

REPORT

**Genser Energy Ghana Limited, 105 km Pipeline from
Gyegyetroso to Kumasi Project**
Final Draft Scoping Report and Terms of Reference

Submitted to:

Genser Energy Ghana Limited

Submitted by:

Golder Associates Ghana Ltd.

Densu Point Building, 3 Foho Link, North Dzorwulu, Accra, Ghana
P.O. Box KIA 16092, Airport, Accra, Ghana

+233 0 302 978 819/823

21480005-350725-1

February 28, 2022



Distribution List

1 e-copy - GEGL

1 e-copy - Golder

Executive Summary

Genser Energy Ghana Limited (GEGL) is planning to construct and install a 105 km, 24-inch natural gas pipeline infrastructure from Gyegyetroso to Ejisu-Kumasi in the Ashanti Region of Ghana. This gas pipeline project will connect the existing gas pipeline from the Branch Point Station (BPS) at Gyegyetroso to a new Branch Metering Station at Ejisu- Kumasi. The construction of the pipeline will facilitate the supply of natural gas from the Prestea Regulating and Metering Station to the *Ameri power plant*¹ which is proposed to be relocated close to the GRIDCo substation in Ejisu.

The main components of the natural gas project are, approximately a 105km 24-inch natural gas pipeline, Block Valve Stations, a Branch Metering Station, and ancillary equipment needed for gas supply.

GEGL will comply with all applicable Ghanaian legislation relating to the development and operation of a natural gas pipeline, particularly the Environmental Assessment Regulations, 1999 (LI 1652). GEGL registered the project with the Environmental Protection Agency (EPA) and has prepared this Scoping Report to generate the relevant Terms of Reference (ToR) to guide the Environmental Impact Assessment (EIA) study of the project. As per the EPA directives outlined in a letter to GEGL, dated 16 April 2021. This Scoping Report introduces the project and discusses key issues, concerns, and includes inputs and guidance solicited from the project stakeholders on the ToR for the Environmental Impact Statement (EIS).

Baseline data has also been collected for the key environmental and social resources, including biodiversity, air quality socio-economic and traffic impact. Data collected will be analysed and will guide the impact assessment presented in the EIS. Stakeholder engagements have also been completed by GEGL and a total of 115 meetings were held attended by 3497 participants. Stakeholders engaged entailed government agencies non-governmental organizations and community authorities and members in the project areas.

The stakeholder engagement process was aligned with the objectives of the stakeholder consultation process as set out in LI 1652. A key issue that emerged was naming the proposed BPS as Dawusaso BPS. It has been addressed and the proposed BPS is now called Gyegyetroso BPS. Issues and concerns raised by the various stakeholders were documented for reference and action to be undertaken to address the concerns will be incorporated into the EIS.

The key impacts identified include potential land disturbance, increased noise levels, loss of flora and fauna of ecological importance, dust and gaseous emissions, risks to public safety and traffic related impacts.

These key impacts, as defined in the ToR, are presented in this Scoping Report as are issues and concerns expressed by the stakeholders. The EIS will present detailed assessments of the potential project impacts and propose measures to mitigate negative impacts and enhance project benefits.

¹ Ameri power plant is a 250MW thermal plant at Aboadze fired by natural gas from Atuabo, all in the western region of Ghana. The Ministry of Energy has relocated the Ameri power plant to Kumasi.

Abbreviations and SI Units

ABBREVIATIONS

3LPE	3-Layer Polyethylene
API	American Petroleum Institute
ASME	American Society of Mechanical Engineers
BID	Background Information Document
BMS	Branch Metering Station
BPS	Branch Point Station
BVS	Block Valve Station
CCGT	Plant combined cycle gas turbine plant
CRR	Comments and Response Report
ECOWAS	Economic Community of West African States
EHS	Environmental health and safety
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EPA	Environmental Protection Agency
EPC	Engineering, Procurement, and Construction
EPFI	Equator Principles Financial Institution
ESMP	Environmental and Social Monitoring Plan
ESMS	Environmental and Social Management System
GEGL	Genser Energy Ghana Limited
GHG	Green House Gas
GNPC	Ghana National Petroleum Corporation
GRIDCo	Ghana Grid Company Limited
GWCL	Ghana Water Company Limited
HFO	Heavy Fuel Oil

IFC	International Finance Corporation
LI	Legislative Instrument
LPG	Liquefied Petroleum Gas
NGLs	Natural Gas Liquids
O&M	Operations and Maintenance
PS	Performance Standards
RMS	Regulating and Metering Station
ROW	Right of Way
SAWH	Submerged-Arc Welding Helix
SAWL	Submerged-Arc Welding Length
SEP	Stakeholder Engagement Plan
SI Units	
° C	Degrees Celsius
barg	Gauge Pressure
Bcf	billion cubic feet
cm	Centimetres
Ha	Hectares
km	Kilometre
mm	Millimetres
mm ²	Square millimetre
m	Metres
m ³	Cubic metre
mscfd	Million standard cubic feet per day
MW	Megawatts

Table of Contents

1.0	INTRODUCTION	1
1.1	Project Background and Justification.....	5
1.1.1	Project Background.....	5
1.1.2	Project Justification	5
1.2	Objectives of Scoping Report	6
1.3	Study Methodology	7
1.3.1	Site Visit	7
1.3.2	Literature / Desktop Review.....	8
1.3.3	Stakeholder Engagement	8
1.3.3.1	Key Issues from the Stakeholder Engagement	8
1.4	Policy, Legal and Regulatory Framework	10
1.4.1	Constitution of the Republic of Ghana, 1992	10
1.4.2	National Policy Framework	10
1.4.2.1	Ghana National Energy Policy, 2010.....	10
1.4.2.2	National Environmental Policy, 2014.....	10
1.4.2.3	National Water Policy, 2007	10
1.4.2.4	Environmental Sanitation Policy, 2010	10
1.4.2.5	Ghana Forest and Wildlife Policy, 2012	11
1.4.2.6	National Wetlands Conservation Strategy, 1999.....	11
1.4.2.7	Ghana Climate Change Policy, 2013	11
1.4.3	Legal and Regulatory Framework.....	11
1.4.3.1	Environmental Protection Agency Act, 1994 (Act 490)	11
1.4.3.2	Energy Commission Act, 1997 (Act 541).....	11
1.4.3.3	Ghana Highway Authority Act, 1997 (Act 540).....	11
1.4.3.4	Environmental Assessment Regulations, 1999 (LI 1652)	11
1.4.3.5	Electricity Regulations, 2008 (LI 1937).....	12
1.4.3.6	Fees and Charges (Amendment) Instrument, 2019 (LI 2386).....	12
1.4.3.7	Water Resources Commission Act, 1996 (Act 522)	12
1.4.3.8	Local Governance Act 2016 (Act 936).....	12
1.4.3.9	Lands Commission Act 2008, (Act 767)	13
1.4.3.10	Land Use and Spatial Planning Authority Act 2016, (Act 925)	13

1.4.3.11	Environmental Guidelines and Standards	13
1.4.4	International Environmental Treaties and Conventions	13
1.5	International Standards and Guidelines	13
1.5.1	IFC Performance Standards on Social and Environmental Sustainability	14
1.5.2	IFC Environmental Health and Safety Guidelines	15
1.6	Outline of the Scoping Report	15
2.0	PROJECT DESCRIPTION	17
2.1	Project Scale	17
2.2	Project Components	19
2.3	Project Design	20
2.4	Project Services	22
2.4.1	Accommodation Facilities	22
2.4.2	Workshop	24
2.4.3	Health Care	24
2.4.4	Monitoring Facilities	24
2.5	Water Needs	24
2.6	Waste Management	24
2.7	Scheduling and Activities	25
2.8	Staffing and Employment	25
2.9	Alternatives to Proposed Undertaking	26
2.9.1	Site Analysis for the Location of the Pipeline	26
2.9.2	Site Analysis for the Location of the Gas Stations	26
2.9.3	No-Go Project Alternative	26
3.0	BASELINE INFORMATION	27
3.1	Physical Environment	27
3.1.1	Topography and Drainage	27
3.1.2	Climate	27
3.1.3	Mineral Deposits	27
3.1.4	Soil and Land Use	27
3.1.5	Noise	27
3.1.6	Air Quality	28

3.2	Biological Environment.....	28
3.2.1	Vegetation.....	28
3.3	Socio-Economic Environment.....	28
3.3.1	Socio-Economic Profile.....	28
3.3.2	Traffic.....	29
4.0	ENVIRONMENTAL AND SOCIAL IMPACTS	30
4.1	Physical Environment.....	30
4.1.1	Soil and Land Use.....	30
4.1.2	Noise.....	30
4.1.3	Air Quality	30
4.1.4	Greenhouse Gas Emissions	30
4.1.5	Surface Water	30
4.2	Biological Environment.....	31
4.2.1	Biodiversity.....	31
4.3	Socio-Economic Environment.....	31
4.3.1	Socio-Economic	31
4.3.2	Traffic.....	31
5.0	KEY ENVIRONMENTAL AND SOCIAL IMPACTS	32
5.1	Physical Environment.....	32
5.1.1	Soil and Land Use.....	32
5.1.2	Noise.....	32
5.1.3	Air Quality	32
5.1.4	Surface Water and Groundwater	32
5.2	Biological Environment.....	32
5.2.1	Flora and Fauna.....	32
5.2.2	Aquatic	33
5.3	Socio-economic Environment	33
5.3.1	Traffic.....	33
6.0	MITIGATION MEASURES	34
6.1	Physical Environment.....	34
6.1.1	Soil and Land Use.....	34

6.1.2	Noise	34
6.1.3	Air Quality	34
6.1.4	Surface Water	34
6.2	Biological Environment.....	35
6.2.1	Flora and Fauna.....	35
6.2.2	Aquatic	35
6.3	Socio-Economic Environment.....	35
6.4	Traffic	36
7.0	TERMS OF REFERENCE FOR THE EIA.....	37
7.1	Physical Environment.....	37
7.1.1	Soil and Land Use.....	37
7.1.2	Noise	38
7.1.3	Air Quality	38
7.1.4	Climate	38
7.1.5	Surface Water	38
7.2	Biological Environment.....	38
7.2.1	Biodiversity.....	38
7.3	Socio-Economic Environment.....	39
7.3.1	Socio-Economic	39
7.3.2	Key Stakeholder Issues	39
7.3.3	Traffic	40
7.4	Structure of EIA Report.....	41
8.0	CONCLUSION.....	42

TABLES

Table 1: Project Stakeholders	9
Table 2: GPS coordinates of stations along the natural gas pipeline.....	17
Table 3: List of the BMS Components.....	19
Table 4: List of BVS Component	20
Table 5: Pipeline Design Parameters	21
Table 6: Pipeline Mechanical Data	22
Table 7: EIS Structure	41

FIGURES

Figure 1: Project Location..... 3

Figure 2: Satellite Image of the Proposed Pipeline to Kumasi (GEGL, 2021)..... 4

Figure 3: Layout of the EIA Process (EPA, 2015) 7

Figure 4: Proposed gas stations along the 105 km pipeline route 18

Figure 5: Proposed Camp Layout for the Pipeline Project 23

APPENDICES

APPENDIX A

EPA letter requesting and EIA for the project

Gas Pipeline Construction Schedule

APPENDIX B

Comments and Response Report List and dates of stakeholder engagements

APPENDIX C

BMS layout

1.0 INTRODUCTION

Genser Energy Ghana Limited (GEGL) is an energy solution incorporated in Ghana in April 2007 under the Companies Act 1963 (Act 179). Genser Energy Holdings Limited, a Mauritius-incorporated company with two Ghanaians as ultimate beneficiaries, owns GEGL.

GEGL provides sustainable and cost-effective energy solutions to numerous sectors across Africa. Since its inception in 2007, GEGL has successfully executed seven power generation projects for well-known mining and industrial companies in Ghana. GEGL is a private owner of natural gas pipelines in Ghana. GEGL engages in the full value chain of energy generation and transmission including the Engineering, Procurement and Construction (EPC) of power plants and natural gas pipeline infrastructure for power generation as well as Operation and Maintenance (O&M) of its assets.

GEGL has over the past fourteen years commissioned seven distributed generation plants and a fuel supply terminal in Ghana. Each power generation plant has been uniquely designed with varying capacities, tailored to suit the consumer.

- GP Bogoso Plant – 36.0MW Single Cycle Plant fired by distillate on the mining concession of Golden Star Resources, Bogoso mine
- GP Unilever Plant – 5.5MW Cogeneration of Heat and Power Plant fired by LPG on the premises of Unilever Ghana Limited, Tema
- GP Chirano Plant – 30.0MW Steam Turbine Plant fired by natural gas and NGLs on the mining concession of Chirano Gold Mines Limited, Chirano mine
- GP Tarkwa Plant – 66.0MW Single Cycle Plant fired by natural gas and NGLs on the mining concession of Gold Fields Ghana Limited, Tarkwa mine
- GP Damang Plant – 25.0MW Single Cycle Plant fired by natural gas and NGLs on the mining concession of Abooso Goldfields Limited, Damang mine
- GP Wassa Plant- 33.0MW Single Cycle Plant fired by natural gas and NGLs on the mining concession of Golden Star Resources, Wassa mine
- GP Edikan Plant- 33.0MW Single Cycle Plant fired by natural gas and NGLs on the mining concession of Perseus Mining Ghana Limited, Edikan mine

In addition, GEGL has implemented a 310km pipeline infrastructure project originating from the Ghana National Gas Company's Regulating and Metering Station (RMS) at Prestea to its existing power plants in the Western, Western North, Central and Ashanti regions of Ghana. The pipeline project has allowed GEGL to reach its objective of developing a reliable fuel supply chain for the smooth running and operation of its thermal power plants.

At the request of the Ministry of Energy, Genser Energy is investing in the construction of a 105 km 24-inch natural gas pipeline infrastructure (Primary Pipeline 02 from Gyegyetroso to Ejisu-Kumasi in the Ashanti Region of Ghana (Figure 1). The pipeline will connect the existing gas pipeline from the Branch Point Station (BPS) at Gyegyetroso to a proposed BMS at Ejisu- Kumasi.

As required by the Environmental Assessment Regulations 1999 (LI 1652), GEGL has duly registered the project with the Environmental Protection Agency (EPA). The EPA in a letter dated 16th April 2021 APPENDIX A requested that GEGL conduct an Environmental Impact Assessment (EIA) for the project and subsequently submit an Environmental Impact Statement to the EPA. The EPA had also directed that

a Scoping Report be prepared to generate the relevant Terms of Reference (ToR) to guide the EIA study. This document is the Scoping Report and includes a Draft Terms of Reference for the EIA.

The Scoping Report introduces the proposed project and alternatives considered, describes the applicable legislative framework, and the existing preliminary biophysical and social environment within the project area. It presents the key project impacts and issues raised by stakeholders. The document also describes preliminary mitigation measures to be implemented to reduce and/or eliminate the impacts and presents the ToR in line with the provisions under Regulation 12 of LI 1652.

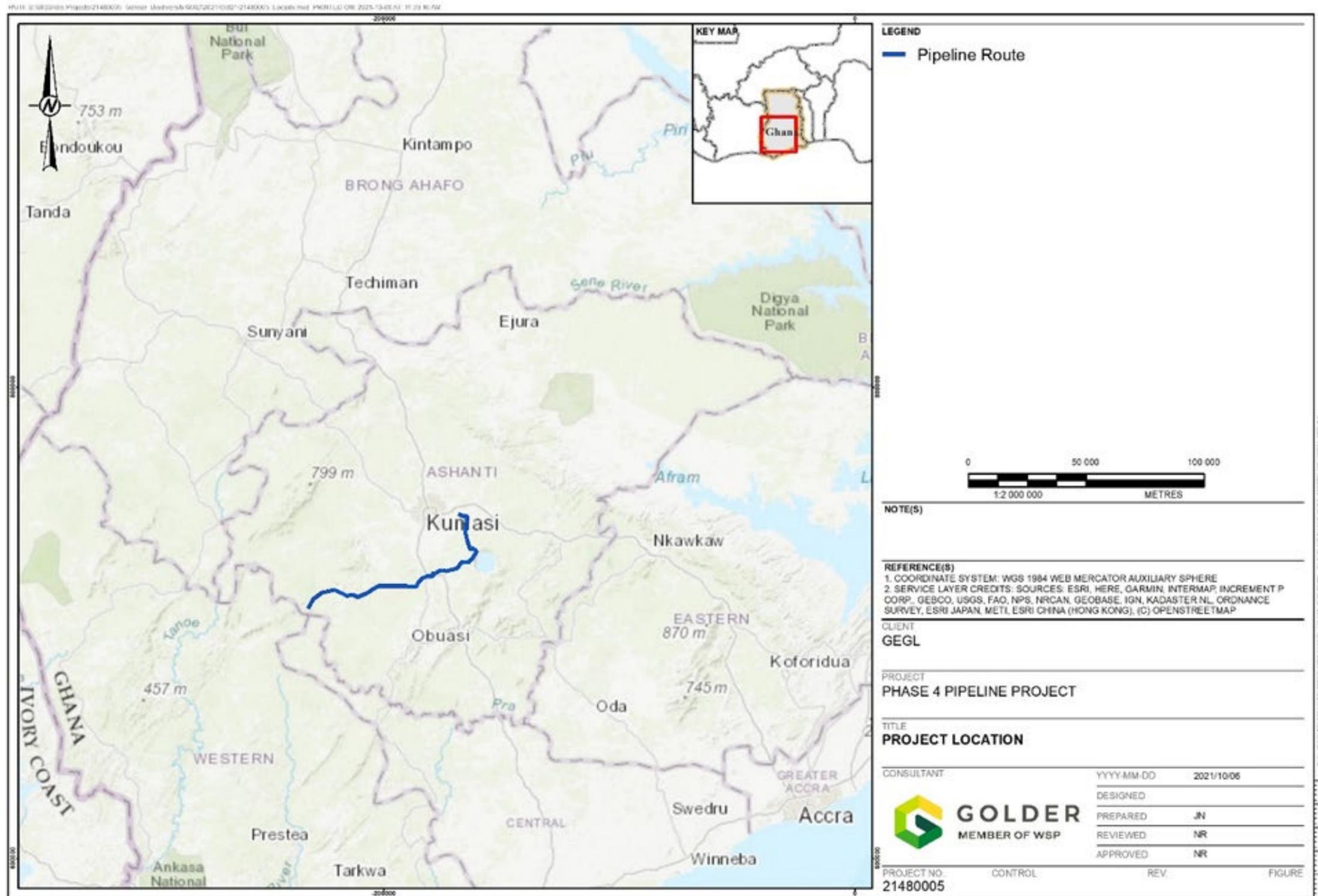


Figure 1: Project Location

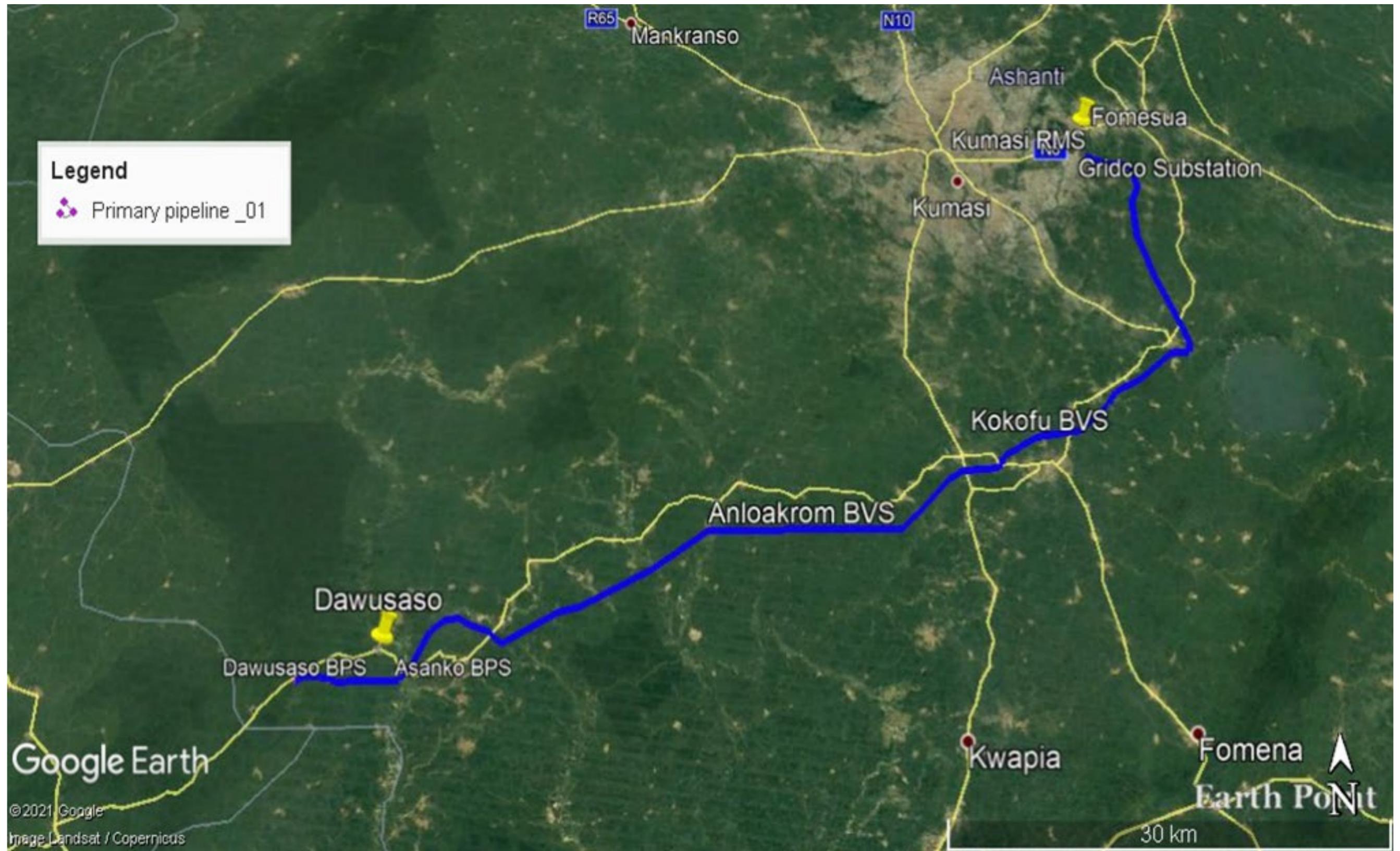


Figure 2: Satellite Image of the Proposed Pipeline to Kumasi (GEGL, 2021)

1.1 Project Background and Justification

1.1.1 Project Background

The Volta River Authority manages the Ameri power plant, which is a 250MW thermal plant currently located at Aboadze in the Western region of Ghana. The Ameri power plant is fired by natural gas from the Atuabo Gas Processing Plant for power generation onto the national grid. To stabilise grid supply in the central part of Ghana (Kumasi), the Ministry of Energy has proposed the relocation of the Ameri Power plant to Kumasi. On this basis, the Ministry of Energy has requested GEGL to extend its gas pipeline infrastructure from Gyegyetroso to Kumasi to facilitate the supply of natural gas from the Prestea RMS to the Ameri power plant.

To meet the requirements of the Ministry of Energy, GEGL is proposing to construct a 105 km 24-inch gas pipeline infrastructure from the Gyegyetroso BPS to Ejisu BMS in Kumasi for natural gas supply to the Ameri power plant.

It is important to note that GEGL has completed a number of pipeline projects totaling 310 km in length, all of which have been commissioned and are operational. They are as follows:

- Primary Pipeline_01: From the Prestea RMS to Gyegyetroso (completed and operational).
- Branch Pipeline_01: From the Prestea RMS to Tarkwa, Damang and Wassa (completed and operational).
- Branch Pipeline_02: From the Primary Pipeline to the GP Chirano Plant (completed and commissioned).
- Branch Pipeline_03: From the Primary Pipeline to the GP Edikan Plant (completed and commissioned).

1.1.2 Project Justification

Ghana discovered its first deepwater oil and gas in 2007. Presently, the most advanced reserves identified are: The Jubilee field, with associated gas reserves estimated at 490 billion cubic feet (Bcf); the TEN fields with associated gas reserves of 363 Bcf and the Sankofa field with non-associated gas reserves of 1,107 Bcf. Plans are underway to develop the Mahogany and Teak fields with estimated total reserves of 120 Bcf as part of the Greater Jubilee Full Field. Most of the natural gas from these fields were hitherto flared into the atmosphere for safety reasons.

Globally, there is a recognition of the benefits of utilizing natural gas over other sources of energy. For a developing country like Ghana which have discovered oil and gas in commercial quantities, there is an opportunity to switch from the use of conventional fuels to natural gas in powering industries. In addition to the advantage of reduced greenhouse emissions that natural gas has over other energy sources, there are cost saving opportunities from its use.

Aside its reliance on hydroelectric and heavy fuel thermal energy, the government of Ghana has shown support for the use of other energy sources to produce electricity and is committed to developing competitive gas and electricity markets to deliver lower energy prices and varied choices to customers.

With the numerous challenges currently associated with the use of hydroelectric and heavy fuel thermal electricity supply, industries heavily reliant on energy for the running of their daily operations are beginning to consider other options such as natural gas. GEGL intend to expand gas pipeline to cover more areas within the southern and middle belt of Ghana, this will address the energy supply challenges to the industries in the region.

This project provides the opportunity for GEGL to expand its gas supply infrastructure which currently terminates at Gyegyetroso to Kumasi. Accordingly, the utilisation of natural gas as an energy source, will create new opportunities and serve as a foundation for a vibrant petroleum and petrochemical industry to evolve, thereby providing new economic opportunities for Ghana.

The following are some of the envisaged benefits of the project:

- Link the underserved areas to the national gas supply grid and increase the supply of natural gas within the middle belt of Ghana.
- Meet the government of Ghana's vision of increasing cleaner, affordable, and sustainable energy within the energy mix and to meet the increasing demand for energy in the country.
- Reduce operational costs of industries reliant on energy due to the cheaper cost of gas as compared to other energy sources. The extension of the gas pipeline for natural gas supply to Kumasi will reduce reliance on expensive fossil fuels, such as diesel/ Heavy Fuel Oil (HFO) for industries within the southern and middle belt of Ghana. The switch from diesel/HFO to natural gas will result in significant reduction in the cost of operations for local industries in the region.
- Reduce load and traffic on highways as road transport will be minimized from areas where the pipeline is routed through.
- Serve as a possible key link for natural gas supply from Ghana Gas's distribution terminals to industries with large energy needs located in the southern and middle part of Ghana. This is because the pipeline project will provide the capacity to facilitate the supply of natural gas to these industries.
- Provide industries a more reliable and uninterrupted flow of energy via pipelines as opposed to using other means to transport energy.
- Reduce the wait time for constructing alternative means (e.g., rail, asphalted detour roads) of transporting energy, which is usually guided by topography, climate, manpower.
- Reduce impacts associated with tanker transport such as pollution recorded from tanker spillage incidents as the likelihood of leakages in high quantities occurring along pipelines are not as frequent as recorded for tankers.
- Significantly enhance the development opportunities for industries in the southern and middle sectors of Ghana.
- Enhance creation of jobs directly from the project and indirectly from industrial development and economic opportunities.

It is noteworthy that most of the natural gas from the identified field, which were hitherto flared into the atmosphere, will be put to beneficial use with the implementation of the project.

1.2 Objectives of Scoping Report

In line with Regulation 11 of LI 1652, the Scoping Report has the following objectives:

- To set out the scope or extent of the EIA to be undertaken by GEGL.
- To develop a draft ToR for the EIA study, which shall set out the essential issues² to be addressed in the EIA.
- Scoping Report is also to solicit input and guidance of all the relevant stakeholder on the ToR.

² The essential issues will include key issues and concerns raised by stakeholders and key environmental and social impacts identified.

1.3 Study Methodology

The scoping study was conducted using the following approaches:

- Site visit
- Review of existing data on the project
- Stakeholder engagement to help identify key issues and concerns to inform the impact assessment.

The scoping study forms part of the EIA process as illustrated in Figure 3.

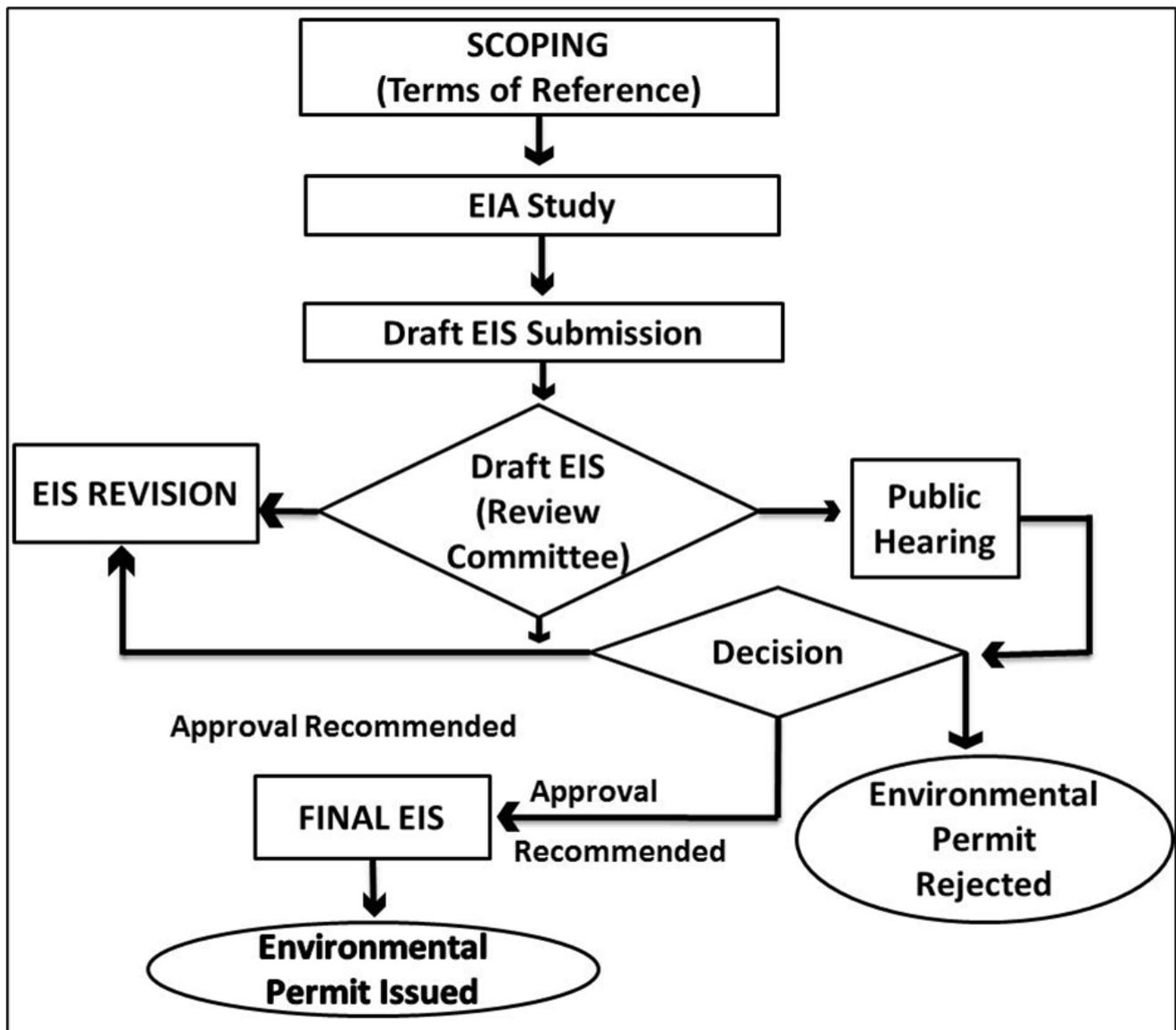


Figure 3: Layout of the EIA Process (EPA, 2015)

1.3.1 Site Visit

The project team visited the pipeline route (Gyegyetroso-Kumasi area) to familiarize themselves with the site conditions and assess the social and environmental condition of the project. The visit was also to undertake a high-level assessment of the potential impacts of the project to inform the scope of the project ahead of the detailed specialist studies.

1.3.2 Literature / Desktop Review

Existing data and information relating to the project area including the project feasibility study report, information on the biophysical and social environments, historical scoping report, and other public materials and reports were reviewed. The goal of the desktop study was to obtain a fair and accurate understanding of the project.

1.3.3 Stakeholder Engagement

Detailed stakeholder engagement was undertaken as part of the EIA process. A stakeholder engagement plan (SEP) was prepared as part of the stakeholder engagement process. The SEP provided the framework for project-related stakeholder engagement and the disclosure of related information to the broader project stakeholders.

A background information document (BID) also forms part of the EIA process. The BID was distributed to stakeholders ahead of the stakeholder engagement. The BID provided background information on the project to stakeholders, invited stakeholder to participate in the EIA process and encouraged them to provide their comments and concerns on the project.

The stakeholder engagement included identification of stakeholders and consultations with traditional leadership, local leaders, community residents and governmental agencies at the local, district and regional levels. The stakeholder engagements, led by GEGL, was conducted from 16th July 2021 to 31st August 2021, February 23, 2022 and a total of 115 meetings were held attended by 3,497 participants.

- All the engagements were in the form of community gatherings, face-to-face meetings and focus group discussions.
- The meetings were conducted in primarily in Twi (the local dialect spoken in these communities), in small groups and were documented (photos, completion of attendance registers and note-taking).
- The meetings were held at venues easily accessible to stakeholders.
- Comments and issues raised were captured in a comment and response report (CRR).

The engagements were conducted using diverse approaches including discussing distributed printout materials and maps on the project, PowerPoint presentations especially during engagement with the district assemblies and general interactions. After every presentation, stakeholders were given the opportunity to comment, provide suggestions and raise any concerns regarding the project. Appropriate responses were then provided by the Team.

1.3.3.1 Key Issues from the Stakeholder Engagement

A key issue that emerged was calling the site of the proposed BPS as Dawusaso BPS. The Gyegyetsreso community had indicated that the site for the proposed BPS was on Gyegyetsreso land and were against it being called Dawusaso BPS. Upon verification, GEGL changed the name to Gyegyetsreso BPS. Other key issues and concerns raised during the stakeholder engagements are presented as follows:

- **Safety and security:** stakeholders from Keniago, Fahiakobo communities and Bosomtwe District Assembly were concerned about how safe the pipeline would be if they worked or stayed in the proximity of the route. Others also asked how faults on the buried pipeline would be detected.
- **Crop and land compensation:** stakeholders enquired if compensations would be paid before or after the project commenced. They also wanted to know the price ratings for each crop and if compensations would be a one-off or annual payment. They enquired if the compensations would be paid directly to the affected farmers, or would a percentage be given to the community leaders?

- **Resettlement:** stakeholders from Kokodei, Piase and Toafokrom wanted to know if their homes would be relocated if the pipeline route passed through their residence.
- **Gas for domestic use:** residents of Marfokrom, Boni and Sebedie enquired if the gas flowing through the pipeline could be sold for domestic use.
- **Environmental effects (soil and water):** communities asked about the environmental impacts of the pipeline on soil fertility and water resources.
- **Environmental impact assessment:** there were queries about the general impacts of the pipeline on the environment from stakeholders from Kurase, Sebedie, Adubiaso and Kwaaso communities.
- **Employment:** several communities including those from Adankragya-Sawaba and Nyameani and asked if locals would be employed when the project commenced, and what types of jobs would be available.
- **General issues:** general issues included questions about the continuation of farming after the pipeline had been constructed, the depth of the pipeline below the surface and the size of the pipeline.

Among the concerns raised by stakeholders, most of the issues were linked to crop and land compensation, employment, and environmental impacts of the project on soils and water. Stakeholders, however, did not object to the project.

All comments, suggestions, concerns, and issues raised were documented and compiled into a Comment and Response Report, which is attached in APPENDIX B.

The communities engaged during the scoping phase are outlined in Table 1.

Table 1: Project Stakeholders

Amansie West District	Amansie South District		Bekwai Municipality		Bosomtwe District	Ejisu Municipality
Abodom	Nwinuso	Manso mhorho	Akyeremade	Afransie	Adwafo	Ahomasu
Abodom domi	Mpatasie	Subinso	Asaman	Huntado	Akokofe	Ahomasu-High Tension
Kwakokrom	Manso Miano	Ebirem	Bedomase	Boni	Amankwadei	Domeabra
Omandware	Ankam	Kumpese -	Boaman	Anwinkwanta	Gyapandu	Apromase
Kwabnakrom	Mim	Manso-nyamkomase	Edwenase	Yaw ponkokrom	Kokodie	Krapa
Siabotere	Agrosum	Odumase	Essumeja	Ntinakor	Kokofu	Achinakrom
Yawhenemekrom	Keniago	Aponapon	Kyekyere-Betinanko	Sumkyerekrom	Onwe	Donnyina
Sarfokrom	Kwabenaso	Wahas	Kyenkyem	Manhyia	Patrensa	Homabenase
	Fahiakobo	Dawusaso	Swedro-Abankese	Atwetwasu	Piase	Kwaso Deduako
	Adubeaso	Gyegyetros	Poano	Denyase	Tuamfom	Sarpe
				Fahiakobo	Worakese	Donaso
				Marfo	Yaasi	Onwe
					Abono	Asienimpong
					Nyame Eni	Kwaso
						Kokoben
						Appiadu

The list and dates for the various engagements are provided in APPENDIX B.

Further consultations were also held with government agencies including the EPA, Energy Commission, Ghana National Fire Service, Department of Social Welfare, Department of Urban Roads, and Planning Offices as part of the impact assessment phase stakeholder engagement. The details of all the engagements undertaken during the EIA process will be included in the EIS.

