options available.

The public road network will be used to deliver the materials needed for the implementation of the project. Measures will be taken to ensure that all relevant stakeholders (local traffic police etc) are notified in advance of convoys so that appropriate traffic management procedures can be put in place.

Finally, in the event that the workforce is accommodated in existing housing stock within the region, there will be a greater interface between the workforce and local population which may lead to increased community safety and security risks.

Recommended Management Measures

- Conduct a security risk assessment and develop a Security Management Plan complying with the spirit of the Voluntary Principles on Security and Human Rights and including community redress procedures.
- Working closely with State security organisations to ensure the safe passage of equipment will be a key project success factor. Recognising that the Project's activities may affect local communities, Project management will engage regional and local authorities on a regular basis to ensure the welfare of the community and mitigate any potential conflicts.
- As the contractor (and its subcontractors) will be responsible for the movement of heavy equipment transport management measures will be detailed in the Traffic Management Plan. This plan will be developed in cooperation with key external stakeholders (traffic police, customs, port authorities and local administrations) and account for any security / permitting requirements. It will also form part of the ESMMP framework.

- All transportation contractors working on behalf of the Project will be required to carry contact cards which provide the details for accessing the Project Grievance Procedure. In the event they are approached by community members, they will be able to immediately refer them to the grievance procedure.

9.6. Project Impacts on Land Acquisition and Easements

It must be noted that due to the historical events in the country during the communist regime resulting, among others, in involuntary expropriation on a large scale of agricultural land in the country as well as property in general, the Bulgarian population is very sensitive to expropriation. After restoration of democracy in the country, property expropriated during communism, was reinstated to its' original owners or their heirs. The Constitution explicitly prohibits expropriation unless it is accompanied by a fair compensation. The laws of the country were construed in a way to protect the ownership right in the first place, so a number of different level guarantees were foreseen to involve the state in the expropriation process as a guarantee to private ownership, i.e.:

- expropriation is admissible only in the cases defined by law;
- no expropriation is admissible without a declared state/public need by the Council of Ministers;
- different ministries are involved in the process to determine the legality of the expropriation;
- the compensations are determined by an independent evaluator, who works on the basis of a preset evaluation methodology by the National Chamber of Evaluators;
- the affected owners may appeal against the defined compensation.

With regard to the Chiren gas storage facility expansion project it must be noted that expropriation is used only as a "last resort" opportunity, i.e., if the land owners could not be found despite all efforts by the company and the local authority. For the implementation of all project components 2 decisions have been approved by the authorities for expropriation. In addition, BTG aims to limit the economic displacement of affected persons as much as possible. For this reason, it aims at locating the project on municipal or state owned properties as a priority and implements the mitigation measures described in the Land Acquisition and Livelihood Restoration Plan. Summary of the affected properties by the aboveground facilities and the connecting pipeline to the village of Butan is included in the tables below. The identification of affected lands by the new exploitation wells is still pending.

Type of ownership	Number of properties	Affected area /decare/	Level of vulnerability
Municipal	3	65,022	N/A
Private	2	9,000	Some
Public organizations	1	8,222	Low
Total:	6	82,244	

Table 5: Affected properties for purchase - Aboveground facilities project component

Type of ownership	Number of properties	Affected area /decare/	Level of vulnerability
Municipal	16	18,522	N/A

Private	23	16,184	Some
Public organizations	2	1,079	Low
Total:	41	35,785	

Table 6: Affected properties for easement - Aboveground facilities project component

Type of ownership	Number of properties	Affected area /decare/	Level of vulnerability
Private	1	2,146	Some
Total:	1	2,146	

Table 7: Affected properties for purchase - Gas pipeline connecting Chiren UGS to the existing gas transmission network of Bulgartransgaz EAD

Type of ownership	Number of properties	Affected area /decare/	Level of vulnerability
Municipal	222	166,668	N/A
Government	48	57,935	N/A
Private	536	882,715	Some
Public organizations	93	138,204	Low
Total:	899	1245,511	

Table 8: Affected properties for easement - Gas pipeline connecting Chiren UGS to the existing gas transmission network of Bulgartransgaz EAD

It is important to note that the affected properties are all part of large agricultural plots for industrial production of agricultural goods and no livelihoods depend on the particular land plot affected by the easement rights of the construction slip. In addition, the effects of the project construction are with limited duration of about 1 year of actual construction activities in total.

