Draft Detailed Project Report

Gurugram Light Engineering Cluster

Submitted to,

Department of Industries and Commerce
Government of Haryana
(for assistance under Mini Cluster Scheme)

Report No. 2018-Chandigarh-0008

February 2018

Submitted by,
N2D Futuretech Private Limited, SPV

Prepared by,
Ernst & Young LLP
Under the project: MSME Ecosystem Transformation in Haryana

15 February 2018

Director

Department of Industries & Commerce,

Government of Haryana

1st Floor, 30 Bays Building,

Sector 17, Chandigarh

Dear Sir/Madam,

As part of our engagement for providing consulting services for 'MSME Ecosystem Transformation in the State of Haryana', we hereby submit the Draft Detailed Project Report (DPR) for setting up of Common Facility Centre (CFC) at Gurugram Light Engineering Cluster, Gurugram for your kind perusal. The deliverable has been prepared in accordance with our engagement agreement with Directorate of Industries, Govt. of Haryana dated 03 January 2017, and our procedures were limited to those described in that agreement.

This Detailed Project Report is based on studies of and discussions with:

- Directorate of Industries, Govt. of Haryana
- MSME-DI, Karnal
- DIC, Gurugram
- Members of the SPV
- Light engineering units located in and around Gurugram
- Industry experts
- Secondary research

Our work has been limited in scope and time and we stress that procedures that are more detailed may reveal other issues not captured here. The procedures summarized in our Draft Detailed Project Report do not constitute an audit, a review or other form of assurance in accordance with any generally accepted auditing, review or other assurance standards, and accordingly we do not express any form of assurance. This draft Detailed Project Report is intended solely for the information and use of the Office of Director Industries-Haryana and is not intended to be used by anyone other than specified party.

We appreciate the cooperation and assistance provided to us during the preparation of this report. If you have any questions, please contact the undersigned.

Sincerely,

Amar Shankar, Partner – Advisory Services

Disclaimer

This Draft Detailed Project Report for development of Common Facility Centre (CFC) at Gurugram light engineering cluster, Gurugram has been prepared by Ernst & Young LLP (hereinafter referred to as 'EY' or 'Ernst & Young' or 'Us') and delivered to the 'Office of Director of Industries & Commerce – Government of Haryana (O/o of DI-HR)' (hereinafter referred to as 'the Client').

The inferences and analyses made by EY in this report are based on information collated through primary research, secondary research, discussions with the client personnel and key stakeholders and our knowledge about the state mini cluster development scheme and its objectives. EY has taken due care to validate the authenticity and correctness of the information from various sources, however, no representations or warranty, expressed or implied, is given by EY or any of its respective partners, officers, employees or agents as to the accuracy or completeness of the information, data or opinions provided to EY by third parties or secondary sources.

Nothing contained herein, to the contrary and in no event shall EY be liable for any loss of profit or revenues and any direct, incidental or consequential damages incurred by the Client or any other user of this report.

In case the report is to be made available or disclosed to any third party, this disclaimer along with all the limiting factors must be issued to the concerned party. The fact that EY assumes no liability whatsoever, if for the reason any party is led to incur any loss for acting upon this report, must be brought to the notice of the concerned party.

Acknowledgement

We would like to express our sincere gratitude to Department of Industries & Commerce - Haryana and its officials for their involvement and valuable inputs during the preparation of this DPR. We are thankful to **Mr. Sudhir Rajpal, IAS, Principal Secretary, Industries & Commerce** and **Mr. Ashok Sangwan, IAS, Director Industries & Commerce, Government of Haryana** for sharing their insights about the 'Enterprises Promotion Policy 2015' and their vision about the State Mini Cluster Development Scheme. Special thanks to **Mr R.C Dahra, Consultant (Clusters), Department of Industries and Commerce and and Mr. Bhagmal Takshak, Joint Director, DIC Gurugram** for his proactive support and guidance to the team during the entire process.

We would like to convey our sincere thanks to members of Gurugram light engineering cluster for their support during the on-site visits and interactions with light engineering units in Gurugram as well as facilitation in conducting stakeholder consultations. Further, we would also like to thank officials of DIC, Gurugram for providing support and information related to light engineering units in Gurugram.

In addition, we must extend our sincere thanks to light engineering entrepreneurs and other key stakeholders who gave us their valuable time and insights with respect to various dimensions of the industry and its support requirements. Without their help, capturing of the industry insights would not have been possible.