1.4 Policy, Legal and Regulatory Framework

Ghana has well-established laws, policies guidelines and regulations to promote and regulate the energy sector and the environmental landscape. Relevant laws applicable to the project are summarized in the following sub-sections.

1.4.1 Constitution of the Republic of Ghana, 1992

Chapter 21, Article 257 (section 1) of the Constitution states that: “all public lands in Ghana shall be vested in the President on behalf of, and in trust for, the people of Ghana”. Chapter 6, Article 36, Clause 9, requires the State to take appropriate measures to protect and safeguard and seek the co-operation of all stakeholders to protect the environment.

GEGL understands that land is vested in the President of the Republic of Ghana. Thus, GEGL will put in measures to mitigate the environment impacts and ensure that all requisite permits from various government agencies are obtained before project implementation.

1.4.2 National Policy Framework

1.4.2.1 Ghana National Energy Policy, 2010

The National Energy Policy (2010) is the underlying policy guiding governmental actions and strategies in the energy sector. Generally, the policy is targeted at ensuring that Ghana become a major exporter of power in the West African sub-region. This is intended to be achieved through capacity addition, modernization of transmission and distribution infrastructure. The policy also focuses on institutional and regulatory reforms intended to create competitive electricity markets. Ghana’s Energy Policy is premised on the need to increase installed generation capacity to more than 5,000MW and to achieve universal access. The project aims at providing clean energy and thereby contributing to electrical power increase in the country and to diversify the energy mix in power generation.

1.4.2.2 National Environmental Policy, 2014

The reviewed National Environmental Policy (2014) was first formulated in 1995 to improve the surroundings, living conditions and quality of life of present and future generations. The policy seeks to promote sustainable development by ensuring a balance between economic development and natural resource conservation. It requires the implementation of strategies and programmes for the sustainable management of Ghana’s resources. The project will be aligned with the supporting principles of the policy for the realisation of sustainable outcomes.

1.4.2.3 National Water Policy, 2007

The National Water Policy (2007) provides the framework for the sustainable development of water resources in Ghana. The overall goal of the policy is to “achieve sustainable development, management and use of Ghana’s water resources to improve health and livelihoods, reduce vulnerability while assuring good governance for present and future generations.”

GEGL understands the importance of water and is committed to put in place appropriate measures to protect water resources and has specific plans for pipeline crossing Rivers during construction. Water needs for the project development and operation is highly minimal. However, GEGL will ensure that the necessary permits are obtained from Water Resources Commission, should there be a need for water resources development.

1.4.2.4 Environmental Sanitation Policy, 2010

The overarching goal of the Environmental Sanitation Policy (2010) is to develop a clear and nationally accepted vision of environmental sanitation as an essential social service and a significant determinant for improving the

health of its citizens and quality of life in Ghana. This policy will guide GEGL in the development of waste management strategies for project implementation.

1.4.2.5 Ghana Forest and Wildlife Policy, 2012

The Ghana Forest and Wildlife Policy (2012) aims to promote conservation and the sustainable development of forest and wildlife resources. The policy calls for the maintenance of environmental stability and continuous flow of optimum benefits from the socio-cultural and economic goods and services that the forest environment provides to present and future generations. It also helps Ghana to fulfil its commitments under international agreements and conventions. GEGL will adhere to the dictates of the policy during development.

1.4.2.6 National Wetlands Conservation Strategy, 1999

The purpose of this strategy is to protect and drive the sustainable use of wetland resources which occupies approximately 10% of the country's total land surface. Ghana is a signatory to the Ramsar Convention, which seeks to protect all wetlands. GEGL will comply with the dictates of the strategy for the realisation of its intended outcomes.

1.4.2.7 Ghana Climate Change Policy, 2013

The National Climate Change Policy provides strategic direction and coordinates issues of climate change in Ghana. The three objectives of the Policy are effective adaptation, social development, and mitigation.

To address the adaptation issues in Ghana, five areas have been identified, namely, (1) energy, industrial and infrastructure development, (2) natural resources management, (3) agriculture and food security and (4) disaster preparedness and response and (5) equitable social development. In the effort of aligning with its energy strategy, one of the government's aims includes the development of a local market for the industrial use of natural gas by 2015. This project will further strengthen the development of the local market as heavily industrialized activities such as the mines will rely on the use of natural gas for their operations.

1.4.3 Legal and Regulatory Framework

1.4.3.1 Environmental Protection Agency Act, 1994 (Act 490)

The Environmental Protection Act, 1994 (Act 490) was enacted for the amendment and consolidation of laws relating to environmental protection, pesticides control and regulation, and for other related purposes. Section 12 (1) of the Act mandates the Agency to request an EIA report from any person responsible for an undertaking which, in the opinion of the Agency, has or is likely to affect the environment. Sections 28(1) and (2) of the Act mandate the development of regulations and guidelines for project implementation.

1.4.3.2 Energy Commission Act, 1997 (Act 541)

The Energy Commission Act, 1997 (Act 541) requires the establishment of the Energy Commissions. The Act confers functions relating to the regulation, management, development, and utilisation of energy resources in Ghana. The Energy Commission is the technical regulator of Ghana's electricity, natural gas and renewable energy industries, and the advisor to Government on energy matters. All requirements of the Act will be adhered to.

1.4.3.3 Ghana Highway Authority Act, 1997 (Act 540)

The pipeline will cut across some existing roads. This will be discussed with the Ghana Highway Authority in line with the requirements of the Ghana Highway Authority Act, 1997 (Act 540), and GEGL will obtain all the necessary permits before project implementation.

1.4.3.4 Environmental Assessment Regulations, 1999 (LI 1652)

The Environmental Assessment Regulations, 1999 (LI 1652), set out the requirements for environmental permitting/certificates including requirements for environmental assessment and Environmental Management

Plans (EMPs). LI 1652 was enacted in 1999 in accordance with the EPA Act, 1994 (Act 490). Schedule 1 of Regulation 1 of LI 1652 lists all activities that require an EIA. Under Schedule 2 of Regulation 3, the construction of offshore pipelines is classified as an undertaking for which an EIA is mandatory.

1.4.3.5 Electricity Regulations, 2008 (LI 1937)

The Electricity Regulations 2008 (LI 1937) provides for the planning, expansion, safety criteria, reliability, and cost effectiveness of the national interconnected transmission system. The LI provides for the regulation of a wholesale electricity market; market operations of the electricity transmission utility; the technical operations of the electricity transmission utility; minimum standards and procedures for the construction and maintenance of facilities and installations; the protection of the mains and electrical installations and services and the protection of life and property and the general safety of the public in respect of electricity services. Other issues include minimum reserve margins to satisfy demand and the development and implementation of programmes for the conservation of electricity. The dictates of these Regulations will be adhered to throughout the project implementation.

1.4.3.6 Fees and Charges (Amendment) Instrument, 2019 (LI 2386)

The Fees and Charges (Amendment) Instrument 2019 (LI 2386) replaced the Fees and Charges (Amendment) Instrument 2016, LI 2228 and (Amendment) Instrument 2014 (LI 2216). This instrument gives regulation to the Fees and Charges (Miscellaneous Provision) Act 2009 (Act 793), which provides comprehensive rates, fees and charges collectable by Ministries, Departments and Agencies for goods and services delivered to the public.

The Ghana Immigration Service, through this instrument, has introduced a residence permit fee to ECOWAS nationals and Ghanaians holding foreign passports. Other nationals entering the country for work will also be required to apply for residence permit and pay the accompanying fees. GEGL will comply with residence permit fees and all charges pertaining to expatriates hired for the project.

1.4.3.7 Water Resources Commission Act, 1996 (Act 522)

WRC is empowered by Act 522 to grant water rights. Section 13 prohibits the diversion, damming, and storing of water resources except when in accordance with the provisions of the Act. The Act provides that any person may apply to the Commission in writing for the granting of a water right, which then permits the proponent to dam, store, divert or use water. On receipt of the application, the Commission investigates as it considers necessary, including consultations with the inhabitants of the area of the water resources concerned. Section 24 also provides that: "... except in accordance with the provisions of Act 522, or with the approval of the EPA, a person who interferes with, or alters the flow of water resources beyond such levels as the EPA may prescribe, commits an offence". GEGL will abide by the requirements of Act 522 in developing the project.

1.4.3.8 Local Government Act 2016 (Act 936)

This Act replaces the Local Government Act 1993, (Act 462) and provides for local governance and National Development Planning System for the Districts. The Act also defines and regulates planning procedures of District Assemblies. The Assembly is mandated to initiate programmes for the development of basic infrastructure and provide municipal works and services as well as be responsible for the development, improvement and management of human settlements and the environment in the district.

Section 91 (1) states that no physical development shall be carried in a district without prior approval in the form of a written permit granted by the District Planning Authority. GEGL will consult applicable authorities and obtain all needed permits before project implementation.

1.4.3.9 **Lands Commission Act 2008, (Act 767)**

This is an Act to establish the Lands Commission to integrate, subject to the Constitution, the operations of public service land institutions under the Commission in order to secure effective and efficient land administration and to provide for related matters.

The Act empowers the Land Commission to, on behalf of the Government, manage public lands and any other lands vested in the President by the Constitution or by any other law and any lands vested in the Commission. For this project, the land belongs to private owners who have been duly identified, engaged and compensation process initiated.

1.4.3.10 **Land Use and Spatial Planning Authority Act 2016, (Act 925)**

The Land Use and Spatial Planning Act aims to provide for sustainable development of land and human settlements through a decentralised planning system. It establishes processes to regulate national, regional, district and local spatial planning, and generally to provide for spatial aspects of socio-economic development.

The Act includes sections on structure plans (sections 61-70), local plans (sections 71-82), zoning schemes (sections 83-103) and permits (113-125). GEGL will engage applicable authorities and obtain all needed approvals before project implementation.

1.4.3.11 **Environmental Guidelines and Standards**

Several environmental guidelines have been developed in Ghana to support environmentally sound design and management during Project implementation. Some of the guidelines relevant to an EIA include:

- Environmental Assessment in Ghana, A Guide (1996) and Environmental Impact Assessment Procedures (1995) are EPA guidance documents which outline procedures to be adhered to when undertaking an EIA.
- Standard for Health Protection - Requirements for Ambient Noise Control (GS 1222:2019).
- Standard for Water Quality – Specification for Drinking Water (GS 175:2017).
- Standard for Environment and Health Protection – Requirements for Ambient Quality and Point Sources/Stack Emissions (GS 1236:2019).
- Standard for Effluent Discharge (GS 1212: 2019) provide guidance on maximum permissible effluent discharge.
- Standard for Motor Vehicle Emissions (GS 1219: 2018) specifies the requirements for exhaust emissions of motor vehicles, tractors, construction machines.

1.4.4 **International Environmental Treaties and Conventions**

The Government of Ghana is a party to several international treaties relating to the environment, notably:

- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) – a treaty which prevents species from becoming endangered or extinct because of international trade.
- Convention on Biological Diversity– a treaty established by the United Nations aimed at preserving biological diversity around the world.
- Convention on the Conservation of Migratory Species of Wild Animals– also known as the Bonn Convention, the main objective of this international agreement is the conservation and sustainable use of terrestrial, aquatic and avian migratory animals and their habitats.

1.5 **International Standards and Guidelines**

The International Finance Corporation (IFC) Performance Standards and Equator Principles are the benchmarks for good internal environmental practice for many organisations. They are often applied to evaluate

EIAs and Environmental and Social Management System (ESMS) proposals when considering a project and provide a level of assurance for investing partners. The principles have been designed to allow a project and its backers to understand the implications of environmental and social issues associated with the project and assess whether good practice for managing potential impacts are in place or could be developed. These Principles are supplemented by additional industry focused EHS Standards for selected sectors.

There is a range of international organisations that have variants of these requirements. Many have been prepared in line with the IFC standards and the principal interests remain common among them. The principles set out expectations that the environmental and social issues pertinent to a project have been adequately studied and assessed, and that management and mitigation measures will meet appropriate levels and systems.

1.5.1 IFC Performance Standards on Social and Environmental Sustainability

Of the eight Performance Standards (PS) issued by IFC (Published January 1, 2012 (updated June 14, 2021)), seven PSs (PS1, PS2, PS3, PS4, PS5, PS6 and PS8) have been defined as applicable to the project and thus will be adhered to throughout the EIA.

Performance Standard 1³ establishes the importance of:

- Integrated assessment to identify the social and environmental impacts, risks, and opportunities for projects.
- Effective community engagement through the dissemination of project related information and consultation with local communities on matters that directly affect them.
- The management of social and environmental performance throughout the life of the project.

Performance Standard 2⁴ establishes the importance of:

- Employment creation and income generation being accompanied by protection of fundamental rights of workers.
- Constructive worker-management relationships, treating workers fairly and providing them with safe and healthy working conditions as this may enhance efficiency and productivity.
- The protection of workers, including vulnerable categories of workers such as children, migrant workers, workers engaged by third parties, and workers in the client's supply chain.

Performance Standard 3⁵ establishes the importance of:

- The avoidance or minimising adverse impacts on human health and the environment by avoiding or minimising pollution from project activities.
- Promoting sustainable use of resources, including water and energy.
- Reducing project related Green House Gas (GHG) emissions.

Performance Standard 4⁶ establishes the importance of:

³ (International Finance Corporation, 2012b)

⁴ (International Finance Corporation, 2012c)

⁵ (International Finance Corporation, 2012d)

⁶ (International Finance Corporation, 2012e)

- The anticipation and avoidance of adverse impacts on the health and safety of the affected community during the project life from both routine and non-routine circumstances.
- Ensuring that the safeguarding of personnel and property is carried out in accordance with relevant human rights principles and in a manner that avoids or minimises risks to the Affected Communities.

GEGL's HSE policy is aligned to this PS.

Performance Standard 5⁷ establishes the importance of:

The avoidance of involuntary resettlement wherever possible and to minimise its impact on those displaced through mitigation measures such as fair compensation and improvements to living conditions.

Actively engaging community throughout the land acquisition and involuntary resettlement process.

Performance Standard 6⁸ establishes the importance of:

- Biodiversity conservation and sustainable management of living natural resources.
- Protecting and conserving biodiversity, maintaining ecosystem services, and sustainably managing living natural resources are fundamental to sustainable development.
- How developer can sustainably manage and mitigate impacts on biodiversity and ecosystem services throughout the project's lifecycle.

Biodiversity management plan developed as part of the project studies is aligned to this PS.

Performance Standard 8⁹ establishes the importance of:

- Protecting cultural heritage during the project activities for current and future generations.
- Providing mitigation measures to address impacts to cultural heritage during the project life cycle and applying the provisions of Convention Concerning the Protection of the World Cultural and Natural Heritage.

Mitigation for Cultural Heritage impacts will be in line with this PS.

The EIA will include a write-up on how the respective guidelines are applicable to the project.

1.5.2 IFC Environmental Health and Safety Guidelines

These guidelines are technical reference documents with general and industry-specific examples of Good International Industry Practice as defined in IFC's Performance Standard 3 on Pollution Prevention and Abatement. The EHS Guidelines contain the performance levels and measures that are normally acceptable to IFC and are generally considered to be achievable in new and existing facilities at reasonable costs. The dictates of the guidelines will be adhered to during the EIA process.

1.6 Outline of the Scoping Report

The Scoping Report consists of the following chapters:

- Chapter 1 : Introduction

⁷ (International Finance Corporation, 2012a)

⁸ (International Finance Corporation, 2012e)

⁹ (International Finance Corporation, 2012e)

- Chapter 2 : Project Description
- Chapter 3 : Baseline Information
- Chapter 4: Environmental and Social Impacts
- Chapter 5: Key Environmental and Social Impacts
- Chapter 6: Mitigation Measures
- Chapter 7: Terms of Reference for the EIA
- Chapter 8: Conclusions
- References

2.0 PROJECT DESCRIPTION

The 105km, 24-inch branch natural gas pipeline will join GEGL's existing BPS from Gyegyetroso to Ejisu (Figure 2). As part of the pipeline infrastructure, GEGL also intends to construct three BVS and one BMS. The BVSs will be in the Miawano, Ntinako and Adwafo communities, while the BMS will be located at Ejisu-Kumasi. These facilities will all be linked to the gas pipeline network.

The installation of the three BVS along the pipeline route will ensure effective interconnection of the gas pipeline. The gas pipeline will allow for the supply of natural gas from the RMS managed by the Ghana National Gas Company in Prestea to the Ameri power plant via GEGL's existing pipeline infrastructure to Gyegyetroso .

2.1 Project Scale

The natural gas pipeline from Gyegyetroso to Ejisu will be approximately 105km long and 24 inches in diameter and will be in the Ashanti Region of Ghana. It will commence from the southwest, at Gyegyetroso BPS and travel northeast at 31km to the proposed Miawano BVS. It will further run East to the Ntinako BVS, which is 17.8km away. The pipeline will continue again to Adwafo BVS east of Ntinako for 26.4km and terminate at the proposed Ejisu BMS.

The pipeline will travel along major communities such as Antoakrom in the Amansie South district, Ahwiankwanta and Kokofu in the Bekwai Municipality, Kuntanse in the Bosomtwe District and Ejisu in the Ejisu Municipality.

Figure 4 provides a satellite image of the Primary, branch pipeline stations and route lines, and GPS coordinates of the stations along the gas pipeline and the total land-take are provided in Table 2.

Table 2: GPS coordinates of stations along the natural gas pipeline

Location	GPS coordinates		Total Land-Take
Gyegyetroso BPS	6°19'58.01"N	2° 5'1.91"W	
Miawano BVS	6°24'59.03"N	1°48'57.16"W°	
Ntinako BVS	6°29'51.68"N	1°31'44.32"W	
Adwafo BVS	6°30'34.85"N	1°28'15.58"W	
Ejisu BMS	6°41'25.55"N	1°30'52.67"W	

The pipeline will have a production capacity of 135 million standard cubic feet per day.

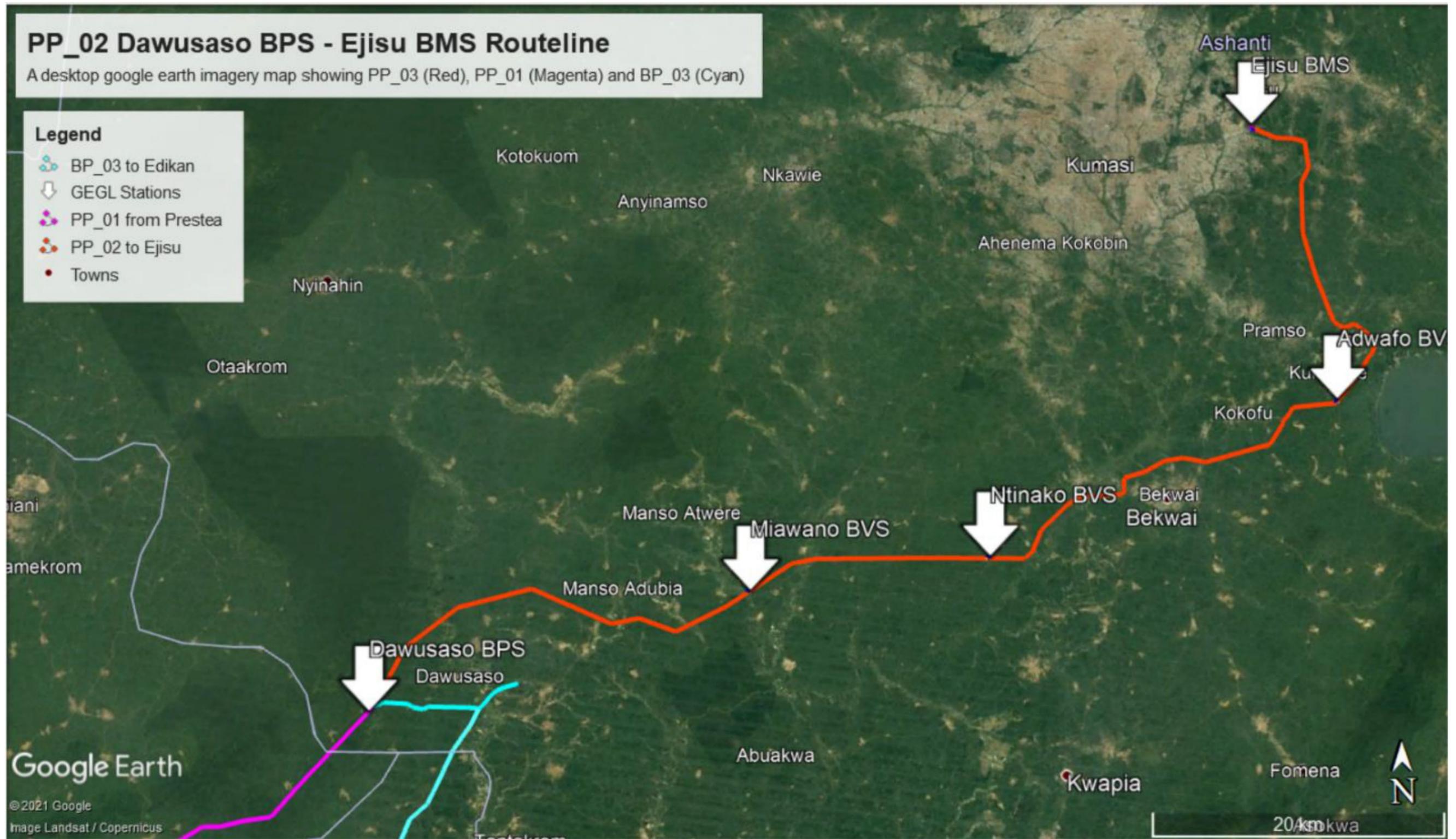


Figure 4: Proposed gas stations along the 105 km pipeline route

2.2 Project Components

The pipeline development will include the following major components:

- 105 km 24-inch natural gas pipeline
- Gas stations consisting of 3 BVS and 1 BMS
- Camps serving as housing and temporary workstations for the EPC team

105km Primary Pipeline

GEGL will extend a 24-inch primary gas pipeline from GEGL's existing 133 km primary pipeline via the Gyegyereso BPS. The natural gas to be supply through the proposed pipeline will be sourced from the Ghana National Petroleum Corporation through Prestea RMS and GEGL existing natural gas pipeline infrastructure from Prestea to Gyegyereso.

Gas Stations

Branch Metering Station

GEGL will construct one BMS at Ejisu to receive and forward the natural gas supply to the Ameri power plant. At the Ejisu BMS, natural gas will be compressed to a minimum pressure of 41bar for use by the Ameri power plant. The BMS will serve as a termination point of the primary pipeline and branch point for future tie-in connections and metering points. The BMS will mainly consist of a station skid, power generation systems, fire protection systems, Control Room to house the control systems, and a warehouse for the storage of spare parts to be used for maintenance works. Table 3 provides a description of the various equipment and materials which will be used in each BMS. The layout of the BMS is attached in APPENDIX C.

Table 3: List of the BMS Components

Item	Description
Skids in the station	<ul style="list-style-type: none"> ■ DN600 Pig receiver, 2X ■ DN300 Pig Launcher, 2X ■ DN500 filter separator, 2X ■ DN300 metering package and accessories, 22 skids, control system
Installation Materials	<ul style="list-style-type: none"> ■ Lightning Protection ■ Equipment Grounding ■ Vent Pipes, fiber hardware connection, flanges, steel pipes, pipe fittings, inlet and outlet station connection elbows.
Power Generation System	<ul style="list-style-type: none"> ■ Solar Power Generating Unit ■ Lightning System
Fire Protection System	<ul style="list-style-type: none"> ■ Fire extinguisher
Container Room	<ul style="list-style-type: none"> ■ A 20' Container to house the Control System

Block Valve Stations

GEGL will install three Block Valve Stations (BVS) along the pipeline route, between the BPS at Gyegyetros and BMS at Ejisu to ensure effective interconnection of the gas pipeline. The three BVS will be and will be located at Miawano, Ntinako and Adwafo. The purpose of the BVS is to isolate any part of the pipeline in case of a leak, to vent the gas and to allow repairs. The BVS will mainly consist of a station skid, power generation systems, fire protection systems, control room to house the Control Systems, and a warehouse to house spare parts used for maintenance works. Table 4 provides a description of the various equipment and materials which will be used in each BVS.

Table 4: List of BVS Component

Item	Description
Skids in the station	<ul style="list-style-type: none"> ■ DN600 Gas-Liquid Linkage Ball Valve ■ The Skid ■ Control Systems ■ Instruments and Accessories such as Pressure Indicators
Installation Materials	<ul style="list-style-type: none"> ■ Lightning Protection ■ Equipment Grounding ■ Vent Pipes, Flanges, Steel Pipes, Pipe fittings, Inlet and Outlet station Connection Elbows. (DN 600)
Power Generation System	<ul style="list-style-type: none"> ■ Solar Power Generating Unit will be used to provide power for the station. ■ Lightning System
Fire Protection System	<ul style="list-style-type: none"> ■ Fire extinguisher
Container Room	<ul style="list-style-type: none"> ■ A 20' Container to house the Control System

2.3 Project Design

In the design of a natural gas distributed system, the principal factor influencing the size of pipelines is the maximum hourly volumes of gas that the system is required to transport. Accordingly, to ensure that the system design meets the requirement of the consumer served by the system, peak hour design loads have been derived and applied to the system design.

The following aspects were also taken into consideration in the design of the pipeline:

- a) Appropriate cathodic protection system to prevent leakages resulting from the effects of external corrosion of the pipe.
- b) External and internal pipeline coating system to prolong the service life of the pipeline.

- c) Measures to protect the internal layers of the pipeline from the detrimental effects.
- d) The ability of the pipeline to remain in place on sediment and not float, even if empty or filled with gas rather than liquids).
- e) Proposed operating pressures.
- f) Adequate provisions to protect other pipelines the proposed route crosses over.
- g) Compliance with all applicable regulations.

The design and construction of the pipeline will be aligned to the requirements of international codes and standards such as the American Petroleum Institute (API), the American Society of Mechanical Engineers (ASME), the National Association of Corrosion Engineers and British Standards.

The pipeline will consist of lengths of carbon steel pipe which will be welded together and buried with a depth of cover of at least 1.5m. The pipeline will be designed to operate at a maximum permissible pressure of 7.5MPa. The buried section of the pipeline will be coated with an anti-corrosion agent to prevent corrosion and supplemented with a cathodic protection system.

The parameters of the pipeline are as provided in Table 5, and the mechanical data of the pipeline are also provided in Table 6.

Table 5: Pipeline Design Parameters

Design Parameter		Specification
Fluid		Lean gas
Pipeline installation		Buried
Pipeline length		105 km
Pipe nominal diameter (main line)		24"
Corrosion allowance		1.5 mm
Pipe specification / material grade		API 5L PSL2 X65 Carbon Steel
Maximum allowable operating pressure		72.00 barg
Hydro test pressure		84.38 barg
Design Temperature		0-50°C
Operating temperature	Maximum	50°C
	Minimum	10°C
Ambient temperature	Maximum	40°C
	Minimum	18°C
Product densities	Maximum	97.0 kg/m ³
	Minimum	55.1 kg/m ³

Table 6: Pipeline Mechanical Data

Parameter	Specification
Inside diameter	600 mm
Wall thickness tolerances	+15%/-12.5% (as per API 5L specs)
Material standard of line pipe	API5LX52M
Line pipe manufacturing process	SAWH/SAWL
Lengths	Fixed (average 12.0m)
Ends	30 +5o, 0o
External Coating	3LPE
Concrete Coating	For mechanical protection where required on alignment sheets

2.4 Project Services

2.4.1 Accommodation Facilities

There will be camps constructed at approximately every 25km along the pipeline route to accommodate the project team and also serve as temporary work area for the EPC team. A total of four camps will be constructed and the components will be the same as shown in Figure 5 which is the proposed camp layout design for the Ejisu BMS. They will be constructed at Miawano, Ntinako, Adwafo and Ejisu. For existing projects visitors are normally accommodated in hotel facilities close to the working locations and this will be the case for the proposed project. Due to the project area spanning Gyegyetroso to Kumasi, it is anticipated that the construction team will be accommodated at the relevant camp and will move as they progress with the construction of the pipeline.

GEGL will allocate spaces at each camp for the construction of an administration block. The administration will consist of offices, a conference room, washroom, a kitchen, and a storeroom. The administration block will be built with containers and will be located at 5m from the housing units. The allocated area for GEGL's camp is 2,315.82m².

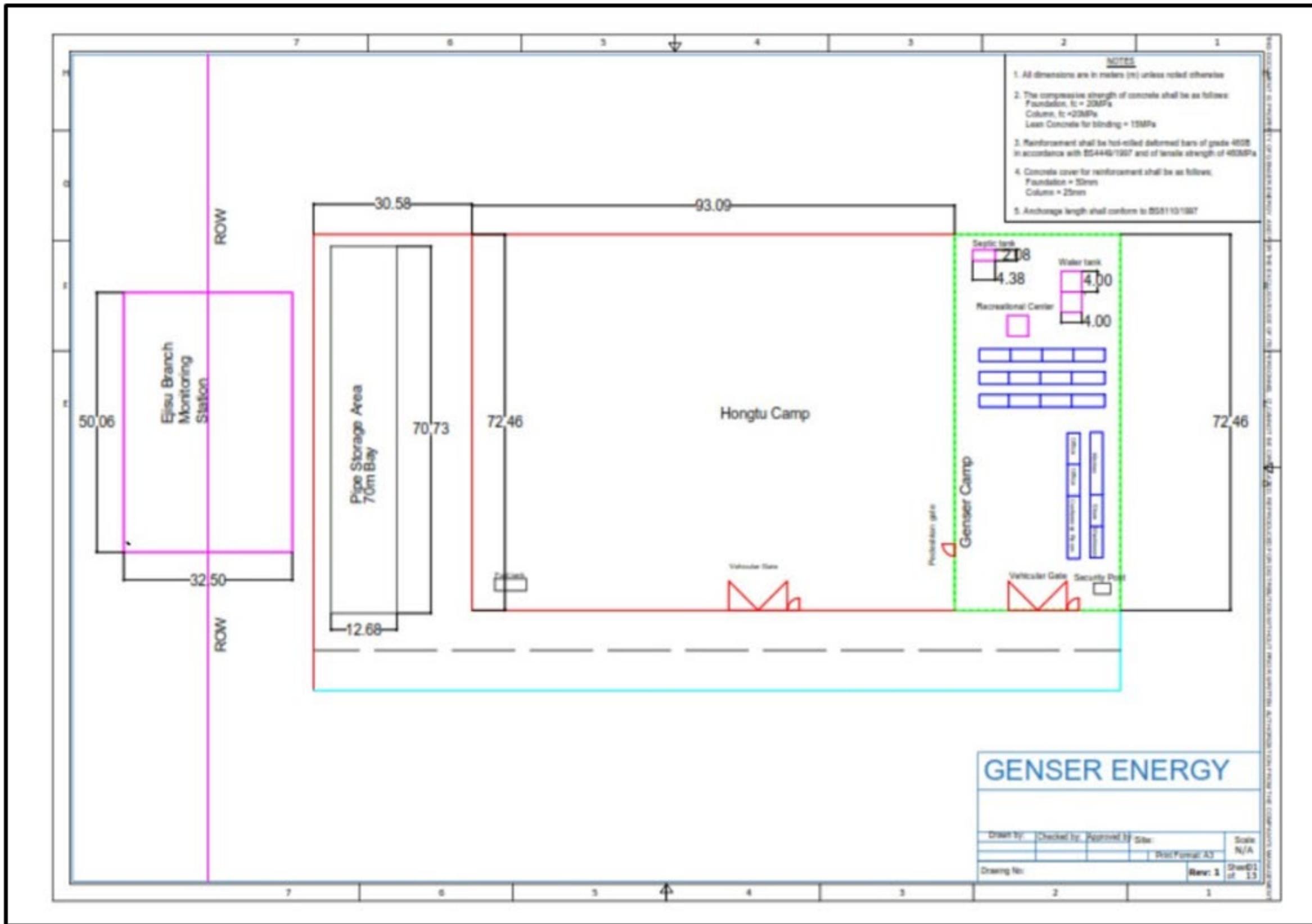


Figure 5: Proposed Camp Layout for the Pipeline Project

2.4.2 Workshop

A workshop will be provided at each of the camps for the maintenance of project equipment. The area for the workshop will be situated within the space allocated to the EPC subcontractors for the construction of the pipeline (Hongtu). The space allocation for the Hongtu team is estimated to be 6745.30m².

2.4.3 Health Care

GEGL will build an infirmary at each of the camps to cater for the health needs of the employee. The infirmary would have resident nurse and offsite medical personnel who will attend to the sick. Also, will identify public health facilities along the Gyegyetroso-Kumasi area where staff could get medical attention in the event of illness beyond the capacity of the infirmary.

The construction and pipeline installation teams will have specific work standard first aid kit to respond to injuries and other ailments until individuals are attended to at a medical facility (where required).

2.4.4 Monitoring Facilities

It is anticipated that the Ejisu BMS will have a weather station with data processing installed. The equipment will mainly record rainfall and temperature, which is a key aspect that could affect the pipeline and other associated facilities. An air quality equipment will also be installed for daily monitoring.

GEGL has a centralized control room at Damang, with a dedicated team to monitor the functioning of equipment and operations at all natural gas stations, as well as operations parameters. This enables the early detection of a break whenever an emergency shutdown valve at any of the stations is shut. All emergency valves and buttons could be operated (i.e., shut or opened) from the Damang control room to prevent accidents, and for the safe running of the gas pipeline. This centralised control room will cover the Ejisu BMS during operations. However, the Ejisu BMS will also be equipped with a control room to perform the same function.

A fiber optic cable will be provided beside the underground pipeline to ensure long distance and high-performance communication along the pipeline. Any rupture along the pipeline or change in flow parameters will be communicated through the fiber optic cable to the control room.

2.5 Water Needs

The camps will be connected to the Ghana Water Company Limited (GWCL) water supply system, where possible, to cater to the water needs of the project. There will be bore holes with attached overhead tanks at each of the camps where access to GWCL water supply is not possible. The bore hole water will be treated and tested to meet the Ghana Standards for Water Quality - Specification for Drinking Water (GS 175: 2017) before use. A water storage tank of 5m³ capacity will be provided to supplement water needs in the case there is no flow from GWCL.

2.6 Waste Management

GEGL will classify wastes into streams to enable appropriate segregation, handling, transport, disposal, and recycling/recovery in a manner appropriate to the waste materials. Colour coded waste receptacles will be provided by GEGL at vantage points at the camps to enable waste segregation and subsequent management.

Hydrocarbon wastes, mostly from waste oils and lubricants, will be managed as part of hazardous waste and the waste management plan will utilize the waste hierarchy framework of mostly prevention, reduction, recycle, recovery and the least of all, disposal.

Domestic wastewater and sewage will be channeled to a septic tank located at the camps. The sewage built up will be removed by a vacuum truck sourced from Ejisu and the other camps sites (whenever needed) to be transported to appropriate and approved waste disposal site.

Training will be provided to staff and the workforce to increase familiarity with competence in appropriate waste handling and disposal methods.

2.7 Scheduling and Activities

GEGL plans to complete the construction and commissioning of the project in 10 months once the environmental permit is obtained. The proposed schedule for the Gas Pipeline Construction is provided in APPENDIX A.

2.8 Staffing and Employment

Due to GEGL having several operations in the country, it is anticipated there will be a pool of qualified and experienced nationals available to support this project during the construction and operational phases. However, GEGL will employ approximately 300 people during the construction phase of the project. The people to be employed will consist of 100 skilled labour and 200 unskilled labour. The skilled labour group will include professionals such as Engineers and Medical personnel. The list of technical people required for the project are:

- Project Manager
- Construction Supervisors
- QA/QC Engineers
- HSE Engineers
- Community Relations Officers
- Doctors
- Nurses
- Local subcontractors
- International subcontractors for specialized work

The medical staff will include two doctors and two nurses for each camp, as well as one doctor assigned to two camps.

During the operational phase, approximately skilled 23 people unskilled labour will be outsourced. The list of technical people required for the operational phase of the project are:

- Fuel Supply Manager
- Operations Superintendent
- Mechanical Reliability Engineers
- Electrical & Instrumentation Engineers
- Civil Engineers
- Human Resource Personnel
- Supply Chain Personnel
- HSE personnel
- Community Relations personnel
- Operations Engineers

- Operations Mechanics and Technicians

2.9 Alternatives to Proposed Undertaking

2.9.1 Site Analysis for the Location of the Pipeline

GEGL conducted a reconnaissance study to investigate the pipeline route that could suit the project's objectives. The availability of land, terrain of the area, accessibility, mining activities, water crossing point and distance from residential facilities were a few of the factors utilized in evaluating the pipeline route options. At the end of the study, 2 pipeline routes (including the proposed route) were settled on. The alternative gas pipeline route considered was a 102km route originating from the Gyegyetroso BPS and spanned through a number of communities till finally terminating at Ejisu-Kumasi. The route is similar to the current proposed pipeline line route.

This alternative pipeline route ran through an active mining concession managed by Asanko Gold Mines. Following due diligence and correspondence, this route was diverted from the active mining zone (approximately 25km away), resulting in a 3km increase in the initial length of the route line.

2.9.2 Site Analysis for the Location of the Gas Stations

In the preliminary analysis for the gas stations along the pipeline route, two BVS were proposed to be installed at Anloakrom and Kokofu (35m apart), as well as an RMS at Ejisu. However, because the BVSs were planned to be approximately 25km apart, the location of the BVSs were changed to Miawano, Ntinako, Adwafo, in order to achieve a balance in the separating distance between the gas stations. The RMS was also changed to a BMS.