The Project envisages that the facilities under the Project will be built on agricultural land, on which no residential buildings or other types of buildings have been built. The facilities provide for an easement zone, which aims to protect the population and property from inconveniences caused during the construction period or during the operation period (when repair activities are planned). No displacement of citizens of the villages on whose territory the facilities fall or any other type of inconvenience during the period of construction or operation is foreseen. The project does not foresee loss of local population's livelihood, shelter or sources of income. After the construction of the pipeline network facilities, the owners continue to use their land in the way of its permanent use - agriculture. The general land use is agricultural one practiced by industrial farmers (no small parcels of cultivated land were observed along the visited areas). Project affected municipalities are well

known at national level for extensive farming at industrial level. Industrial farmers from the area are known for having set up successful businesses and are not expected to suffer from temporary acquisition of land for the construction phase. The main cultivation is wheat, corn and tobacco are also being cultivated. Breeding activity is not typical for the area, if any, it is limited to smaller or individual livestock breeders.

For the establishment of easement rights for the pipeline network facilities/acquisition of rights in rem for the process sites/construction period, affected property owners/users of affected properties shall be fairly compensated for damages and lost benefits. After the completion of the construction, the terrains on which the pipeline network facilities are built are restored to their original form, which is certified with informed consent by each owner/user of the affected terrain. As a result of the implementation of the project, it is not expected that there will be manifestations of economic displacement of the local population, because the project does not foresee displacement/loss of livelihood or causing material damage to the population.

The procedure for the establishment of real rights starts with the preparation and approval of a Detailed Spatial Plan for the facilities, notification of the affected population at several stages of the development and approval of the project, including the stage of environmental impact assessment for the investment proposal, and foresees dozens of possibilities the affected population to express their recommendations, requests or objections to each stage of the project.

The legal framework that regulates the real rights acquisition procedure is the following:

➤ Procedure for the establishment of an easement

The easement establishment procedure for energy sites is laid down in article 64 of the Energy Act (EA). In accordance with article 64(4) of the EA, easements are established when a detailed spatial plan has entered into force and when the easement title holder pays or wires a one-off payment for damages in accordance with paragraph 6 to the owner and the holders of other real rights over the impacted property. In accordance with article 64(6) of the EA, the determination of the amount and the payment of compensations for the energy sites easements shall be made in accordance with articles 210 and 211 of the Spatial Development Act. The procedure for the determination of the compensation for the easement is carried out in the following sequence:

- Dispatch of an application to each municipality for the appointment of the committee under article 210 of the SDA with attached registers of the impacted properties;
- Preparation of a committee appointment order;
- The committee under article 210 of the SDA shall select an independent valuer who shall prepare the appraisals of the impacted properties (municipal, private and state);
- The valuer prepares appraisals of the due compensations and the committee to the municipality approves them with a protocol; the mayor of the municipality issues an order. The mayor's order specifies a bank account (opened for the benefit of the beneficiaries to whom the compensations will be wired), local tax, overheads, a fee for communicating the appraisals to the owners such as postage, etc., the costs of preparing the appraisals by an independent valuer, and also bank accounts to transfer the costs will be specified;
- Payment of all costs by Bulgartransgaz EAD to the indicated bank accounts;
- Notifying the owners of the payment of compensations - through announcements in prominent places in the municipality, a local newspaper and a standard letter to the addresses of the owners;

- A possible appeal of the amount of the compensation by the owners does not stop the construction process by virtue of article 64(6) of the SDA. In the event that the court orders a higher compensation than the one determined by the commission, Bulgartransgaz EAD supplements the payment until reaching the compensation amount determined by the court.

➤ Procedure for the acquisition of real rights for the technological sites

Concerning sites, a procedure for the acquisition of ownership or the transfer of the building right is envisaged according to article 62 of the EA. Following the approval of a detailed spatial plan Bulgartransgaz EAD shall take actions to directly negotiate the purchase of properties with the owners. When the properties are municipal property, on the basis of article 62(2) of the EA, the competent municipal authorities shall establish, for the benefit of the person who will build and operate the energy site, a building right against remuneration over the land in accordance with the Law on Municipal Property without a tender or competition. In accordance with article 63 para. 1 of the EA, in the event the owner refuses or there is an impossibility to do the actions involving the purchase of the property, the property shall be expropriated in favour of the state, applying a strict procedure for compensation of the owner, as the investor is obliged to comply with an independent appraisal of the property, also approved by the Ministry of Finance.

➤ Compensations for the owners/tenants/users of land properties for damages inflicted to them (destruction of agricultural production, etc.)

