

SOCIAL IMPACT ASSESSMENT STUDY

DRAFT REPORT



**Land Acquisition for construction of proposed SV Station at
Thekkumbagam for the Kochi Salem LPG Pipe Line**

Requiring Agency
**Kochi Salem Pipeline
Private Limited**



January 25, 2018

SIA Unit



Rajagiri College of Social Sciences
Rajagiri P.O Kalamassery, Pin: 682 104
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Abbreviations

BPCL	Bharat Petroleum Corporation Limited
IOCL	Indian Oil Corporation Limited
LA	Land Acquisition
LPG	Liquefied Petroleum Gas
MoEFCC	Ministry of Environment, Forest and Climate Change
MSW	Master of Social Work
NGO	Non Governmental Organisation
KSPPL	Kochi Salem Pipe Line Private Limited
NH	National Highway
NHAI	National Highway Authority of India
MMTPA	Million Metric Tonneper Annum
PCB	Pollution Control Board
PESO	Petroleum and Explosives Safety Organisation
PNGRB	Petroleum and Natural Gas Regulatory Board
RoU	Right of Use
RTFCTLARR	Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act
SIA	Social Impact Assessment

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CHAPTER 1 EXECUTIVE SUMMARY

1.1 Introduction - Project and public purpose

Kochi Salem Pipeline Private Limited (KSPPL) is a Joint Venture of Bharat Petroleum Corporation Limited and Indian Oil Corporation Limited with a 50% equity shares each. The project envisages laying of 12"/8" dia , 429 km LPG pipeline from Kochi to Salem connecting their dispatch terminals at Kochi Refinery and Puthuvypeen and Receipt terminals at Udhayamperoor, Palakkad, Coimbatore, Erode and Salem LPG plants of BPCL/IOCL. Authorisation for the project is received from PNGRB (Petroleum and Natural Gas Regulatory Board) and has approvals from MOEF (Ministry of Environment, Forest and Climate Change), PCB (Pollution Control Board), PESO (Petroleum and Explosives Safety Organisation) and from NHAI, Railways, Irrigation, PWD etc for the crossings of the pipeline in Kerala.

The project is intended to reduce the movement of LPG through road and transport through pipeline which is considered to be the most safest mode of LPG transport. The pipeline will have Sectionalising Valve Stations at every 12 Kms for closing the pipeline in segments for any other purpose. The size of the SV Station will be normally 50 x 50 meters (2500 square meters) for accommodating the valve and for building a station for accommodating CPE panels, SCADA panels and telecom panels and emergency power supplies. Two such SV stations are planned at Thekkumbagam and Marampilly.

This Social Impact Assessment Study analyses the Impact on Kochi - Salem Gas Pipeline Project - Acquisition of land for the construction of Sectionalising Valve Station at Thekkumbhagam.

1.2 Location

The proposed area is located in the Ernakulam District, Aluva Taluk,

Chowara - Thekkumbagam Village at Survey No 224/7 (Dryland) owned by Mr. Habib Muhamed.

1.3 Size and attributes of land acquisition

As per the Kerala Gazette Notification No 50/2017 dated 19.12.2017, 0.1945 hectares of land is proposed to be acquired for the Construction of Sectionalising Valve. The proposed land is Dry Land and presently is open land.

1.4 Alternatives Considered

The pipeline route is selected after considering detailed route survey and studying the various alternative routes possible for laying the pipeline. The majority of pipeline in Kerala passes through the existing RoU of M/s Petronet CCK Limited, whose pipelines have been in operation since 2001 without any risk. Further, more than 90% of the pipeline passes through agricultural lands and the passage of pipe line through populated and residential areas is limited to the maximum extent possible. Additional protection by way of increased thickness and depth is adopted for such areas that cannot be avoided.

1.5 Social Impact

While conducting the Social Impact Assessment, the SIA team had observed that although a private property is needed to be acquired at the proposed project area, no one is residing in the property.

1.6 Mitigation Measures

The alignment of the proposed project is designed in a way that the passage of pipe line through populated and residential areas is limited to the maximum extent possible. Thus the impact of the acquisition is also minimized, further safety and security measures to be adopted are ensured by the requiring body. Permits and consent from concerned authorities including PNGRB and MoEF had also been taken by the requiring body. (Source: <http://www.ksppl.com/statutory-documents>). The implementing agency shall comply all the provisions of the regarding the implementation of the project. Periodical monitoring of the same are also recommended.