2.9.3 No-Go Project Alternative

The high volatility of the national grid is largely due to the concentration and proximity of generation assets in the coastal areas of Ghana. The relocation of the Ameri power plant to the middle belt of Ghana, will reduce large power draws over long distances to the central belt.

A power system and network analyses have shown that the creation of a generation enclave in Kumasi would result in significantly reduced transmission losses due to reduced line loadings between Kumasi and the coastal areas (GEGL, 2021). Power supply for the middle belt will be sourced mainly from the Ameri power plant and Bui Power Authority thereby reducing power transmission losses over the grid from exporting power from the hydroelectric and thermal power plants located in the coastal and southern belts. According to the 2021 Electricity Supply Plan by the Power Planning Technical Committee, siting a 360MW plant in Kumasi would result in a total reduction in system losses by 24.9MW. The use of natural gas to power the Ameri power plant also presents environmental benefits through the reduction of CO₂ emissions in line with recent global calls for decarbonization. Thus, the need for the pipeline project cannot be overemphasized.

If the project were not to advance all the anticipated benefits of the project will not be realised, and the following would occur:

- There will be no further investment by GEGL in the project and no realisation of returns for GEGL
- Potential employment and skills transfer/development would be lost
- There would be no project related taxes paid to the government
- There would still be over dependence on imported fuels and continued contribution of greenhouse gases emissions
- Continued high volatility of national grid and high operational costs for industries
- All the benefits outlined in section 1.1.2 under project justification will not be realised.

3.0 BASELINE INFORMATION

In this chapter, information is presented on the project area's locality characteristics of the surrounding area; the existing physical, socio-economic, and biological features of the study area and surroundings.

3.1 Physical Environment

3.1.1 Topography and Drainage

The topography of the area is generally undulating with an elevation of between 150 and 300 m above sea level. The most prominent feature is the range of hills, which stretches across the western part of the project area. These hills have an elevation of between 560 m and 630 m. The area is drained by the Offin and Oda Rivers and dozens of tributaries such as Jeni, Pumpin and Emuna. The only natural lake in Ghana, Lake Bosomtwe is also located in the area.

3.1.2 Climate

The climate of the area is wet semi-equatorial. The area has a double rainfall maxima regime- with the major rainy season occurring between March and July. The minor rainfall season occurs between September and November. Mean annual rainfall ranges between 855mm and 1,500mm. The months of December to March are usually dry and characterized by high temperatures, and early morning moist/fog and cold weather conditions.

Temperatures are generally high throughout the year with mean monthly temperature of about 27°C. Humidity is high during the rainy season. The months of December to February, however, record very low humidity. The climatic condition is suitable for the cultivation of cash and food crops such as cocoa, citronella, oranges, plantain and vegetables to feed the agro-based industries in the area.

3.1.3 Mineral Deposits

Resources identified in the area are potentially rich mineral (gold) deposits. Some of the mineral deposits have been acquired by licensed companies while others are also exploited through small-scale mining activities. This is more common in the western part of the pipeline route. Other mineral deposits in the area are Clay, Sand and Gravel deposits.

3.1.4 Soil and Land Use

Several soil types can be found in the area. Some of them are Bekwai-Oda compound Association, Ahawam-Kakum-Chichiwere Association, Mim-Oda Compound, Bekwai-Zongo-Oda Complex, Nyanoo-Tinkong Association and Kobeda-Eschiem-Subinso-Oda Complex. Others include Kumasi-Offin and Bomso-Offin. The nature of the soil types in the area has the potential of supporting both food and cash crops such as cassava, plantain, coca, citronella, and oil palm.

3.1.5 Noise

The baseline noise level in the area will be discussed in the EIS. It is envisaged that there will be elevation in noise level due to the construction of project infrastructure and vehicular movement. However, the presence of forest vegetation around the communities could absorb some of the noise minimising the impact on nearby communities.

21 communities have been identified along the pipeline route and the closest communities identified are 0.4 km from the pipeline. There were three manufacturing firms (details of which will be provided in the EIS) identified along the pipeline and the closest ones are about 2km from the pipeline.

3.1.6 Air Quality

The baseline air quality state in the area will be discussed in the EIS. It is predicted that the main impacts to air quality will be from dust and fine particulate matter (PM₁₀) emissions from vehicular movement and earthworks during construction and combustion gas emissions (oxides of carbon (CO), nitrogen oxides (NO_x) and sulphur (SO₂)) from the operation of vehicles and equipment.

It is noted that the combustion of natural gas will result in the emission of sulphur, mercury and particulates. It also produces NO_x (Union of Concerned Scientists USA, 2014). However, the emission levels will be lower than the combustion of other fossil fuels.

3.2 Biological Environment

3.2.1 Vegetation

The vegetation of the area is mainly of the rain forest type and exhibits moist semi deciduous characteristics. This makes the land very fertile and suitable for agricultural production. The area can boast of natural environment ranging from forest reserves with rich species of flora and fauna to vast arable land that can support the production of both staple crops and cash crops. There are several forest reserves in the area with the following being the common ones:

- Essumeja Forest Reserve
- Mprampram forest reserves
- Oda River Forest Reserve
- Apanprama Forest Reserve
- Jimira Forest Reserve and
- Gyeni River Forest Reserve

As a result of the practices such as slash and burn method of farming, shifting cultivation, small-scale mining and logging, some forests have gradually been destroyed and replaced by a mosaic of secondary forest.

Chain saw operators and some timber merchants are encroaching on the reserves so rapidly that it is feared that the reserves would lose its value in the next few years. Furthermore, the activities of small-scale mining are having a serious effect on the natural environment. The citronella plant (*Cymbopogon nardus* and *winterianus*) thrives well in the area.

3.3 Socio-Economic Environment

3.3.1 Socio-Economic Profile

The pipeline will be routed along about 70 communities within the area. These are communities which shares close proximity (not more than 2 km) away from the proposed pipeline route. However, a consideration of other factors such as the locations of project affected farmers, land ownership, pipeline crossings of roads and community infrastructure, auxiliary project infrastructure such as camps and BVP stations increases the number of projects affected communities to nearly 100. The communities, and the pipeline route are located in five different administrative districts but all of them are within the Ashante Region.

The districts are, in the east-wards direction, Amansie South and west Districts, Bekwai Municipality, Bosomtwe District and Ejisu Municipality. Among all the district Amansie south is the farthest area away from Kumasi, the regional capital. This also makes Gyegyetroso, the starting point of the project, the farthest community to Kumasi. Whiles the Ejisu and Bekwai Municipalities are predominantly urban areas, that of Amansie West and South are typical rural districts. However, the Bosomtwe district shows a peri-urban status due to its intermediary

location between Ejisu, Bekwai and the regional Capital-Kumasi. Other socio-economic features in the project area are as follows:

- Household members in the area largely derive their livelihoods from land-based resources and activities. Most of the project affected communities are predominantly farming communities. However, other non-farm activities such as small-scale mining, timber logging, trading and commerce had negatively affected the labour supply and farm production in the area.
- Majority of the community members are Ashantes. Other significant minority ethnic groups in the area include Fantes, Wassa, Ndzema, and Dogombas/Dagaates. This means that the Akan ethnic group assume a vast majority within the study area.
- Most of the in-migrants who have settled in the area are largely motivated by economic opportunities such as farming and small-scale mining.
- The average household size across the area is about 5.1. However, household sizes in the urban areas were observed to be relatively smaller as compared to the household sizes in the rural districts.
- The major food crops produced in the area are plantain, cassava, and maize. Meanwhile, while cocoa remains a major cash crop in the Amansie West and South districts and the western part of the Bekwae District, Oil Palm plantation is predominantly cultivated in the eastern part of the project area.
- Firewood and charcoal are the main sources of energy for cooking in the project area. In terms of lighting electricity is the main source though most of the community members complain of high electricity tariffs and erratic power supply.
- Almost all the project affected communities have, at least a bore hole, pipe born water or dug-well which supply them with water. However, boreholes were observed to be the commonest source of water, but sachet water is widely relied on for drinking purposes
- Sanitation is a critical challenge in the communities. This is because almost all the communities do not have a proper system for solid waste disposal. Community members resort to public dumping sites. Additionally, most of the toilet facilities in the area are in insanitary conditions. open defecation is therefore a common phenomenon in most of the project affected communities.

3.3.2 Traffic

The movement of vehicles and persons within and across the project area is highly significant and demands a critical consideration in the EIA process. This is because several factors such as the high levels of economic activities in the area, proximity of the communities to major areas such as the regional capital of Kumasi, and the high population of the communities encourage high rate of vehicular and human movement in the area. Most of the vehicles are commercial transport such as taxis and privately owned buses, locally known as “trotros”. Additionally, the use of motor bicycles especially in the Amansie west and South districts is highly common.

4.0 ENVIRONMENTAL AND SOCIAL IMPACTS

The EIA will identify and assess all potential impacts associated with the project construction, and operational phases. The activities involved in each phase will impact the physical, biological, and socio-economic environment. However, the scoping phase has identified some preliminary impacts on these variables and are discussed in the following sections.

4.1 Physical Environment

4.1.1 Soil and Land Use

The project is a greenfield development and, as such, construction and development activities of the pipeline and associated facilities will result in changes in land use. These activities could have the following impacts on soils and land use:

- Loss of soil resources from soil erosion due to vegetation clearance and earthworks during pipeline installation.
- Sedimentation along pipeline route.
- Soil contamination from accidental spillage of hydrocarbons from machinery and equipment.
- Change in land use and potential loss of potential arable land.
- Changes in topography and drainage patterns due to modified landforms.

4.1.2 Noise

The project activities will require the use of infrastructure that will cause an increase in ambient noise levels at nearby communities during the construction of the pipeline.

4.1.3 Air Quality

The ambient air quality impacts from the project may include the following:

- Dust and particulate emissions from the removal of vegetation cover increasing the potential for wind erosion during earthworks and movement of vehicles.
- Increased suspended particles in the air due to earthworks and the movement of bulk materials during construction.
- Atmospheric emissions from vehicular movement and equipment including NO_x, and SO₂.

4.1.4 Greenhouse Gas Emissions

The anticipated GHG emissions from the project are:

- CO₂ emissions due to the use of internal combustion engines in vehicle and stationary sources, mainly including power generation equipment.
- Fugitive emissions of methane from the pipeline system due to leakages mainly from flanges and valves.

4.1.5 Surface Water

Surface water resources may be impacted from the following activities:

- Changes in the flow regime and quality of surface water systems during pipeline installation around water bodies.

- Accidental spillage of hydrocarbons from vehicles, machines and equipment that could result in the potential contamination of water resources.
- Change in interactions with groundwater resources.

4.2 Biological Environment

4.2.1 Biodiversity

Development of the project may result in the following impacts to ecological resources:

- Loss of natural habitats and flora species of concern during vegetation clearance.
- Spread of invasive plant species due to earthworks.
- Injury and mortality of faunal species of concern during vegetation clearance at the site.
- Indirect effects on ecosystems integrity due to dust generation from earthworks and vehicles.
- Collision risk to fauna species of concern from construction vehicles.
- Potential loss of fauna because of accidents.
- Disturbance of fauna due to project activities and infrastructure.
- Project infrastructure can present a barrier to fauna movement.
- Disturbance of terrestrial species by noise and excessive light.

Changes in water quality and flow regimes have the potential to impact aquatic life as well as the riparian zones along the banks of water bodies.

4.3 Socio-Economic Environment

4.3.1 Socio-Economic

The following socio-economic impacts are envisaged:

- New business sales, multiplier effects and economic stimulation.
- Employment and skills development.
- Potential economic displacement which could lead to effects on the livelihood of communities within the project area.
- Health risks due to exposure of workers and some residents to fugitive dust emissions from construction activities.
- Boost in the local economy and provision of employment to the local youth.

4.3.2 Traffic

It is envisaged that there will be increased traffic due to the transportation of goods, materials, and workforce during project construction phase. It also expected that traffic will be intense at the pipeline laydown (stockyards) areas for the project.

5.0 KEY ENVIRONMENTAL AND SOCIAL IMPACTS

This chapter identifies the potential negative and positive key environmental and social impacts (key impacts) of the project on the physical, biological, and socio-economic environments during the construction and operational. The key impacts are being critically assessed for the EIA phase so that effective mitigation measures could be proposed to control the impacts. The measures will include assessment of project design, project alternatives and development of an efficient management plan. Chapter 6.0 provides potential mitigation measures for the key impacts identified.

5.1 Physical Environment

5.1.1 Soil and Land Use

Land disturbance and loss of soil resources: Land disturbance will occur as vegetation is removed and soils are exposed from the pipeline route for the construction and installation of the pipeline and the site for project infrastructure. The potential effects of these activities include soil erosion and loss of soil resources, sedimentation of water resources, changes to river channels from sedimentation, and modified landforms.

5.1.2 Noise

Increased ambient noise levels: Noise levels within the immediate project area are expected to increase intermittently due to the transport of materials, operation of heavy equipment and construction activities such as excavation, ground compacting and cutting and welding of pipes.

Noise modelling will be undertaken as part of the EIA, where various activities under the project phases will be modelled to assess the level of impact for each activity and appropriate mitigation measures will be developed for the management of impacts.

5.1.3 Air Quality

Dust emissions: The removal of vegetation at the project site for construction activities will result in the emission of dust. Dust emissions will be generated during excavations for pipeline installations and associated facilities, wind blowing over bare stockpiles, dumping of construction materials at site could also generate dust.

Gaseous emissions: There is also the potential for gaseous emissions into the atmosphere from vehicles, equipment and plant used for project activities. The EIA will include the specifics on the equipment that will be used and predict emissions from them to determine their level of impact on sensitive receptors.

5.1.4 Surface Water and Groundwater

Reduction in water flow and quality (turbidity): The construction of the pipeline could result in the reduction of flow of water to downstream users when the pipeline cross rivers during installation. At river crossing, water flow will be blocked off until the installation of the pipeline at the point is completed. Installation of pipeline at the river crossing could also increase suspended particles in the river.

Potential contamination of both surface and groundwater due to sedimentation, surface spillage, leakage, discharge, and/or incorrect storage and handling of chemicals, oils, lubricants and fuel during project construction and operational phases. These contaminants if not well managed could be washed as runoffs into nearby water bodies and infiltrate into the groundwater system.

5.2 Biological Environment

5.2.1 Flora and Fauna

Habitat fragmentation and loss: Construction activities, including the development of facilities' footprints, will lead to the clearing of vegetation within the proposed project area. These could result in habitat loss and displacement of local flora and fauna.

There is also the risk to fauna due to the use of construction equipment and vehicular movement that could result in collisions with faunal species on site.

5.2.2 Aquatic

Changes in surface water quality and its impact on aquatic life: The risk of soil contamination from fuels, oils and waste leakages and spills during construction, if not handled adequately, may either be washed with runoff into surface water bodies or infiltrate into the groundwater system and subsequently affect aquatic life. Again, sedimentation, because of runoff from the project area getting into water bodies, could also result in uncondusive environment for aquatic life.

5.3 Socio-economic Environment

Employment opportunities: During the implementation of the project, skilled and unskilled labour will be hired for all phases of the project, creating employment opportunities in the project area. GEGL will be unable to employ all the people seeking work, therefore the employment process will be guided by GEGL's employment policy and draw from procedures employed in other GEGL projects.

Boost in local economy: Access to natural gas power will reduce operational costs and increase production capacity for industries due to the cheaper cost of gas as compared to other energy sources. It will also help in business development within the project area and beyond through diversification of existing businesses into ones that rely on power.

Loss of farmlands and livelihoods: The acquisition of land for the project will have impacts on the livelihoods of neighbouring community members because of restricted or no access to land. Affected farmers could lose their livelihood.

Poor housekeeping: Poor management of construction activities may result in stagnant water in uncovered trenches or excavations for the pipelines and other construction activities. These unsecured excavations may also compromise public safety.

Safety risks (accidents, injuries, explosions and fire): Potential increase in vehicle accidents because of the increased use of the public road for conveying construction material to site. This increases the risk of the public and neighbouring communities with operations. Easy access to the working areas can result in accidents and fatalities, therefore measures would have to be put in place to minimise unauthorised access.

5.3.1 Traffic

Increase in traffic: The transportation of project construction materials to the project area can increase the traffic in the project area. The movement from site to project laydown areas could also result in increased traffic. GEGL will put in appropriate measures to manage traffic in the area.

6.0 MITIGATION MEASURES

This chapter presents the recommended mitigation measures envisaged to reduce, rectify, minimise, (control) and, where possible, avoid adverse physical, biological, and socio-economic impacts/effects associated with the project. During the EIA phase, a variety of mitigation measures will be developed in line with regulatory requirements to avoid, reduce, minimise, or eliminate as much as possible significant impacts associated with the project.

6.1 Physical Environment

6.1.1 Soil and Land Use

Land disturbance and loss of soil resources: Some of the mitigations to be implemented include progressive clearing of vegetation and limiting site clearance to the footprints of project infrastructure. This will minimise the loss of flora and habitats and exposure of soil to erosion. Soil will be stockpiled near the striped site to avoid excessive handling. Construction materials (aggregates) will be covered with tarpaulin to prevent erosion. The area for construction will be clearly demarcated to prevent exposing soil. During the EIA phase, specific mitigation measures will be developed for ecology which may occur from land related disturbances

6.1.2 Noise

Increased ambient noise levels: Construction equipment will be fitted with noise attenuation equipment (e.g., muffles) provided by the manufacturers/ suppliers on engine exhausts and other relevant components. Maintenance and regular servicing of equipment and other noise emitting equipment to prevent any malfunction that could cause high level noise. Equipment with low sound power level will be used and operation hours will be limited for noisy equipment. Hearing protection earplugs/earmuffs to be worn by operators of noisy equipment. Equipment that may be intermittent in use will be shut down between work periods.

6.1.3 Air Quality

Dust emissions: Mitigation measures will include wetting or covering construction related materials (aggregates) during transportations and when stockpiled. Speed limits on-site will be adhered to by vehicle operators to minimise the mobilisation and dispersion of dusts. There will be periodic wetting of the construction areas especially during excavations of the pipeline trench. Periodic wetting of stockpiled construction materials will also be carried out to prevent material being blown from the stockpiles during high winds.

Gaseous emissions: Machinery with low emissions will be used and GEGL will undertake routine maintenance and servicing of machines in accordance with the manufacturer's recommendations or legal requirements. Unnecessary movement of vehicles will be avoided, and idle machinery will be switched off. The GEGL maintenance team will conduct periodic patrols and inspections/checks at the natural gas stations. A fiber optic cable will also be installed beside the pipeline which will be monitored for any issues for immediate attention.

The outcome of the air quality impact assessment which will be undertaken during the EIA phase will guide the development of an appropriate air quality management plan for the project.

6.1.4 Surface Water

Reduction in water flow and quality (turbidity): Reduction in water flow will be addressed by providing notices to downstream users prior to river blockage. Work at river crossing will be executed quickly to reduce the time for the blockage.

GEGL has in place management plan for river crossing to control impacts to downstream users, a copy of the plan will be attached to the EIS. Spill kits will be made available in areas where chemical and/or hydrocarbon spills could occur to facilitate immediate clean-up, and personnel will be trained in spill prevention and response.

There will also be regular maintenance of project equipment and vehicles to minimise the potential spillage and leaks of hydrocarbons.

Staff will implement protocols for the storage, handling and disposal of all chemicals and other hazardous substances. Protocols will also include provision for the appropriate clean-up of potential spills and leaks.

6.2 Biological Environment

6.2.1 Flora and Fauna

Habitat fragmentation and loss: Mitigation measures that will be implemented to minimize the loss of habitats and disturbance of flora and fauna species include limiting vegetation clearance within the footprints of the project infrastructure. From the field surveys any breeding habitats or otherwise sensitive areas will be demarcated and avoided. Where it is unavoidable, plants and seedlings of plants of conservation importance will be carefully removed and nursed and/or replanted in an area with a similar environment for its survival.

Dust suppression by water bowsers will be implemented on exposed surfaces before and after earthwork activities.

Risk to fauna: Enforcement of GEGL speed limit on-site (BMS and right of way) for all vehicles to minimise collision risk to fauna. Construction related vehicular movements will be avoided at night.

6.2.2 Aquatic

Changes in surface water quantity and quality and its impact on aquatic life: Appropriate stormwater infrastructure, including earthen berms and sediment traps, will be installed around the proposed project site. These will be regularly maintained during the construction and operational phases to minimise impacts on riparian species. Regular monitoring of aquatic ecosystems and water quality for early detection of changes will be done and corrective actions applied where required.

6.3 Socio-Economic Environment

Employment opportunities: The creation of employment is a positive impact and therefore the key aspect will be the implementation of appropriate strategies to enhance this impact. The establishment of a local skills desk in the study area to determine the potential skills that could be sourced in the area and recruit local labour as much as feasible. Knowledge sharing and on-the-job- training as a prerequisite, where feasible, for all service contractors/service providers working on the development and employment of local labour.

Engage key stakeholders such as community leaders in the planning and implementation of project to ensure that all likely concerns, risks and inputs are factored throughout the project cycle.

Boost in local economy: Goods and services will be procured from local small businesses to stimulate indirect job creation.

Loss of farmlands and livelihood: GEGL will put in place a plan to guide compensation for loss of farmlands. There will be a crop compensation plan which will be implemented in line with LI 2175. GEGL in collaboration with affected farmland owners and the government, will explore alternative livelihood programmes for implementation.

Safety risks (accidents, injuries, explosions and fire): Provide adequate signage along the roads to warn motorists of the construction activities taking place on the site. Movement of workers between the site and areas of residence will be controlled to minimise loitering around the proposed facility by providing scheduled transportation services.

There will be an implementation of a traffic management plan, use of noise control devices such as noise barriers and deflectors, and use of equipment with the lowest possible sound power levels.

Poor housekeeping: GEGL will ensure the Contractor complies with all the health and safety requirements of the site, including the need to observe proper housekeeping and putting measures in place to ensure the safety of workers and the public at all stages of the construction.

6.4 Traffic

A detailed traffic assessment will be undertaken, and a traffic management plan developed for the project. The details of the studies and management will be incorporated into the EIS.

7.0 TERMS OF REFERENCE FOR THE EIA

The purpose of the EIA study is to identify adequate mitigation measures and management plans to address possible direct and indirect significant environmental and social impacts of the proposed project for acceptability and sustainability. The ToR for the EIA will be significantly influenced by the key issues raised during the stakeholder engagement and the preliminary key impacts identified for the project. The impact hierarchy to avoid, minimize, rectify, or reduce will be applied. The EIS will include the following:

- A description of the undertaking.
- An analysis of the need for the undertaking.
- Alternatives to the project, including the “no-go” alternative.
- Matters of site selection, including considerations in the choice of pipeline siting and whether alternatives were considered.
- An identification of existing environmental conditions including social, economic and other aspects of major environmental concern.
- Information on potential positive and negative impacts of the proposed project from the environmental, social, economic and cultural perspectives in relation to the different phases of project development.
- The potential impact on the health of people.
- Methodology for the assessment of identified impacts and applicable mitigation measures to minimize, rectify, or reduce the impacts.
- Management plans to prevent or mitigate any potential negative impacts and enhance project benefits.
- Management programmes to monitor environmental impacts and to assess performance of the proposed mitigation measures.
- Contingency plans to address any unpredicted negative impacts and accompanying mitigation measures.
- Evidence of consultation with stakeholders of the project.
- Project design drawings and maps and other illustrative material to enable stakeholders to understand the contents of the EIS.
- Provisional environmental management plan.

The ToR for undertaking the EIA is as described in the following sections.

7.1 Physical Environment

7.1.1 Soil and Land Use

The soil and land use study will include the following:

- Soil Classification including description and mapping of the soil types and their distribution within the study area.
- Description and summary of the capability of the soils to support agriculture.
- Description and summary of the current land use in the project area.
- Description of the impacts of the project on soil and land use.

- Recommendation of actions to mitigate significant impacts.

7.1.2 Noise

The noise study will include:

- Description of noise sensitive receptors.
- The identification and collection of all possible noise sources that may cause noise nuisance during the construction phase.
- Acoustic propagation calculations to determine the impact of the noise associated with the operations.
- Recommendations on mitigation measures and management to reduce the impact on identified sensitive receptors.

7.1.3 Air Quality

The air quality studies will include:

- Description of air quality sensitive receptors.
- Measured levels, repeatability, and spatial and temporal variation in measured concentrations.
- Developing a comprehensive emissions inventory for the project and other sources of air quality impact generation activities in the project area.
- Evaluation and discussion of the predicted emissions concentrations and anticipated impacts.
- Recommendations on mitigation measures and management strategies for identified impacts on sensitive receptors.

7.1.4 Climate

A discussion of climate change patterns in the project area.

- A brief description of the current climate of the project area.
- Undertake a high-level assessment of the potential impacts of climate change on the project.

7.1.5 Surface Water

The surface water study will include:

- A description of the catchment and water uses in the project area.
- The establishment of the hydrological characteristics of the project area from topographic and climatic data.
- Assessment of potential impacts of hydrological, drainage and land cover changes on surface erosion, sedimentation and flows in water bodies.
- Review of plans for pipeline crossing water bodies.
- Recommendation of appropriate mitigation measures to mitigate significant impacts identified.

7.2 Biological Environment

7.2.1 Biodiversity

The biodiversity studies will provide:

- Consideration for potential avoidance, mitigation/management measures.

- Description of landcover classification in the project area.
- Mapping using GIS, where potential effects on ecosystems can primarily be indicated by examining, for example, the associations between species and species groups and mapped vegetation communities or habitat types.
- Description of vegetation communities and biodiversity including flora and fauna species in the project area.

The impact assess will quantify the projects effects on ecosystems and species within the project area. It will:

- Quantify potential project effects relative to the baseline conditions.
- Predict changes in ecosystems and habitat that may result from project activities (e.g., site clearing).
- Assess impacts and propose mitigation measures to avoid, minimise to avoid and where appropriate restore biodiversity.

A Biodiversity Management Plan will be developed for the project, and this will provide a framework for the implementation of the required mitigation measures for identified impacts on biodiversity.

7.3 Socio-Economic Environment

7.3.1 Socio-Economic

The socio-economic study will be undertaken concurrently with the stakeholder engagement and will include the following:

- Detailed stakeholder engagement and collation of socio-economic baseline data (focus group, one-on-one and community meetings).
- National and regional profiles
- Detailed collation of socio-economic baseline data (focus group, one-on-one and community meetings) and presentation of the demographic information and the characteristics of the project area
- Undertake Socio-Economic impact assessment.
- Provide recommendations for mitigating and managing socio-economic impacts including loss of land, change in land use.
- Recommendations to avoiding or mitigating adverse impacts and enhancing positive effects of the project. These will also be included in a social management plan, which will be captured as part of the provisional EMP.

7.3.2 Key Stakeholder Issues

The key issues and concerns raised during the stakeholder engagement will be assessed during the EIA and will include:

- Discussion on safety and security of the pipeline project.
- Crop and land compensation related issues.
- Discussion on Resettlement.
- Discussion on why the gas flowing through the pipeline cannot be taped.
- Project related impact on the environmental.
- Discussion on employment opportunities and general issues.

7.3.3 Traffic

The traffic study will entail the following:

- A brief description of the existing traffic conditions along the pipeline route.
- 24-hour traffic volume counts will be undertaken at five major roads and nine minor roads. The major roads will be monitored for a minimum of 3 days per location and the minor roads will be monitored over 2 days.
- Data collected from the count will be analysed and interpreted to inform the evaluation of impacts from project generated traffic.
- A Traffic Management Plan with mitigation measures for identified traffic impacts will be developed for implementation during the construction phase.

7.4 Structure of EIA Report

The EIA will consist of the chapters described in Table 7.

Table 7: EIS Structure

Chapter	Description of Content
Executive Summary	This chapter provides a non-technical description of the entire project, predicted environmental and social impacts, and the mitigation measures proposed.
Chapter 1 - Introduction	This chapter contains a brief description of the project background, the justification for, and potential benefits of the project, and the objectives of the EIA.
Chapter 2 – Policy Legal and Regulatory Framework	The chapter entails a review of the relevant policies, laws and regulations which are applicable to the project.
Chapter 3 - Project Description and Alternatives	This chapter describes the project and provides a summary of alternatives considered.
Chapter 4 - Baseline Information	Existing environmental and social conditions in the vicinity of the project are described in this chapter. Biological, physical, and socio-economic resources that potentially could be impacted by the construction and operation of the project are discussed.
Chapter 5 – Public Participation	This chapter provides information on consultations and stakeholder engagement conducted in conjunction with the engagement process for the project.
Chapter 6 – Impact Identification and Prediction	This chapter presents key impacts associated with the construction and operation of the project with focus on assessing potential impacts on the biological, physical, and socio-economic resources.
Chapter 7 – Impact Mitigation	This chapter describes mitigation measures that will minimize, rectify, or reduce potential impacts identified in Chapter 6.
Chapter 8 - Monitoring Programmes	This chapter provides a description of programmes that will be used to monitor various resources during the construction and operation of the project.
Chapter 9 - Provisional Environmental Management Plan	This chapter includes GEGL's provisional EMP specific to the project. The plan governs activities that will occur during the initial 18-month after commencement of operations.
Chapter 10 - Reclamation and Decommissioning	Methods and measures to be used to rehabilitate and decommission the project site after construction and the cessation of operations are described in this chapter.
Chapter 11 - Conclusion	This chapter presents conclusions reached from preparing the EIS for the project.
References	All references cited in the Draft EIS are included in this section.

8.0 CONCLUSION

GEGL intends to develop a 105 km pipeline from Gyegyetroso to Ejisu-Kumasi. This pipeline will service the Ameri power plant, which will cater for the power supply of the middle belt thereby reducing power transmission over the grid from the southern areas of Ghana. The project consists of a 24-inch pipeline which will be laid along a distance of 105km from Gyegyetroso to Ejisu, four gas stations comprising a BMS, and three BVS as well as all equipment/components needed for gas supply.

Project stakeholder engagements are ongoing and baseline data being collected for biophysical environment, socio-economic and traffic. Data collected and stakeholder input will guide the impact assessment presentation in the EIS.

The key impacts identified include potential land disturbance, increased noise levels, loss of flora and fauna of ecological importance, dust and gaseous emissions, impact to public safety and traffic.

The next phase of the EIA process will involve the completion of baseline data collection, detailed assessments by specialists through qualitative and quantitative analysis methods, assessment of impacts to inform mitigation and management plans based on the mitigation hierarchy of avoidance, minimization, rectification, or reduction or offset. During this phase, measures will be proposed to mitigate negative impacts and enhance project benefits to the extent practicable.

REFERENCES

Construction Plan for River Crossing. (2020). Phase 2 GEGL NGP Jingmen Hongtu Special Aircraft Manufacturing Co.,Ltd., Ghana project department. Audited by: TANG BAOHUA. Approved by: ZHANG TONGGANG.

Genser Energy Ghana Limited. (2021). Feasibility Study for GEGL's Primary Gas Pipeline_02

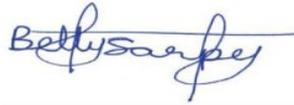
Power Planning Technical Committee. (2021). 2021 Electricity Supply Plan for Ghana. An Outlook of the Power Supply Situation for 2021 and Highlights of MediumTerm Power Requirements.

Signature Page

Golder Associates Ghana Ltd.



Gladys Anaman
Environmental Engineer



Elizabeth Sarpey
Senior Environmental Consultant

GA/ES/ga

CA-35, 031

Directors: E. Sarpey, RGM Heath, G Michau

Golder and the G logo are trademarks of Golder Associates Corporation

c:\users\ganaman.golder\desktop\new folder (2)\21480005-350725-1_gegl phase iii pipeline scoping report_final_28-02-2022.docx

APPENDIX A

EPA letter requesting and EIA for
the project
Gas Pipeline Construction
Schedule

Tel: (0302) 664697 / 664698 / 662465

667524 / 0289673960 / 1 / 2

Fax: 233 (0302) 662690

Email: info@epa.gov.gh

Ghana Post (GPS): GA-107-1998



Environmental Protection Agency

P. O. Box MB 326

Ministries Post Office

Accra, Ghana

Website: <http://www.epa.gov.gh>

Our Ref: CE: 7608/01/02

16th April, 2021

THE SENIOR COMPLIANCE OFFICER
GENSER ENERGY GHANA LIMITED
HORIZON PLAZA
#60 LIBERATION ROAD, 1ST FLOOR
AIRPORT-ACCRA

Dear Madam,

ENVIRONMENTAL IMPACT ASSESSMENT (EIA):
PROPOSED 102KM NATURAL GAS PIPELINE TO KUMASI IN THE ASHANTI REGION OF GHANA.

We acknowledge receipt of your application for Environmental Permit submitted to the Agency in accordance with the Environmental Assessment Regulations 1999 (LI 1652) on the proposed 102km Natural Gas Pipeline to Kumasi in the Ashanti Region of Ghana.

The proposal falls in the category of undertakings (Regulation 3) for which Environmental Impact Assessment (EIA) is required to help understand the likely implications of the proposal, the relevant alternatives and mitigations to consider in order to ensure sound decision-making and sustainable development of the project.

In line with Regulations 11 of LI 1652, you are advised to carry out a scoping exercise to generate the relevant Terms of Reference (TOR) to guide satisfactory EIA study of the proposal.

Please note that scoping is meant to focus the EIA on the key issues, concerns and decision areas and solicit input and guidance of all relevant stakeholders on the TOR. Scoping notices must be served as appropriate to facilitate stakeholder involvement (see attached sample). Ten (10) hard and soft copies of the scoping report must be submitted for study and agreement on the TOR, prior to the EIA studies.

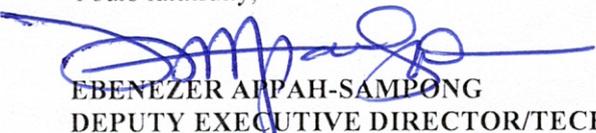
It is important to note that the scoping report and EIS should contain a summary profile of the main consultants who took part in the studies. The summary information should include: Name, Address, and Tel. No., E-mail address, Qualification and Experience of the relevant staff and their specific contribution to the report.

Failure to provide this information would make the submission incomplete and would delay the review of the report.

For further information or clarification on the above, please contact **0501301567 / 0501301563**.

Counting on your cooperation.

Yours faithfully,


EBENEZER APPAH-SAMPONG
DEPUTY EXECUTIVE DIRECTOR/TECHNICAL
for: EXECUTIVE DIRECTOR

Cc: The Ag. Regional Director, EPA-Kumasi, A/R

SCOPING NOTICE

.....proposes to establish a
(Name of Company/Organization)

..... at

(Proposal/undertaking)

(Location)

in the..... of the

(District)

(Region)

Notice of the proposed..... is hereby served for public information as required under the procedure for the conduct of EIA in accordance with Regulations 15(1) of (LI 1652)

Any person(s) who has an interest, concern, or special knowledge relating to potential environmental effects of the proposed undertaking, may contact or send such concerns, etc to

The Director
P. O. Box
Accra

The Executive Director
Environmental Protection Agency
P. O. Box M326
Accra

Tel:

66469/8 and 708175-8

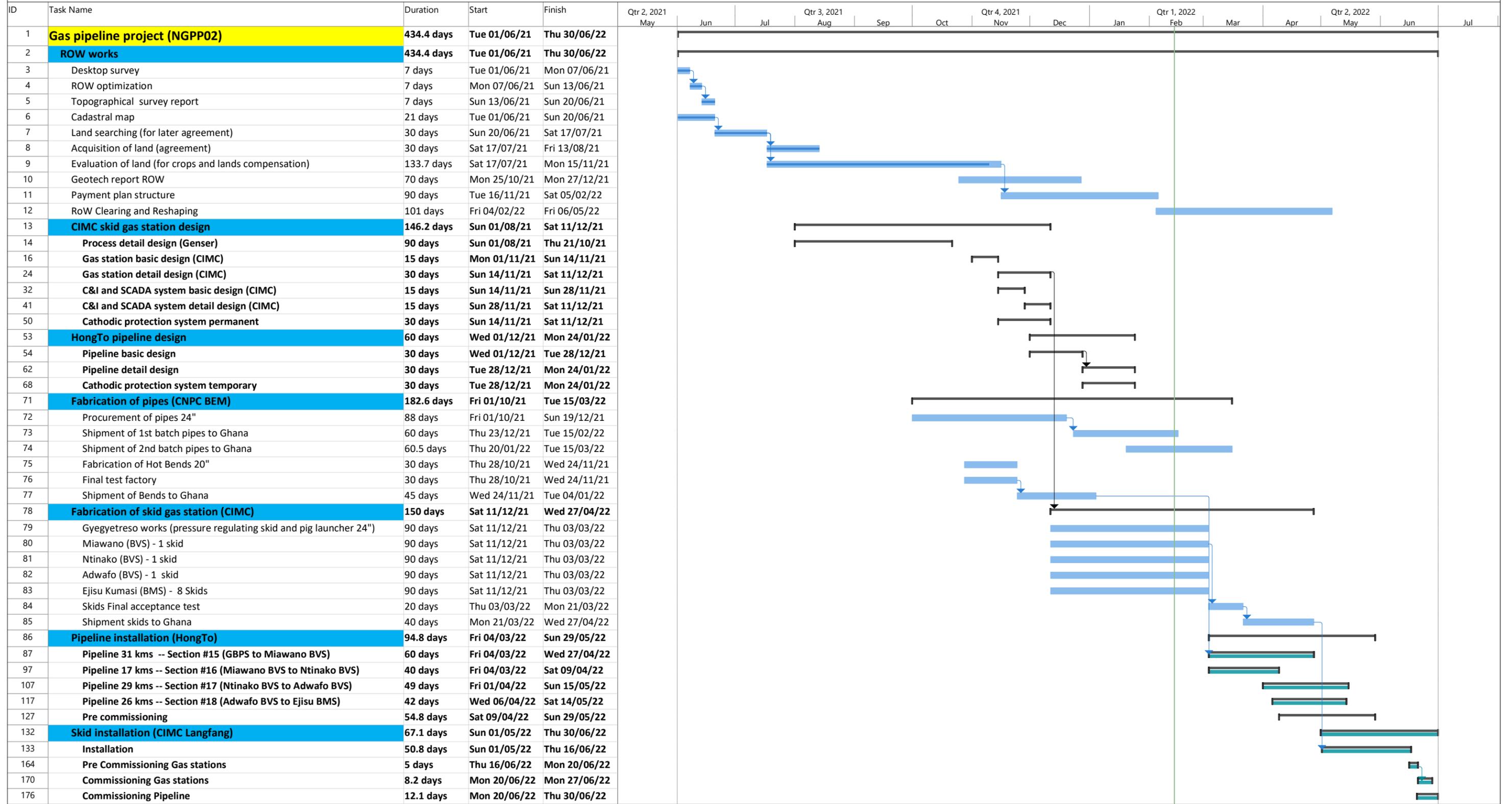
Fax:

662690

Email:

support@epaghana.org

Genser Energy
Gas Pipeline Project (Phase 2)



Project: Gas Pipeline Gantt Cha

Task		Summary		Inactive Milestone		Duration-only		Start-only		External Milestone		Manual Progress	
Split		Project Summary		Inactive Summary		Manual Summary Rollup		Finish-only		Deadline			
Milestone		Inactive Task		Manual Task		Manual Summary		External Tasks		Progress			

APPENDIX B

**Comments and Response Report
List and dates of stakeholder
engagements**

REPORT

Genser 105km Natural Gas Pipeline Project: Stakeholder Engagement Comments and Response Report

Submitted to:

Genser Energy Ghana Limited

Submitted by:

Golder Associates Ghana Ltd.