Bulgartransgaz EAD carries out the activities of indemnification of owners, tenants and users of land properties in accordance with its Rules for the organization of the activities of indemnification of owners/tenants/users of land properties for damages caused (destruction of agricultural production, etc.) during the construction and reconstruction of facilities and sites of the company's gas transmission system.

When making compensations, the rule for determining fair compensation for the owner/user of the property, removal of the humus layer before the construction works and restoration of the fertile humus layer after the completion of the construction works in order to preserve the fertile qualities of the agricultural land is observed. The fact that the project cannot be granted a building permit unless all compensation due to the affected persons has been paid by the project company is also a guarantee that all owners/tenants/users will be compensated.

In conjunction with the requirements of the Performance Standards, Bulgartransgaz has developed a Land Acquisition and Restoration Management Plan that describes the procedure in detail to ensure that fair compensation is paid and that vulnerable groups and all persons affected by the Project are taken into account.

Recommended Management Measures

- Regular monitoring and, if necessary, updating the Land Acquisition and Restoration Management Plan;
- Draw the attention of the local community to the available grievance mechanism.

9.7. Impact on energy security

The project is part of the activities aimed at expanding the storage capacity in the region of South-East Europe and increasing the energy security and the flexibility of the gas infrastructure.

Chiren UGS is considered an integral part of the regional gas system, consisting of interconnections (IGB, IBS), liquefied natural gas terminals (GR) and storage facilities. Therefore, the successful completion of the activities involving its expansion will contribute both to increasing the degree of security of supply to the country and the region, and improving the market integration in the region.

The benefits of project implementation for increasing the security of supply are identified by two indicators: Curtailed Demand and Single Largest Infrastructure Disruption (SLID) for the respective country.

The project enables to reduce the risk of Curtailed Demand in Bosnia and Herzegovina and Serbia, as well as to increase the flexibility of supply to Bosnia and Herzegovina and Serbia.

The project reduces the risk from single largest infrastructure disruption (SLID); according to the outcome, assessed by ENTSOG, the risk drops from 86% to 76% for Bosnia and Herzegovina and from 84% reaches 75% for Serbia in 2025, realising a reduction of 10% from the values without the realisation of the Project. With the implementation of the Chiren UGS expansion, the risk continues to decrease.

The implementation of the project improves the possibility for diversification (LICD indicator) in Bulgaria and Serbia, in all levels of infrastructure, in all years, thanks to the already existing infrastructure between Greece and Bulgaria as well as the existing one and that which is under construction between Bulgaria and Serbia. This increases the number of gas sources that Serbia and Bosnia and Herzegovina can use at the "existing" level of infrastructure. In 2025, natural gas sources for Serbia and Bosnia and Herzegovina increase by one and as of the same year the total number of sources is 3 for each of the two countries.

The project has a positive impact, which results in reducing the gas supply costs. In the configuration of the reference supply price, this can be estimated at about EUR 7 million per year (average) at the "existing" level of infrastructure.

9.8. Cultural heritage

The prescribed and mandatory cultural heritage protection measures for archaeological sites along the route, as well as the release of the terrains for construction under the Cultural Heritage Act (CHA) and Ordinance H-00-0001 of 14 February 2011 for carrying out field archaeological investigations (Ordinance H-00-0001) and PS8 of the IFC shall be implemented during the implementation of the project.

Types of field archaeological surveys and requirements for their implementation:

➤ *Carrying out an archaeological survey*

The exploration of archaeological sites is the initial stage of archaeological survey where archaeological valuables are identified through non-destructive methods and is carried out in accordance with Section I, chapter Two of Ordinance H-00-0001 and the CHA. According to the prescriptions of protocol of the expert committee appointed by the Ministry of Culture pursuant to the CHA and Ordinance H-00-0001 of the carried-out field archaeological surveys, describing the archaeological sites explored and the applicable cultural heritage protection measures, the provisions of the CHA and Ordinance № H-00-0001 should be observed.

➤ *Performance of rescue archaeological excavations*

The archaeological excavations are a type of destructive method of field archaeological survey, carried out on the basis of follow-up actions specified in a scientific report and/or archaeological measures prescribed by expert committee established under Art. 158a, par. 1 of the CHA, as well as when during performance of archaeological survey, archaeological structures are found for which archaeological excavation is necessary. The archaeological excavations shall be carried out by a team of archaeologists in accordance with the CHA and Section III of chapter two of Ordinance No. H-00-0001.