Abbreviations

AICTE	All India Council of Technical Education
AoA	Article of Association
BDSP	Business Development Service Providers
BoD	Board of Directors
CAD	Computer Aided Design
CAE	Computer Aided Engineering
CDCC	Cluster Development Coordination Committee
CEO	Chief Executive Officer
CFC	Common Facility Center
CLU	Change of Land Use
DGET	Directorate General of Employment and Training
DIC	District Industries Center
DIPP	Department of Industrial Policy And Promotion
DPR	Detailed Project Report
DSR	Diagnostic Study Report
EEPC	Engineering Export Promotion Council of India
EPP	Enterprises Promotion Policy
ERP	Enterprises Resource Planning
FDI	Foreign Direct Investment
GIA	Gurgaon Industrial Association
GITM	Gurgaon Institute of Technology and Management
HARTRON	Haryana State Electronics Development Corporation Limited
HFC	Haryana Financial Corporation
HSIIDC	Haryana State Industrial and Infrastructure Development Corporation
HUDA	Haryana Urban Development Authority
INR	Indian National Rupees
MIG	Metal Inert Gas
MIWA	Manesar Industries Welfare Association
MoA	Memorandum of Association
MSME DI	MSME Development Institute
NCCI	Northern Chamber of Commerce and Industries
NCR	National Capital Region
NCVT	National Council on Vocational Training
NSIC	National Small Industries Corporation Ltd
SCVT	State Council of Vocational Training
SEZ	Special Economic Zone
SIDBI	Small Industries Development Bank of India
SITM	Somany Institute of Technology and Management
SPV	Special Purpose Vehicle
SWOT	Strength, Weakness, Opportunity and Threats
UAM	Udhyog Aadhar Memorandum
VMC	Vertical Machine Center

Table of Contents

List of Figures

List of Tables

Executive Summary

Executive summary

The Government of Haryana through the Department of Industries and Commerce intends to transform the MSME sector of the state and put it on a growth path. Several incentives have been offered under the state's ambitious 'Enterprise Promotion Policy (EPP) 2015' to provide an impetus to growth of the MSME sector. Towards this, the state aims to strengthen the technology infrastructure as well as enhance productivity and competitiveness of various MSME clusters across the state by leveraging funding under the State Mini Cluster Development Scheme providing grant under its EPP 2015.

In this context, the Detailed Project Report (DPR) has been prepared to seek grant-in-aid assistance under the State Mini Cluster Development Scheme to set up a state-of-the art Common Facility Centre (CFC) in Gurugram light engineering cluster at Gurugram District, Haryana.

About the Gurugram light engineering cluster

The engineering sector can be broadly classified into heavy engineering and light engineering sectors. It is a salient economic sector and the growth of the sector is closely linked with manufacturing and infrastructure sectors. Engineering products are widely used as inputs in the capital goods industry and for capacity creation in an array of sectors like power, mining, oil & gas, refinery, steel, automotive and consumer durables. Hence, the growth and demand of engineering sector is largely fueled by the growth and demand of the capital goods industry.

Globally, the engineering sector has registered a slow down with production falling in US and Japan. Europe, however, has been a bright spot, showing considerable improvement over last year in production.

The Indian Engineering sector has witnessed a remarkable growth over the last few years driven by increased investments in infrastructure and industrial production. The engineering sector, being closely associated with the manufacturing and infrastructure sectors, is of strategic importance to India's economy and also enjoys sizeable export share India's exports of engineering goods have been growing steadily over the last decade, reflecting a double digit growth rate. Engineering exports include transport equipment, capital goods, other machinery/equipment and light engineering products such as castings, forgings and fasteners. In August 2016, the engineering exports by India, to its top 25 destinations, registered a growth of 5.8% over August 2015. With the revival of demand for iron and steel in China and the US, India's engineering exports reached USD 58.8 billion in FY16. As per IBEF reports, engineering exports from India stood at USD 65.23 billion in FY17. During FY08–FY17, engineering exports from India registered growth of 7.61% CAGR. Although India's engineering exports has risen but it has been affected negatively by trends in US & European markets.

There are about 2000 light engineering units in Gurugram district, Haryana, engaged in the manufacturing of light engineering products such as auto component, machines and spares, SPMs, fabricated products etc. These units are predominantly located in various

industrial areas of Gurugram with NH-8 as the nearest major national highway. The annual turnover of the cluster is about INR 3000.00 Crore

The increasing costs of raw materials coupled with higher production costs is driving many micro players out of the market. The micro units do not have these high-end machines and hence are unable to procure orders from MNCs. To add to their woes, the micro and small units are unable to produce quality products for the biggest market segment in the region.