Densu Point Building, 3 Foho Link, North Dzorwulu, Accra, Ghana

P.O. Box KIA 16092, Airport, Accra, Ghana

+233 0 302 978 819/823

21480005

February 2022



Distribution List

1 x ecopy Golder Associates Ghana Limited

1 x ecopy Genser Energy Ghana Limited

Comments and Response Report

1.0 INTRODUCTION

Stakeholder consultation is a key component of every environmental impact assessment (EIA) process. It strengthens the value of impact assessment and informs project planning and decision-making.

This document provides a summary of the stakeholder engagement process that was conducted for the Genser Pipeline Project as part of an EIA process by Genser Energy Ghana Limited (GEG). The stakeholder engagement process was undertaken between 16th July 2021 and 31st August 2021 by Genser's social team.

Golder has been requested to produce a stakeholder engagement report based on the minutes of the stakeholder engagement process that were provided by Genser.

1.1 Project overview

GEG is an Independent Power Producer in Ghana, which specialises in providing custom-engineered energy solutions to industrial clients with high energy requirements. GEG engages in engineering, procurement, and construction and the O&M of its power generation assets. GEG sells power and steam to clients.

GEG is planning to construct and install a 105 km, 24-inch natural gas pipeline infrastructure from Gyegyetseso to Ejisu-Kumasi in the Ashanti Region of Ghana. This gas pipeline project will connect the existing gas pipeline from the Branch Point Station (BPS) at Gyegyetseso to a new Branch Metering Station at Ejisu- Kumasi. The construction of the pipeline will facilitate the supply of natural gas from the Prestea Regulating and Metering Station to the *Ameri power plant*¹ which is proposed to be relocated close to the GRIDCo substation in Ejisu.

The main components of the natural gas project are, approximately a 105km 24-inch natural gas pipeline, Block Valve Stations, a Branch Metering Station, and ancillary equipment needed for gas supply.

2.0 REGULATORY REQUIREMENTS, GUIDELINES, AND STANDARDS

Genser's operations are premised on the principles of environmental sustainability. In addition to Genser's own standards and the Development Bank of Southern Africa's (DBSA) Environmental and Social Safeguard Standards (2018), Genser will comply with national requirements and legislations.

3.0 NATIONAL AND INTERNATIONAL REQUIREMENTS

The policies, legislation and guidelines relating to the stakeholder engagement process are outlined below:

3.1 National requirements

The stakeholder engagement process will adhere to the following national legislation related to public consultation:

- Environmental Protection Agency Act, 1994 (Act 490); this act provides a legal framework for the sustainable development, management, and protection of the environment by the EPA; and
- Environmental Assessment Regulation, 1999 (LI 1652):

Section 5 (1) of LI 1652, states the importance of public consultation in the decision-making process:

"The Agency shall on receipt of an application and any other relevant information required, as an initial assessment, screen the application taking into consideration (c) the concerns of the public, if any, and in particular concerns of immediate residents, if any;"

¹ Ameri power plant is a 250MW thermal plant at Aboadze fired by natural gas from Atuabo, all in the western region of Ghana. The Ministry of Energy has relocated the Ameri power plant to Kumasi.

The section also states public consultation in the review of the Environmental Impact Study (EIS) and enjoins the developer to:

- a) *give notice of the proposed undertaking to the relevant Ministries, government departments and organisations and the relevant Metropolitan, Municipal or District Assembly;*
- b) *advertise in at least one national newspaper and a newspaper, of any circulating in the locality where the proposed undertaking is to be situated; and*
- c) *make available for inspection by the public in the locality of the proposed undertaking, copies of the scoping report.*

3.2 International requirements

International principles and guidelines that have been considered in the formulation of this stakeholder engagement report are provided in the following sub-sections.

3.3 Development Bank of Southern Africa Environmental and Social Safeguard Standards (2018)

The DBSA provides a set of environmental and social standards for its clients in the management of project environmental and social risks and impacts, and enhancement of project environmental and social performance. There are eight standards, namely:

- **Standard 1:** General Overview: Assessment and Management of Environmental and Social Risks and Impacts
- **Standard 2:** Stakeholder Engagement and Information Disclosure
- **Standard 3:** Gender Mainstreaming
- **Standard 4:** Indigenous Peoples
- **Standard 5:** Land Acquisition, Restrictions on Land Use and Involuntary Resettlement
- **Standard 6:** Labour
- **Standard 7:** Community Health and Safety
- **Standard 8:** Cultural Heritage

3.4 Gender policies

GEGL is committed to building and maintaining good relationships with its communities based on mutual respect and the recognition of each other's rights. GEGL has also adopted the DBSA Standards as part of this pipeline project. The public consultation process that forms part of the impact assessment process was tailored to satisfy the DBSA stakeholder engagement standards. Additionally, GEGL will maintain its formalised community consultation structures and grievance mechanisms that have been established and made accessible to the community for the duration of the project.

According to GEGL's Health, Safety and Environment Policy Statement, the company is committed to health, safety, and environmental management as a priority. This commitment includes the conservation of the environment and natural resources, the protection of the health and safety of employees, contractors, customers, and communities within which GEGL operates. GEGL is also committed to adhere to local and international laws, regulations and relevant industry practices.

4.0 STAKEHOLDER ENGAGEMENT PROCESS

An EIA process entails three phases, namely the:

- **Scoping Study** – the scoping study phase entails initial field and baseline data reviews as well as early stakeholder engagement to define the scope of the EIA.
- **Terms of Reference** – during this phase, the framework and proposed methodology for the assessment of environmental and social impacts are developed. The ToR phase includes a presentation of the project, proposed EIA update process and the stakeholder engagement process.
- **Environmental Impact Study** – this phase entails an impact assessment and addressing the issues raised during the ToR phase. A draft EIS report will be developed and presented to the public for review and discussion. The EIS is then finalised and submitted to the EPA for approval (the decision-making phase).

4.1 Objectives

The stakeholder engagement process has been designed to consult with interested and affected parties throughout the EIA process. This approach provides organisations and individuals with an opportunity to raise concerns and make comments and suggestions regarding the proposed project.

The process was conducted in combinations of Twi and English. The stakeholder engagement process focussed provide sufficient and accessible information to stakeholders so that they could:

- Understand the context of the EIA process.
- Become informed and educated about the proposed project and its potential impacts.
- Identify issues of concern, make suggestions for enhanced benefits and comment on alternatives
- Contribute local knowledge and experience.
- Verify that their comments, issues of concern and suggestions have been captured and considered for the ToR for the impact assessment.

4.2 Approach and methodology

The approach and methodology applied to the public consultation process were influenced by the need to ensure broader stakeholder participation, reliability and validity of data collected. Genser is committed to engaging with stakeholders in decision-making processes, improve communication, share information, and obtain views and feedback to enhance the consultation and decision-making process.

The methodology employed during the public consultation process included the following:

- All the engagements were in the form of key informant (face-to-face) and focus group discussions.
- The meetings were conducted in Twi and English and were documented (photos - Figure 2, completion of attendance registers and note-taking).
- Meetings were held at venues easily accessible to stakeholders.
- The project was introduced to stakeholders using a map displaying the pipeline route and the surrounding communities.
- Comments and issues raised were captured and minutes recorded. The minutes of the stakeholder meetings were provided to Golder.

4.2.1 Development of a stakeholder database

A stakeholder database was developed comprising a list of stakeholders representing various sectors of society, namely those who live in proximity of the project area and directly affected stakeholders. The involvement of the following clusters or organisations in the stakeholder engagement process was considered of key importance:

- Traditional and religious authorities.
- Women, farmers, and youth groups.
- Local communities likely to be directly affected by the project.

4.2.2 Methods of engagement

4.2.2.1 Notification

Due to the remote nature of most of the communities, the best approach to reaching them was via telephone calls to their community representatives and community leadership structures.

4.2.2.2 Invitations and presentation

Invitations were extended through the regional government and community representatives. The invitation request was done through letters and followed up by telephone. Mobilisation requests were made progressively as the meetings were conducted from one area to the next.

4.2.2.3 Stakeholder engagement

A total of 101 meetings was convened and attended by approximately 3,488 participants. The participants included representatives of the traditional authorities, religious leaders, committee members, non-governmental organisations (NGO), youth and the media. Table 1 shows the details of the stakeholder meetings conducted. Please refer to APPENDIX A for samples of minutes of the meetings and sample of attendance registers. Photos of some of the stakeholder engagements conducted are presented in Table 2.

Table 1 : Evidence of Stakeholder Information

Date	Stakeholder Group Engaged	Venue	No of Participants
16th July 2021	Bosomtwe District Assembly	Conference Room, Bosomtwe District Assembly	42
19th July 2021	Dess FM – Asante Bekwai	Dress FM Station	9
	Nkomo FM – Anhwia Nkwanta	Nkomo FM Station (Anhwia Nkwata)	8
20th July 2021	NGOs – Bosomtwe District	Bosomtwe District Assembly	12
21st July 2021	Manso Nkwanta Palace	Manso Nkwanta Palace	8
	Bekwai Municipal Assembly	Conference Hall, Bekwai Municipal Assembly	32
	MCE, Ejisu Municipal	MCE Office	2
	Departments of the Ejisu Municipal Assembly	Conference Room, Ejisu Health Directorate	34
22nd July 2021	Asaman Traditional Council	Palace	12
	Bekwai Traditional Council	Asante Bekwai Chiefs Palace, Asante Bekwai	10

Date	Stakeholder Group Engaged	Venue	No of Participants
	Denyase Traditional Council	Denyase Chiefs Palace, Denyase	14
	Essumeja Traditional Council	Essumeja Palace	12
	Kokofu Traditional Council	Kokofu Chiefs Palace, Kokofu	20
	Kuntunase Traditional Council Durbar	Kuntunase Palace	116
23rd July 2021	Abrankese Community	Community Centre, Swedru-Abrankese-Abodiase	58
	Swedru-Abodiase Traditional Council	Swedru-Abodiase Chiefs Palace	11
	Akokofe Community	Community Center, Akokofe	3
	Kokodie Community	Kokodei Community Centre	40
	Petrensa Community	Patrensa Community Centre	30
	Piase Community	Piase Community Centre	91
	Tuamfom Community	Toamfom Community Centre	69
26th July 2021	Amansie South District	Conference Hall, Amansie South District	23
	Onwe Community	Onwe Community Centre, Onwe	73
	Dess FM Marketing Manager	Hotel De Pat Palace, Anwia-Nkwanta	2
	Woarakese Community	Woarakese Community Centre	48
27th July 2021	Adwafu Community	Krom-Adwafo community center, Krom-Adwafo	65
	Akyeremade Community	Community Centre, Akyeremade	29
	Amansie West District	Conference Room, Amansie West District Assembly	29
	Asamang Community	Asamang Community Centre	67
	Bedominase Community	Bedominase Community Centre	50
	Edwenase Community	Community Centre, Edwenase	21
	Japandu Community	Community Centre, Japandu	39
	Kyekyam Community	Community centre, Kyekyam	33
	Yaasi Community	Chief Palace	36
28th July 2021	Anhwia nkwanta Traditional Council	Anhwia-Nkwanta Palace	10

Date	Stakeholder Group Engaged	Venue	No of Participants
	Ejisu Traditional Council	Ejisu Palace	13
29th July 2021	Adankragya Traditional Council	Chief Palace	17
	Denyase Community	Denyanase Community Centre	47
	Essumeja Community	Community Centre	35
	Ejisu Traditional Council	Ejisu Palace	13
	Kyekyere Betenanko Community	Community Centre	52
30th July 2021	Asanso Community	Asanso Palace	34
	Boaman Community	Boaman Community Centre	32
02nd August 2021	Afransie Community	Afransie Community Centre	82
	Huntado Community	Huntado Community Centre	53
	Ntinako Community	Community centre, Ntinako	43
	Poano Community	Community centre, Poano	69
03rd August 2021	Abono Community	Lake Side Grounds	36
	Boni Community	Community Grounds, Boni	103
	Miawano Community	Palace, Miawano	11
	Nyameani Community	Community centre, Nyameani	28
	Sunkyerekrom Community	Community centre, Sunkyerekrom	28
04th August 2021	Amanhyia Community	Community centre, Amanhyia	31
	Fahiakobo Community	Chief's House	9
	Kwabentakrom Community	Community Grounds, Kwabentakrom	44
	Marfokrom Community	Community centre, Marfokrom	21
	Sarfokrom Community	Sarfokrom Market Centre	62
	Yawpongkorkrom Community	Yawpongkorkrom Community Centre	9
05th August 2021	Manso Abodom Community	Palace, Manso Abodom	40
	Domi Community	Community Centre, Domi	48
	Kwakukrom Community	Assembly Grounds, Kwakukrom	32
	Omandware Community	Community Center, Omandware	42
	Oseikokokrom Community	Assembly Grounds, Oseikokokrom	47
	Siabotre Community	Community Center, Siabotre	17
	Yawhemenekrom Community	Community Grounds, Yawhemenekrom	23
09th August 2021	Ankam Community	Community Centre	28

Date	Stakeholder Group Engaged	Venue	No of Participants
	Aponapon Community	Community Grounds	77
	Kumpese Community	Community centre, Kumpese	13
	Miawano Community	Palace, Miawano	28
	Mpatasie Community	Community centre, Mpatasie	53
	Nwineso	Assembly Grounds, Nwineso	3
	Wahaso Community	Community centre, Wahaso	19
10th August 2021	Ebiram Community	Palace, Ebiram	71
	Manso Nkran Council	Community Centre, Manso Nkran	24
	Subinso Community	Subinso Community Centre	24
	Wirempe Traditional Council	Wirempe Palace	25
11th August 2021	Assienimpong Community	Community Centre	45
	Humebenase Community	Catholic Church	35
	Kwaaso Deduako Community	Community Centre, Kwaaso-Deduako	75
	Sarpe Community	Community Centre	45
12th August 2021	Apromase Elders	Chiefs House, Apromase	7
	Domeabra Community	Domeabra Catholic Church	21
13th August 2021	Achinakrom Community	Community Centre, Achinakrom	12
	Krapa No 1 Community	Community Centre, Krapa No 1	31
17th August 2021	Apromase	Community Center, Apromase	63
	Donaso	Community centre, Donaso	18
	Donyina	Funeral grounds	120
	Kwaaso	Assembly Grounds, Kwaaso	42
	Sarpe Traditional Elders	Catholic Church	8
18th August 2021	Adubiaso	Adubiaso Community Grounds	21
	Akwasiso	Community Center, Akwasiso	28
	Keniago	Pentecost Church	49
	Mmoho	Community Centre, Mmoho	65
	Odumase	Community Centre, Odumase	32
	Yankomase	Yankomase Community Centre	41
19th August 2021	Abenkyim	Community Centre, Abenkyim	20

Date	Stakeholder Group Engaged	Venue	No of Participants
	Anwian Nkwanta	Community centre, Awian Nkwanta	24
	Kurase	Palace, Kurase	14
	Sawaba Adankragya	Palace	42
	Sebedie	Community centre, Sebedie	16
31st August 2021	Daa Community	Community Grounds	45
TOTAL No. of Stakeholders			3,488

Table 2: Examples of Photo of stakeholder engagements

	
<p>Engagement with Dess FM Asante Bekwai – 19.07.2021</p>	<p>Engagement with NGOs Bosomtwe Municipal – 20.07.2021</p>
	
<p>Engagement with Piase Community – 23.07.2021</p>	<p>Engagement with Amansie West District – 27.07.2021</p>



Engagement with Abono Community – 03.08.2021



Engagement with Marfokrom Community – 04.08.2021



Engagement with Omandware Community – 05.08.2021



Engagement with Humebenase Community – 11.08.2021



Engagement with Sebedie Community – 19.08.2021



Engagement with Kurase Community – 19.08.2021

4.2.2.4 *Summary of key issues, concerns and comments raised during the stakeholder engagement process*

The issues and concerns raised during the various meetings were noted and are included in the Comments and Response Report (APPENDIX B). The key issues were grouped in the following themes:

- **Safety and security:** stakeholders from Keniago, Fahiakobo communities and Bosomtwe District Assembly were concerned about how safe the pipeline would be if they worked or stayed in the proximity of the route. Others also asked how faults on the buried pipeline would be detected.
- **Crop and land compensation:** stakeholders enquired if compensations would be paid before or after the project commenced. They also wanted to know the price ratings for each crop and if compensations would be a one-off or annual payment. They enquired if the compensations would be paid directly to the affected farmers, or would a percentage be given to the community leaders?
- **Resettlement:** stakeholders from Kokodei, Piase and Toafo wanted to know if their homes would be relocated if the pipeline route passed through their residence.
- **Gas for domestic use:** residents of Marfokrom, Boni and Sebedie enquired if the gas flowing through the pipeline could be sold for domestic use.
- **Environmental effects (soil and water):** communities asked about the environmental impacts of the pipeline on soil fertility and water resources.
- **Environmental impact assessment:** there were queries about the general impacts of the pipeline on the environment from stakeholders from Kurase, Sebedie, Adubiaso and Kwaaso communities.
- **Employment:** several communities including those from Adankragya-Sawaba and Nyameani and asked if locals would be employed when the project commenced, and what types of jobs would be available.
- **General issues:** general issues included questions about the continuation of farming after the pipeline had been constructed, the depth of the pipeline below the surface and the size of the pipeline.

4.3 Observations

Among the concerns raised by stakeholders, most of the issues were linked to crop and land compensation, employment, and environmental impacts of the project on soils and water. Stakeholders, however, did not object to the new project.

5.0 CONCLUSION

The public participation process was aligned with the objectives of the stakeholder consultation process as set out in the relevant legislation and regulations. Issues and aspects were documented for reference. This report will be incorporated into the EIS report.

Signature Page

Golder Associates Ghana Ltd.

CA-35, 031

Directors: E Sarpey, RGM Heath, G Michau

Golder and the G logo are trademarks of Golder Associates Corporation

[https://golderassociates-my.sharepoint.com/personal/basiedu_golder_com/documents/desktop/delete/21480005_stakeholder engagement report-final.docx](https://golderassociates-my.sharepoint.com/personal/basiedu_golder_com/documents/desktop/delete/21480005_stakeholder%20engagement%20report-final.docx)

APPENDIX A

**Example of Minutes of
Engagements and sample of
Attendance Register**



STAKEHOLDER ENGAGEMENT WITH ALL DEPARTMENTS OF THE EJISU MUNICIPAL ASSEMBLY
FOR THE GEGL DAWUSASO – KUMASI PP02 NATURAL GAS PIPELINE PROJECT

COMMUNITY RELATIONS
(DAWUSASO – KUMASI_PP02_PIPELINE)

21st July, 2021

Venue: Conference Room, Ejisu Health Directorate

Date: Wednesday, 21st July 2021

Time: 10:12am

Members Present: 34

Genser Energy Ghana Limited (“GEGL”)

NAME	ORGANISATION	INITIALS	DEPARTMENT/WORK
Michael Smith	Genser Energy	MS	Community Relations Superintendent
Yaw Barimah Bonsu	Genser Energy	YBB	Community Relations
Blaise Yendemeh	Genser Energy	BY	Community Relations
Hilda Obiri-Yeboah	Genser Energy	HOY	Community Relations
Samuel Nimaful	Genser Energy	SN	Community Relations
Frank Debrah	Genser Energy	FD	Community Relations
Emmanuel Opoku Mensah	Genser Energy	EOM	Community Relations

Ejisu District

NAME	ORGANISATION	INITIALS	DEPARTMENT/WORK
Frederick S. Lumor	Ejisu Municipal Assembly	FSL	Ejisu District Police jawasy_1@yahoo.com
Joseph T. Abibio	Ejisu Municipal Assembly	JTA	Municipal Coordinating Director ababiojoe@gmail.com
Linda Animah	Ejisu Municipal Assembly	LA	NADMO Director lindaanimah@gmail.com
Emmanuel C. Coffie	Ejisu Municipal Assembly	ECC	Physical Planning Officer
Justina Moo	Ejisu Municipal Assembly	JM	Social Welfare Officer
Isaac Okyere	Ejisu Municipal Assembly	IO	Community Development Officer Okyereisaac51@gmail.com
Ali Sulemana	Ejisu Municipal Assembly	AS	Planning Officer Alisulemana73@gmail.com
Dr. David Anambam	Ejisu Municipal Assembly	DDA	Department of Agriculture danambam@yahoo.com
Felix Boakye Assim	Ejisu Municipal Assembly	FBA	felixboakyeassim@gmail.com
Ernest N. Boadouug	Ejisu Municipal Assembly	ENB	M.E.HO boadouugernest@gmail.com
Gama Isaac	Ejisu Municipal Assembly	GI	Municipal Finance Officer ikettagmail.com
Joseph Adu-Mensah	Ejisu Municipal Assembly	JAM	Head of Works Department afetaaku@gmail.com
Addoi Emmanuel Oppong	Ejisu Municipal Assembly	AEO	Ejisu Fire Service Oppongema.ok@gmail.com



STAKEHOLDER ENGAGEMENT WITH ALL DEPARTMENTS OF THE EJISU MUNICIPAL ASSEMBLY
FOR THE GEGL DAWUSASO – KUMASI PP02 NATURAL GAS PIPELINE PROJECT

COMMUNITY RELATIONS
(DAWUSASO – KUMASI_PP02_PIPELINE)

21st July, 2021

Kwadwo Nyarko Ababio	Ejisu Municipal Assembly	KNA	Kumasi Land Valuation Division knyarkoababio@gmail.com
Daniel Offei	Ejisu Municipal Assembly	DO	Urban Roads Legacy2do@gmail.com
Alfred Nu Boye Lartey	Ejisu Municipal Assembly	ANBL	Immigration Ablartey18@gmail.com
Hon. Eric Anning	Ejisu Municipal Assembly	EA	Assembly Man
Kwamena Bartels	Ejisu Municipal Assembly	KB	Officer
Atona Joseph	Ejisu Municipal Assembly	AJ	Officer
Eric Frimpong	Ejisu Municipal Assembly	EF	Assistant Engineer

Community Assembly Members

NAME	COMMUNITY	INITIALS	WORK
Hon. Robert Boakye	Krapa Community	RB	Assembly Man
Hon. Noldy Amankwaa	Achinakrom Community	NA	Assembly Man noldyamankwaa@gmail.com
Hon. Richard Asare	Sompeh/Dediako Community	RA	Assembly Man
Hon. Serwaa Mercy	Kwaso Community	SM	Assembly Woman
Hon. Collins Owusu	Kwaso-Krotia Community	CO	Assembly Man
Hon. Beatrice S. Derkyi	Ejisu Community	BSD	Assembly Woman
Hon Kwarteng Ernest	Apumase Community	KE	Assembly Man

■ Introduction

Genser Energy Ghana Limited carried out a meeting with stakeholders from the Ejisu District Assembly to introduce the GEGL Phase III Natural Gas Project (NGP), which will see the construction of a 102km pipeline infrastructure from Dawusaso to Kumasi in the Ashanti Region.

■ Presentation of Issues

- i. The meeting started with an opening prayer from Isaac Gama at 10:12 am.
- ii. Joseph T. Ababio, District Coordinating Director, welcomed members to the meeting and spoke briefly about the agenda of the meeting. He explained that Genser Energy had been directed by the Government of Ghana to extend its natural gas pipeline infrastructure from Dawusaso to Kumasi and some communities within the Ejisu Municipal will be affected. Hence the need for Genser Energy to engage all the relative stakeholders identified within the Municipal.
- iii. After the introduction of every member at the meeting, Joseph T. Ababio invited Michael Smith to introduce Genser Energy and its operations.
- iv. A presentation by Michael Smith was done with the aid of PowerPoint slides. Michael Smith went through his presentation making reference to the information on the slides.



**STAKEHOLDER ENGAGEMENT WITH ALL DEPARTMENTS OF THE EJJSU MUNICIPAL ASSEMBLY
FOR THE GEGL DAWUSASO – KUMASI PP02 NATURAL GAS PIPELINE PROJECT**

COMMUNITY RELATIONS
(DAWUSASO – KUMASI_PP02_PIPELINE)

21st July, 2021

- v. Michael Smith thanked Joseph T. Ababio and went on to give an overview of the operations and projects embarked on by Genser Energy to date. He mentioned that Genser Energy is an Independent Power Producer (IPP) that specializes in the building of natural gas pipelines, and power plants for the energy needs of mining companies and industries. He mentioned that some of the mining companies and industries Genser works with are Uniliver, Goldfields Tarkwa and Damang, Akyempem Golden Star, and Edikan Perseus Mines. He added that Genser Energy has 7 power plants, and a total pipeline network of approximately 320 km, of which 80km was constructed during the Prestea-Tarkwa-Damang Phase I project, completed in 2018. Phase II of the project saw a 21km pipeline extension from Damang to Wassa-Akyempem, commissioned in October 2020, and the construction of a 240km pipeline network from Prestea - Manso Amenfi – Amoanda – Humjibre – Chirano – Dawusaso – Edikan, commissioned in June 2021. Genser Energy has carried out some Hydro Power visibility studies across the country and in other African countries. He added that Genser is currently working on a project in Burkina Faso specifically in Bonbore, and a wind turbine project in the Kwaku Region in Ghana. He continued by adding that, following the Government of Ghana’s decision to relocate the Ameri Power Plant from Takoradi to Kumasi, the Government has charged Genser Energy to construct a natural gas pipeline from Dawusaso to Kumasi, specifically Domeabra, which will be 102km, for the transportation of natural gas for the Ameri Power Plant.
- vi. Michael Smith explained that the gas pipeline will affect approximately 80-100 project-affected communities, 2000 affected persons, and some communities identified fall within the Ejisu Municipal. Michael Smith with the help of a cadastral map mentioned some project-affected communities within the Ejisu District.
- vii. Michael Smith mentioned that the project may affect farms, lands, and structures hence the need for valuations by the Land Valuation Division of the Lands Commission in Ghana. He added that Land Valuation Division is mandated by law to value all crops, lands, and properties that will be affected by the natural gas pipeline project. He added that compensation is paid after valuation reports are received from the Land Valuations Division.
- viii. Michael Smith explained that there were two types of compensation: Crop compensation and Land Compensation. He mentioned that the company intends to acquire a land width of 25m for which land compensation will be paid to the appropriate owners, however, a Right of Way (ROW) corridor of 9m within the 25m will be valued and compensated for the crops. He explained that because of the company’s planned Alternative Livelihood Projects for affected farmers in future, there will be the need to acquire a minimum land width of 25m. He however emphasized that, for immediate construction purposes, crop compensation will only be paid for 9m of Right of Way.
- ix. Michael Smith mentioned that the pipes for the Phase III of the project, unlike Phase I and II, will be 24inches in diameter, from the initial 20inch. He further explained that pipes classification helps to determine the pipes that should be in an area. He added that this pipe classification is dependent on the population of an area. Michael Smith further cited an example of the pipeline in Takoradi that links the Aboadze Thermal Plant and the power badges. He explained that based on the class of pipes used, it could be within human settlement when the necessary precautions are in place.
- x. Michael Smith said that prior to the commencement of the project, officials from Genser Energy paid a visit to Otumfuo and appealed for his permission and support. Otumfuo in turn pledged his ultimate support and provided Genser Energy a letter to present to paramount chiefs. Michael Smith ended by outlining the planned procedure for the Phase III pipeline project such as the initial Reconnaissance Survey and Pipeline Route Design, Stakeholder Identification, Permitting and Approvals, community engagement, Crop, and land valuations and Compensations. He acknowledged that the scope of the project stakeholder identification will widen, and pleaded with organizations such as the Immigration, District Assemblies, Physical and Works Department, Lands Commission, Police, and Fire Service, Traditional Council, the Media, etc. for their support throughout the project.
- xi. Michael spoke about the construction stages: clearing, reshaping, stringing, welding, trenching, and lowering of the pipes and backfilling. He mentioned that clearing hilly areas usually goes beyond 9m because of the topography of the land. He explained that in situations like this, the overcleared crops will be valued by the land Valuation division and compensated



**STAKEHOLDER ENGAGEMENT WITH ALL DEPARTMENTS OF THE EJJISU MUNICIPAL ASSEMBLY
FOR THE GEGL DAWUSASO – KUMASI PP02 NATURAL GAS PIPELINE PROJECT**

COMMUNITY RELATIONS
(DAWUSASO – KUMASI_PP02_PIPELINE)

21st July, 2021

for. He ended by adding that, Genser Energy will need to acquire lands for Temporary storage of their pipes and lands for the Stations. Here, he appealed to the members that, Genser Energy will need the assistance of both the Assembly and the Traditional Council in the land acquisition.

- xii. Michael Smith opened the floor for questions.
- xiii. Adoi Emmanuel Opong from the Fire Service Department asked about the fire management mechanism employed by Genser to prevent fire explosions and disasters.
- xiv. Michael Smith explained that every station which is approximately 25km apart, has fire alarms, and gas detectors to send signals of any gas leakage to an emergency operations and maintenance team. He added that Genser Energy also has emergency shut-off valves that isolate stations. He further mentioned that all stations have control rooms connected through fiber-optic cables and communication networks to help track and attend to emergency issues along the Right of Way.
- xv. Alli Suleman and Joseph T. Ababio inquired about the mechanism Genser employs to identify project-affected persons to prevent issues of impersonation. Joseph T. Ababio added that there are usually situations where the rightful farm owners give out their farms to others to cultivate. He asked the strategy Genser uses to pay the compensation to these rightful farm owners.
- xvi. Michael Smith explained that Genser consults with the Assembly, the traditional leaders, the securities, and the media for publications in order to reach every project-affected person before valuation to help prevent issues such as impersonation. He continued by stating that Genser Energy's engagement strategy utilizes announcements in the communities usually by the local PA system. He added that Genser is open to suggestions on any other approach to identify project-affected persons. He later invited Kwadwo Nyarko Ababio from the Land Valuation Division of the Lands Commission to explain the strategy the Division to prevent issues of impersonation.
- xvii. Kwadwo Nyarko Ababio explained that the Land Valuation Division after valuation reaches an agreement with both the farm owners and the tenant farmers where they both agree on how the compensation should be paid. He added that the compensation plan usually is similar to how the farm produce is shared after cultivation.
- xviii. Michael Smith added that, based on experience from past projects, the traditional leaders, assembly members, opinion leaders, and committee members usually help identify rightful farm owners and their tenant farmers.
- xix. Frederick S. Lumor advised that Genser Energy should avoid the use of middlemen such as Assembly Members for compensation. He stated that compensation should be paid directly to project-affected persons.
- xx. Felix Boakye Assim and Joseph T. Ababio asked how the Municipal Assembly will financially benefit from the project.
- xxi. Michael Smith explained that what the Municipal Assembly may get is from the bills for the various permit; excavation permitting, business registration permit, working permits, operations permit, and every other necessary permit that Genser will need to acquire from the Assembly for the success of the project.
- xxii. Ali Suleman asked about the CSR package Genser has for project-affected communities apart from compensation.
- xxiii. Michael Smith responded by saying that the company will embark on various Corporate Social Responsibility (CSR) as it has in the past after it carries out needs assessment in the various communities affected by the project. He explained that CSR is in two parts, that is the immediate and the long-term projects. He cited instances of projects that had been undertaken by Genser during Phase I and Phase II. He added that the Alternative Livelihood Projects is an example of a long-term CSR package. He explained further by adding that, this project unlike the gas pipeline project gives more opportunities to affected farmers since it is agriculture-based and does not require skilled labor. He continued by citing instances where a land size of 100m has been acquired by Genser in some communities that were affected during the Phase II project for the planting of



**STAKEHOLDER ENGAGEMENT WITH ALL DEPARTMENTS OF THE EJJSU MUNICIPAL ASSEMBLY
FOR THE GEGL DAWUSASO – KUMASI PP02 NATURAL GAS PIPELINE PROJECT**

COMMUNITY RELATIONS
(DAWUSASO – KUMASI_PP02_PIPELINE)

21st July, 2021

Passion Fruits. He mentioned that this Passion Fruit pilot project will provide jobs to about 300 affected persons in its first year.

xxiv. Noldy Amankwaa asked if project-affected persons will be compensated before construction.

xxv. Michael Smith explained that compensations are issued after the Land Valuation Report is received. He mentioned that Genser Energy usually compensates project-affected persons before construction begins. He added that since bank drafts are the mode of compensation, there are instances of bank delays. He further explained that Genser usually appeals to the project-affected farmers to allow work to go on because of the huge economic loss that comes with machines being idle.

xxvi. Robert Asare asked about the compensation package for the traditional leaders since they are the custodians of the land.

xxvii. Michael Smith explained that, based on the preliminary land search done, most of the affected lands are stools lands. He added, however, there are individual landowners. He further explained that land compensation will be paid to the rightful landowners which include the stool. He continued by adding that, Genser Energy usually assists the traditional leaders in their community-based projects. He emphasized that it was necessary to have the backing of the leaders in the affected communities hence Genser Energy will try its best to gain to support their initiatives.

xxviii. Isaac Okyere asked to know the duration of the Dawusao-Kumasi Natural Gas Pipeline Project and the number of stations that will be situated in the Ejisu Municipal.

xxix. Michael Smith mentioned that the project had already begun and is expected to be completed by the first quarter of 2022. Michael Smith again mentioned that there will be one Station in the Ejisu Municipal and about four Stations for the entire 102km pipeline.

xxx. Isaac Gama asked how Genser Energy will cross these water bodies and roads without causing any damage.

xxxi. Michael Smith explained that there were several ways of crossing water bodies based on their size determined by the hydrological data collected. He further added that GEGL pipeline engineers adopt three strategies when crossing water bodies. These are the horizontal directional drilling, diversion for large water bodies, whereas pipe culverts may be used for small streams. He emphasized that permits are approved by the Water Commission and the Environmental Protection Agency ahead of such construction activities. He cited an example in the Phase II project where the pipeline was buried in the Ankobra River which is about 50m wide. He further explained that the river was diverted, pipeline buried in the bed of the river, and the river returned to its natural flow after burying the pipes. Michael Smith again mentioned that there are strategies adopted for road and water crossings. These are directional drilling and open-cut methods depending on the type of road, the nature of the road, and the community development plan within the area.

xxxii. Emmanuel C. Coffie suggested that there might be areas where affected lands have an approved planning scheme. Therefore Genser Energy should provide the Assembly a cadastral plan indicating the pipeline route to prevent situations where the Assembly.

xxxiii. Michael Smith agreed to this and stated that Genser Energy will provide the necessary documents to the Assembly.

xxxiv. Isaac Gama inquired about measures put in place for the identification of buried pipelines.

xxxv. Michael Smith explained that emergency signposts and marker poles are installed at regular intervals for pipeline identification purposes.



**STAKEHOLDER ENGAGEMENT WITH ALL DEPARTMENTS OF THE EJJSU MUNICIPAL ASSEMBLY
FOR THE GEGL DAWUSASO – KUMASI PP02 NATURAL GAS PIPELINE PROJECT**

COMMUNITY RELATIONS
(DAWUSASO – KUMASI_PP02_PIPELINE)

21st July, 2021

xxxvi. Joseph Adu-Mensah stated that the pipes are made of steel and since metals corrode when in contact with the soil, he inquired the mechanism Genser Energy will adopt to prevent corrosion.

xxxvii. Michael Smith explained that the pipes (s65 steel) which will be used for the pipeline project have an indefinite lifespan, often more than 100 years,, and are well coated to prevent corrosion.

xxxviii. Collins Owusu inquired on how far the pipeline will be from human settlement.

xxxix. Michael Smith mentioned that in designing the pipeline route, engineers make sure the pipeline is at least 200m away from human settlement. He informed members present that, that the proximity of the pipeline Right of Way to areas of the human settlement will further inform the decision of the type of pipes to use based on a pipeline classification technique.

xl. Robert Boakye asked if the ROW can be used for commercial purposes.

xli. Michael Smith explained that the ROW can be used as an access route by farmers to their farmlands and the occasional conveying of farm produce.

xlii. Margaret Moo inquired about the replacement of affected lands.

xliii. Kwadwo Nyarko Ababio explained that compensations based on the current value of affected lands will only be paid.

xliv. Robert Boakye inquired to know what information Assembly members were to communicate to their communities.

xlv. Michael Smith explained Assembly members should communicate to their communities about the Natural Gas Project. He charged them to explain clearly the importance of the project, the LVD planned procedures, compensation, and the stages of construction.

xlvi. Without any further issues to discuss, Joseph. T. Ababio moved the motion for the closure of the meeting. The meeting ended at 11:53 am after a closing prayer by Emmanuel C. Coffie.

