



INTRODUCTION

Hindustan Fertilizer Corporation Limited (HFCL) was one of the oldest units set up in the country with a vision of growth in fertilizer production for food security. HFCL operated four units of fertilizer complex, two in the state of West Bengal namely Haldia Unit & Durgapur Unit, third one Barauni Unit in the state of Bihar and fourth Namrup Unit in Dibrugarh district in the state of Assam.

In Namrup Fertilizer Complex, project planning for Namrup - I group of plants started in the middle of 1960 by Hindustan Chemicals and Fertilizers, which was merged, with Fertilizer Corporation of India on 1st January 1961. After crossing various hurdles successfully, the foundation stone could be laid on 1st January 1966 by the then Assam Chief Minister Late B.P. Chaliha and the factory went into stream in the month of August 1968. Commercial production, however, commenced from 1st January 1969 with annual capacity of only 55,000 MT of urea and 1,00,000 MT of Ammonium Sulphate. Namrup-I was set up at a cost of Rs. 24.96 crore including foreign exchange of Rs. 6.36 crore.

Sulphuric Acid Plant was converted to Double Conversion Double Absorption (DCDA) for one of its streams. Ammonium Sulphate production was discontinued since June, 1992 as the condition of the plant had deteriorated considerably and also the civil structure had become unsafe. Subsequently the Sulphuric Acid Plant was also closed down. Except Ammonia- I, all three plants of Namrup- I was dismantled and sold as scrap. Ammonia Plant of Namrup-I is also not in operation and it is being disposed off.

While operation of Namrup-I was in progress, it was found that surplus natural gas would be available in the adjoining Moran-Naharkatia oil fields of M/s. Oil India Limited. Government decided to gainfully utilize this associated natural gas by putting up the 2nd Unit of Namrup Fertilizer Plant.

The project planning work started in March 1968 but the plant was commissioned only in April 1976. The plant went into commercial production on 1st October 1976. During its operation till 1993-94, the highest production was 57.53% in year 1987-88. Due to inherent design deficiencies, use of unproven equipment selection, interruptions in gas (feed stock) supply as well as power supply, the capacity utilization was never satisfactory. The plant was put up at a cost of Rs. 74.60 crores including foreign exchange of Rs. 23.60 crores with annual capacity of 3, 30,000 MT of urea.

The availability of surplus natural gas in the Naharkatia-Moran and Lakwa Oil fields led to the addition of the 3rd Unit of Namrup Fertilizer Plant at a cost of Rs. 285.55 crores including Rs. 58.67 crores of foreign exchange. The plant went into commercial production in 1987 with annual capacity of 3,85,000 MT of urea.

Namrup-III plant was the first in the Country, which used totally indigenous Urea process developed by M/s. Project Development India Limited, (A Govt. of India Undertaking). Namrup-II and Namrup-III plants started Urea production w.e.f. 01.10.1976 and 01.10.1987 respectively.

Due to under performance of all the plants, HFCL had made huge losses. These losses had their own cascading effect. The company was declared sick and was referred to BIFR. Subsequently, all the units of HFCL except for Namrup were closed down. The Namrup fertilizer complex was bifurcated from HFCL and renamed as Brahmaputra Valley Fertilizer Corporation Limited (BVFCL) on 5th April 2002.

BVFCL has now two operating gas based Ammonia-Urea plants along with associated off-sites and utilities at Namrup, Assam in the name of Namrup-II and Namrup-III plants. The



performance of the unit has been far from satisfactory mainly due to use vintage technology and obsolete machinery resulting teething machinery / equipment problems leading to very low production and high losses.

The Namrup Fertilizer Complex originally comprises of the following production facilities:

The Namrup Fertilizer Complex originally comprised of the following production facilities:- Plant	Date of commissioning	Installed Capacity (Lakh MT per annum)	Remarks
<u>NAMRUP – I</u> Ammonia-I Urea-I Ammo Sulphate Sulphuric Acid	January 1969	0.66 0.55 1.00 0.82	Being disposed off. Closed since Aug 1986 Closed since June 1992 Closed since Sept 2000
<u>NAMRUP – II</u> Ammonia – II Urea – II	October 1976	1.44 2.40	In operation. Original plant capacity of 600 MTPD & 1000 MTPD derated to 480 MTPD & 240000 MTPD.
<u>NAMRUP – III</u> Ammonia – III Urea – III Captive Power	October 1987	1.67 2.70 2 x 15 MW	In operation. Original plant capacity of 600 MTPD & 1167 MTPD derated to 558 MTPD & 270000 MTPD.