It is the duty of the selected contractor to support the activities of the archaeological teams in carrying out archaeological excavations by coordinating his Gantt Chart with the necessary deadlines for carrying out rescue excavations at the archaeological sites with the prescribed measure "carrying out archaeological excavations". The contractor will assist the archaeological teams in their work with the available machinery in order to clear the field (by carrying out excavation works) to the necessary extent (depth and scope) to start the archaeological survey, also if necessary, to remove obstacles by machinery, transport earth masses, provide access (also by temporary roads) and the possibility to use, if necessary, on-site warehouses and/or other suitable premises for storage of archaeological equipment and/or tools.

➤ *Carrying out a preliminary (partial) archaeological survey*

The "preliminary archaeological survey" measure envisages carrying out archaeological excavations on 10% of the area registered during field surveys in order to collect information about the boundaries of the site and the thickness of the cultural layers. As a result of the preliminary studies, the type, chronology and boundaries of the site determined by field surveys, shall be often revised.

According to the requirements of Art. 158a of the CHA, after completion of the preliminary studies, a committee appointed by the Minister of Culture shall be convened. The committee decides whether work on the archaeological site is finished, i.e., whether the available cultural layer has been completely surveyed and the archaeological structures - studied. If archaeological activities are completed, the site will be released for construction. In the event that additional activities are necessary for preservation of the cultural heritage, according to Ordinance H-00-0001 and the CHA, excavations should continue until the site has been fully explored. In case of a committee decision to continue surveys, the contracting authority provides the necessary funds for complete survey of the site and release of the terrain for construction activities.

➤ *Carrying out complete archaeological survey*

The "complete archaeological survey" measure is envisaged for archaeological sites threatened with destruction, located at a large area. The application of this measure envisages a survey of 100% of the area of the archaeological site within the easement.

➤ *Carrying out a comprehensive archaeological survey*

The "comprehensive archaeological survey" measure is envisaged for archaeological sites threatened with destruction. "Comprehensive" survey is required for burial mounds where even peripheral disturbance leads to their compromise and impossibility of their further preservation. The application of this measure means that the entire archaeological site should be fully explored (on the entire area occupied by the mound, even outside the gas pipeline easement).

➤ *Carrying out an archaeological survey*

In methodological terms, archaeological surveying is a field survey to establish the presence of archaeological structures at a given site. This measure is applied during the construction activities and does not provide for excavations. The measure shall apply to sites whose area will be peripherally affected by construction works or for which there is no reliable data on their existence, but there are reasonable doubts. Excavation works within the boundaries of archaeological sites shall be carried out pursuant to Art. 20, para. 5 of Ordinance No. H-00-0001 and Art. 161, para. 2 of the CHA in order to establish the presence of archaeological structures in a given place, protect the cultural archaeological heritage and prevent destruction of archaeological sites. In the event that during survey, archaeological structures are discovered, Art. 148 and Art. 160, para. 2 of the CHA shall apply and the Minister of Culture shall appoint an expert committee to propose follow-up actions. In such cases, the contractor should continue his activities on the section outside the area of study of the archaeological site. By approving the protocol of the committee, the Minister of Culture issues mandatory prescriptions for the necessary research and conservation activities of movable and immovable archaeological cultural valuables.

It is the duty of the contractor to comply with archaeologists' instructions in the areas where archaeological sites are located with the prescribed measure "carrying out archaeological survey", as well as, if necessary, provide regular monitoring by archaeologists during construction works within the entire investment intention of the contracting authority. The selected contractor shall comply with the instructions of the archaeologists in establishing the presence of archaeological structures in accordance with the provisions of the CHA and Ordinance H-00-001, will not suspend its activities, but continue execution of construction works along the route outside the boundaries of study of the archaeological site and/or structure in order to meet construction deadline.

Activities during construction:

The contractor receives the protocol(s) of the expert committee appointed by the Ministry of Culture in accordance with the CHA and Ordinance H-00-0001 of 14.02.2011 for accepting the results of the conducted field archaeological surveys, as well as contacts of the persons coordinating contracts for carrying out archaeological survey.

In order to arrange and carry out archaeological survey during construction in connection with the Cultural Heritage Act, the Contractor must notify the contracting authority within 7 (seven) days before commencement of construction works.

In case of discovery of new archaeological sites, construction works shall be suspended and actions shall be undertaken according to the Cultural Heritage Act and Ordinance No. H-00-0001 of 14.02.2011 for carrying out field archaeological surveys. Upon discovery of new archaeological sites, the Contractor shall be obliged to immediately notify the Contracting authority and the archaeologists with whom the Contracting authority has concluded a contract.