CHAPTER 2 DETAILED PROJECT DESCRIPTION

2.1 Background of the Project

KSPPL is a joint venture formed between BPCL and IOCL with 50% participation of each, for the execution and operation of a 429 Kms (224 Kms in Kerala and 205 Kms Tamilnadu) long 12"/8" dia pipeline being constructed from Kochi to Salem along with associated state of the art Telecom, SCADA and APPS systems involving 2 dispatch terminals, 5 receipt stations, and 34 SV stations at an estimated cost of Rs.1112 Crore including IDC.

The project is envisaged for transportation of LPG from BPCL, Kochi Refinery post its expansion from 9.5 MMTPA to 15.5 MMTPA and from the proposed IOCL import terminal Puthuvypeen to BPCL/IOCL LPG plants at IOCL Udayamperoor, BPCL Palakkad, BPCL Coimbatore, IOCL Coimbatore, Erode and Salem. The project is intended to reduce the movement of LPG through road and transport through pipeline which is considered to be the safest mode of LPG transport.

Authorisation for the project is received from PNGRB (Petroleum and Natural Gas Regulatory Board) and has approvals from the MoEF (Ministry of Environment, Forest and Climate Change), PCB (Pollution Control Board), PESO (Petroleum and Explosives Safety Organisation) and from NHAI, Railways, Irrigation, PWD etc. for the crossing of the pipeline in Kerala.

2.2 Rationale of the project

Pipeline mode of transport is considered to be the safest mode of transport of petroleum products and Kerala Govt. has insisted for movement of LPG through pipeline instead of roadways, which is prone to accidents and related major consequences. The project envisages the movement of LPG through pipeline from

Kochi Refinery and IOCL, Puthuvypeen to the bottling plants of IOCL and BPCL as per the product demand pattern. LPG is mainly consumed for domestic purposes. Thus the proposed project shall be considered as a public purpose as per Section 2 of RTFCTLARR Act, 2013 (30 of 2013).

2.3 Details of the project size, location, capacity, outputs, production targets, costs and risks

- | | | | |
|-------|--|---|--|
| i. | Pipeline Starting Point | : | Kochi, Kerala |
| ii. | Pipeline Terminating Point | : | Salem, Tamil Nadu |
| iii. | Pipeline Length | : | 429 Kms |
| iv. | Pipeline Specification | : | API 5L X65/70 Grade |
| v. | Pipeline Capacity | : | 1.53 MMPTA including common Carrier Capacity |
| vi. | Pipeline Size | : | 12"/8" (6.4/7.1/7.9/8.8/9.5mm) |
| vii. | Product | : | LPG |
| viii. | Design Pressure | : | 95 Kg/ cm ² |
| ix. | SV Stations | : | 36 Nos |
| x. | Project Cost | : | Rs.1112 Crore (including IDC) |
| xi. | Scheduled Date of Completion | : | 25.02.2019 |
| xii. | Environment Impact Assessment is carried out by M/s Mecon Limited and all the mitigations suggested for avoiding risk during the construction and operation of the pipeline is taken care of. Further EIL (Engineers India Limited) have carried out the HAZOP studies for the pipeline and the recommendations are being implemented. | | |

2.4 Examination of Alternatives

The pipeline route was selected after considering a detailed route survey and studying the various alternative route possibilities for the laying of the pipeline. The majority of pipeline in Kerala passes through the existing RoU of M/s Petronet CCK Limited, whose pipelines have been in operation since 2001 without any risk.

Further, more than 90% of the pipeline passes through agricultural lands and the passage of pipe line through populated and residential areas is limited to the maximum extend possible. Additional protection by way of increased thickness and depth is adopted for such areas that cannot be avoided.

2.5 Phases of Project Construction

The project execution in Kerala is divided into three phases:

I. Kochi Refinery to Udayamperoor (12 Kms)

This portion of the pipeline is commissioned and is in operation since August 2017.