In light of the above background, a diagnostic study was undertaken in December 2017 to map the existing business processes in the cluster, identify the gaps, understand the the cluster needs and a diagnostic study report (DSR) was prepared and submitted to the Department of Industries & Commerce, Haryana. The DSR was approved on 25th January 2018 and was granted permission to go ahead with preparation of Detailed Project Report (DPR) for the cluster.

Proposed Common Facility Centre

The proposed CFC for Gurugram will facilitate job work facility with **modern machinery for various machining operations like cutting, bending, drilling, welding, machining etc**. Such a common facility will both supplement and complement the activities of firms in the cluster, and there is no similar facility available in the district for use by cluster micro enterprises. The proposed common facilities will be utilized by the SPV members and will also be available to non-members units within and outside the cluster. The facility will provide a much needed infrastructural push to the cluster units and will enable them to become more competitive.

The proposed CFC will have the following facilities:

- **3D Scanner/ 3D printer Facility:** The proposed CFC with 3D scanner and 3D printing machine would enable the cluster units to get quick and accurate measurement of typical objects and produce prototype of desired work piece. This will help save raw material and production time.
- **Laser Cutting Facility:** In-house laser cutting facility is required for conducting metal operations-laser cutting job work at competitive prices. This would help units to produce superior metal cut designs, reduce their final product cost and become more competitive in the market.
- **Designing Software:** Designing software like Catia and Solid Works to facilitate in-house designing at competitive prices.
- **General Machining Facility:** Installation of modern machine i.e. MIG welding machine, surface grinder, VMC, sheet shearing machine for better usage of raw material, shorter production time and multiple operations at a time. These machines require low maintenance and offers lower production time.

Special Purpose Vehicle for Project Implementation

A Special Purpose Vehicle (SPV) by the name and style of **'N2D Futuretech Pvt. Ltd.'** has been formed as a private limited company under sub section (2) of section 7 of the

Companies Act, 2013 (18of 2013) and rule 18 of the Companies (Incorporation) Rules, 2014. The proposed CFC will be implemented on public-private partnership basis through the SPV **'N2D Futuretech Pvt. Ltd.'** by availing support from Government of Haryana (under EPP 2015).

Project Parameters, Viability and Sustainability

The total project cost for the CFC is estimated at **Rs. 243.46 lakhs**. The cost of the project and proposed means of finances is tabulated below:

S. No.	Particulars	Total Project Cost (Rs in Lakh)	Amount as per Guidelines	Remarks
1	Land & Building			
	a. Land Value	0.00	0.00	Eligible (Max 25% of total of L&B, P&M, and Misc. F.A.)
	b. Land Development	0.00		
	c. Building & Other Civil Works	0.00		
	d. Building Value	0.00		
	Sub Total (A)	**0.00**	**0.00**	
2	Plant & Machinery			Eligible
	a. Indigenous	192.34	192.34	
	b. Imports	0.00	0.00	
	c. Secondary Machines	21.40	21.40	
	Sub Total (B)	**213.73**	**213.73**	
3	Miscellaneous fixed assets (C)	2.10	0.00	Not eligible for grant
4	Preliminary & Preoperative Expenses (D)	6.96	0.00	
5	Contingency			
	a. Building @ 2%	0.00	0.00	
	b. Plant & Machinery @ 5%	10.69	0.00	
	Sub Total (E)	**10.69**	**0.00**	
6	Margin money for working capital @ 75% CU (F)	9.98	0.00	
	Grand Total (A+B+C+D+E+F)	**243.46**	**213.73**	

The estimated total project cost is estimated to be Rs. 243.46 lakhs. As indicated above, assistance to the project from the Govt. of Haryana is envisaged to the tune of Rs. 180.00 lakhs. SPV contribution is to the tune of Rs. 63.46 lakhs (over 26%) of the total project cost.