■ **Action Items**

- i. DCD on behalf of the Ejisu District assembly pledged his support for the project and requested that the youth be employed during the project he believes that sustainable energy brings about development.
- ii. Cadastral plans have to be submitted to the Physical planning and works department.
- iii. Assembly members will help with setting up meetings in their various communities.

PICTURES OF THE MEETING ARE SHOWN BELOW



Figure 1 Michael Smith explaining the stages of construction



Figure 2 Kwadwo Nyarko Ababio from the Lands Valuation Division, educating the audience on Valuation and Compensation related matters.



Figure 3 Michael Smith briefing the audience on the Dawusaso-Kumasi Phase III Natural Gas Pipeline Project



	STAKEHOLDER ENGAGEMENT WITH ALL DEPARTMENTS OF THE EJJISU MUNICIPAL ASSEMBLY FOR THE GEGL DAWUSASO – KUMASI PP02 NATURAL GAS PIPELINE PROJECT	
	COMMUNITY RELATIONS (DAWUSASO – KUMASI_PP02_PIPELINE)	21 st July, 2021

Figure 4 Michael Smith showing a copy of the cadastral map that indicates the affected communities

MEETING ATTENDANCE SHEET

DATE: 21-07-2021 COMMUNITY: EJISU
 VENUE: CONFERENCE HALL, EJSU HEALTH DIRECTORATE
 AGENDA: STAKEHOLDER ENGAGEMENT OF GAS PIPELINE PROJECT

SN	NAME	COMMUNITY	CONTACT	SIGNATURE
1	Frederick S. Lumor	EJISU District Police	0244472592 jawasy.1@yahoo.com	
2	LINDA ANIMAH	EJISU MUNICIPAL NADMO DIRECTOR	lindaanimah@gmail.com 0558116937	
3	Emmanuel C. Copie	EJSU Physical & Sports	0808478837	
4	Justinu Mao	EJSU MUNICIPAL Social welfare	0541346580	
5	Robert Boaky	Hon Kwapa	boakyrobert90@gmail.com 0243-234139	
6	ISAAC OKTERE	COMMUNITY DEVT OFFICER	oktereisaac51@gmail.com 0244185199	
7	ALI SULEMANA	DEVT PLANNING OFFICER	0246311732 alisulemana73@gmail.com	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

EMMANUEL OPOKU MENSAH

ALFRED NII BOYE LAMLEY

COMMUNITY RELATIONS OFFICER

WITNESSED BY

SIGNATURE/THUMBPRINT

SIGNATURE/THUMBPRINT

MEETING ATTENDANCE SHEET

DATE: 21-07-2021 COMMUNITY: ESLU
 VENUE: CONFERENCE HALL, GHSU HEALTH DIRECTORATE
 AGENDA: STATEHOLDER ENGAGEMENT FOR THE DANLAWASO-ICUKASI GAS PIPELINE PROJECT

SN	NAME	COMMUNITY	CONTACT	SIGNATURE
8	Dr. David Anambam	Ejisu Municipal Dept of Agric	024196892 danambam@yahoo.com	
9	Felix BOAKYE ASSIM	EJISU MUNI ASSEMBLY (MBA)	felixboakyejassim@gmail.com 0276440958	
10	Joseph. T. Agyabuo	Ejisu Assembly (MCD)	abagyabuo@gmail.com 0243272915	
11	Ernest N. Boakye	Ejisu M/A M.E.HO	boakyeer@gmail.com 0246445261	
12	Gama Isaac	EJISU m/A MFO	iketee@gmail.com 0247846997	
13	Joseph Adu-Mensah	Head of WORKS Dept.	0209130782 afelanku@gmail.com	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

EMMANUEL OPOKU MENSAH

COMMUNITY RELATIONS OFFICER

SIGNATURE/THUMBPRINT

ALFRED NUBUYE LANSKY

WITNESSED BY

SIGNATURE/THUMBPRINT

MEETING ATTENDANCE SHEET

DATE: 21-07-2021 COMMUNITY: EJSU
 VENUE: CONFERENCE HALL, EJSU HEALTH DIRECTORATE
 AGENDA: STATISTICAL ENGAGEMENT FOR THE DANUSASO-KEMASI GAP PIPELINE PROJECT

SN	NAME	COMMUNITY	CONTACT	SIGNATURE
14	ADDI Emmanuel Oppong	EJSU Fire Station	0548203981 oppongema.ak@gmail.com	
15	Hon. Nolly Amankwaa	Achinakrom Assembly mem	Nolly amankwaa@gmail.com 0242954799	
16	Hon Richard Asare	Sompoh/Dednako Assemblyman	024204742	
17	Kwasi Nkrumah ABABIO	LVD Kumasi	krumahkwasi@gmail.com 0208114750	
18	Daniel Offei	Urban Roads	0243070275 dgaeyedo@gmail.com	
19	Alfred Nuroye Lantey	aslantey18@gmail.com immigration	0243471578	
20	Serwaa Mercy	KWASO	0242369569	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

EMMANUEL OPOING OPPONG

COMMUNITY RELATIONS OFFICER

SIGNATURE/THUMBPRINT

ALFRED NUROYE LANTAY

WITNESSED BY

SIGNATURE/THUMBPRINT

MEETING ATTENDANCE SHEET

DATE: 21-07-2021 COMMUNITY: ESLSU
 VENUE: CONFERENCE HALL, ESLSU HEALTH DIRECTORATE
 AGENDA: STAKEHOLDER ENGAGEMENT FOR THE DAKURASU - KUMASI GAP PIPELINE PROJECT

SN	NAME	COMMUNITY	CONTACT	SIGNATURE
21	Collins Owusu	Kwasa-Kwasa	0542952577	
22	Jan Beatrice S Derkyi	Ejisu Assembly	0208164955	
23	Michael Smith	Community Relations	0241418152	
24	Samuel O. Mensah	Community Relations	0524346755	
25	Hilda O. Yeboah	Community Relations	0551128621	
26	Blaise Yendemeh	Community Relations	0585816109	Blaise Yendemeh
27	Samuel Nimful	Community Relations	0544600075	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

EMMANUEL OPOLED-MENSAH

COMMUNITY RELATIONS OFFICER

SIGNATURE/THUMBPRINT

Isaac Ogyere

WITNESSED BY

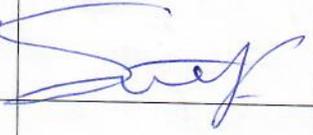
SIGNATURE/THUMBPRINT

MEETING ATTENDANCE SHEET

DATE: 21-07-2021 COMMUNITY: EJLSU

VENUE: CONFERENCE HALL, EJLSU HEALTH DIRECTORATE

AGENDA: STAKEHOLDER ENGAGEMENT FOR THE DAWU SASO-ICUMAPI GAP PIPELINE PROJECT

SN	NAME	COMMUNITY	CONTACT	SIGNATURE
28	Frank Debrish	Community Relations	0247696009	
29	Yan Barimah	Community Relations	0547011781	
30	Kwamey Ernest	Appraisal Member	0549258886	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

FRANCIS OPOKU MENSAH

COMMUNITY RELATIONS OFFICER

SIGNATURE/THUMBPRINT

ISAAC OJERE

WITNESSED BY

SIGNATURE/THUMBPRINT



**STAKEHOLDER ENGAGEMENT WITH ONWE COMMUNITY FOR THE GEGL DAWUSASO – KUMASI
PP02 NATURAL GAS PIPELINE PROJECT**

COMMUNITY RELATIONS
(DAWUSASO – KUMASI_PP02_PIPELINE)

26th July, 2021

Venue: Onwe Community Centre, Onwe

Date: Monday, 26th July 2021

Time: 1:00 pm

Members Present: 73

Genser Energy Ghana Limited (“GEGL”)

NAME	ORGANISATION	INITIALS	DEPARTMENT/WORK
Yaw Barimah Bonsu	Genser Energy	YBB	Community Relations
Frank Debrah	Genser Energy	FD	Community Relations
Blaise Yendemeh	Genser Energy	BY	Community Relations
Emmanuel Opoku Mensah	Genser Energy	EOM	Community Relations

Traditional leaders

NAME	COMMUNITY	INITIALS	DEPARTMENT/WORK
Nana Osei Kwabena II	Onwe	NOK II	Onwe hene
Nana Agyeiwaa Kodie	Onwe	NAK	Queen mother
Nana Kofi Gyimah	Onwe	NKG	Gyaasehne
Nana Daniel Gambrah	Onwe	NDG	Chief’s brother
Nana Aduse Poku	Onwe	NAP	Abusua Payin

Community Leaders

NAME	COMMUNITY	INITIALS	DEPARTMENT/WORK
Hon. Eric Aning	Onwe	EA	Assemblyman
Cris –Cross Antwi Adjei	Onwe	CAA	Committee Chairman
Philip Ntim	Onwe	PN	Unit Committee
Philip Sarfo	Onwe	PS	Unit Committee

Community Members

A list of all community members present at the community engagement can be found in the attendance sheet

▪ **Introduction**

Genser Energy Ghana Limited carried out a stakeholder engagement meeting with Onwe community members to introduce the GEGL Phase III Natural Gas Project (NGP), which will see the construction of a 102km pipeline infrastructure from Dawusaso to Kumasi in the Ashanti Region.

▪ **Presentation of Issues**

- I. The meeting started with an opening prayer from Nana Aduse Poku at 1:00 pm.
- II. Yaw Barimah Bonsu thanked the community folks for giving GEGL officials to meet and have a discussion. He introduced GEGL officials to the community and gave an overview of GEGL operations. Yaw Barimah Bonsu said Genser Energy is an Independent Power Producer (IPP) that specializes in the building of natural gas pipelines, and power plants for the energy needs of mining companies and industries. He mentioned that some of the mining companies and industries Genser have as clients were Uniliver, Goldfields Tarkwa and Damang, Akyempem Golden Star, and Edikan Perseus. He continued by adding that, following the

	STAKEHOLDER ENGAGEMENT WITH ONWE COMMUNITY FOR THE GEGL DAWUSASO – KUMASI PP02 NATURAL GAS PIPELINE PROJECT	
	COMMUNITY RELATIONS (DAWUSASO – KUMASI_PP02_PIPELINE)	26 th July, 2021

Government of Ghana’s decision to relocate the Ameri Power Plant from Takoradi to Kumasi, the Government has charged Genser Energy to assist in the construction of a natural gas pipeline infrastructure from Dawusaso to Kumasi, specifically Domeabra, which is approximately 102km long, for the transportation of natural gas for the Ameri Power Plant.

- III. Yaw Barimah Bonsu explained the pipeline will affect crops, lands, and structures hence the need for Genser Energy to engage all persons within these project-affected areas to introduce the project to them. He further explained that these affected crops, lands, and structures will be compensated for. He mentioned that the Land Valuation Division of the Lands Commission of Ghana has been mandated by the law of Ghana to carry out valuation for projects such as the natural gas pipeline project. This valuation team will start the valuation of the affected crops, lands, and structures after the flagging of the pipeline route.

- IV. Yaw Barimah Bonsu mentioned that before the valuation exercise by the Land Valuation Division, an announcement will be carried out in the affected communities for farmers to be present during valuation to ensure transparency. He added that there were two types of compensation: Crop compensation and Land Compensation. He continued by explaining that the company intends to acquire a land width of 25m for which land compensation will be paid to the appropriate landowners with the help of the traditional council in identifying the rightful owners, however, a Right of Way (ROW) corridor of 9m within the 25m will be valued and compensated for the crops and this crop compensation is paid to the farm owners or tenant based on the arrangement by both parties. He further explained that because of the company’s planned Alternative Livelihood Projects for affected farmers to be embarked on in the future, there will be the need to acquire a minimum land width of 25m. He however emphasized that, for immediate construction purposes, the crop compensation will only affect 9m of Right of Way. He mentioned this Alternative Livelihood project provides jobs opportunities to a large number of affected farmers, unlike the pipeline project due to its technical nature. Yaw Barimah Bonsu ended by stating that Genser Energy embarks on various Corporate Social Responsibilities (CSR) as it has in the past after it carries out needs assessment in the various communities affected by the project. He explained that CSR is in two parts, that is the immediate and the long-term CSR projects. He mentioned examples of projects that Genser Energy has undertaken during its previous pipeline project.

- V. Yaw Barimah Bonsu opened the floor for questions.

- VI. Opoku Nketiah asked the lifespan of the gas pipe

- VII. Yaw Barimah Bonsu responded that the pipes are capable of lasting over 100 years and was made with strong steel.

- VIII. Cecilia Amoah also asked who was entitled to the land compensation.

- IX. Yaw Barimah Bonsu answered that majority of the lands in the Ashanti region are stool lands, however, to determine rightful owners of the land there would be a collaboration between the lands commission and the stool to identify owners of lands so the appropriate compensations would be paid.

- X. Kojo Appiah, a farmer asked whether the compensations would be paid before Right of Way clearing or after

- XI. In response, Yaw Barimah Bonsu said compensations would be paid before the Right of Way is cleared. However, sometimes there are incidences of over clearance. He said such cases compensations are paid for the additional meters cleared

- XII. Mary Dufie inquired that would the community members be employed on the project

- XIII. In response, YBB said, several communities would be affected by this gas pipeline. He added that an estimated figure of over 80- 100 communities would be affected. In all community engagement, every community strive to get its members to be employed on the project which would be impossible for GEGL. In that regard, only a few of about 2-3 people can be employed on the projects. He mentioned that GEGL would be outsourcing help from foreigners and they would be dealing with the majority of the technical things. He said, but jobs like security and unskilled labourer type of job would be taken from communities affected.

	STAKEHOLDER ENGAGEMENT WITH ONWE COMMUNITY FOR THE GEGL DAWUSASO – KUMASI PP02 NATURAL GAS PIPELINE PROJECT	
	COMMUNITY RELATIONS (DAWUSASO – KUMASI_PP02_PIPELINE)	26 th July, 2021

- XIV. Ama Manu asked that in future how would community members know that there was a gas pipe buried years back.
- XV. In response, YBB said there would be a signpost and restriction notice post at vantage points on the Right of Way. He mentioned that from time to time GEGL has teams that patrol on the ROW to check there was no harmful activity or heavy trucks are not passing on the ROW. He added that farmers could use the ROW to access their farms. He also indicated that when the pipes are buried, there are caution tapes at various layers underground. He added that it caution people there was a highly inflammable gas pipeline beneath.
- XVI. Agnes Akyea also asked what kind of crops would be planted under the Alternative Livelihood Programme.
- XVII. Yaw Barimah Bonsu answered that it depends on the feasibility study. He said based on the report, GEGL would determine the kind of crop to produce.
- XVIII. Ama Agyemang asked in case the ROW passes through her mud house, what does she do?
- XIX. YBB said, GEGL has designed the ROW possibly not to pass through structures but in such circumstances, GEGL would compensate the affected person.
- XX. Joyce Kontor asked if farmers can farm in their remaining farms.
- XXI. Yaw Barimah Bonsu stated that farmers can farm in their remaining farms. However, farmers will be educated on how to live with the gas to prevent fire outbreaks after construction. He added that people from the affected communities will be employed and trained to monitor the ROW together with Genser Energy’s Operations and Maintenance team.
- XXII. Joyce Kontor asked a follow-up question to know when the crops on the remaining 16m of the land width of 25m acquired be compensated for.
- XXIII. Yaw Barimah Bonsu explained that the crop compensation for the remaining 16m will be paid when the alternative livelihood farming project begins.
- XXIV. Beatrice Buakyewaa asked what were some of the post-construction effects of the projects
- XXV. Frank Debrah explained the challenges of the pipeline have to do with flooding and swampy wetlands. However, the company has in place a grievance management mechanism it adopts in the resolution of such issues. He added damaged crops are valued and compensated for.
- XXVI. Juliana Owusu asked whether all crops are priced the same for crop compensation?
- XXVII. Yaw Barimah Bonsu answered that the land valuation team would be valuing the crops when they visit their farms. He added that the value of the crop varies. He said the price of a cocoa plant and the price of pepper would have different value, therefore when the LVD team value crops, the standardized valuation for that crop would be what GEGL would pay to the farmers.
- XXVIII. With no outstanding issues, the meeting was brought to a close
- XXIX. A closing prayer was said by Linda Akyaa at 3:00 pm



**STAKEHOLDER ENGAGEMENT WITH ONWE COMMUNITY FOR THE GEGL DAWUSASO – KUMASI
PP02 NATURAL GAS PIPELINE PROJECT**

COMMUNITY RELATIONS
(DAWUSASO – KUMASI_PP02_PIPELINE)

26th July, 2021

▪ **Action Items**

- I. Yaw Barimah Bonsu informed the community should they see surveyors flagging in their farms they should not be alarmed
- II. Nana Osei Kwabena II urged GEGL to considered their community folks for employment under the Gas Pipeline project.

PICTURES OF THE MEETING ARE SHOWN BELOW



Figure 1 Yaw Barimah giving an overview of Genser operations



Figure 2 Frank explaining the post-construction effect of the pipeline.



Figure 3 Community folks asking questions

MEETING ATTENDANCE SHEET

DATE: 25/07/17 COMMUNITY: Oruwa VENUE: Community Centre
 AGENDA: Community engagement for Daw-Kun Pipeline Project

SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
	Aug Campi Domingo	Farmer	05347 5752	
	Arthur Augustine	Carpenter	0245 3818 21	
	Atokuba Pinaung	Farmer	—	
	Cecilia Amogh	Farmer	—	
	Henry Kofi Gyimesi	Gyasebene	024429 26 70	Cur
	Henry Aduse Poku	Oruwa	0543 658050	
	Henry Gambaeh Daniel	Oruwa	024445 61 75	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Humand Mersah

COMMUNITY RELATIONS OFFICER

SIGNATURE/THUMBPRINT

Abu Eric Amung

WITNESSED BY

SIGNATURE/THUMBPRINT

MEETING ATTENDANCE SHEET

DATE: 26/07/21 COMMUNITY: Onne VENUE: Community Centre
 AGENDA: Community engagement on Dew-Kum Pipeline Project

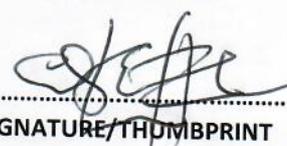
SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
	Portia Anumwa	Trader	0244655784	
	Cecilia Ampotoz	Farmer	—	
	Mary Dufie	Farmer	—	
	Kojo Apish	Farmer	—	
	Hannah Konech Anem	Farmer	—	
	Dorcas Antwi	Farmer	0243026387	
	Maxwell Mensch	Farmer	0244714576	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Emmanuel Mensch
 COMMUNITY RELATIONS OFFICER


 SIGNATURE/THUMBPRINT

Hon. Eric Anning
 WITNESSED BY


 SIGNATURE/THUMBPRINT

MEETING ATTENDANCE SHEET

DATE: 26/07/21 COMMUNITY: Ornu VENUE: Community Centre
 AGENDA: Community engagement on New-Kum Pipeline Project

SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
	John Dankwah	Building technician	0241147850	
	Grace Atoyire	Electrician	0546571246	
	Florence Achiss	Trader	0547043799	
	Marfo Samuel	Trader	0246252435	
	Alkosna Brago	Trader	—	
	Mercy Adomaku	Farmer	0542142703	
	Issac Antwi	Shore market	—	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Emmanuel Maresch

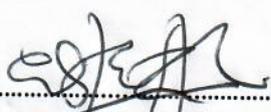
COMMUNITY RELATIONS OFFICER



SIGNATURE/THUMBPRINT

Hon. Eric Aning

WITNESSED BY



SIGNATURE/THUMBPRINT

at 10.
ve Topic, agenda was

MEETING ATTENDANCE SHEET

DATE: 26/07/21 COMMUNITY: Onwe Community VENUE: Community Centre
 AGENDA: Community engagement on Daw-Kem Pipeline Project

SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
	Mensah Emmanuel	Community relations	0804346755	
	Blaise Yendembu	Community relations	855 381 009	
	Frank Deborah	Community relations	0247696609	
	Taw Benjamin Benny	Community relations	0547011761	
	Hannah Agbei	Farmer	0591646685	
	Patricia Kissinwa	Farmer	0244194574	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Emmanuel Mensah

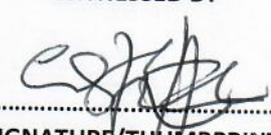
COMMUNITY RELATIONS OFFICER



SIGNATURE/THUMBPRINT

Hon. Eric Anning

WITNESSED BY



SIGNATURE/THUMBPRINT

MEETING ATTENDANCE SHEET

DATE: 26/07/21 COMMUNITY: Onwe VENUE: Chief Palace
 AGENDA: Community engagement for Dow - Kum Pipeline Project

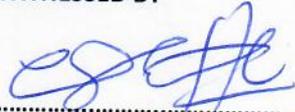
SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
	Beatrice Bwkyewss	Onwi	055043433	
	Anna Agyeaman	Onwi	0557688655	
	Theresah Krag	Onwi	—	
	Afue Adumbi	Onwi	0545424343	
	Agnes Akyea	Onwi	0244194544	
	Kusi weh Pabiqa	Onwi	0244194544	
	Anna Ampoasa	Onwi	—	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Immanuel Merah
 COMMUNITY RELATIONS OFFICER

Hon. Eric Amang
 WITNESSED BY


 SIGNATURE/THUMBPRINT


 SIGNATURE/THUMBPRINT

the following pers
 /Agenda was a

ment ex rcise

MEETING ATTENDANCE SHEET

DATE: 26/07/21 COMMUNITY: Onwe VENUE: Onwe Palace
 AGENDA: Community engagement for New-Kum Pipeline Project

SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
	Mary Gyamfi	Onwi	0552278698	
	Margaret Serey	Onwi	—	
	Morice Mankah	Onwi	—	
	Anna Mankah	Onwi	—	
	Joyce Kontor	Onwi	0542754026	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Emmanuel Mankah
 COMMUNITY RELATIONS OFFICER

[Signature]
 SIGNATURE/THUMBPRINT

Mr. Eric Anning
 WITNESSED BY

[Signature]
 SIGNATURE/THUMBPRINT

MEETING ATTENDANCE SHEET

DATE: 26/07/21 COMMUNITY: Dumbe VENUE: Chrys, Pelaco
 AGENDA: Community engagement for Daw-Kum Pipeline Project

SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
1	Hon. Eric Aming	Assemblyman	020 777 9777	
2	Mr. C. Cross Agyei	Omni Committee Chairman	0277 201949 0244 674781 020 8325295	
3	Mr. Philip Abiam	Unit Committee Zonal Chairman	0248136608 0244 737780	
4	Mr. Philip Sarfo	Committee Member	0240 731280	
5	Mans Kwadwo Tuffour	Omni	0551236600	
6	Kwame Agye	Omni	0547 235569	
7	Vida Afriyie	Omni	0594217378	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Samuel Mensah
 COMMUNITY RELATIONS OFFICER

SIGNATURE/THUMBPRINT

Hon. Eric Aming
 WITNESSED BY

SIGNATURE/THUMBPRINT

MEETING ATTENDANCE SHEET

DATE: 26/07/21 COMMUNITY: Onwe VENUE: chiefs Palace
 AGENDA: Community engagement for Dow-Kum Pipeline Project

SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
1	Mama Sei Kwabeng II	Onwi here	0244814986	
2	Mama Ayeyiwa Kodie	Queen mother	0244974784	
3	Mama Kofi Gyimesi here	Onwi Gyimesi here	0244 292690	
4	Mama Daniel Gamsrah	chief Brother	0244 456175	
5	Mama Aduse Poky	Abusee panin	0543658050	
6	AKwesi Akhymah	Onwi	0592185787	
7	op. Poky rekatis	Onwi	0552565461	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Samuel Maseh
 COMMUNITY RELATIONS OFFICER

SIGNATURE/THUMBPRINT

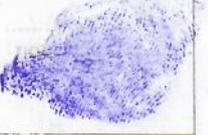
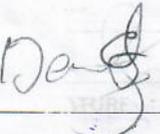
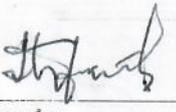
Hon. Eric Aming
 WITNESSED BY

SIGNATURE/THUMBPRINT

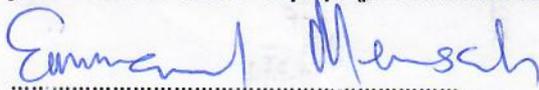
Community Centre

MEETING ATTENDANCE SHEET

DATE: 26/07/2021 COMMUNITY: Onuri Community VENUE: Onuri Palace
 AGENDA: Community engagement for New-Kum Pipeline Project

SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
	Manny Amma ^{Felicia}	Onuri	0540553937	
	Onuri Felicia	Onuri	0248504979	
	Manny Gyamfi	Onuri	0552278298	
	Amma Manny	Onuri	—	
	Daniel Ayeei	Onuri	0546877326	
	Kofi Anyangah Minka	Onuri	0594647845	
	Nana Kwadwo Tuffour	Onuri	05541236600	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.



COMMUNITY RELATIONS OFFICER


SIGNATURE/THUMBPRINT

Hon. Eric Aring

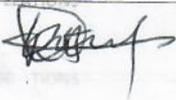
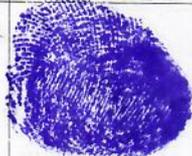
WITNESSED BY


SIGNATURE/THUMBPRINT

Community Centre

MEETING ATTENDANCE SHEET

DATE: *26/07/2021* COMMUNITY: *Onni Community* VENUE: *Onni Palace*
 AGENDA: *Community engagement for Daw-Kun Pipeline Project*

SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
	<i>Linda Akya</i>	<i>Onni</i>	<i>0241 053466</i>	
	<i>R. K. Acheampong</i>	<i>Onni</i>	<i>0248 242260</i>	
	<i>Juliana Onusi</i>	<i>Onni</i>	<i>0249139636</i>	
	<i>Joyce Kerton</i>	<i>Onni</i>	<i>0542 754026</i>	
	<i>Afia Adubi</i>	<i>Onni</i>	<i>0545 424243</i>	
	<i>Mary Agye Kum</i>	<i>Onni</i>	<i>0243964485</i>	
	<i>Aunna Aunsa</i>	<i>Onni</i>	<i>0592170215</i>	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Emmanuel Mensah

COMMUNITY RELATIONS OFFICER



SIGNATURE/THUMBPRINT

Hon. Eric Aning

WITNESSED BY



SIGNATURE/THUMBPRINT

MEETING ATTENDANCE SHEET

DATE: 26/07/21 COMMUNITY: Onwe VENUE: Onwe Palace
 AGENDA: Community engagement for Daw-Kum Pipeline Project

SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
	Menesh Emmanuel	Community relations	0504896755	
	Blaise Fendemech	Community relations	055 381 609	
	Frank Debrish	Community relations	0297696609	
	Taw Benimah Bawa	Community relations	054701721	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Emmanuel Menesh

COMMUNITY RELATIONS OFFICER


SIGNATURE/THUMBPRINT

Hon. Eric Anning

WITNESSED BY


SIGNATURE/THUMBPRINT



COMMUNITY ENGAGEMENT AT DENYASE FOR THE GEGL DAWUSASO – KUMASI PP02 NATURAL GAS PIPELINE PROJECT

COMMUNITY RELATIONS
(DAWUSASO – KUMASI_PP02_PIPELINE)

29th July, 2021

Venue: Denyanase Community Centre

Date: Thursday, 29th July 2021

Time: 07:50 am

Members Present: 47

Genser Energy Ghana Limited (“GEGL”)

NAME	ORGANISATION	INITIALS	DEPARTMENT/WORK
Onesimos Barimah Bonsu	Genser Energy	OBB	Legal and Compliance Manager
Michael Smith	Genser Energy	MS	Community Relations Superintendent
Eubank Arthur	Genser Energy	EA	Legal and Compliance
Emmanuel Opoku Mensah	Genser Energy	EOM	Community Relations
Hilda Obiri-Yeboah	Genser Energy	HOY	Community Relations
Richard Osei	Genser Energy	RO	Media Relations

Community Leaders

NAME	ORGANISATION	INITIALS	DEPARTMENT/WORK
Awuah Frank	Denyase Community	AF	Assemblyman
Dwumah Francis	Denyase Community	DF	Farmer
Samuel Adjei	Denyase Community	SA	Farmer
Baffour Asare	Denyase Community	BA	Farmer
Felix Tuffour	Denyase Community	FT	Farmer
Kwame Antwi	Denyase Community	KA	Farmer
Osei Kwame	Denyase Community	OK	Farmer
Awuah Frank	Denyase Community	AF	Farmer
Nana Oppong	Denyase Community	NA	Farmer
Afful Rita	Denyase Community	AR	Committee Member

Members Present

A list of all community members present for the community engagement at Denyase can be found in the attendance sheet.

▪ **Introduction**

Genser Energy Ghana Limited carried out a community engagement with the people of Denyase to introduce the GEGL Phase III Natural Gas Project (NGP), which will see the construction of a 102km pipeline infrastructure from Dawusaso to Kumasi in the Ashanti Region.

▪ **Presentation of Issues**

i. The meeting started at exactly 07:50 am with a prayer by Afful Rita.

	COMMUNITY ENGAGEMENT AT DENYASE FOR THE GEGL DAWUSASO – KUMASI PP02 NATURAL GAS PIPELINE PROJECT	
	COMMUNITY RELATIONS (DAWUSASO – KUMASI_PP02_PIPELINE)	29 th July, 2021

- ii. Eubank Arthur thanked members present and after introducing the team from Genser, he went on to present an overview of the operations and projects embarked by Genser Energy to date. He mentioned that Genser Energy is an Independent Power Producer (IPP) that specializes in the building of natural gas pipelines, and power plants for the energy needs of mining companies and industries. He continued by adding that, following the Government of Ghana’s decision to relocate the Ameri Power Plant from Takoradi to Kumasi, the Government has charged Genser Energy to assist in the construction of a natural gas pipeline infrastructure from Dawusaso to Kumasi, specifically Domeabra, for the supply of natural gas to the Ameri Power Plant. He stated that Genser Energy has a pipeline network of 320km which is mainly in the Western Region, Western North Region, Central Region, and a small part in the Ashanti Region, precisely Dawusaso.
- iii. Eubank Arthur, after his brief introduction, handed over to Emmanuel Opoku Mensah for a detailed presentation regarding the compensation and the stages of construction.
- iv. Emmanuel Opoku Mensah again thanked members present and went on to explain the pipeline will affect crops, lands, and structures hence the need for Genser Energy to engage all persons within these project-affected areas to introduce the project to them. He further explained that these affected crops, lands, and structures will be compensated for. He mentioned that the Land Valuation Division of the Lands Commission of Ghana has been mandated by the law of Ghana to carry out valuation for projects such as the natural gas pipeline project. This valuation team will start the valuation of the affected crops, lands, and structures after the flagging of the pipeline route.
- v. Emmanuel Opoku Mensah mentioned that before the valuation exercise by the Land Valuation Division, an announcement will be carried out in the affected communities for farmers to be present during valuation to ensure transparency. He added that there were two types of compensation: Crop compensation and Land Compensation. He continued by explaining that the company intends to acquire a land width of 25m for which land compensation will be paid to the appropriate landowners with the help of the traditional council in identifying the rightful owners, however, a Right of Way (ROW) corridor of 9m within the 25m will be valued and compensated for the crops and this crop compensation is paid to the farm owners or tenant based on the arrangement by both parties. He further explained that because of the company’s planned Alternative Livelihood Projects for affected farmers to be embarked on in the future, there will be the need to acquire a minimum land width of 25m. He however emphasized that, for immediate construction purposes, the crop compensation will only affect 9m of Right of Way. He mentioned this Alternative Livelihood project provides jobs opportunities to a large number of affected farmers, unlike the pipeline project due to its technical nature. He continued by stating that Genser Energy embarks on various Corporate Social Responsibilities (CSR) as it has in the past after it carries out needs assessment in the various communities affected by the project. He explained that CSR is in two parts, that is the immediate and the long-term CSR projects. He mentioned examples of projects that Genser Energy has undertaken during its previous pipeline project.
- vi. Michael Smith opened the flow for questions.**
- vii. Dwumah Francis wanted clarification on the width of the land acquired and the ROW.
- viii. Michael Smith explained that there were two types of compensation: Crop compensation and Land Compensation. He continued by explaining that the company intends to acquire a land width of 25m for which land compensation will be paid to the appropriate landowners with the help of the traditional council in identifying the rightful owners, however, a Right of Way (ROW) corridor of 9m within the 25m will be valued and compensated for the crops and this crop compensation is paid to the farm owners or tenant based on the arrangement by both parties
- ix. Baffour Asare asked where exactly the pipeline will pass in their community.

	COMMUNITY ENGAGEMENT AT DENYASE FOR THE GEGL DAWUSASO – KUMASI PP02 NATURAL GAS PIPELINE PROJECT	
	COMMUNITY RELATIONS (DAWUSASO – KUMASI_PP02_PIPELINE)	29 th July, 2021

- x. Michael smith explained that based on the preliminary survey and the cadastral plan the company has, it is indicated that the pipeline will affect the Denyase community. He added that however the exact pipeline route will be identified after flagging the pipeline route.
- xi. Samuel Adjei asked if crops will be valued based on their sizes.
- xii. Michael smith explained that the Land Valuation Division determined the rate of every crop depending on the sizes and types of crops. He added that this crop rate will be provided for the project-affected farmers before compensations are paid.
- xiii. Felix Tuffour asked if Genser Energy will employ people from the community for the construction of the pipeline.
- xiv. Onesimos informed the house about Genser Energy’s commitment to local employment and cited examples from its past projects. He explained that due to the technical nature of the pipeline construction. The company employes expatriates for pipeline construction. However, these expatriates appoint people from the community to assist them. He further explained that the alternative livelihood initiative which does not require skilled labor tends to employ a larger number of people, unlike pipeline construction. He added that the company has an insurance package for where the company assists these students with school fees, trains them through internships, and employs them after graduation.
- xv. Kwame Antwi asked to know if the Land Valuation Division will use a GPS machine for the crop enumeration or crops will be counted.
- xvi. Michael Smith explained that the Land Valuation Division uses both techniques in the crop enumeration exercise depending on the farm size and how predominant the crop is on the farm
- xvii. Osei Kwame asked if the pipeline will traverse in areas of human settlement.
- xviii. Michael Smith explained that in designing the pipeline route, engineers make sure the pipeline is at least 200m away from human settlement. However, he informed farmers present that the proximity of the pipeline Right of Way to areas of human settlement will further inform the decision of the thickness of the pipes.
- xix. Onesimos added the project is covered by four different insurance covers: Risk Insurance, Asset Insurance, Third Party Liability Insurance, and Fire Allied.
- xx. Nana Oppong asked if the pipeline will be fenced to prevent intrusion by farmers.
- xxi. Michael Smith explained that farmers can farm in their remaining farms. He further explained that framers can use the ROW as an access route for the occasional conveying of their farm produce. He added that the company employs Community liaison officers from the affected community to work together with the company’s Operations and Maintenance team to monitor the pipeline to prevent farmers from farming on the ROW, “galamsey” activities, and the use of heavy machines on the ROW.
- xxii. Awuah Frank asked about the effect of the pipeline in the community and the remaining farmlands.
- xxiii. Michael Smith explained that the effect of the pipeline is flooding and swampy wetlands. However, the company has in place a grievance management mechanism it adopts in the resolution of such issues. He added that damaged crops are valued by the Land Valuation Division and compensated.
- xxiv. With no other issue to discuss, the meeting ended at exactly 08:20 am with a closing prayer by Frank Amofah.



COMMUNITY ENGAGEMENT AT DENYASE FOR THE GEGL DAWUSASO – KUMASI PP02 NATURAL GAS PIPELINE PROJECT

COMMUNITY RELATIONS
(DAWUSASO – KUMASI_PP02_PIPELINE)

29th July, 2021

■ **Action Items**

- i. Frank Awuah, Denyase Assemblyman urged Genser Energy to follow the procedure for the pipeline construction as explained to farmers to prevent agitations.
- ii. Michael Smith informed members that flagging of the pipeline route will follow hence should not be alarmed when they spot surveyors in their farmlands.