II. Kochi Refinery to BPCL Palakkad Bulk Terminal

The work related to the above pipeline is in progress. All the materials required for this portion have been procured and contracts awarded. RoU for laying the pipeline is mostly acquired.

III. IOCL Puthuvypeen to Kochi Refinery

This will be taken up in synchronization with the construction of Puthuvypeen terminal by IOCL.

2.6 Core design features and size and type of facilities

The pipeline is constructed as per ASME 31.6 complying OISD 141 and 224 (Oil Industry Safety Directorate) standards and the material used for construction are as per API standards. The pipeline will have Sectionalising Valve Stations every 12 Kms for closing the pipeline in segments for any other purpose. The pipeline is cathodically protected against corrosion using impressed current which is regularly monitored. This is apart from three LPE coating provided for the pipeline. The entire cross country portion of the pipeline is laid underground keeping a minimum depth of 1.5 meters. The size of the SV station will be normally 50 x 50 (2500 Square Meters) for accommodating the valve and for building a station for accommodating CPE panels, SCADA panels and telecom panels and emergency power supplies. Two such SV stations are planned at Thekkumbagam and Marampilly.

2.7 Need for ancillary infrastructural facilities

The project is about construction of pipeline which will have apart from the pipeline, Sectionalising Valve Stations, Receipt and Despatch Terminals.

2.8 Work Force Requirements

Normal work force during construction will be around 350 and permanent work force upon commencement will be around 20.

2.9 Details of Studies Conducted Earlier

Social impact study is conducted by M/s. Mecon Limited, a Govt. of India enterprise which has the approval for conducting such studies as per Ministry of Environment and Forest and all the suggestions and mitigation measures given in the report are complied with.

2.10 Applicable Law and Policies

The applicable laws on land acquisition, rehabilitation and resettlement for the proposed project are:

- The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013
- Government of Kerala - Revenue Department - State Policy for Compensation and Transparency in Land Acquisition
- Right to Information Act, 2005

CHAPTER 3
TEAM COMPOSITION, METHODOLOGY AND SCHEDULE OF SOCIAL
IMPACT ASSESSMENT

3.1 List of all team members with qualifications

The study team is headed by the Project Director, RAJAGIRI outREACH, who is the Chairperson of the SIA Unit. A team of six members having experience in conducting Social Impact Assessment studies and socio-economic surveys were assigned for data collection, monitoring of data collection, coordination and report preparation of the study. Representatives from the Revenue Department supported the investigators to identify the affected families.

Sl.No	Name	Qualification and Designation	Experience
1	Meena Kuruvilla Director Rajagiri outreach	MSW, Chairperson - SIA Unit	30 years in development sector
2	Princy Jacob	MSW, Project Co-ordinator SIA Unit	21 years in development sector
4	Linda Chacko	MA Sociology, PGDHS Research Officer - SIA Unit	14 years in development sector
5	Ligi V. E	MSW, Research Associate- SIA Unit	20 years in development sector
6	Arun Mathews George	MSW, Documentation Officer - SIA Unit	I year in development sector
3	Biju C .P	BA; Research Associate-SIA Unit	23 years in development sector

3.2 Methodology & Tools

The objective of Social Impact Assessment (SIA) is to enumerate affected land and structures, affected families and persons, to identify social impacts, and to prepare Social Impact Management Plan (SIMP). In order to capture data for the present exercise, both primary as well as secondary sources were systematically collected. SIA unit had also examined the records and documents including the alignment drawing of the proposed project. SIA team had also made a site visit along with the land revenue officials for information dissemination. Questionnaires and interview schedules were used as tools for data collection.

3.3 Sampling Methodology Used

As a part of SIA, Census Socio-Economic survey has been conducted by experienced members of SIA Unit to list out the adverse impacts of the proposed project. Before the actual household Socio-Economic Survey, all the properties that were likely to be affected by the project were identified with the support of the Revenue Department staff. The survey was conducted through door-to-door personal interview. In this interview, the size and nature of the land was recorded. The details of affected families, possession of legal documents, data related to social profile, family details, occupation, source of income, family expenditure, self employment activities, and employment pattern were collected. Majority of the interview schedule has been pre-coded, except those reflecting the opinion and views of PAFs, which have been left open-ended. Before filling the questionnaires, the affected families were asked to provide a copy of the necessary documents they need to produce as proof of their ownership of the property.