All the plants of Namrup-I have been dismantled and disposed off long back except its Ammonia Plant, which is not in operation since October 2002 and is being disposed off. Namrup-II and Namrup-III Units have been revamped but even after revamp, the energy consumption remained very high due to old technology, inefficient machinery performance and frequent interruptions due to machinery and equipment failures.

BVFCL has engaged Projects & Development India Limited (PDIL), a Government of India, QCI-NABET accredited (Sl. No.94 as on 11.07.2016) EIA Consultancy Organization for obtaining Stage-1 Environmental Clearance for proposed Namrup-IV Project.

The installed capacity for the proposed project of ammonia and urea plants has been considered as 1500 MTPD and 2620 MTPD respectively. The total requirement of natural gas (LHV- 8200 kcal/Sm³) for the proposed project (at 100% capacity utilization) would be about 1.59 MMSCMD. However, BVFCL has an agreement with OIL for supply of 1.72 MMSCMD of NG which would be sufficient to produce 1615 MTPD ammonia and 2821 MTPD urea. Considering Ammonia plant with a nominal capacity of 1500 MTPD capable to produce 1615 MTPD ammonia and Urea plant with a nominal capacity of 2620 MTPD capable to produce 2831 MTPD urea, the production during the first year (90%) and subsequent years (100%) has been taken as 838,125 MT and 930,930 MT respectively utilizing total available natural gas of 1.72 MMSCMD. Project viability has been worked out based on the production figures mentioned above.



PROJECT LOCATION

The Namrup Fertilizer Complex of BVFCL is located in Dibrugarh district in the State of Assam. Geographically, BVFCL is located at 27°10'41.86" North & 95°21'12.34" East at an elevation of 128 m from MSL. The fertilizer complex is located on the bank of the river Dilli on the South-Western border of Dibrugarh district. The proposed project shall be located within the existing premises of BVFCL in the free available land of 172 Ha. Dibrugarh is a city and the headquarters of Dibrugarh district is located at a distance of about 70 km from BVFCL. The Dibrugarh is surrounded by Dhemaji district and a part of Lakhimpur district in the north, part of Sivasagar district and Arunachal Pradesh in the south, Tinsukia district in the East and Sivasagar district in the West. The river Brahmaputra flows throughout the North Western boundary of the district. The Dibrugarh district is a plain district of Assam with gradual slop from the East Arunachal hills to the West.

PROJECT PROPOSAL

The proposed Namrup-IV Project will include the following units.

- Single Stream Ammonia plant with a nominal capacity of 1500 MTPD
- Single Stream Neem Coated Urea plant with a nominal capacity of 2620 MTPD
- Urea bagging and loading facilities etc.
- All offsite & Utilities (Power, steam, water, inert gas, instrument air, effluent treatment, cooling tower, safety/fire fighting, Gas Metering and refurbishment of Non-Plant building facilities).

RAW MATERIAL AND UTILITIES

The production of 1500 MTPD of ammonia and 2620 MTPD of neem coated urea plants is shall be based on NG as feed stock and fuel at the rate of 60,341 Sm³/day except CPP fuel. Energy consumption shall be at the rate of 5.0 Gcal per tonne of urea based on recently developed reliable and reproducible Best Available Technology (BAT).

ENVIRONMENTAL STATUS

BVFCI - Namrup does not fall in the list of 88 industrial clusters identified for preparation of Comprehensive Environmental Pollution Index (CEPI). The plant premises are surrounded by a number of tea gardens where important industrial activity is limited to production of tea. From environment point of view the area does not attract any adverse comment.

PROJECT IMPLEMENTATION PLAN & TIME SCHEDULE

Time Schedule

The expected implementation time may be around 36 (33 months mechanical completion and 3 months commissioning) months from Zero date.

Estimated Project Capital Cost

The Project Capital Cost of the proposed project is estimated at Rs. 493277 Lacs.

Need & Justification

The need and justification of the proposed project is summarized as under:

- It will reduce overall gap between demand and supply in the country especially in northern /north eastern region.
- It will ease the availability of chemical fertilizers to farmers.
- By ensuring more efficient use of precious natural resources like Natural gas in a state-of-the-art industry less green house is expected to be emitted and urea production will increase by almost three fold with the same Natural Gas being used by the existing plants.



Conclusion

Thus, the proposal for setting-up of Brown field ammonia urea project-in JV at Namrup can be seen as a corrective step towards reducing the growing supply gaps for fertilizer urea in eastern & north-eastern zone and to minimize import dependency to fill the demand-supply gap. There will be reduction in the emission levels with adoption of new technology which consumes approximately 5.0 Gcal/Te of Urea.