PICTURES OF THE MEETING ARE SHOWN BELOW



Figure 1 Eubank Arthur presenting to members present



MEETING ATTENDANCE SHEET

DATE: 29-07-2021 COMMUNITY: Denyase VENUE: Community Centre
 AGENDA: Community Engagement for the Dawusaro - kumasi, C/o

SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
	Nicholas Okey	Denyase	024 583 2830	
	Ama Mansah	Denyase	024 196 3508	
	Sarfo Kenneth	Denyase	0242905222	
	George Ashur	Denyase	0549116989	
	Vivian Nyarko	Denyase	0242702774	
	Kofi Otu - Baffoe	Denyase	0242702801	
	Margaret Nyarko	Denyase	0551939897	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Frank Debrah
 COMMUNITY RELATIONS OFFICER


 SIGNATURE/THUMBPRINT

Amal Frede
 WITNESSED BY


 SIGNATURE/THUMBPRINT



MEETING ATTENDANCE SHEET

DATE: 30-07-2021 COMMUNITY: Denyase VENUE: Community Centre
AGENDA: Community Engagement for Dawusaso-Kumasasi Line

SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
	Akuu Adu	Denyase	240 40	
	Kofi Afful	Denyase	-	
	Osei Akrossi	Denyase	024 7848306	
	Abera Ayemaw	Denyase	02419635084	
	Ama Mensah	Denyase	0553139711	
	Afful Rifa	Denyase	0245349343	
	Bright Adjoche	Denyase	0547767574	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Frank Debrah

COMMUNITY RELATIONS OFFICER

SIGNATURE/THUMBPRINT

Burch Frank

WITNESSED BY

SIGNATURE/THUMBPRINT

MEETING ATTENDANCE SHEET

DATE: 30-07-2021 COMMUNITY: Denyase VENUE: Community Centre
 AGENDA: Community Engagement in Dawusaso - Kam. Line

SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
	Grace Oleng	Denyase	0248646734	
	Kwabeng Antwi	Denyase	0206727249	
	Dwumah Francis	Denyase	0245026619	
	Adwoor Bach	Denyase	0247822123	
	Kwabeng Salasi	Denyase	0554210784	
	Samuel Adjei	Denyase	0542211326	
	Ana Achoma	Denyase	0555859573	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Frank Debrah
 COMMUNITY RELATIONS OFFICER

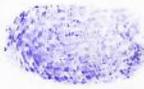
Anah Frank
 WITNESSED BY

SIGNATURE/THUMBPRINT

SIGNATURE/THUMBPRINT

MEETING ATTENDANCE SHEET

DATE: 30-07-2021 COMMUNITY: Denyere VENUE: Community Centre
 AGENDA: Community Engagement for Dawusaso - Kumasi Line

SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
	Jennifer Dankov	Denyere	6544372876	
	Gladys Sarpong	Denyere	0540329214	
	Yaa Asantewaa	Denyere	-	
	James Atta Kobea	Denyere	0544831360	
	Felix Tuffour	Denyere	0241267254	
	Emmanuel Niako	Denyere	059693716	
	Cecilia Serwa	Denyere	0245832199	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Frank Debrah
 COMMUNITY RELATIONS OFFICER

Anneh Frank
 WITNESSED BY


 SIGNATURE/THUMBPRINT


 SIGNATURE/THUMBPRINT

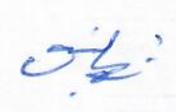
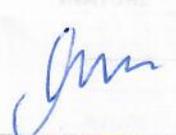
following pers
 'Agen was c

ise

ATURE

MEETING ATTENDANCE SHEET

DATE: 20-07-2021 COMMUNITY: Denyare VENUE: Community Centre
 AGENDA: Community Engagement for the Dausara-Kumasi Line

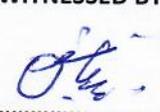
SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
	Afia Thousand	farmer	0242666584	
	Awaah Frank	Assembly Member	0541411838	
	Afia Oblea Bomeh	farmer	0543207391	
	John Baffour Asene	farmer	0249186819	
	Nana Oppong	farmer	0247660598	
	Jennifer Appiah	farmer	0247865636	
	Frank Amofah	farmer	0248434654	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Frank Deborah
 COMMUNITY RELATIONS OFFICER


 SIGNATURE/THUMBPRINT

Awaah Frank
 WITNESSED BY


 SIGNATURE/THUMBPRINT

MEETING ATTENDANCE SHEET

DATE: 30-07-2021 COMMUNITY: Denyaso VENUE: Community Center
 AGENDA: Community Engagement for Dawusaso - Icumasi Line

SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
	Dacosta Aline	Denyaso	0245642250	
	Anokye Ernest	Denyaso	6557661207	
	Irene Twumasi	Denyaso	0594564128	
	Patience Trimpang	Denyaso	0240865754	
	Ana Agyemang	Denyaso	0240865754	
	Abeneah Kyereves	Denyaso	-	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Frank Debrah
 COMMUNITY RELATIONS OFFICER

SIGNATURE/THUMBPRINT

Ameh Frank
 WITNESSED BY

SIGNATURE/THUMBPRINT



**STAKEHOLDER ENGAGEMENT WITH THE COMMUNITY FOR THE KYEKYEWERE AND BETINAKO
COMMUNITY FOR THE GEGL DAWUSASO – KUMASI PP02 NATURAL GAS PIPELINE PROJECT**

COMMUNITY RELATIONS
(DAWUSASO – KUMASI_PP02_PIPELINE)

29th July, 2021

Venue: Community Centre

Date: Thursday, 29th July 2021

Time: 05:30 AM

Members Present: 52

Genser Energy Ghana Limited (“GEGL”)

NAME	ORGANISATION	INITIALS	DEPARTMENT/WORK
Michael Smith	Genser Energy	MS	Community Relations Superintendent
Hilda Obiri-Yeboah	Genser Energy	HOY	Community Relations
Julius Tagbor	Fastlane	JT	Driver

Leaders of Betenase and Kyekyewere Community

NAME	ORGANISATION	INITIALS	DEPARTMENT/WORK
Jackson Samuel Gyebi	Kyekyewere and Betinako Community	JSG	Committee Secretary
Opoku Christopher	Betinako Community	OP	Krontihene
Stephen Kofi Appiah	Kyekyewere Community	SKA	Elder
Nana Kyei Mensah	Kyekyewere Community	NKM	Chief
Nana Kwame Antwi	Betinako Community	NKA	Chief
Kwasi Benahene	Kyekyewere Community	KB	Elder
Hon. Kofi Frimpong	Kyekyerewere and Betinako Community	KF	Assemblyman
Esther Tiwaah	Kyekyewere Community	ET	Farmer
Elvis Antwi	Betinako Community	EA	Framer
Yaw Ofori	Betinako Community	YO	Farmer
Yaw Tweneboah	Kyekyewere Community	YT	Farmer
Kwasi Nyarkoh	Betinako Community	KN	Farmer

Community Members

A list of all community members present at the community engagement can be found in the attendance sheet

■ **Introduction**

A community engagement was carried out for the chief, elders, and community members of Kyekyewere and Betinako Community to introduce the Phase III Dawusaso – Kumasi Natural Gas Pipeline Project to them and to answer key questions about the project.

■ **Presentation of Issues**

i. The meeting started at exactly 05:30 am with a prayer by Hon. Kofi Frimpong



**STAKEHOLDER ENGAGEMENT WITH THE COMMUNITY FOR THE KYEKYEWERE AND BETINAKO
COMMUNITY FOR THE GEGL DAWUSASO – KUMASI PP02 NATURAL GAS PIPELINE PROJECT**

**COMMUNITY RELATIONS
(DAWUSASO – KUMASI_PP02_PIPELINE)**

29th July, 2021

- ii. Hon. Kofi Frimpong thanked members present for honoring the invitation. He went on to mention that Genser Energy is an energy company which uses produces electricity with natural gas. He added that Genser Energy has been tasked by the Government of Ghana to construct a pipeline to the Ashanti Region due to the relocation of the Ameri Power Plant from Takoradi to Kumasi. He then invited Hilda Obiri-Yeboah to provide a detailed presentation about the project.
- iii. Hilda Obiri-Yeboah after introducing the team from Genser Energy gave an overview of the operation of Genser to the members present. She mentioned that Genser Energy is an Independent Power Producer that supplies electricity to mining companies and industries within the country such as Goldfields Tarkwa and Damang, Chirano Kinross, Golden Star Akyempim, and the Ayamfuri Perseus Mines. She added that Genser Energy transports natural gas from the Atuabo Gas Processing Plant through its pipelines to Power Plants built by the company. She mentioned that Genser Energy has a total pipeline network of approximately 320 km, of which 80km was constructed during the Prestea-Tarkwa-Damang Phase I project, completed in 2018. Phase II of the project saw a 21km pipeline extension from Damang to Wassa-Akyempem, commissioned in October 2020, and the construction of a 240km pipeline network from Prestea - Manso Amenfi – Amoanda – Humjibre – Chirano – Dawusaso – Edikan, commissioned in June 2021.
- iv. Hilda Obiri-Yeboah explained that due to the Government's decision to relocate the Ameri Power Plant to Kumasi, The Ministry of Energy has tasked Genser Energy to extend its Pipeline from Dawuso-Kumasi to run the Ameri Power Plant. She further explained that the construction of the pipeline will mean that some farmlands must be acquired for the project and Kyekyewere and Betinako communities have being identified on the cadastral plan for the Phase III project as affected communities, hence the need for Genser Energy to engage the people, inform them about the project, provide answers to key questions from the communities and plead for their support and blessings.
- v. Hilda Obiri-Yeboah mentioned that the pipeline will affect crops, lands, and other properties which will be compensated for. She explained that Compensation is in two folds; Land Compensation and Crop Compensation. She further explained that Genser Energy will acquire a land width of 25m and a ROW width of 9m for immediate construction. The remaining 16m will be used for the company's future Alternative Livelihood initiative. She stated that compensation of the land will be paid to the rightful landowners with the help of the traditional leaders after valuation by the Land Valuation Division. She added that crop compensation for the 9m width will be paid to the affected farmer or the tenant farmer based on the existing arrangement between both parties. She ended by mentioning that crop compensation for the remaining 16m will be paid to affected farmers before the Alternative Livelihood Initiative begins.
- vi. Hilda Obiri-Yeboah stated that the Company also engages in Corporate Social Responsibility Projects in the various project-affected communities. He explained that in the course of the project, the company will find some solutions for key problems identified in some communities. He further added that long-term CSR projects will also be carried out after a proper needs assessment is done in the communities with the help of community leaders.



**STAKEHOLDER ENGAGEMENT WITH THE COMMUNITY FOR THE KYEKYEWERE AND BETINAKO
COMMUNITY FOR THE GEGL DAWUSASO – KUMASI PP02 NATURAL GAS PIPELINE PROJECT**

COMMUNITY RELATIONS
(DAWUSASO – KUMASI_PP02_PIPELINE)

29th July, 2021

- vii. Michael Smith asked farmers present to ask questions regarding the project.
- viii. Jackson Samuel Gyebi inquired about the compensation package for project-affected bare lands.
- ix. Michael Smith mentioned that land compensation will be paid to the rightful owner of the bare land after land compensation
- x. Esther Tiwaah asked Genser officials how persons whose lands have been acquired to build houses will be compensated for if the property is affected by the construction of the pipeline.
- xi. Michael Smith answered by saying that such persons will need to present to the company and traditional authorities evidence of ownership and once such documents are received, compensations will be processed.
- xii. Elvis Antwi asked to know about the insurance cover for the project.
- xiii. Michael Smith mentioned that the project is funded by International Lenders and as such insurance remains a requirement for international funding. He explained that the project is covered by four different insurance covers: Risk Insurance, Asset Insurance, Third Party Liability Insurance, and Fire Allied.
- xiv. Kwasi Nyarkoh inquired about the measure put in place to ensure that pipeline is safe for the community.
- xv. Michael Smith explained that engineers make sure that before the pipeline is buried, all necessary tests will be carried out to prevent gas leakages. He added that a team from Genser Energy with the help of community liaison officers who will be employed from the community will patrol the Right of Way to ensure 24/7 pipeline safety. He assured the community that no harm will be created by the pipeline.
- xvi. Yaw Ofori asked about the challenges of the pipeline.
- xvii. Michael Smith explained challenges of the pipeline have to do with flooding and swampy wetlands. However, the company has in place a grievance management mechanism it adopts in the resolution of such issues. He added damaged crops are valued and compensated for.
- xviii. Nana Kyei Mensah, Chief of Kyekyewere, thanked officials from Genser Energy for the presentation and also thanked all members for their presence. He concluded by showing his support to the project and charged all community members to embrace the project will open arms
- .
- xix. Without any further issues to discuss the meeting ended at exactly 06:16 am with a prayer by Yaw Tweneboah.



**STAKEHOLDER ENGAGEMENT WITH THE COMMUNITY FOR THE KYEKYEWERE AND BETINAKO
COMMUNITY FOR THE GEGL DAWUSASO – KUMASI PP02 NATURAL GAS PIPELINE PROJECT**

COMMUNITY RELATIONS
(DAWUSASO – KUMASI_PP02_PIPELINE)

29th July, 2021

▪ **Action Items**

- i. Nana Kyei Mensah and Elders of Kyekyewere and Betinako declared their support to the project and offered their blessing for the success of the natural gas project since it is a national project and will bring about development in the Ashanti Region
- ii. Nana Kyei Mensah urged Genser Energy to employ some people from his community to assist the expatriates in the pipeline construction.
- iii. Yaw Barimah Bonsu informed members that flagging of the pipeline route will follow hence should not be alarmed when they spot surveyors in their farmlands.

PICTURES OF THE MEETING ARE SHOWN BELOW



Figure 1 Hilda Obiri-Yeboah on the floor presenting to the people of Kykyewere and Betinako



MEETING ATTENDANCE SHEET

DATE: 29-07-2021

COMMUNITY: KYEKYEWERE & BETENAKO

VENUE: COMMUNITY CENTRE

AGENDA: COMMUNITY ENGAGEMENT FOR THE DANUASAPU - KURASI PIPELINE

SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
	Jackson Samuel Gyebi	Committee Secretary	0271227802	
	Opoku Christopher	Drobdhene Elder	0245086201	
	Stephen Kofi Appiah	Elder	0549994577	
	Nana Kyei Mensah	Chief Kyekekwere	0502060876	
	Nana Kwame Anuri	Chief Betinko	0246742884	
	Kwesi Banahene	Elder. Kyekekwere	0542636191	
	HON. KOFI FRAMPONG	ASSEMBLY-MEMBER	0249999222	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Hilda Ochi-Yeboah
COMMUNITY RELATIONS OFFICER

SIGNATURE/THUMBPRINT

Hon. Kofi Frampong
WITNESSED BY

SIGNATURE/THUMBPRINT

MEETING ATTENDANCE SHEET

DATE: 29-07-2021

KYEKYEWERE & BETINKO

COMMUNITY:

VENUE: COMMUNITY CENTRE

AGENDA: COMMUNITY ENGAGEMENT AM LITE DANUSASO - KUKIASI PIPELINE

SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
	Kwame Bekoe	Kyekyewere	0246793579	
	Elizabeth Kyei	Betinko	05576852356	
	Abdullah Felicity	Betinko	0508838140	
	Sarah Ate Nyanku	Betinko	0592429622	
	Akua Koko	Betinko	0242825417	
	Taw Isaac	Betinko	0551939880	
	Kwabena Ate	Betinko	0271193366	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Atedo Oari Yeboah

COMMUNITY RELATIONS OFFICER



SIGNATURE/THUMBPRINT

Hon Kwaku Frimpong

WITNESSED BY



SIGNATURE/THUMBPRINT

MEETING ATTENDANCE SHEET

DATE: 24/10/20 COMMUNITY: KYEKYEWERE & BETINKO VENUE: Community Centre
 AGENDA: Community Engagement for Dawuraso - Kumasi Univ

SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
	Afia Sarwa	Betinko	-	
	Vick Mansah	Kyekyewere	-	
	Adwoa Appiah	Betinko	-	
	Kyeri Kwame	Betinko	0555224974	
	Banshene Samuel	Kyekyewere	0552773086	
	Annia Kwame Dridgt	Kyekyewere	0549384394	
	Taw Abuyine	Kyekyewere	-	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Hilda Obiri Yesoah
COMMUNITY RELATIONS OFFICER


SIGNATURE/THUMBPRINT

Hen. Kwaku Tsipini
WITNESSED BY


SIGNATURE/THUMBPRINT

MEETING ATTENDANCE SHEET

DATE: 29/7/20 COMMUNITY: Iyekiye & Behna VENUE: Community Centre
 AGENDA: Community Engagement w Danras - Kumasi Line

SN	NAME	POSITION	CONTACT /E-MAIL	SIGNATURE
	Akosua Okyere	Behna	—	
	Joyce Adumhuma	Iyekiye	—	
	Abere Aninoo	Behna	—	
	Lucy Banahene	Behna	0504120052	
	Mawant Dansu	Iyekiye	—	
	Chichina Boateng	Iyekiye	—	
	Adwoa Senoo	Behna	—	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Alda Dan-Yeboah
 COMMUNITY RELATIONS OFFICER

SIGNATURE/THUMBPRINT

Hon Kwaku Frimpong
 WITNESSED BY

SIGNATURE/THUMBPRINT

	STAKEHOLDER ENGAGEMENT WITH THE KWAKUKROM COMMUNITY FOR THE GEGL DAWUSASO – KUMASI PP02 NATURAL GAS PIPELINE PROJECT	
	COMMUNITY RELATIONS (DAWUSASO – KUMASI_PP02_PIPELINE)	5th August 2021

Venue: Assembly Grounds, Kwakukrom

Date: Thursday, 5th August 2021

Time: 10:12 am

Members Present: 32

Genser Energy Ghana Limited (“GEGL”)

NAME	ORGANISATION	INITIALS	DEPARTMENT/WORK
Yaw Barimah Bonsu	Genser Energy	YBB	Community Relations
Blaise Yendemeh	Genser Energy	BY	Community Relations
Emmanuel Opoku	Genser Energy	EO	Community Relations

Leaders and Persons who asked questions - Kwakukrom Community

NAME	ORGANISATION	INITIALS	DEPARTMENT/WORK
Akua Felicia	Kwakukrom	AF	Community Member
Opoku Peter	Kwakukrom	OP	Community Member
Ampah Isaiah	Kwakukrom	AI	Community Member
Nicolas Manu	Kwakukrom	NM	Community Member
Kwesi Oppong	Kwakukrom	KO	Community Member
Sarah Darko	Kwakukrom	SD	Community Member
Dwumah Willams	Kwakukrom	DW	Community Member
Asamoah Obed	Kwakukrom	AO	Community Member
Richard Asamoah	Kwakukrom	RA	Community Member
Ophelia Gyamfi	Kwakukrom	OG	Community Member

Community Members

A list of all community members present at the community engagement can be found in the attendance sheet

▪ **Introduction**

A community engagement was carried out for the chief, elders, and community members of Kwakukrom Community in the Asante Bekwai District to sensitize them about the Phase III Dawusasu – Kumasi Natural Gas Pipeline Project, and to answer key questions from the community about the project.

	STAKEHOLDER ENGAGEMENT WITH THE KWAKUKROM COMMUNITY FOR THE GEGL DAWUSASO KUMASI PP02 NATURAL GAS PIPELINE PROJECT	
	COMMUNITY RELATIONS (DAWUSASO – KUMASI_PP02_PIPELINE)	5th August 2021

▪ **Presentation of Issues**

- i. The meeting started at exactly 10:12 am.
- ii. Opoku Peter welcomed officials from Genser Energy to the meeting and thanked the company for the decision to engage community stakeholders ahead of the start of the project. He asked for an introduction of officials from Genser Energy. One by one, officials of Genser Energy introduced themselves and the role played within the company.
- iii. Opoku Peter then gave a brief overview of the project to the house, after which he handed over the floor to Blaise Yendemeh to provide a detailed presentation about the project.
- iv. Blaise Yendemeh began by delivering an overview of the operation of Genser to the house. He mentioned that Genser Energy is an Independent Power Producer supplying electricity to mining companies and industries within the country such as Goldfields, Golden Star Resources, Kinross Gold Company, and a new addition being the Perseus Mining Company in Ayamfuri. He added that power plants built by the company run on natural gas from the Atuabo Gas Processing Plant which is transported through pipelines. He continued by saying that Genser Energy has a total pipeline network of approximately 320km which facilitates the flow of natural gas to its sites in the western and central regions of the country.
- v. Speaking about the Phase III pipeline project, Blaise Yendemeh informed the house that the company is planning to extend its pipeline infrastructure to Domeabra, a suburb of Ejisu, from Dawusasu where the natural gas pipeline currently terminates. He explained that this move is in line with the government's decision to relocate the Ameri Power Plant from Takoradi to Kumasi in an attempt to stabilize the energy situation within the Ashanti and northern part of the country. He then informed members that the construction of the pipeline will mean that some farmlands must be acquired for the project and Kwakukrom community has been identified as one of the potential affected communities. He, however, pleaded with the people of Kwakukrom to support the company in making sure that the project is successful.
- vi. Blaise Yendemeh explained to the house that compensations will be paid to all persons whose crops, land, and other properties will be affected. He continued by saying that before the payment of compensations, the Land Valuation Division which is mandated by the government to carry out valuations of this kind will deploy personnel to enumerate crops after the pipeline route is marked out by surveyors.
- vii. Frank then spoke about the planned Corporate Social Responsibility to be embarked on in various affected communities. He explained that in the course of the project, the company will find some solutions for key problems identified in some communities. He further added that long-term CSR projects will also be carried out after a proper needs assessment is done in the communities with the help of community leaders. He provided details of the company's Alternative Livelihood Program.
- viii. To conclude his presentation, Blaise Yendemeh provided details about construction. He explained that a right of way of 25m will be acquired, however, for immediate construction, a 9m corridor will be valued and compensated for. It is within this 9m that all construction of the pipeline will be carried out. He added that the pipeline will be buried 8ft underneath the ground after all necessary engineering tests have been carried out. The remaining 16m of the right of way will be used for the company's Alternative Livelihood Program where passion fruit and other crops will be cultivated along the right of way as a mechanism to protect the pipeline from intrusion and erosion, and also as a means of employment to affected persons.

	STAKEHOLDER ENGAGEMENT WITH THE KWAKUKROM COMMUNITY FOR THE GEGL DAWUSASO KUMASI PP02 NATURAL GAS PIPELINE PROJECT	
	COMMUNITY RELATIONS (DAWUSASO – KUMASI_PP02_PIPELINE)	5th August 2021

- ix. Opoku Peter then allowed members of the meeting to ask questions regarding the project.
- x. Richard Asamoah asked for further clarification about compensations.
- xi. Frank explained that compensations will be paid in two; thus, crop and land compensations. He added that a land search will be carried out to identify landowners after which land compensations will be paid to them. Furthermore, farmers whose crops will be affected will also receive compensation for their crops.
- xii. Ophelia Gyamfi asked Genser officials how persons whose lands have been acquired to build houses will be compensated for if the property is affected by the construction of the pipeline.
- xiii. Blaise Yendemeh answered by saying that such persons will need to present to the company and traditional authorities evidence of ownership and once such documents are received, compensations will be processed.
- xiv. Nicolas Manu enquired how persons will know if their farms or property will be affected
- xv. Blaise Yendemeh explained that surveyors will be deployed in the coming weeks to flag the path for which the pipeline will traverse.
- xvi. Asamoah Obed inquired about the measure put in place to ensure that pipeline is safe for the community.
- xvii. Blaise Yendemeh explained that engineers make sure that before the pipeline is buried, all necessary tests will be carried out to prevent gas leakages. He added that a team from Genser Energy with the help of community liaison officers who will be employed from the community will patrol the Right of Way to ensure 24/7 pipeline safety. He assured the community that no harm will be created by the pipeline.
- xviii. Kwesi Oppong asked about the ways in which the community will benefit from the project.
- xix. Blaise Yendemeh responded by saying that in the short term, community members will have access to employment in some unskilled labor. He further pleaded with the chief and elders of Kwakukrom to forward their written petition and request describing problems in the community for which they need the assistance of the company.
- xx. Opoku Peter thanked officials from Genser Energy for the presentation and also thanked all members for their presence. He concluded by showing his support to the project and charged all community members to embrace the project will open arms. xxi. Without any further issues to discuss the meeting ended at exactly 11:16 am.

▪ **Action Items**

- i. The people of Kwakukrom declared their support to the project and offered their blessing for the success of the natural gas project.
- ii. Community members pleaded with Genser Energy to provide them with information about the flagging and crop enumeration of the pipeline route on time in order to assist the team deployed for the exercise.



STAKEHOLDER ENGAGEMENT WITH THE KWAKUKROM COMMUNITY FOR THE GEGL DAWUSASO

KUMASI PP02 NATURAL GAS PIPELINE PROJECT

COMMUNITY RELATIONS (DAWUSASO –
KUMASI_PP02_PIPELINE)

5th August 2021

PICTURES OF THE MEETING ARE SHOWN BELOW



Figure 1 Blaise Yendemeh on the floor presenting to the people of Kwakukrom



STAKEHOLDER ENGAGEMENT WITH THE KWAKUKROM COMMUNITY FOR THE GEGL DAWUSASO

KUMASI PP02 NATURAL GAS PIPELINE PROJECT

COMMUNITY RELATIONS (DAWUSASO –
KUMASI_PP02_PIPELINE)

5th August 2021



Figure 1 Blaise Yendemeh answering questions asked by the audience



STAKEHOLDER ENGAGEMENT WITH THE KWAKUKROM COMMUNITY FOR THE GEGL DAWUSASO

KUMASI PP02 NATURAL GAS PIPELINE PROJECT

**COMMUNITY RELATIONS (DAWUSASO –
KUMASI_PP02_PIPELINE)**

5th August 2021



MEETING ATTENDANCE SHEET

DATE: 05-08-21 COMMUNITY: Kwalekron VENUE: St. Martin's Church
 AGENDA: Community Budget

SN	NAME	POSITION	CONTACT	SIGNATURE
	Akys Felicia	farmer	057109725 3	
	Oporu Peter	farmer	05550565 72	
	Osei Adjei	farmer	0542625851	
	Samuel Amaofa	farmer	0245142109	
	Ampoah Issiah	farmer	0268861671	
	Owum Bernard	farmer	05413515 73	
	Kwame Ofori	Maroon	05562873 37	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Naize Yendemeh

 COMMUNITY RELATIONS OFFICER

Stephen Swope

 COMMUNITY LEADER

Naize Yendemeh

 SIGNATURE/THUMBPRINT



 SIGNATURE/THUMBPRINT

MEETING ATTENDANCE SHEET

DATE: 05-08-21 COMMUNITY: Kwesikrom VENUE: St. Mark Church Premises

AGENDA: Community Stakeholder Engagement

SN	NAME	POSITION	CONTACT	SIGNATURE
	Nicolas Mann	-	05553059 62	
	Charles Poku	farmer	055335764 1	
	Francis Mensah	farmer	0548822997	
	Kwabena Mensah	farmer	0246433610	
	Kwesi Pong	farmer	0558308061	
	Francis Adla Asabere	farmer	054772 3834	
	Comfert Mann	farmer	0245730870	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Blaise Yendemel
COMMUNITY RELATIONS OFFICER

Stephen Joseph
COMMUNITY LEADER

Blaise Yendemel
SIGNATURE/THUMBPRINT

SIGNATURE/THUMBPRINT

MEETING ATTENDANCE SHEET

DATE: 05-08-21 COMMUNITY: Kwaka Krom VENUE: St. Martin's Church
 AGENDA: Community Stakeholder Engagement

SN	NAME	POSITION	CONTACT	SIGNATURE
	Ngomi Oporu	former	054 82843 68	
	Felicia Addai	former	-	
	Afiis Nkumah	former	-	
	Sarah Darko	former	024 86755 68	
	Adutsumaa Sarah	former	054 68212 1	
	Alberta Otuom	former	054 90617 12	
	Akwesi Afranie	former	059 33614 2	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Alice Yensereh
 COMMUNITY RELATIONS OFFICER

Stephen Swain
 COMMUNITY LEADER

Maneyah
 SIGNATURE/THUMBPRINT

[Signature]
 SIGNATURE/THUMBPRINT

MEETING ATTENDANCE SHEET

DATE: 15-08-21 COMMUNITY: Kwaleken VENUE: St. Martin's church
 AGENDA: Community Stakeholder Engagement

SN	NAME	POSITION	CONTACT	SIGNATURE
	Salifu Akhonor	farmer	854 9277547	
	Osei Ramonah	farmer	053 29653 96	
	Francis Asumah	Driver	0545 33428 6	
	Kofi Yammey	farmer	—	
	Dannah Killians	farmer	0246 2423 99	
	Asumah Osei	farmer	0549 122343	
	Amprah Emmanuel	farmer	0249 482126	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Blaise Yendemeh
 COMMUNITY RELATIONS OFFICER

Blaisyendemeh
 SIGNATURE/THUMBPRINT

Stephen Swaphin
 COMMUNITY LEADER

SIGNATURE/THUMBPRINT

MEETING ATTENDANCE SHEET

DATE: 05-08-21 COMMUNITY: Kwakwaka VENUE: A Martins Church
 AGENDA: Community Stakeholder Engagement

SN	NAME	POSITION	CONTACT	SIGNATURE
	Stephen Swoapim	Opinion leader	027322 4473	
	Richmond Asamoah	farmer	02404158 74	
	Comfort Brobey	farmer	05545046 40	
	Ophelia Gyasi	farmer	-	

This is to certify that the following persons were present during the community engagement exercise for which the above Topic/Agenda was discussed.

Blaise Yandemeh
 COMMUNITY RELATIONS OFFICER

Blaiseyandemeh
 SIGNATURE/THUMBPRINT

Stephen Swoapim
 COMMUNITY LEADER


 SIGNATURE/THUMBPRINT

APPENDIX B

Comments and Response Report

Table 3: Comments and Responses Register

No.	Name	Comment	Response
	Bosomtwe District Assembly – July 16, 2021		
1	Ama Serwaa Acquah Ababio	Explain the RoW width to be acquired.	<p>There are two types of compensation: Crop compensation and land compensation. GEGL intends to acquire a land width of 25m, for which land compensation will be paid to the appropriate owners. However, the Right of Way (RoW) corridor of 9m within the 25m will be valued and compensated for the crops.</p> <p>Because of the company's planned Alternative Livelihood Projects for affected farmers to be embarked on in future, there will be the need to acquire a minimum land width of 25m. For direct construction purposes, the crop compensation will only affect 9m of RoW.</p>
2	Atona Joseph	Who will the land compensations be paid to?	After a land search from which various land owners are identified, these individuals or stools will receive the compensation due them as determined by the Lands Commission.
3	Hon. Issac Boakye	Will GEGL appoint its own valuers for the crop valuation exercise?	<p>GEGL does not contract any private valuers. Since this is a government project, the LVD of the Lands Commission has been mandated to ensure that the department handles all issues relating to compensations.</p> <p>In addition, as the Senior Valuer of the Land Valuation Division (LVD), I have a mandate, and I must serve in the best interest of project-affected persons.</p>
4	Isaac Mensah	What are the benefits that the communities will receive from this project?	GEGL will embark on various Corporate Social Responsibilities (CSR) as it has in the past after carrying out a needs assessment in the various communities affected by the project. The CSR is in two parts: the immediate and the

No.	Name	Comment	Response
			long-term projects. There have been instances of projects that GEGL had undertaken during Phase I and Phase II.
5	DSP Eric Akwaboah	What about the safety of the natural gas pipeline for communities, and what measures are put in place by the company to prevent any future catastrophe?	Various tests and processes are put in place before, during and after construction to prevent incidents such as pipe leakages leading to an explosion. Various pipe welding techniques and quality control tests are undertaken to ensure pipeline safety. A dedicated team from the O&M constantly patrol the RoW to ensure its safety.
6	Addo Korang	GEGL should install CCTV cameras at various locations along the RoW for 24/7 surveillance of the pipeline against activities such as 'galamsey' and intrusions.	Suggestion well noted. GEGL's O&M Department regularly makes use of drone surveillance along the RoW. All stations have control rooms connected to fibre optic cables and communication networks to help track and attend to emergency issues along the RoW.
7	Isaac Mensah	What is the insurance cover for the project?	International Lenders fund the project, and as such, insurance remains a requirement for international funding. The project is covered by four different insurance covers: Risk Insurance, Asset Insurance, Third Party Liability Insurance and Fire Allied.
8	Hon. JK Assuming	GEGL should offer some form of employment to the unskilled labour within the various affected communities.	GEGL commits to local employment, and there are examples from our past projects.
9	Addo Korang	GEGL must ensure that only qualified personnel are engaged, particularly for welding its steel pipes.	Only qualified welders with the necessary certification will be engaged after passing a series of welding tests hosted by GEGL. The welding methods employed are different from the regular welds we usually use. He presented a technical insight into the welding technique. Every welder will be subjected to strict tests before work.

No.	Name	Comment	Response
10	Evelyn Kusi	What are the various environmental problems that GEGL has encountered in its previous projects?	GEGL has faced numerous challenges, particularly in flooding and swampy wetlands. However, GEGL has in place a grievance management mechanism it adopts to resolve such issues. For example, hydro-protection is carried out in areas of concern, and culverts are installed where necessary.
11	Eric Frimpong	What measures are put in place to identify buried pipelines, and how long the pipeline will last?	<p>Yellow caution tapes are placed before the final backfilling of the pipeline. Emergency sign posts and marker poles are placed at regular intervals for pipeline identification purposes.</p> <p>Regarding the lifespan of the pipes, the pipes (s65 steel) to be used for the pipeline project have an indefinite lifespan, often more than 100 years.</p>
12	Isaac Mensah	Are there are situations where the pipeline traverses areas of human settlement?	<p>In designing the pipeline route, engineers make sure the pipeline is at least 200m away from human settlement. However, in terms of engineering classification techniques, the proximity of the pipeline RoW to areas of human settlement will further inform the decision of the thickness of the pipes.</p> <p>There are examples of the pipelines for natural gas in Takoradi that linked the Aboadze Thermal Plant and the power badges. Based on the class of pipeline used, it could be within human settlement areas with the necessary precautions in place.</p>
13	William W Akpaglo	How are the pipelines buried across water bodies?	<p>There are several ways of crossing water bodies based on their size determined by the hydrological data collected. GEGL pipeline engineers adopt three strategies when crossing water bodies. These are the horizontal directional drilling diversion for large water bodies, whereas pipe culverts may be used for small streams.</p> <p>Permits are received from the Water Commission and the Environmental Protection Agency ahead of construction activities along significant water bodies.</p>

No.	Name	Comment	Response
14	Eric Kusi	Please share the aerial photos of projects and the cadastral plan projected to the audience.	Copies of the Phase III cadastral plan will be delivered to the physical planning and works department.
15			
	Abrankese Community – July 23, 2021		
16	Atta Kodu	what happens in the case where land which was purchased from the chief is affected by the project and the way compensations will be provided in such a situation	the project would still go on when the rightful owner of the land reports himself to GEGL with the necessary documents and evidence of ownership, the company will provide the necessary compensations.
17	Solomon Adusei	Can the farmers farm beyond the 25 metres RoW?	However, bush burning is not advisable because of the gas pipeline. But apart from that, all farming activities are permissible
18	Kojo Nimo	Would the crop compensation amount be the same for project-affected farmers?	The land valuation team would be valuing the crops when they visit their farms. The value of the crop varies. The price of a cocoa plant and the price of pepper would have different values; therefore, when the LVD team values crops, the standardised valuation for that crop would be what GEGL would pay the farmers.
19	Kojo Nimo	Please clarify the distances for the RoW	Twenty-five metres is approximately 80 feet, and the 9 metre Right of Way corridor is also approximately 30 feet. In cases where the Right of Way (RoW) divides a farmer's land into two, the farmer can cross to both ends and continue their farming activities.
20	Florence Adomako	Why is GEGL only paying for a 9m crop compensation and not all the 25m corridor?	The remaining 16m crop compensation would be paid when GEGL commences the Alternative Livelihood Programme. GEGL would only pay for the 9m crop compensation and 25m land compensation for the immediate term. After the 9m RoW is done, farmers can farm on the remaining 16m with no fire activities until the 16m crop compensation is paid for the Alternative Livelihood Programme.

No.	Name	Comment	Response
21	Abena Badu	How will GEGL determine rightful owners of the land for the appropriate compensations?	Per the Land Commission survey, most of the lands are stool lands. The Land Commission would collaborate with the stool in determining rightful owners of the lands for their compensation.
22	Janet Antwiwaa	What measures are in place to safeguard the community because gas is a highly flammable product?	Several measures would be put in place, including the fire protective measures that the Health, Safety, and Environment team put in place to safeguard the pipe, individuals and the community. Various insurance policies cover assets, public liability, and others. In addition, there would also be post-project sensitisation on how the community could safely live with the pipe.
23	Charles Aryee	What benefit would the community gain from the project because if the gas pipeline passes the community, it is good the community gains something substantial?	GEGL embarks on CSR, which would benefit the community. The short term CSR projects include maintenance works such as repairing broken bridges and providing scholarships to students.
24	Kofi Abeka	how and what measures would be employed when gas pipelines are supposed to cross waters?	GEGL engineers divert the water flow, and the gas pipelines would be buried at the river bed. After the pipeline is buried, the water will be returned to its natural flow
25	Theresa Nyarko	who would have the crop compensation? Is it the farmer or the landowner?	The farmer would be entitled to crop compensation, and land compensation would go to the rightful landowner.
26	Kankam Stephen	When would the project commence?	the project was supposed to start some months back and end in September, but due to delays, it could not go as planned; as engagement had begun, the project has started
27	Kankam Stephen	What was the payment method for compensation?	Affected farmers and landowners would provide their national identity card details to GEGL. He added that the details would be used to issue cheques for the respective affected farmer, and only the farmer can withdraw the issued cheque. In cases where the bearer of a cheque kicks the bucket, the family would have to report to GEGL about the situation so that the name could be changed.
28	Cecilia Nyarko	If the Right of Way is supposed to pass through a permanent structure, what would be done?	The Right of Way is designed not to pass through towns and cities. It usually passes

No.	Name	Comment	Response
			through the outskirts of communities and mainly through farmlands to avoid permanent structures.
	Akokofe Community – July 23, 2021		
29	Leo Manu	Will persons from the community be employed during the construction of the project?	There will be two types of employment: skilled and unskilled. Due to the delicate nature of pipeline welding, all skilled labour related to the welding will be mostly carried out by expatriates and a few locals with relevant certification in pipeline welding. However, all unskilled workers will be recruited from project-affected communities. I urge the youth to show dedication and interest in whatever role they will be employed in – these roles include security officers, cleaners, labourers, etc. will be recruited from the project communities.
30	Peter Adu	Can farmers farm beyond the 25m land that will be acquired?	Farmers can farm outside the acquired 25m corridor. Before the payment of the 16m after the 9m corridor compensations, farmers are also allowed to farm until compensations are completed.
31	Justice Agyemang	What will happen to over clearances beyond 25m?	All over clearances will be compensated for. Any persons whose farmlands will be damaged as part of the over clearances should follow the grievance management procedures outlined to get their issues addressed. There will be a Genser representative assigned to each community, and hence issues should be reported to the elected representatives and Genser reps to get issues resolved in a timely manner.
32	Agya Osei	Will there be any acquisition beyond 25m?	Any future acquisitions will be communicated. There have been instances in Amoanda and Sompre where the company had to acquire between 100m – 200m to develop an agric-based CSR project to provide employment to the communities.
33	Kofi Asumedu	Will there be any future acquisitions?	
34	Vera Amankwah	During the construction, what will happen to the farmer when the company discovers gold on the land during the excavation?	Genser energy is not into gold exploration, and hence in such unlikely instances, the company will notify the traditional leadership and the district assembly on such discovery.