The contractor must ensure the necessary conditions for preservation of the cultural archaeological heritage, namely:

- removal of the humus layer in the area of the archaeological site should be carried out in the presence and under the supervision of an archaeologist;
- in the event that after humus layer removal, the presence of archaeological materials and structures is confirmed, it is necessary to suspend construction works within the affected archaeological site in order to carry out rescue excavations.

The Contractor of the project, through a legally competent person - a surveyor, lay out (trace) the route and the easement, including tracing of the location and boundaries of the archaeological sites within the easement.

Recommended Management Measures

- Bulgartransgaz to ensure regular monitoring of activities related to mitigation of impacts on cultural heritage as foreseen in its' ESMMP Framework;
- A Chance find procedure to be developed;
- Effective interface between the building contractors and the contractor for excavations/ cultural heritage preservation to be managed by Bulgartransgaz.

10. Conclusion

As further social and socio-economic data is acquired during ongoing stakeholder consultation efforts and additional Project information becomes available, the corresponding management plans from the ESMMP framework will be reviewed and updated accordingly.

Based on the scale of the Project, its location and the characteristics of the existing social and socio-economic context, the socio-economic impacts of the Project are expected to be mainly positive.

The Project will bring new investment and employment opportunities to the area. Through workforce training, it will enhance the skill base and promote economic activity through local content initiatives. Furthermore, Bulgartransgaz has a cooperative approach to community investment over and above its impact mitigation obligations and will seek to make a positive and sustainable community development contribution.

Social risks and negative impacts identified will be addressed and managed in accordance with international social performance standards and in cooperation with key stakeholders.

11. Annex A – Social Impact Matrix

Social Impact Matrix of Chiren UGS Capacity Expansion Project				
		Risk	Project phase	Level of risk
Design, construction and commissioning of above ground facilities	Local community			
		Discrimination	Design and construction/ operation	MODERATE
		Violation of human rights in the use of armed security	Design and construction/ operation	LOW
		Forced displacement/land acquisition	Design and construction	LOW
		Social services/ deterioration of infrastructure	Construction / operation	LOW
		Health and safety of the local community	Construction / operation	LOW
		Employment/livelihood	Construction / operation	LOW
		Transport/moving heavy machinery and equipment	Construction	LOW
	Working environment conditions			
		Working conditions (working hours and breaks, etc.)	Design and construction/ operation	MODERATE
		Forced labour	Design and construction/ operation	LOW
		Child labour	Design and construction/ operation	LOW
		Joining trade unions, collective bargaining	Design and construction/ operation	LOW
		Risks related to OHS	Design and construction/ operation	MODERATE
		Accommodation conditions for workers from outside the area	Construction	LOW
		Installation// transport/ moving heavy machinery and equipment	Construction	MODERATE

Design, construction and commissioning of a gas pipeline in the section VA Butan - Chiren UGS	Local community			
		Discrimination	Design and construction/ operation	MODERATE
		Violation of human rights in the use of armed security	Design and construction/ operation	LOW
		Forced displacement	Design and construction	LOW
	Working environment conditions			
		Working conditions (working hours and breaks, etc.)	Design and construction/ operation	MODERATE
		Forced labour	Design and construction/ operation	LOW
		Child labour	Design and construction/ operation	LOW
		Joining trade unions, collective bargaining	Design and construction/ operation	LOW
		Risks related to OHS	Design and construction/ operation	MODERATE
	Design, construction and commissioning of underground facilities	Local community		
		Discrimination	Design and construction	MODERATE
		Violation of human rights in the use of armed security	Design and construction/ operation	LOW
		Forced displacement	Design and construction	LOW
Working environment conditions				
		Working conditions (working hours and breaks, etc.)	Design and construction/ operation	MODERATE
		Forced labour	Design and construction/ operation	LOW
		Child labour	Design and construction/ operation	LOW
		Joining trade unions, collective bargaining	Design and construction/ operation	LOW
		Risks related to OHS	Design and construction/ operation	MODERATE

12. Sources of information

<https://www.grao.bg/tables.html>

<https://www.vratza.bg/>

<https://infostat.nsi.bg/>

<https://www.ngobg.info/bg/>

<https://kozloduy.bg/>

<https://www.hayredin.com/>

<https://www.obshtinamizia.com/>

<https://www.borovan.bg/>

<https://vratsa.government.bg/>