3.4 Overview of information/ data sources used

Secondary source information was collected from various concerned departments including Office of the Special Tahsildar (LA), NH II, Aluva and a host of other literatures. Thus, secondary source information complemented the primary data elicited through field survey from the affected people and other stakeholders.

Understanding was created about the physical, social, economic, and cultural set-up of the project area before undertaking detailed field investigations.

3.5 Process and Schedule of Activities

- | | |
|--------------|--|
| 16-10-2017 - | District Collector, entrust RAJAGIRI outREACH to conduct the SIA study |
| 19-12-2017 | Publication of 4 (1) notification in Kerala Gazette |
| 21-12-2017 - | Discussion with members of affected family |
| 25-01-2018 - | Draft Report Submission |
| 29-01-2018 - | Propose to conduct Public Hearing |

CHAPTER 4 LAND ASSESSMENT

4.1. Information about affected area

The land proposed to be acquired for the project is owned by Mr Habib Muhamed, (0.1945 hectare) located at Resurvey No 224/7 pt in Thekkumbagam Village, Block 30, Aluva Taluk, Ernakulam District.



Proposed Acquisition Sketch

4.2. Area of impact

The proposed land acquisition shall affect the property owner, who loses 0.1945 hectare land. The proposed property is an open land.

4.3. Total land requirement for the project

For the construction of SV station at Thekkumbagam for the proposed Kochi Salem LPG pipeline, 2500 square meter (0.25 hectares) of land is required at Thekkumbagam village.

4.4 Present use of public land in the vicinity of the project area

The area in the vicinity of the project area is owned by private parties and no public land is available in the surrounding area.

4.5 Land (if any) already purchased, alienated, leased or acquired, and the intended use for each plot of land required for the project

No land is purchased, alienated, leased or acquired already in the area for the requirement of the proposed project.

4.6 Quantity and location of land proposed to be acquired for the project

Nearly 0.1945 hectare of land is proposed to be acquired for the proposed project. The property is located at

4.7 Nature, present use and classification of land and if agricultural land, irrigation coverage and cropping patterns

The proposed land is dry land. Presently the property is an open land, not using for agricultural or related purpose.



Proposed Acquisition Land

4.8. Size of holding, ownership patterns, land distributions and number of residential Houses

The extent of land is 0.1945 hectare owned by Mr Habib Muhamed, located at Resurvey No 224/7 pt in Thekkumbagam Village.

4.9. Land prices and recent changes in ownership, transfer and use of lands over the last 3 years

As per the information given by the respondents, no transactions had been taken place in the affected area for the last three years.

CHAPTER 5

ESTIMATION AND ENUMERATION

5.1 Families which are directly affected

Mr. Habib Muhamed, land owner of the proposed project area is considered to be directly affected by the project.

5.2 Families which are indirectly impacted by the project

There shall be no indirect impact by the acquisition of land for the proposed project.

5.3 Inventory of productive assets and significant lands

The proposed land is an open land and no productive asset exists in the land.

CHAPTER 6

SOCIO ECONOMIC AND CULTURAL PROFILE

6.1. Demographic details

Mr Habeeb Muhammed and his wife Mrs Sophia aged 67 and 66 respectively. The family follows Muslim religion and belongs to Other Backward Caste. Heirs of the couples are residing out of the country and further details were not revealed by the family. Mr Habeeb had attained LLB educational qualification and Mrs Sophia had attained Degree level of education.

6.2. Income and poverty level

As per the PDS system record, the family belongs to Above Poverty Line, the monthly income was not revealed by the family.

6.3. Vulnerable groups

The affected persons are Senior Citizens, but no vulnerable groups are residing/operating in the area.

6.4. Land use and livelihood

Livelihood of no families is affected by the acquisition of the land for the proposed SV Station.

6.5. Local economic activities

No economic activities are being conducted in the area.

6.6. Factors that contribute to local livelihoods

Since no economic activities are being carried out, the local livelihood is not affected in any manner.