No.	Name	Comment	Response
35	Hon. Theodore Amankwah	Is there any insurance covering the project and affected persons?	There are about three different types of insurance cover for the project: Asset insurance, third party insurance, and risk insurance. He explained that because the project is financed by international funding, it was necessary that the project is secured by an insurance policy else no international organisation will fund the project.
36		Can natural gas be used for domestic purposes?	Natural gas is slightly different from the domestic gas used. The domestic gas is liquefied petroleum gas (LPG) while the gas pipeline is for natural gas from oil exploration. The domestic gas has gone through some processing and has been dosed to have a particular smell which everyone is used to. The LPG composition is slightly different mainly made up of butane and little propane.
37		What benefit will be the project bring to the community?	The project will provide employment to the community. Genser also implements CSR initiatives in project-affected communities. The CSR comes in two forms; short to medium term and long term initiatives. The short to medium term CSR include items that do not cost too much and are easy to carry out such as helping the community with streetlights, boreholes, clearing a new school park, etc. The long term CSR initiative involves a needs assessment survey with the various groups in the community (youth, women groups, assembly, unit committees, traditional leadership) to help identify projects in the community. Once this is completed, the company supports or helps to execute this need. I would request that any request should be put in writing and signed by the community leadership and Assembly Members.
38	Akwasi Ankobeaa	What are the safety measures put in place to ensure that no accidents occur with the pipeline?	Genser is working closely with all regulatory bodies such as the Ghana fire service, Water Resource Commission, EPA, Energy commission, etc to ensure that the pipeline meets all necessary safety and regulatory requirements. Gas detectors and instrumentation controls have been installed at various locations along the pipeline. There is cathodic protection for the pipeline to help protect the pipe from damage. During the installation of the pipeline, fibre optic cable is also buried with the pipeline to transmit

No.	Name	Comment	Response
			information from the various stations to the centralised control room.
39	Osofo Twum	How will you ensure that all compensations are paid to the affected person?	Land and Crop valuations will be done by the Lands Valuations Division of the Lands Commission. The organisation is the government-authorised body that handles all valuation-related concerns. Prior to valuations, surveyors will demarcate the RoW and announcements will be done to get all project-affected persons to the farms. Valuations will be carried together with the officers and the documentations given to the farmer.
40	Hon Theodore Amankwah	What measures have been put in place to ensure that there are no negative effects on persons?	Apart from working with all the regulatory bodies as mentioned and ensuring the safety of the pipeline using the instruments, a community liaison person is recruited in each community to patrol and send daily reports on the safety of the pipeline. Also, the O&M team conducts routine patrols to ensure that the pipeline is safe.
41	Agya Peter	What compensation is available to lands that have not been cultivated?	Such landowners are entitled only to land compensation.
	Kokodei Community – July 23, 2021		
42	Bismark Obroni Kwarteng	Does the LVD use a GPS machine during crop enumeration or will the number of affected trees be counted manually.	LVD mostly uses GPS during crop enumeration. However in situations where the number of crops is less on farmland, the LVD counts the trees.
43	Hon. Richard Agyemang	When will the crops on the remaining 16m of the land width of 25m acquired be compensated for.	The crop compensation for the remaining 16m will be paid when the alternative livelihood farming project begins.
44	Yaw Bio	What is the compensation package for project-affected bare lands?	Land compensation will be paid to the rightful owner of the bare land after land compensation.
45	Akwasi Kwarteng	Will there be different rates for different crops.	The LVD has a different rate for the types of crops. He added that this crop rate will be provided for project-affected farmers before compensations are paid.

No.	Name	Comment	Response
46	Patrick Antwi	Are there situations where the pipeline traverses areas of human settlement.	In designing the pipeline route, engineers make sure the pipeline is at least 200m away from human settlement. The proximity of the pipeline RoW to areas of the human settlement will further inform the decision of the thickness of the pipes.
47	Yaw Anokye	What is the insurance cover for the project.	The project is funded by International Lenders and as such insurance remains a requirement for international funding. He explained that the project is covered by four different insurance covers: Risk Insurance, Asset Insurance, Third Party Liability Insurance, and Fire Allied.
48	Charles K. Bonsu	Can farmers farm in their remaining farms.	farmers can farm in their remaining farms. However, farmers will be educated on how to live with the gas to prevent fire outbreaks after construction. He added that people from the affected communities will be employed and trained to monitor the RoW together with Genser Energy's O&M team.
49	Job Okyere	Will buildings be compensated for.	Per the preliminary topo design, Genser Energy tries not to affect a building by diverting the pipeline. However, in situations where diversions cannot be made, affected buildings are valued by the LVD and compensated for.
50	Johnson Kwame Opoku	What are the challenges of the pipeline.	The challenges of the pipeline have to do with flooding and swampy wetlands. However, the company has in place a grievance management mechanism it adopts in the resolution of such issues. He added damaged crops are valued and compensated for.
	Petrensa Community – July 23, 2021		
51	Nana Kofi Sarkodie	Compensation should be directed to project-affected persons, not through middlemen such as the Assembly Members, the traditional leaders, or the opinion leaders. There are examples where project-affected persons did not receive their compensation due to the introduction of these middlemen. This brought about agitations and disputes in their community and therefore Genser	Suggestion well noted The Phase I and II project, compensations are paid directly to project-affected persons. He further explained that, during valuation, project-affected persons will be tasked to present their national identification cards to the officials from the LVD to help identify these project-affected farmers by name. He continued by adding that the mode of compensation by

No.	Name	Comment	Response
		should avoid these middlemen as a mode of compensating project-affected persons.	Genser Energy is through a bank draft bearing the names of these project-affected farmers. He ended by emphasising that, the various banks pay the money only to the name on the bank draft.
52	Kwabena Antwi	What type of machines will be used for the construction.	Dozers will be used for the clearing and reshaping while excavators will be used for trenching, lowering of the pipes, and backfilling of the soil.
53	Kwabena Acheampong	What is the depth of the trench.	the minimum depth of the trench is about 1.6m deep (~6ft)
54	Kwabena Antwi	Patrensa community is in need of electricity in their school. We would request the assistance of Genser Energy to provide electricity in their classrooms.	Kindly make your request official by stating it in a letter addressed to Genser Energy with the endorsement from the traditional leaders and opinion leaders in the community.
	Piase Community – July 23, 2021		
55	Margaret Afrakoma	Will people from the community be employed for the pipeline construction.	Due to the technical nature of the pipeline construction, the company employs expatriates for the construction of the pipeline. However, these expatriates employ people from the project-affected communities and train them to assist in the pipeline construction. The Alternative Livelihood Initiative, on the other hand, is an agricultural-based project which does not require skilled labour, hence it provides jobs opportunity for a larger number of people in the project-affected communities.
56	Akwasi Antwi	Will affected crops be compensated.	The compensation package is in two folds: crop compensation and land compensation. The crops within the 9m corridor are valued by the LVD and compensation paid to the affected farmer. The land compensation is also paid to the rightful landowner with the help of the traditional leaders in identifying the rightful landowners since they are the custodians of the land, to prevent impersonation.
57	Hannah Kesse	Please clarify the width of the land acquired and the width of the RoW.	The company acquires land width corridor of 25m and a RoW width of 9m sits within the 25m corridor. The remaining 16m is

No.	Name	Comment	Response
			the minimum land size acquired for the company's future alternative livelihood project.
58	Kwadwo Opoku	How does Genser Energy identify leakages on the pipeline and how are the leakages addressed?	Various tests and processes are put in place before, during, and after construction to prevent incidents such as pipe leakages leading to an explosion. Various pipe welding techniques and quality control tests are undertaken to ensure pipeline safety. In addition, a dedicated team from the O&M constantly patrol the RoW to ensure its safety. The O&M department regularly makes use of drone surveillance along the RoW. All stations have control rooms connected to fibre optic cables and communication networks to help track and attend to emergency issues along RoW
59	Daniel Owusu Fordjour	What is the insurance cover for the project.	The project is funded by International Lenders and as such insurance remains a requirement for international funding. He explained that the project is covered by four different insurance covers: Risk Insurance, Asset Insurance, Third Party Liability Insurance, and Fire Allied
60	Osei Yaw Asuming	Can farmers farm on their remaining farmlands?	Yes, farmers can farm in their remaining farms. However, farmers will be educated on how to live with the gas to prevent fire outbreaks after construction. People from the affected communities will be employed and trained to monitor the RoW together with Genser Energy's O&M team.
61	Adu Peter	Are there situations where the pipeline passes in areas of human settlement?	In designing the pipeline route, engineers make sure the pipeline is at least 200m away from human settlement. The proximity of the pipeline RoW to areas of the human settlement will further inform the decision of the thickness of the pipes. In situations where some buildings are affected by the pipeline, the building will be valued by the LVD and compensated for.
62	Osei Bonsu	How many years will the pipeline.	The pipes (s65 steel) to be used for the pipeline project have an indefinite lifespan, often more than 100 years.
63	Kwame Kyei Baffour	We would like a copy of the insurance with the traditional leaders and the Assembly Members.	Well noted

No.	Name	Comment	Response
64	Toafom Community – July 23, 2021		
65	Kwame Agyemang Prempeh	Did GEGL inform the traditional Leaders before the engagement?	GEGL already paid a courtesy call to the leadership of the Asantehene. Following the meeting with the Asantehene, he has directed GEGL to issue notification letters to all the Traditional Councils affected by the project to notify them of his permission, blessings, and support of the project to the council and have submitted a copy of the notification letters to the council.
66	Ernest Osei Agyemang	Are compensations paid directly to project-affected persons or through middlemen?	Crop compensations are paid to the farm owners or the tenant farmers based on the agreement between both parties. To prevent issues of impersonations, the land compensations are paid to the rightful landowners with the help of the traditional leaders who help identify the rightful landowners since the traditional leaders are the custodians of the land.
67	Felicia Opoku	There are situations where the pipeline passes in areas of human settlement.	In designing the pipeline route, engineers make sure the pipeline is at least 200m away from human settlement. The proximity of the pipeline RoW to areas of the human settlement will further inform the decision of the thickness of the pipes. In situations where some buildings are affected by the pipeline, the buildings will be valued by the LVD and compensated for.
68	Yaa Frema	What happens when project-affected persons fail to allow the pipeline to affect their properties?	The pipeline is a national project therefore situations like these rarely happen. However, GEGL with the help of the traditional leaders and opinion leaders try to agree with project-affected persons to resolve issues like these.
69	Michael Kussi	How are pipelines are buried across water bodies?	There were several ways of crossing water bodies based on their size determined by the hydrological data collected. GEGL pipeline engineers adopt three strategies when crossing water bodies. These are the horizontal directional drilling, diversion for large water bodies, whereas pipe culverts may be used for small streams. The company receives permits from the Water Commission and the Environmental Protection Agency ahead of such construction activities along with major water bodies.

No.	Name	Comment	Response
70	Samuel King Dapaah	Will GEGL employ people from the affected communities for the pipeline construction?	Due to the technical nature of the pipeline, the company employs expatriates for the construction of the pipeline. However, these expatriates employ people from the project-affected communities and train them to assist in the pipeline construction. The Alternative Livelihood Initiative, on the other hand, is an agricultural-based project which does not require skilled labour, hence it provides jobs opportunity for a large number of people in the project-affected communities.
71	Ama Agyeiwaa	Are there situations where the pipeline passes in areas of human settlement?	In designing the pipeline route, engineers make sure the pipeline is at least 200m away from human settlement. The proximity of the pipeline RoW to areas of the human settlement will further inform the decision of the thickness of the pipes. He stated that in situations where some buildings are affected by the pipeline, the building will be valued by the LVD and compensated for.
	Amansie South District – July 26, 2021		
72	Yaw Opoku	Has the EPA permit for the Phase II project been submitted to the Assembly since some communities affected by the Phase II pipeline project were in the Amansie South District?	GEGL has submitted the EPA permits for Phase II to the District Assembly.
73		What the measures have been put in place for the Phase III project to prevent agitations from project-affected persons and communities?	Numerous and effective communication channels will be adopted to help prevent agitations from farmers. GEGL will also need the assistance of the District Assembly, opinion leaders, and traditional leaders to help resolve all issues that may arise during and after the project. GEGL will undertake more CSR projects to help bring development in project-affected areas.
74	Frank Osei	Have all project-affected persons in the Phase II project have been compensated?	Yes, GEGL has no outstanding compensation to pay to Phase I & II project-affected persons. However, over-cleared crops and damaged crops from flooding caused by the RoW have

No.	Name	Comment	Response
			been valued and the timeline for compensation has been communicated to the affected farmers.
75	John Swanzy	Will GEGL employ people from the project-affected communities?	Based on how technical the pipeline project is, expatriates will be engaged to carry out such jobs. However, local personnels will be employed to assist particularly for unskilled jobs. Persons from project-affected communities are employed mostly as securities, labourers, cleaners, cooks, etc.
76			local contractors are engaged for the clearing and preparation of the Right of Way, in which they engage the services of the youth in the execution of their work.
77	Asamoah Bismark Mensah	What training and scholarships will Genser give to persons in the project-affected communities?	GEGL has a scholarship package where engineering students from these project-affected communities are sponsored and employed after graduation. These students are mostly selected with the help of the traditional leaders and the Assembly.
78	Alhassan Abdulai	Genser Energy should build gas filling stations in communities along the pipeline route because of the inadequate number of gas filling stations in the District.	Natural gas is slightly different from the domestic gas used. The domestic gas is LPG while the gas pipeline is for natural gas from oil exploration. The domestic gas has gone through some processing and has been dosed to have a particular smell which everyone is used to. The LPG composition is slightly different mainly made up of butane and little propane.
79	Ernest Opoku Addo	Will GEGL provide electricity for the communities along the pipeline route with no electricity considering the company is an independent Power Producer, and that the lands of such communities play a key role in supply of natural gas to the Ameri Power Plant?	There are examples where the GEGL assisted in the provision of electricity for some communities during the Phase II project. Genser will ensure that petitions of communities will be attended to in the course of the project in line with the company's CSR policies.
80	Doris Adade	What measures have been put in place to prevent farmers from intruding the RoW?	Community liaison officers from the various project-affected communities will be employed to monitor the RoW to prevent

No.	Name	Comment	Response
			farmers from farming on the RoW, “galamsey” activities, or heavy machines working on the RoW. Since project-affected farmers continue to farm close to the RoW, they will be allowed to use the RoW as an access route to their farms, and occasional use of the RoW to convey farm produce will be permitted.
	Onwe Community – July 26, 2021		
81	Opoku Nketiah	What is the lifespan of the gas pipe?	The pipes are capable of lasting over 100 years and was made with strong steel
82	Cecilia Amoah	Who is entitled to the land compensation?	Owners of the lands that will be affected will receive compensation. The majority of the lands in the Ashanti Region are stool lands, however, to determine rightful owners of the land there would be a collaboration between the Lands Commission and the stool to identify owners of lands so the appropriate compensations would be paid.
83	Kojo Appiah	Will the compensations be paid before RoW clearing or after?	Compensations would be paid before the Right of Way is cleared. However, sometimes there are incidences of over clearance.
84	Mary Dufie	Will the community members be employed on the project?	Several communities would be affected by this gas pipeline. An estimated figure of over 80- 100 communities would be affected. In all community engagement, every community strives to get its members to be employed on the project which would be impossible for GEGL. In that regard, only a few of about 2-3 people can be employed on the projects. GEGL would be outsourcing help from foreigners and they would be dealing with the majority of the technical things. But jobs like security and other unskilled labour would be taken from communities affected.
85	Ama Manu	In future how would community members know that there was a gas pipe buried in the past?	There would be a signpost and restriction notice post at vantage points on the Right of Way. From time to time GEGL

No.	Name	Comment	Response
			has teams that patrol on the RoW to check there is no harmful activity or heavy trucks not passing on the RoW. Farmers can use the RoW to access their farms. When the pipes are buried, there are caution tapes at various layers underground. The caution tape warns people there is a highly inflammable gas pipeline beneath.
86	Agnes Akyea	What kind of crops would be planted under the Alternative Livelihood Programme?	It depends on the feasibility study. Based on the report, GEGL would determine the kind of crop to produce.
87	Ama Agyemang	In case the RoW passes through my mud house, what should I do?	GEGL has designed the RoW possibly not to pass through structures but in such circumstances, GEGL would compensate the affected person
88	Joyce Kontor	Can farmers farm in their remaining lands?	Farmers can farm in their remaining farms. However, farmers will be educated on how to live with the gas to prevent fire outbreaks after construction. People from the affected communities will be employed and trained to monitor the RoW together with GEGL's O&M team.
89		When will the crops on the remaining 16m of the land width of 25m acquired be compensated for?	crop compensation for the remaining 16m will be paid when the alternative livelihood farming project begins.
90	Beatrice Buakyewaa	what are some of the post-construction effects of the project?	The challenges of the pipeline have to do with flooding and swampy wetlands. However, the company has in place a grievance management mechanism it adopts in the resolution of such issues. Damaged crops are valued and compensated for.
91	Juliana Owusu	Are all crops priced the same for crop compensation?	The price of the crop varies. The price of a cocoa plant and the price of pepper would have different values, therefore when the LVD team value crops, the standardised valuation for that crop is what GEGL would pay to the farmers
Woarakese Community – July 26, 2021			

No.	Name	Comment	Response
92	Nana Asante	Will affected farmers be compensated for considering this is a government project?	Compensation will be paid to all affected persons. LVD was mandated to carry out an assessment, enumeration and valuation of all crops. During the valuation exercise, all affected persons will have to present their national identification cards to the LVD officials for identification purposes. The mode of compensation by GEGL is through bank drafts bearing the names provided by affected persons during the valuation exercise. The banks will pay the money only to the bearer of the bank draft.
93	Nana Kusi Appiah	Will GEGL acquire huge lands for the project.	There will be the need to acquire a minimum land width of 25m. For immediate construction purposes, the crop compensation will only affect 9m RoW.
94	Yaw Donkor	What types of machines will be used for the construction.	GEGL usually engages the services of bull dozers for the clearing and reshaping and excavators for trenching, lowering of the pipes and backfilling. Numerous mechanical machines are also used at various stages of the project
95	Cris-Cross Antwi	What is the depth of the trench.	The minimum depth of the trench is about 1.6m deep (~6ft)
96	Kwadwo Gyebi	The Woarakese community needs a community center and so I ask that GEGL provides this for the community.	Please make your request official by putting in a written petition addressed to Genser Energy endorsed by traditional leaders and opinion leaders in the community.
	Krom-Adwafo Community – July 27, 2021		
97	Philip Ntim	Will compensations be paid for bare lands.	There were two types of compensation - crop compensations and land compensation. Farmers will be the full beneficiaries of the crop compensation but the land compensation would be paid to landowners. If there are no crops on the land, GEGL would only pay for land compensations
98	Augustine Nkrumah	Is the project a government project and how would the land price be determined.	It is a government project and it is the responsibility of the Lands Commission to value and determine the price of lands for compensation. The land valuation team will value affected

No.	Name	Comment	Response
			lands, crops, and property so the appropriate compensation can be paid
99		How many times compensation would be paid.	All compensations would be paid once. The mode for compensation payment will be by cheque withdrawals. The national identity details of the affected farmer or person will be used to prepare the cheque and no other person can withdraw the cash apart from the bearer of the national identification holder provided.
100	Agya Twum Junior	Will the crop compensations be paid to the respective landowners or farmers.	Crop compensations would be paid to farmers and not to landowners. Landowners are entitled to land compensation unless the landowners also cultivated on their lands then, GEGL would pay crop and land compensation to them.
101	Nana Opoku Agyemang	What would the community gain from the gas pipeline project.	GEGL has a CSR to the community. GEGL has short and long term projects that would seek to address key challenges the communities face. The short term CSR projects are community-based projects by which GEGL would assist in solving challenges they face in the short run. There have been cases whereby GEGL repaired broken bridges, and provided boreholes to the communities. For the long term, there would be a needs assessment that would point out the most pressing need for the community, then GEGL would assist in providing that community need
102	Ama Badu	How would affected farmers be identified.	There would be line flagging after the community engagement and any farm that the pipeline passes through means that the farmland would be affected. That would help in the easy identification of farmers.
103	Kwadwo Duku	Can farmers still farm on their remaining lands.	Farmers can farm in their remaining farms. However, farmers will be educated on how to live with the gas to prevent fire outbreaks after construction. People from the affected communities will be employed and trained to monitor the RoW together with GEGL's O&M team

No.	Name	Comment	Response
104	Gideon Yeboah	When is the project supposed to commence.	The project was supposed to start some months back and end in September but due to delays it could not go as planned but as engagement has started, the project has started.
105			There would be community engagement with Krom-Adwafo people on how to live safely with the gas pipeline. This would be done in three stages - pre-construction, construction, and post-construction.
	Akyeremade Community – July 27, 2021		
106	Akosua Foriwaa	Compensation will be paid every year.	The compensation is paid once but in twofold – crop compensation and land compensation
107	Wofa Tawiah	Will there be any effects after the pipelines are laid.	Several safety measures will be adhered to including laying fibre optic cables to detect any possible leakage and setting up stations every 25km along the entire pipeline route. In addition, there are four insurance covers to cover any probable damage should calamity strike.
108		Will any section of the pipeline be above ground?	No, the entire stretch will be buried underground
109	Akosua Foriwaa	Will there be any employment opportunities.	There will be employment opportunities for unskilled labour. Given, the complex nature of the project, GEGL will bring professionals from abroad who have expert knowledge and experience in the area of gas pipeline construction to carry out the project.
110			
	Boni Community – August 03, 2021		
111	Akwesi Antwi	How would generations know gas pipelines are buried on the RoW?	GEGL provides all the documentation to the works department of the assembly so they can update their systems. the works department would be available to inform persons in future that the gas pipeline is within that jurisdiction and

No.	Name	Comment	Response
			prevent structures near the pipes. The O&M team (O&M) would be within the communities to give routine maintenance and educated the community on how to live with the gas pipeline
112	Adjoa Bioh	Is the gas pipeline for domestic use?	Genser had built power plants for mining companies. The relocation of the Ameri Power Plant to Kumasi will require natural gas to power the plant. The gas pipeline was not the same as LPG used in our homes. The project was to be completed by September, but due to some delays the project timeline has been extended to December or early months of next year for its completion
113	Anthony Dapaah	Would the company employ community members under the gas pipeline project. This community has several young and energetic individuals who are capable of working.	Community folks would be considered for employment. However, the employment opportunity is for menial works under the project but for the technical areas, GEGL outsources skilled personnel from overseas. Honestly, its important to note that GEGL all unemployed youth or adults because project-affected communities were numerous and that is why GEGL would embark on the Alternative Livelihood Programme which would employ several people in the community.
114		What would the community benefit from the project.	There are both direct and indirect benefits the community would gain. The gas pipeline that seeks to power the Ameri plant that is being relocated to Ejisu would provide a power solution to the power shortages and fluctuations affecting communities in the region. During construction and post-construction, Genser Energy would need some unskilled labour to assist in the day to day operations at power station camps. These individuals would be employed from and around communities where GEGL power stations are situated. As part of Genser's CSR, the company will assist communities that require social amenities. This initiative is classified into two; Short term and long term. The short term CSR initiatives are the immediate social assistance that can be provided by the company. The community draws the attention of the company on their immediate needs for assistance, however immediate needs identified should cost high in its implementation. For instance, the community can

No.	Name	Comment	Response
			<p>alert the GEGL it needs a borehole or street bulb. GEGL will assist in the provision of such needs. For long term CSR initiatives, Genser will undertake a community needs assessment and based on the report, assistance will be provided in securing the identified social need. For instance, the report may recommend the refurbishing of a basic school building.</p> <p>Lastly, the Alternative Livelihood Programme would also employ project-affected farmers and youth within the community</p>
115		What kind of crops will be planted under the Alternative Livelihood Programme.	The company will buy off or cultivate crops such as cocoa, coffee, teak and rice in swampy areas within the remaining 16 metres.
116		Have GEGL consulted the Traditional Councils, municipal assemblies and other stakeholders?	The first stakeholder engagement was with Otumfuo Osei-Tutu II to seek support. The company has engaged all Traditional Councils within the projected affected areas, and all municipal and districts assemblies. GEGL is also in consultations with NGOs, the media and other vulnerable groups.
117		What is the compensation payment method?	The company would pay for crop compensation before the project starts. The farmer would have to provide national ID card for the correct cheque information. If the farmer provides a name that does not tally with his ID cards, the bank would reject the check. This means that the farmer in question would be the only person that can withdraw the money.
118		How do I know that my farm is affected?	Surveyors are currently line flagging farms. If a farmer goes to his/her farm and see flags or pegs in there, that means that farm would be affected.
119		How do the company detect leakages and how is it repaired.	After pipes are lowered into the trenches, there are signal cables that are placed on the pipes. These cables send signal and information to our control rooms when there are faults or leakages on the pipe. Because these are highly inflammable gas, the maintenance team are quick to responses. Sometimes the engineers shut down the gas flow from the station then attend to the situation.

No.	Name	Comment	Response
120	Kwaku Adu	Can an individual disagree not to give out his land and crops for the project.	The project is a national project. During construction of projects people get affected every time but it is all for the greater good. The road we all use were formerly people's farms and they had to agree to give out those lands for development. However, it is also very expensive to go into legal battle with the government. It is almost impossible to stop national projects
Miawano Community – August 03, 2021			
121	Kwado Obey	Will compensation be paid for the land?	Compensation is paid for both land and crops. He further indicated that land compensation is paid fully for the 25m width and that it is crop compensation that is paid for the 9m width.
122	Nsumah Joseph	Farmers should be adequately compensated to avoid any issues during the project, especially when there are instances of over clearances. The main source of living for us is farming and that the project will be taking that away from some of the indigenes, hence the need for that to be considered when compensating the farmers.	Suggestion well noted. It is worth noting that adequate measures will be put in place to ensure that farmers are adequately compensated, and also any issues of over clearances are quickly resolved
123	Oheneba Amoah	What are the possible benefits the project will bring to the Community and can the gas be used for domestic purposes.	GEGL has a CSR Programme for the affected communities. the CSR comes in three forms; short term, long term and an alternative livelihood programme for the affected farmers. The gas cannot be used for domestic purposes because the gas that runs through the pipeline is LNG, which is different from LPG, that is used for domestic purposes.
124	Aboagye Hayford	What are the harmful effects of the project and what measures are put in place to curb such effects.	LNG can be dangerous, but GEGL puts in the necessary health, safety and environment measures to ensure that the communities are not affected. apart from the deep burying of the pipes, fibre optic cables are installed to send signals to the stations where there are any issues. Other measures put in place are teams set up to patrol the length of the pipeline, sign posts, emergency shut off areas, gas stations among others. any negative effects on humans in the community is highly unlikely but in case of any of such emergencies, there is a patrol team that will move along to resolve any of such issues. Emergency contact numbers will also be given out for people with any concerns to directly contact the GEGL team.

No.	Name	Comment	Response
	Nyameani Community – August 03, 2021		
125	Yaw Amankwah	The majority of the people here in Nyameani do farming. From your earlier statement, two compensations crop and land and why can't the farmer be entitled to both crop and land compensations?	Farmers are fully entitled to crop compensation. However, the Lands Commission and the Traditional Council would collaborate in identifying rightful landowners for the compensation to be paid. It was identified that the majority of the lands are stool lands that have been given out to farmers to farming. But if the farmer has the necessary legal documentation proving he owns the land, then both crop and land compensation will go to him/her.
126	Kwame Debrah	When surveyors do the line flagging, does that mean my entire farm will be acquired for the project?	When the line passes through your farmland, it means a minimum of 25 metres (80 feet) would be acquired and for immediate construction, only 9 metres (30 feet) will be used.
127	Hon. Samuel Wiafe	How long would it take for the project to start so that the youth in Nyameani can prepare for the employment opportunity and benefits of the project?	: Before any project starts, there must be stakeholder engagement that comprises MMDA, Traditional Councils, media, regulatory bodies, and project-affected communities. For this project, all the relevant identified stakeholders have been engaged and the project would be starting this month of August.
128	Barimah Kusi	What kind of employment opportunities would be available to community members?	The employment opportunities vary. Due to the technical nature of the work, the company employs foreigners because they have possess the standardised pipe welding skill required for gas pipeline construction. However, the various unskilled and semi-skilled labour such as securities, cooks, drivers and labourers would be taken from projected affected communities.
129	Yaa Serwaa	Under the Alternative Livelihood Programme, when the company pays crop compensation for the remaining 16 metres can the farmers harvest from that farm section.	As soon as the crop compensation is paid, the farmer has no legal right to be harvesting from that particular farm. There would be farmer supervisors that would monitor the farm operations of all farmlands acquired.
130	Douglas Abra	Does the compensation cover for the entire 80 feet or only 30 feet?	There are two types of compensation that would be paid, crop and land compensation. For land compensation, a minimum of 80 feet would be paid but for crop compensation, 30 feet would be paid for immediate construction. The remaining 50 feet would be paid later for the Alternative Livelihood Programme

No.	Name	Comment	Response
131	Yaa Achiaa	What if there are no crops planted on our family lands, does that mean we are not entitled to crop compensation.	: Farmers that have lands filled with weeds or without crops are not entitled to crop compensation. Crop compensations are only paid to farmers who have planted crops on their farmlands. The company can not pay for crop compensation for bare lands.
132	Kofi Asamoah	Do all the crops have the same price value or do they differ?	The crops pricing done by the lands valuation division do vary. The price of cocoa varies from cassava, pepper, coffee and others. The growth levels of these crops are also determinants for crop pricing. The price of young cocoa differs from over matured cocoa.
133	Yaw Bariamah Bonsu	What is the guarantee that we the community members would be safe if the gas pipeline is installed?	The gas pipeline is buried 6 feet down. There are signal cables placed on the gas pipeline that send signals to our stations to inform us about any leakage for immediate maintenance. I agree that gas is more dangerous, that is why there is a rapid maintenance team that attend to maintenance issues. On the other side, several insurance packages cover workers and that community member. The company also have liaison officers that patrol regularly on the RoW to check whether they are no activities around or on the RoW that could endanger the pipes. There is also a drone system that checks on the RoW regularly both day and night to keep us updated on what happens on the RoW.
Sunkyerekrom Community – August 03, 2021			
134	Fuseni Musah	Would compensations be paid before project construction begins?	Compensations would be paid before construction, but sometimes due to compensation documentation, payments are done during construction
135	Akwesi Asare	How many metres is been acquired for the RoW?	There will be the acquisition of a minimum land width of 25m. However, for immediate construction purposes, the crop compensation will only affect 9m of Right of Way
136	Yaa Akosua	If the Right of Way (RoW) passes through a permanent structure what happens next?	There will be the acquisition of a minimum land width of 25m. However, for immediate construction purposes, the crop compensation will only affect 9m of Right of Way.
137	Kweku Boye	What benefits would the community gain from the project?	As part of Genser's CSR, the company will assist communities that require social amenities. This initiative is classified into two; Short term and long term. The short term CSR initiatives are the immediate social assistance that can be provided by the company. The community draws the attention of the

No.	Name	Comment	Response
			company on their immediate needs for assistance, however immediate needs identified should cost high in its implementation. For instance, the community can alert the GEGL it needs a borehole or street bulb. GEGL will assist in the provision of such needs. For long term CSR initiatives, Genser will undertake a community needs assessment and based on the report, assistance will be provided in securing the identified social need. For instance, the report may recommend the refurbishing of a basic school building.
138	Hon. Peter Nyame	How would farmers know their farms have been affected?	When a farmer visits his/her farm and finds line flags or stamps in their farms that means the gas pipeline would be passing through their farms. That would be how farmers can know their crops have been affected by the project.
139	Hon. Peter Nyame	How would the crop valuation team know that I have some crops planted within the soil?	The land valuation team can only know what is beneath the soil if the farmer informs the valuation team for them to take note and value those crops too. The valuation team are professionals and they know how they go about such situations.
140	Kojo Ntiful	After the gas pipeline installation, can farmers continue their farming activities on their remaining lands.	farmers are allowed to do their farming activities but however, situations where farmers want to burn their farms, the farmer must inform the company. Genser team will provide a fire-belt that would be a measure control to the extent of farm burning to help protect the gas pipeline
141	Simon Obour	Are compensation paid yearly or monthly?	Both land and crop compensations are paid once. There will be no monthly or yearly compensation. I suggest when compensations are paid to project-affected farmers they invest the money Yaw Bariamah Bonsu into other business ventures
142	Simon Obour	What are some of the post-construction impacts on the community?	The major challenge often faced post-construction is usually flooding. With such situations, the land valuation team would value all flood-affected lands for compensations to be paid.
	Amanhyia Community – August 04, 2021		

No.	Name	Comment	Response
143	Yaw Latif	Why is GEGL not paying for 25 metre land compensation outright?	Genser Energy would implement the Alternative Livelihood Programme after the gas pipeline is constructed, the company would pay for 25-metre land compensation and 9-metre crop compensation for immediate construction. Then later pay for the remaining 16 crop compensation when GEGL is ready to start the Alternative Livelihood Programme.
144	Anokye Thomas	If an individual has bare land and the RoW corridor passes through, what compensation package is the person entitled to?	Since there are no crops on the land, no crop compensation would be paid. However, if the individual has all the necessary legal documents to prove he/she owns the land then in collaboration with the Traditional Council the land compensation would be paid to him/her.
145	Owusu Paul	During construction, if GEGL engineers encounter a water body what is done?	River Ankobra for instance, the river was diverted to another direction, the gas pipeline was buried beneath the river bed and then the river was restored back to its original flow.
146	Efie Pokua	The lands are taken completely from farmers for good. Would farmers receive compensations yearly or would royalties be paid yealy to help project-affected farmers survive?	Both land and crop compensations would be paid once. There would be no yearly compensations or royalties. there would be a source of livelihood for affected farmers if the farmers get employed under the Alternative Livelihood Programme. the company would go into plantations and these plantations would be close to the gas pipelines to help protect gas pipelines from erosion. However, the project would employ project-affected farmers and the youth under the Alternative Livelihood Programme.
147	Kofi Fofie	Farmers do hire lands from landowners to do cultivations and share the profits. When crop compensations are to be paid, would the landowner take both the crop and land compensation?	Crop compensation would be given to farmers directly. It would be written in a cheque with the name of that particular farmer on it. Farmers would need to provide their national ID cards for the cheque preparation. However, based on the search at Lands Commission, the majority of the lands in the Ashanti Region were stool lands and to make it easier to identify landowners, the Lands Commission and the Traditional Council would collaborate to identify rightful owners for the necessary compensations to be paid.

No.	Name	Comment	Response
148	Efie Pokua	Is the said gas the same as Liquified petroleum gas used in our homes?	This natural gas is in its raw state gotten from oil and its purpose was not for domestic use. It is to power a plant to help generate electricity in the Ashanti Region.
149	Faustina Tawiah	Do all crops have the same price?	Crop compensation would vary because the pricing for crops varies. The price of cocoa, cassava, rubber, orange will all not have the same price. The price for a young crop would vary from a matured crop and over matured crop
Fahiakobo Community - August 04, 2021			
150	.Kwadwo Gyan	How compensations will be paid for farms with contractual agreements such as “yεmεankye” (where the farmer and the landowner agree to share proceeds from the farm either on a ¼ or 1/3 basis”.	The LVD who will be responsible for the enumeration of crops has no information regarding contractual agreements, they usually try to identify the farmer who planted the crops on the farm and not the landowner. The farmer’s details are then used for all compensation-related matters. However, the farmer and landowner are responsible for determining how to share their money after it is been paid to the farmer.
151	Akwasi Mintah	to find out where exactly the pipeline will traverse.	the audience that the pipeline route lies about 2.2km West of Fahiakobo. although it seems the pipeline is farther away from the community, there is the likelihood that some persons within the Fahiakobo farm and/or own lands within the area
152	Naomi Yeboa	how persons will know if their farms or property will be affected.	that surveyors will be deployed in the coming weeks to flag the path for which the pipeline will traverse.
153	Naomi	how compensation will be paid.	that compensation comes in two types; crop and land compensation. farmers will receive crop compensation once based on the report received from the LVD. Speaking on land compensation, compensation will be paid to landowners. However, because the vast majority of lands within the Ashanti Region are stool lands, compensation will be paid to the various stools owning the land. In cases where individuals have the necessary documents to prove that they own a piece of land that is affected by the project, compensations will be paid to such persons.

No.	Name	Comment	Response
154	.Peter Marfo	What measure is put in place to ensure that pipeline is safe for the community.	that engineers make sure that before the pipeline is buried, all necessary tests will be carried out to prevent gas leakages. A team from Genser Energy with the help of community liaison officers who will be employed from the community will patrol the Right of Way to ensure 24/7 pipeline safety. The community that no harm will be created by the pipeline.
155	Alex Agyekum	Would the community be provided with electricity and gas?	The natural gas been transported through pipelines cannot supply electricity of gas directly to communities close to the pipeline. The pipeline is to serve the Ameri Power Plant with a continuous flow of fuel to the plant in the generation of electricity. The differences between natural gas and LPG used for domestic purposes.
156	Nana Kofi Kyei	The ways in which the community will benefit from the project.	Community members will have access to employment in some unskilled labour. pleaded with the chief and elders of Fahiakobo to forward their written petition and request describing problems in the community for which they need the assistance of the company.
Kwabentakrom Community – August 04, 2021			
157	Simon Kwaku Boakye	if compensation will be paid when there is a house to be potentially affected by the project.	compensations will not be paid for only crops and land, but any property that might be affected by the project even such as boreholes and well. in relation to farms, compensations will be paid in two; thus, crop and land compensations. He added that a land search will be carried out to identify landowners after which land compensations will be paid to them. Furthermore, farmers whose crops will be affected will also receive compensation for their crops.
158	Juliana Kyere	why land compensations will be paid to Chiefs and cautioned Genser Energy to desist from same.	The reason why land compensations in most part goes to Chiefs is because most lands in the country fall under the category of stool lands; meaning ownership of such lands is by Traditional Councils.
159	Stephen Manu	How persons will know if their farms or property will be affected.	Surveyors will be deployed in the coming weeks to flag the path for which the pipeline will traverse.

No.	Name	Comment	Response
160	Nana Kwaku Amankwa	The CSR asked about the ways in which the community will benefit from the project.	Community members will have access to employment in some unskilled labour. pleaded with the chief and elders of Kwabenakrom to forward their written petition and request describing problems in the community for which they need the assistance of the company.
161	Sule Akama	Compensations will be paid for uncultivated land.	compensations will not be paid for such areas.
162	Haruna Mohammed	What will be done in a case an affected person passes on.	The company's community relations department and that the department will fast track the process of name change to a person designated by the family of the deceased to receive compensation
Marfokrom Community – August 04, 2021			
163	Gabriel Afriyie:	Marfokrom is expanding and in future how would generations know gas pipelines are buried on the RoW?	GEGL provides all the documentation to the works department of the assembly so they can update their systems. The works department would be available to inform persons in future that the gas pipeline is within that jurisdiction and prevent structures near the pipes. The O&M team would be within the communities to give routine maintenance and educated the community on how to live with the gas pipeline.
164	Gabriel Afriyie	Is the gas pipeline for domestic use?	Genser had built power plants for mining companies. The relocation of the Ameri Power Plant to Kumasi will require natural gas to power the plant. The gas pipeline was not the same as LPG used in our homes. The project was to be completed by September, but due to some delays the project timeline has been extended to December or early months of next year for its completion
165	Kusi Twumasi:	Would the company employ community members under the gas pipeline project. This community has several young and energetic individuals who are capable of working.	Community folks would be considered for employment. However, the employment opportunity is for menial works under the project but for the technical areas, GEGL outsources skilled personnel from overseas. Honestly, its important to note that GEGL all unemployed youth or adults because project-affected communities were numerous and that is why GEGL would embark on the Alternative Livelihood

No.	Name	Comment	Response
			Programme which would employ several people in the community.
166	George Adjei Korankye	What would the community benefit from the project.	There are both direct and indirect benefits the community would gain. The gas pipeline that seeks to power the Ameri plant that is being relocated to Ejisu would provide a power solution to the power shortages and fluctuations affecting communities in the region. As part of Genser's CSR, the company will assist communities that require social amenities. This initiative is classified into two; Short term and long term. The short term CSR initiatives are the immediate social assistance that can be provided by the company. The community draws the attention of the company on their immediate needs for assistance, however immediate needs identified should costhigh in its implementation. For instance, the community can alert the GEGL it needs a borehole or street bulb. GEGL will assist in the provision of such needs. For long term CSR initiatives, Genser will undertake a community needs assessment and based on the report, assistance will be provided in securing the identified social need. For instance, the report may recommend the refurbishing of a basic school building. Lastly, the Alternative Livelihood Programme would also employ project-affected farmers and youth within the community
167	Kwabena Asamoah	What kind of crops will be planted under the Alternative Livelihood Programme.	The company will buy off or cultivate crops such as cocoa, coffee, teak and rice in swampy areas within the remaining 16 metres.
168	Kwesi Twumasi	Have GEGL consulted the Traditional Councils, municipal assemblies and other stakeholders?	The first stakeholder engagement was with Otumfuo Osei-Tutu II to seek support. The company has engaged all Traditional Councils within the projected affected areas, and all municipal and districts assemblies. GEGL is also in consultations with NGOs, the media and other vulnerable groups.

No.	Name	Comment	Response
169	Adu Solomon	What is the compensation payment method?	The company would pay for crop compensation before the project starts. The farmer would have to provide national ID card for the correct cheque information. If the farmer provides a name that does not tally with his ID cards, the bank would reject the check. This means that the farmer in question would be the only person that can withdraw the money.
170	Adu Solomon	How do I know that my farm is affected?	: Surveyors are currently line flagging farms. If a farmer goes to his/her farm and see flags or pegs in there, that means that farm would be affected.
171	Gabriel Afriyie	How do the company detect leakages and how is it repaired.	: After pipes are lowered into the trenches, there are signal cables that are placed on the pipes. These cables send signal and information to our control rooms when there are faults or leakages on the pipe. Because these are highly inflammable gas, the maintenance team are quick to responses. Sometimes the engineers shut down the gas flow from the station then attend to the situation.
172	Abena Nyarko	Can an individual disagree not to give out his land and crops for the project.	The project is a national project. During construction of projects people get affected every time but it is all for the greater good. The road we all use were formerly people's farms and they had to agree to give out those lands for development. However, it is also very expensive to go into legal battle with the government. It is almost impossible to stop national projects.
Sarfokrom Community – August 04, 2021			
173	Francis Ahoma	The pipeline to traverse areas of human settlement.	Designing the pipeline route, engineers make sure the pipeline is at least 200m away from human settlement. However, he informed farmers present that the proximity of the pipeline Right of Way to areas of human settlement will further inform the decision of the thickness of the pipes. He added that all affected buildings will be compensated for.

No.	Name	Comment	Response
174	Yaw Ofori	If crops on the 16m of land acquired for the planned future Alternative Livelihood Initiative will be compensated for.	The 16m crops for the Alternative Livelihood Initiative will be compensated before the Alternative Livelihood project begins., in situations where Genser will acquire more lands for the project, affected farmers are engaged and compensated.
175	Issifu Haruna	The compensation package for bare lands.	There will be no crop compensation for bare lands since there will be no crops to value. however land compensation will be paid to the appropriate landowner of the bare lands with the assistance from the Traditional Council in identifying the rightful landowners.
176	Siedu Akwasi	Would affected farmers be compensated based on the value of their crops?	The LVD of the Lands Commission of Ghana has been mandated by the laws of Ghana to value crops, lands, and properties.
177	Nkansah Donkor	Crops for the Alternative Livelihood Initiative belong to the affected farmers.	land and crops affected by the Alternative Livelihood project will be compensated for, therefore it becomes the company's property.
178	Alexander Manu	The approach Genser Energy uses when there is a situation when project-affected persons fail to allow the construction of the pipeline on their properties.	The gas pipeline project is a national project, affected persons rarely fail to allow construction on their properties. He added that however, with the assistance from the traditional leaders and the opinion leaders in the community, Genser tries to reach an agreement with these project-affected persons to help resolve issues of these sought.-
179	Peter Adaku	The importance of the Alternative Livelihood Initiative.	The Alternative Livelihood Project is an initiative to protect the gas pipeline and provide employment for people in the project-affected communities. In the Phase I gas pipeline project, 25m of crops were cleared and the pipeline was buried in the middle. The company realised that to help give back to the community, 9m from the 25m land acquired will be cleared for the pipeline construction whereas farmers will be employed to farm in the remaining 16m. employed farmers will be paid

No.	Name	Comment	Response
			monthly. The Alternative Livelihood Initiative is an example of a long term CSR project.
180	Simon Dim	The number of types of compensation will be paid to project-affected persons.	Based on the compensation plan of Ghana, compensations are paid once.
181	Ali Baba	The crop rate Genser used in the Phase I and II project.	Crop rates are subjected to change yearly. He added that the LVD will present the crop rates to project-affected farmers before compensations are paid.
182	Degraft Mensah	Are there different crop rates for different crops?	The LVD has different rates for crops based on their types and sizes.
183	Adwoa Nyarko	Situations where the remaining farm is small, can Genser acquire the whole farm and compensate the affected farmer.	The LVD has a range where remaining farms are deemed small. In situations where the remaining farms are small, crops are valued and compensated for.
184	Sadia Ibrahim	What is the effect of the pipeline on the community?	The O&M department of the company regularly makes use of drone surveillance along the Right of Way. Genser has Stations 25m apart on the pipeline route and all stations have control rooms connected to fibre optic cables and communication networks to help track and attend to emergency issues along the Right of Way. The project is covered by four insurance covers: Risk Insurance, Asset Insurance, Third Party Liability Insurance, and Fire Allied. The Alternative Livelihood Project is also an initiative to protect the gas pipeline. The company also employs people from the affected communities as Community Liason officers who help monitor the gas pipeline after construction to prevent farmers from farming on the RoW and "galamsey activities".
185	Osei Badu	Affected farmers can farm in their remaining farms.	Farmers can farm in their remaining farms. He further explained that framers can also use the RoW as an access route for the occasional conveying of their farm produce. The Community liaison officers from the affected community work

No.	Name	Comment	Response
			together with the company's Operations and Maintenance team to monitor the pipeline to prevent farmers from farming on the RoW, "galamsey" activities, and the use of heavy machines on the RoW.
186	. Ali Musah	The exact location of the pipeline in their community.	According to the Genser's Cadastral Plan for the Phase III Pipeline Project, the pipeline passes through Afransie. However, the exact location of the pipeline in the community will be identified after the flagging of the pipeline route by Genser's surveyors. The flagging of the pipeline route will also help identify the project-affected persons. Land Valuation will begin after flagging the pipeline route. Project-affected persons to provide the team from the LVD with their ID cards for identification purposes.
187	Effah Hanson	When would the project will begin?	The project has already begun. flagging of the pipeline route will continue after community engagement. compensation will be paid after crop enumeration and valuation by the LVD. construction will begin right after compensations are paid to the project-affected persons.
	Yawponkorkrom Community – August 04, 2021		
188	Armstrong Adisa Emmanuel	Would the natural gas pipeline will provide his community with electricity?	The gas pipeline is to transfer gas from Genser's existing Station to Ejisu, precisely Ahomaso where the Ameri Power Plant will be situated. This natural gas is used to turn turbines to produce electricity. However, the company can assist in alerting the Bekwai Assembly about their electricity as a way of giving back to the community since Yawponkorkrom is an affected community. GEGL can widen their road to make it more accessible with cars. He informed Armstrong Adisa Emmanuel to relay the message about the pipeline construction, the Alternative Livelihood Initiative, and the widening of the access route to their community.

No.	Name	Comment	Response
189			
	Adubiaso Community – August 18, 2021		
190	Kwesi Appiah	Will the pipeline traverse areas of human settlement?	In designing the pipeline route, engineers made sure the pipeline was at least 200m away from human settlement. However, the proximity of the pipeline RoW to areas of human settlement will further inform the decision of the thickness of the pipes. All affected buildings will be compensated for.
191	Adam Musa	Will crops on the 16m of land that are acquired for the planned future Alternative Livelihood Initiative be compensated for.	The 16m crops for the Alternative Livelihood Initiative will be compensated before the Alternative Livelihood project begins. In situations where GEGL will acquire more lands for the project, affected farmers will be engaged and compensated.
192	Opoku Hayford	What are the compensation package for bare lands?	There will be no crop compensation for bare lands since there will be no crops to value. However land compensation will be paid to the appropriate landowners of the bare lands with the assistance from the Traditional Council in identifying the rightful landowners.
193	Awudu Matthew	Will affected farmers be compensated based on the value of their crops?	Yes. The LVD of the Lands Commission of Ghana has been mandated by the laws of Ghana to value crops, lands, and properties.
194	Adansi Bona	Will the crops that fall within the lands for the Alternative Livelihood Initiative belong to the affected farmers?	Land and crops affected by the Alternative Livelihood project will be compensated for, therefore it becomes GEGL's property.
195	Manu Amos	What approach will GEGL use when project-affected persons fail to allow the construction of the pipeline on their properties?	Since the gas pipeline project is a national project, affected persons rarely fail to allow construction on their properties. However, with the assistance from the traditional leaders and the opinion leaders in the community, GEGL will try to reach

No.	Name	Comment	Response
			an agreement with these project-affected persons to help resolve any such issues.
196	Ofosu Morgan	What is the importance of the Alternative Livelihood Initiative?	<p>The Alternative Livelihood Project is an initiative to protect the gas pipeline and provide employment for people in the project-affected communities. In the Phase I gas pipeline project, 25m of crops were cleared and the pipeline was buried in the middle. GEGL realised that to help give back to the community, 9m from the 25m land acquired would be cleared for the pipeline construction whereas farmers would be employed to farm in the remaining 16m.</p> <p>The employed farmers would be paid monthly. The Alternative Livelihood Initiative is an example of a long term CSR project.</p>
197	Salifu Abdullah	How many times will compensation be paid to project-affected persons?	Based on the compensation plan of Ghana, compensations are paid once
198	Awudu Matthew	What crop rate did GEGL use in the Phase I and II projects?	Crop rates are subject to change yearly. The LVD will present the crop rates to project-affected farmers before compensations are paid.
199	Ofosu Morgan	When will the project begin?	the project has already begun. Flagging of the pipeline route will continue after community engagement. Compensation will be paid after crop enumeration and valuation by the LVD. The construction will begin right after compensations are paid to the project-affected persons.
	Akwasiso Community – August 18, 2021		
200	Abusuapanyin Offori Atta	What is the exact location of the gas pipeline in our community?	Based on GEGL's cadastral plan for the Phase III project, Akwasiso community will be affected by the pipeline. However, the exact location of the pipeline in the community will be identified after the flagging of the pipeline route. The flagging will also help identify the project-affected persons.

No.	Name	Comment	Response
201	Evans Isaac Frimpong	What is the effect of the gas pipeline on remaining farmlands?	The gas is contained in a 24-inch pipeline (s65 steel). The only effect of the gas pipeline is flooding and swampy wetlands. However, GEGL has in place a grievance management mechanism it adopts in resolving such issues. For example, hydro-protection is carried out at areas of concern, culverts are installed where necessary and damaged crops are valued and compensated for.
202	Yaw Boateng	What is the interval between the pipeline route and areas of human settlement?	The pipeline route is 200m away from areas of human settlement.
203	Akwasi Frimpong	How many times will compensation be paid to affected persons?	Based on the compensation plan in Ghana, compensations are paid once to project-affected persons after valuation by the LVD.
204	Mawueli Jacob	Is GEGL a governmental organisation and what is the quota assigned to every affected community in terms of employment?	GEGL is an independent power producer however the project is as a result of the government's decision to relocate the Ameri Power Plant from Takoradi to Kumasi to reduce the pressure on the national grid, hence the project is a government project. To the second question, GEGL does not assign quotas to project-affected communities in terms of employment. GEGL gives every affected person the opportunity for employment in the company.
205	Joseph Mensah	What is the importance of the gas pipeline project?	The Government of Ghana has decided to relocate the Ameri Power Plant from Takoradi to Kumasi to help reduce the pressure on the national grid. The gas pipeline is to transport natural gas from Dawusaso to the Ameri Power Plant at Ejisu to turn turbines to produce electricity.
206	Peter Ohene Karikari	Who determines the crop rate - GEGL or the project-affected persons?	None of them. The LVD of the Lands Commission is mandated by the laws of Ghana to perform all valuation exercises such as this pipeline project. After valuation, the LVD will provide

No.	Name	Comment	Response
			the crop rate to project-affected persons before compensations are issued.
207	Kwame Antwi	What compensation is available to lands that have not been cultivated?	Land compensations will be issued for uncultivated lands. Land compensations are paid to the rightful landowners with the help of the Traditional Council in identifying the rightful landowners since they are by law the custodians of the land.
	Keniago Community – August 18, 2021		
208	Kofi Tawiah	Will people from the community be employed for the pipeline construction?	Due to the technical nature of the pipeline, the company employs expatriates for the construction of the pipeline. However, these expatriates employ people from the project-affected communities and train them to assist in the pipeline construction. He added that the Alternative Livelihood Initiative, on the other hand, is an agricultural-based project which does not require skilled labour, hence it provides jobs opportunity for a large number of people in the project-affected communities.
209	Kwadwo Mensah	Will affected crops be compensated?	The compensation package is in two folds: crop compensation and land compensation. Crops within the 9m corridor are valued by the LVD and compensation paid to the affected farmer. Land compensation is also paid to the rightful landowner with the help of the traditional leaders in identifying the rightful landowners since they are the custodians of the land, to prevent impersonation.
210	Osei Boakye	What is the width of the land acquired and the width of the RoW?	GEGL acquires land with 25m and a RoW width of 9m within the 25m corridor. The remaining 16m is the minimum land size acquired for the company's future alternative livelihood project.
211	Stephen Atta Mensah	How will GEGL identify leakages from the pipeline in order to address them?	Various tests and processes are put in place before, during, and after construction to prevent incidents such as pipe

No.	Name	Comment	Response
			leakages leading to an explosion. Various pipe welding techniques and quality control tests that are undertaken to ensure pipeline safety. A dedicated team from the O&M constantly patrol the RoW to ensure its safety. The O&M department of the company regularly makes use of drone surveillance along the RoW. All stations have control rooms connected to fibre optic cables and communication networks to help track and attend to emergency issues along the pipeline.
212	Gyasi Michael	What is the insurance cover for the project?	The project is funded by International Lenders and as such insurance remains a requirement for international funding. He explained that the project is covered by four different insurance covers: Risk Insurance, Asset Insurance, Third Party Liability Insurance, and Fire Allied.
213	Elder Opoku	Can farmers farm in their remaining farms.	Farmers can farm in their remaining farms. However, farmers will be educated on how to live with the gas to prevent fire outbreaks after construction. People from the affected communities will be employed and trained to monitor the RoW together with GEGL's O&M team.
214	Boakye Joyce	Are there situations where the pipeline passes in areas of human settlement?	In designing the pipeline route, engineers made sure the pipeline was at least 200m away from human settlement. The proximity of the pipeline RoW to areas of the human settlement would further inform the decision of the thickness of the pipes. In situations where some buildings are affected by the pipeline, the building would be valued by the LVD and compensated for.
215	Kwadwo Mensah	How many years will the pipeline last?	The pipes to be used for the pipeline project have an indefinite lifespan, often more than 100years.
216			

No.	Name	Comment	Response
	Abenkyim Community – August 19, 2021		
217	Alex Kyei Baffour	Will land compensation for individual farmers be paid to the Stools?	Land compensation for individual lands will be paid to the Individual landowners with the help of the traditional leaders in identifying and confirming the rightful landowners to avoid issues of impersonation.
218	Amos Acquah	Will affected buildings be compensated?	The pipeline traverses farmlands hence the pipeline rarely affects buildings. However, project-affected buildings will be compensated for after valuation by the LVD of the Lands Commission.
219	Adjei Tabi	Can natural gas be used for domestic purposes?	Natural gas is slightly different from the domestic gas used. The gas for domestic purposes is LPG whereas the gas pipeline is LNG.
220	Nana Kofi Amakye	Can you further explain the employment packages the company has for the people in the affected communities?	Due to the technical nature of the pipeline construction, GEGL will employ expatriates from the USA, China and Venezuela. However, GEGL will employ and train people from the community to assist these expatriates in pipeline construction. GEGL has normal labourer works, security works, HR works, construction works, and farming works from the Alternative Livelihood Initiative.
221	Agyei Tabi	What is the exact location of the pipeline in our community?	Based on GEGL's cadastral plan for the Phase III project, Abenkyim is a project-affected community. However, the exact location of the pipeline in the community will be identified after flagging the pipeline route by GEGL's surveyors. GEGL needed to engage the community before the flagging activities commenced.
222	Janet Tetteh	Will compensations be paid to project-affected persons before construction works begin?	Crop compensations for the 9m corridor will be paid to project-affected persons before the pipeline construction.

No.	Name	Comment	Response
223	Afia Kobi	When will the project commence?	The project has already begun. GEGL needs to engage all relevant stakeholders including Chiefs and people in the project-affected communities. After the community engagement, the pipeline route will be flagged by surveyors to identify project-affected persons. An announcement will be made before the crop valuation exercise, and compensations are paid after the completion of the valuation report. The pipeline construction begins after compensations are paid.
	Anwian Nkwanta Community – August 19, 2021		
224	Bismark Adu Gyamfi	When will the gas pipeline project commence?	The project has already begun. GEGL needs to engage all relevant stakeholders including Chiefs and people in the project-affected communities. After the community engagement, the pipeline route will be flagged by surveyors to identify project-affected persons. An announcement will be made before the crop valuation exercise, and compensations are paid after the completion of the valuation report. The pipeline construction begins after compensations are paid.
225	Francis Opoku	How would I know that my farm has been affected?	There will be line flagging from Dawusaso to Ejisu Domeabra where the Ameri Power Plant will be located. Farms that will be affected will be pegged with flags. So when farmers visit their farms and see the flagged pegs it will inform them that their farmlands have been affected by the project
226	Francis Opoku	Why GEGL is paying for only 9m crop compensation and not the entire 25m?	The remaining 16m compensation would be paid when the Alternative Livelihood Programme begins. Farmers will be allowed to farm on the 16m until the 16m compensations are paid.
227	Gideon Fosi	Who is entitled to the land compensation and crop compensation?	Farmers are the ones to receive the crop compensations. However, for the land compensation, the majority of the lands in the region are stool lands. The LVD of the Lands Commission in collaboration with the Traditional Councils will

No.	Name	Comment	Response
			determine landowners for the necessary compensations to be paid
228	Beatrice Asiedu	After the gas pipeline construction, would farmers be allowed to farm on their remaining lands?	Farmers are always allowed to farm beyond the acquired 25m corridor.
229	Bismark Adu Gyamfi	What would the community gain from this project?	<p>GEGL has a CSR to the community. GEGL has short and long term projects that would seek to address key challenges the communities face. The short term CSR projects are the community-based project that GEGL are would assist in solving challenges they face in the short run.</p> <p>For example, GEGL has repaired broken bridges, and provide boreholes to communities. For the long term, there would be a needs assessment that would point out the most pressing need for the community, then GEGL would assist in providing that community need.</p>
230	Bismark Adu Gyamfi	How would the crop and land price be determined for compensation?	The Lands Valuation Division from the Lands Commission will be determining the prices of crops and lands. However, the prices of matured cocoa will differ from the cocoa seedling. The prices are not fixed for all crops.
231	Hon. Frank Awuah	Would crop compensations be paid before, during or after construction?	Crop compensations are paid before construction begins.
	Kurase Community – August 19, 2021		
232	Alex Appiah	Will compensation paid for the land?	Compensation is paid for both land and crops. Land compensation is paid fully for the 25m width and that it is crop compensation that is paid for the 9m width.
233	Kofi Gyamfi	Farmers should be adequately compensated to avoid any issues during the project, especially when there are instances of over clearances.	Suggestion well noted. Measures will be put in place to ensure that farmers are adequately compensated, and also any issues of over clearances are quickly resolved.

No.	Name	Comment	Response
		The main source of living for us is farming and the project will be taking that away from some the indigenes. Therefore that must be carefully considered when compensating the farmers.	
234	Kwamena Offeh	What benefits will the project bring to the Community and can the gas be used for domestic purposes?	<p>The Company has a CSR Programme for the affected communities. The CSR comes in three forms; short term, long term and an alternative livelihood programme for the affected farmers.</p> <p>The gas cannot be used for domestic purposes because the gas that runs through the pipeline is LNG, which is different from LPG used in homes.</p>
235	Solomon Nimako	What are the harmful effects of the project and what measures are put in place to curb such effects?	<p>LNG can be dangerous, but GEGL puts in the necessary health, safety and environment measures to ensure that the communities are not affected.</p> <p>Apart from the deep burying of the pipes, fibre optic cables are installed to send signals to the stations where there are any issues. Other measures put in place are teams set up to patrol the length of the pipeline, sign posts, emergency shut off areas, gas stations among others.</p> <p>Any negative effects on humans in the community is highly unlikely but in case of any of such emergencies, there is a patrol team that will move along to resolve any of such issues. Emergency contact numbers will also be given out for people with any concerns to directly contact the GEGL team.</p>
236	Nana Oti Amere II	I thank the officials of GEGL for your presentation and time, and pledge the community's support to the success of the project.	On behalf of GEGL, I thank the Chiefs, Elders and members of the community for your time and contributions.
	Adankragya-Sawaba – August 19, 2021		

No.	Name	Comment	Response
237	Akwasi Boakye	Will the pipeline project result in a relocation of the Adankragya-Sawaba Community?	The project will not result in the relocation of the people of Adankragya-Sawaba. The pipeline route lies at least 200m from the community.
238	Kwakyee Yaw	Will the pipeline have any effects on the community especially farms?	The pipeline will have no environmental effect on the people of Akyekyesu. The natural gas is contained in the pipeline and cannot escape into the atmosphere.
239	Isaac Asamoah	Provide for further clarification about compensations.	Compensations will be paid in two; crop and land compensations. A land search will be carried out to identify landowners after which land compensations will be paid to them. Furthermore, farmers whose crops will be affected will also receive compensation for their crops.
240	Comfort Agyekum	How will persons know if their farms or property will be affected?	Surveyors will be deployed in the coming weeks to flag the path for which the pipeline will traverse.
241	Kofi Nti	What measures are put in place to ensure that pipeline is safe for the community?	Engineers make sure that before the pipeline is buried, all necessary tests will be carried out to prevent gas leakages. GEGL with the help of community liaison officers will be employed from the community to patrol the RoW to ensure 24/7 pipeline safety. I assure the community that no harm will be created by the pipeline.
242	David Boakye	In terms of CSR in what ways will the community benefit from the project.	In the short term, community members will have access to employment in some unskilled labour. I would plead with the chief and elders of Adankragya-Sawaba to forward written petition and request describing problems in the community for which you need the assistance of the company.
243	Kwame Amanfo	What employment opportunities are available for the youth of the community.	Some of the youth will be engaged for the project in roles such as security, labourers, cooks, cleaners etc.
244	Seth Asraku	I thank officials from GEGL for the presentation and also thank all members for your presence.	

No.	Name	Comment	Response
		We support the project and I charge all community members to embrace the project with open arms.	
245	Sebedie Community – August 19, 2021		
246	Kwabena Adu	How would generations know gas pipelines are buried on the RoW.	GEGL provides all the documentation to the works department of the assembly so they can update their systems. The works department would be available to inform persons in future that the gas pipeline is within that jurisdiction and prevent structures near the pipes. The O&M team would be within the communities to give routine maintenance and educated the community on how to live with the gas pipeline.
247	Gabriel Afriyie	Is the gas pipeline for domestic use?	Genser had built power plants for mining companies. The relocation of the Ameri Power Plant to Kumasi will require natural gas to power the plant. The gas pipeline was not the same as LPG used in our homes. The project was to be completed by September, but due to some delays the project timeline has been extended to December or early months of next year for its completion
248	Yakubu Lawbe	Would the company employ community members under the gas pipeline project? This community has several young and energetic individuals who are capable of working.	Community folks would be considered for employment. However, the employment opportunity is for menial works under the project but for the technical areas, GEGL outsources skilled personnel from overseas. Honestly, its important to note that GEGL all unemployed youth or adults because project-affected communities were numerous and that is why GEGL would embark on the Alternative Livelihood Programme which would employ several people in the community
249	Kwabena Adu	What would the community benefit from the project.	There are both direct and indirect benefits the community would gain. The gas pipeline that seeks to power the Ameri plant that is being relocated to Ejisu would provide a power

No.	Name	Comment	Response
			<p>solution to the power shortages and fluctuations affecting communities in the region.</p> <p>During construction and post-construction, Genser Energy would need some unskilled labour to assist in the day to day operations at power station camps. These individuals would be employed from and around communities where GEGL power stations are situated.</p> <p>As part of Genser's CSR, the company will assist communities that require social amenities. This initiative is classified into two; Short term and long term. The short term CSR initiatives are the immediate social assistance that can be provided by the company. The community draws the attention of the company on their immediate needs for assistance, however immediate needs identified should cost high in its implementation. For instance, the community can alert the GEGL it needs a borehole or street bulb. GEGL will assist in the provision of such needs.</p> <p>For long term CSR initiatives, Genser will undertake a community needs assessment and based on the report, assistance will be provided in securing the identified social need. For instance, the report may recommend the refurbishing of a basic school building.</p> <p>Lastly, the Alternative Livelihood Programme would also employ project-affected farmers and youth within the community</p>
250	Kojo Michael	Have GEGL consulted the Traditional Councils, municipal assemblies and other stakeholders?	Yes. The company has engaged all Traditional Councils within the projected affected areas, and all municipal and districts assemblies. GEGL is also in consultations with NGOs, the media and other vulnerable groups. The first stakeholder engagement was with Otumfuo Osei-Tutu II to seek support.
251	Panyin Adu Abanko	What is the compensation payment method?	The company would pay for crop compensation before the project starts. The farmer would have to provide national ID card for the correct cheque information. If the farmer provides

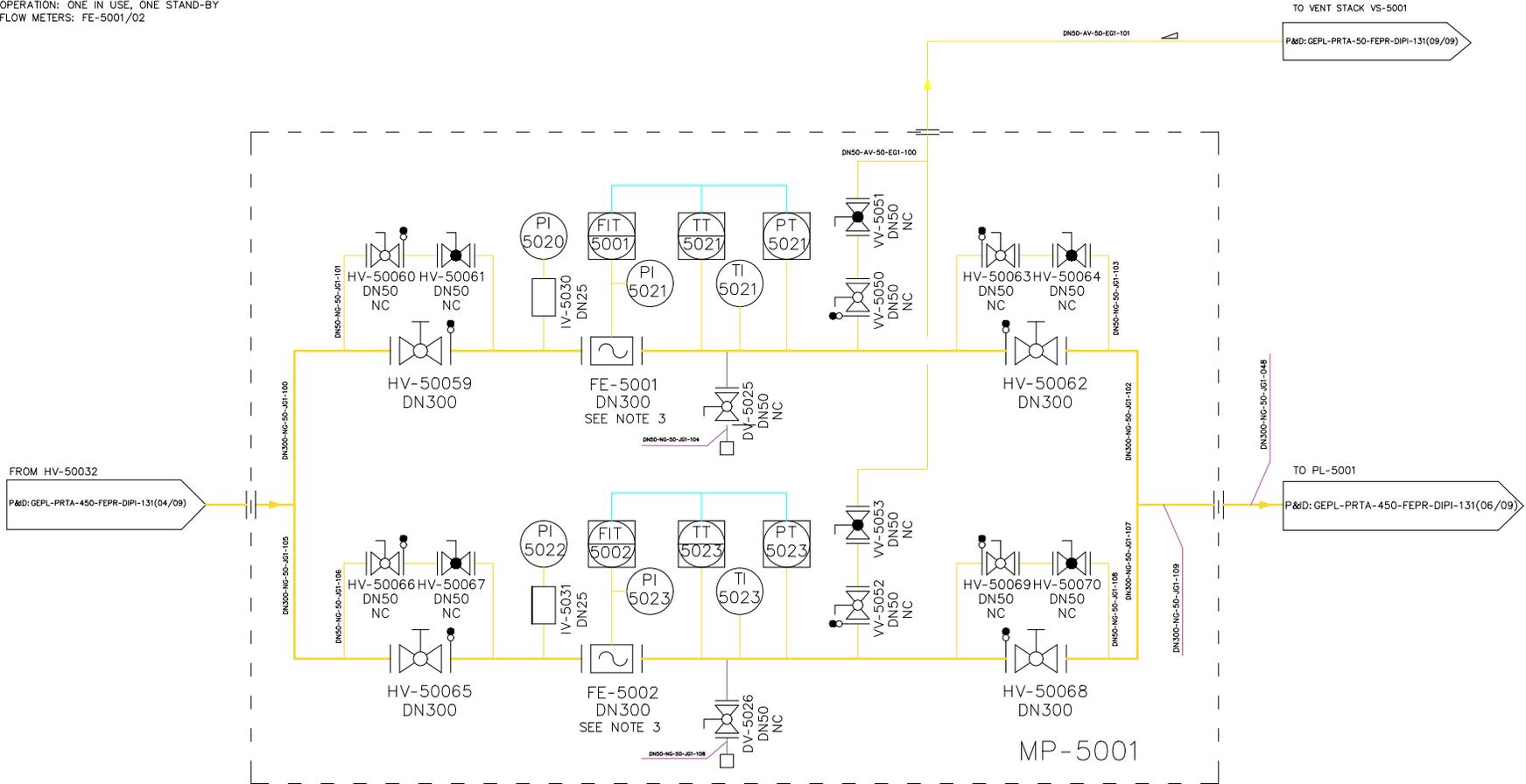
No.	Name	Comment	Response
			a name that does not tally with his ID cards, the bank would reject the check. This means that the farmer in question would be the only person that can withdraw the money.
252	Kwame Appiah:	How do I know that my farm is affected?	Surveyors are currently line flagging farms. If a farmer goes to his/her farm and see flags or pegs in there, that means that farm would be affected.
253	Yakubu Lawbe	How do the company detect leakages and how is it repaired?	After pipes are lowered into the trenches, there are signal cables that are placed on the pipes. These cables send signal and information to our control rooms when there are faults or leakages on the pipe. Because these are highly inflammable gas, the maintenance team are quick to responses. Sometimes the engineers shut down the gas flow from the station then attend to the situation.
	Daa Community – August 31, 2021		
254	Sarkodie Samuel	Compensation should be directed to project-affected persons, not through middlemen such as the Assembly Members, the traditional leaders, or the opinion leaders. There are examples where compensation project-affected persons did not receive their compensation due to the introduction of these middlemen. This brought about agitations and disputes in their community therefore GEGL should avoid these middlemen as a mode of compensating project-affected persons.	Suggestion well noted About the Phase I and II project, compensations are paid directly to project-affected persons. During valuation, project-affected persons will be tasked to present their national identification cards to the officials from the LVD to help identify these project-affected farmers by name. The mode of compensation by Genser Energy is through a bank draft bearing the names of these project-affected farmers. The various banks pay the money only to the name on the bank draft.
255	Bioh Collins	What types of machines that will be used for the construction.	GEGL engineers usually use the Dozers for the clearing and reshaping and the excavators for trenching, the lowering of the pipes, and backfilling

No.	Name	Comment	Response
256	Eric K Amankwah	How deep is the trench.	the minimum depth of the trench is about 1.6m deep which is approximately 6ft
257	Eric K Amankwah	Daa community needs electricity in their school and so would request the assistance of Genser Energy to provide electricity in their classrooms.	Kindly make your request official by stating it in a letter addressed to Genser Energy with the endorsement from the community's traditional leaders and opinion leaders.

APPENDIX C

BMS layout

MP-5001:
 METERING PACKAGE
 SERVICE: NATURAL GAS
 CAPACITY: TBD
 DESIGN PRESSURE: 45 barg
 TEMP. MIN/MAX: -19/70C
 OPERATION: ONE IN USE, ONE STAND-BY
 FLOW METERS: FE-5001/02



- NOTES:
- Vent to atmosphere at safe location connected to the same Station's Vent Stack.
 - JG1 and EG1 are Index of Services referenced to the Genser Piping Class.
 - To be confirmed the size of Flow Meter in accordance the maximum gas flow to be supplied.

REFERENCE DRAWINGS	
DRAWING NUMBER	DESCRIPTION
GE-NGP-GEN-001	Natural Gas Pipeline Illustration Drawing, Rev. J
GE-NGP-PRO-101	Natural Gas Pipeline P&ID, Rev. E
GEPL-PR-00-FEPR-DIPI-201	P&ID Symbols for Genser Energy Drawings, Rev. 2

REVISIONS					
REV	DATE	DESCRIPTION	DESIGNED	REVIEWED	APPROVED
A	16-06-21	ORIGINAL EMISSION	R. Correa	F. Gomez	Baafour A.
B	17-07-21	OPTIMIZATION OF SKIDS AND EQUIPMENT	J.C. / R.C.	F. Gomez	Baafour A.
C	30-09-21	CHANGED NAME OF THE STATIONS	J.C. / R.C.	F. Gomez	Baafour A.
D	16-10-21	REVISED DRAWING (ESDV out of this Sheet)	J.C. / R.C.	F. Gomez	Baafour A.



Natural Gas Pipeline Project (Phase 3)
Ejisu Branch and Metering
Station (EBMS-50) P&ID

Drawn by: J. Corrales	Revised by: R. Correa/H. Oppong	Approved by: F. Gomez	Project Site: Gas Pipeline	Scale: N/A
16-10-2021	16-10-2021	16-10-2021	Print Format: A3	Sheet: 05 of 09

Drawing No: **GEPL-PRTA-50-FEPR-DIPI-131** Rev. **D**

THIS DOCUMENT IS PROPERTY OF GENSER ENERGY LIMITED AND IS FOR THE EXCLUSIVE USE OF THE PERSONNEL. IT CANNOT BE CIRCULATED, REPRODUCED OR DISTRIBUTED WITHOUT PERMISSION FROM THE COMPANY'S MANAGEMENT.



golder.com