CHAPTER 7

SOCIAL IMPACT MANAGEMENT PLAN

7.1 Approach to Mitigation

There shall be no displacement of families by the proposed acquisition. Primary source of livelihood of families are also not affected. Commencement of the present land acquisition laws and policies shall mitigate the impact of the proposed project.

7.2 Measures to avoid mitigate and compensate impact

Provisions of compensation for the land acquisition under the RTFCTLARR Act, 2013 shall be enough to mitigate impacts regarding loss of land.

7.3. Measures those are included in the terms of Rehabilitation and Resettlement

Since there shall be no displacement of families, rehabilitation and resettlement are not required here.

7.4. Measures that the Requiring Body has stated it will introduce in the Project Proposal

A Social impact study is already conducted by M/s. Mecon Limited, a Govt. of India enterprise which has the approval for conducting such studies as per Ministry of Environment and Forest and all the suggestions and mitigation measures given in the report are complied with.

7.5. Alterations to project design and additional measures that may be required to address the extend and intensity of impacts across various groups as identified during the Social Impact Assessment process

Not Applicable

7.6. Detailed Mitigation Plan

Not Applicable

CHAPTER 8

SOCIAL IMPACT MANAGEMENT PLAN INSTITUTIONAL FRAMEWORK

8.1 Institutional Structures and Key Persons

The RTFCTLARR Act, 2013 defines the Administrator appointed by the State Government as the person responsible for the preparation of the Rehabilitation and Resettlement Scheme for affected families of Land Acquisition. Subject to the superintendence, directions, and control of the appropriate Government and the Commissioner for Rehabilitation and Resettlement, the formulation, execution and monitoring of the Rehabilitation & Resettlement Scheme shall be vested in the Administrator.

In the Land Acquisition for Construction of SV station for the proposed Kochi - Salem pipeline, the major mitigation measures from the acquisition can be handled by providing the appropriate compensation under the RTFCTLARR Act, 2013.

As per G.O. (Ms.) No.485/2015/RD, dated 23/09/2015, The Kerala State Policy for Compensation and Transparency in Land Acquisition,

The District Level Fair Compensation, Rehabilitation and Resettlement Committee comprises the:

- District Collector
- Administrator for resettlement and rehabilitation,
- Land Acquisition officer,
- Finance Officer,
- Representatives of the requiring body to take financial decisions on its behalf,
- Representatives of Local Self Government Institution will monitor the Rehabilitation Action Plan.

Note: (Since no one is displaced by the project, no rehabilitation is required)

CHAPTER 9

**SOCIAL IMPACT MANAGEMENT BUDGET AND FINANCING OF
MITIGATION PLAN**

9.1. Costs of all resettlement and rehabilitation costs

Not Applicable

9.2. Annual budget and plan of action

Not Applicable

9.3. Funding sources with breakup

Not Applicable

CHAPTER 10

SOCIAL IMPACT MANAGEMENT PLAN MONITORING AND EVALUATION

10.1 Key Monitoring and Evaluative indicators

Not Applicable

10.2 Reporting mechanisms and monitoring roles

Not Applicable

10.3 Plan of independent evaluation

Not Applicable

CHAPTER 11

ANALYSIS OF COSTS AND BENEFITS AND RECOMMENDATION ON ACQUISITION

The project is intended to reduce the movement of LPG through road and transport through pipeline which is considered to be the most safest mode of LPG transport. The pipeline route is selected after considering a detailed route survey and studying the various alternative routes possible for laying the pipeline. The majority of pipeline in Kerala passes through the existing RoU of M/s. Petronet CCK Limited, whose pipeline has been in operation since 2001 without any risk. Further, more than 90% of the pipeline passes through agricultural lands and the passage of pipeline through populated and residential areas is limited to the maximum extent possible. Additional protection by way of increased thickness and depth is adopted for such areas which cannot be avoided.

While conducting the Social Impact Assessment, the SIA team observed that the proposed acquisition is using for agriculture purpose and no one is residing in the project area. Due to the acquisition of land the owner cannot be able to engage in any agricultural activity, or construction of any buildings in future. Apart from that, there shall be no other adverse impacts to ecology or related aspects.

The project is treated as a public purpose project under the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (30 of 2013) Section 2. Considering the public advantage and interest, and treating the project as a vital need, the project implementation is recommended.