The means of financing as follows:

S. No.	Source of finance	Project cost upto INR 200 lakh		Project cost over INR 200 lakh			Remarks
		Percentage Contribution	Amount (INR in lakh)	Percentage Contribution	Amount (INR in lakh)	Total Amount (INR in lakh)	
1	Grant-in-aid under State Mini Cluster Development Scheme (Govt. of Haryana)	90%	180.00	0%	0.00	180.00	As per EPP, 2015 GoH contribution is max 90% (Including soft intervention expenses)
2	Contribution of SPV	10%	20.00	100%	43.46	63.46	
	Total	**100%**	**200.00**	**100%**	**43.46**	**243.46**	

The viability and sustainability of the project is evident from the project economics as well as the cooperative spirit and profile of the SPV. Some indicators of the viability are as follows:

Project's financial indicators

S. No.	Particulars	Estimates
1	BEP (cash BEP at initial operating capacity of 75%)	56.33%
2	Av. ROCE (PAT/CE)	31.49%
3	Internal Rate of Return (IRR)	26.38%
4	Net Present Value (at a discount rate of 10 per cent) - incorporating viability gap funding (grant) by GoH	NPV is positive and high (Rs. 200.42 lacs) at a conservative project life of 10 years
5	Payback period	4.50 years with Grant-in-aid assistance from GOH
6	DSCR	Not Applicable (non-availment of term loan in this project)

As evident from the financials above, with viability gap funding under Mini Cluster Scheme of GoH, the project is highly viable and sustainable. The project is expected to generate surplus from the fifth year of operation.

Project Implementation

Project implementation is envisaged to involve a time-frame of about 6 months upon receipt of final approval of grant-in-aid assistance from the Government of Haryana under State Mini Cluster Development Scheme. The project will be implemented by the SPV in close association with DIC, Gurugram and the State government. It is proposed to constitute a Cluster Development Coordination Committee (CDCC), under the Chairmanship of Director of Industries, Government of Haryana to oversee all cluster development projects in Haryana under State Mini Cluster Development Scheme. The committee may operate under the overall monitoring of the State Level Steering Committee (SLSC).

The potential for Gurugram engineering cluster to grow is enormous, owing to the growing market demand for engineering in India and globally. The strength of the cluster lies in its location (both geographically & industrially), with large engineering units in the region. Currently the light engineering units are largely using manual machining methods and out-dated machines. Due to the use of out dated technology, there are operational delays and lack of precisioining. Therefore, at present, the units are unable to expand in domestic and international markets.

The proposed facility will be open to all cluster firms to enable them to get engineering related job work done in order to cater to the laser cutting, priniting, designing and gerneral enginnering requirements. The facility will also provide an opportunity to MSE units to increase their capacity utilization, profitability and major technological push to the units reeling under high competition. The CFC will also enhance the co-operation and joint action among cluster stakeholders to improve their competitiveness to meet the demands of the domestic as well as international markets.

Introduction

1. Introduction

1.1 Overview of the cluster

There are about 2000 light engineering units in Gurugram district, out of which around 60% units are engaged in light engineering and metal cutting operations. Broadly, the units are engaged in light engineering related works such as production of auto component, machines, spares, SPMs, fabricated products etc.

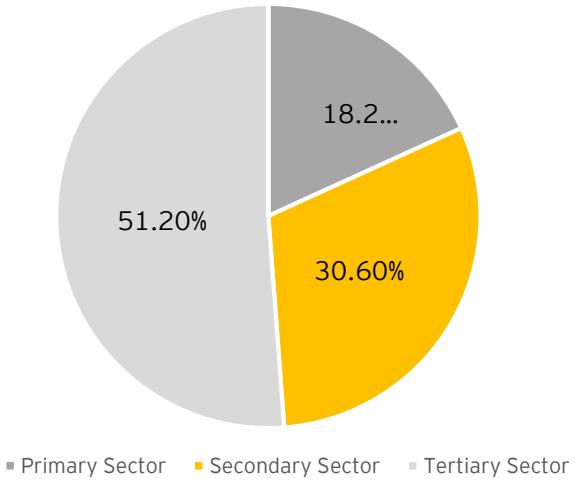
At a compositional level, around 60% of the 2000 units fall into micro category, 20% are belonging to small category and 10% units are of medium category[1].Most of units are manufacturing for OEMs & few units are manufacturing to Tier-I suppliers too. At present, many cluster units are not able to supply their products to OEMs and opportunity of export is missing. This is because of use of conventional technologies and processes. To counter this issue, SPV members collectively want to adopt 3D printing, advanced machining and designing technology in Gurugram light engineering cluster to increase their competiveness.

A group of 10 light engineering units have come together and formed a Special Purpose Vehicle (SPV) to set up a Common Facility Centre (CFC), which consist of 3D printing facility, laser cutting facility and some upgraded machinery like MIG welding machine, VMC etc. These facilities would help them to increase their competitiveness and supply products to OEMs and foreign market.

1.2 About the State & District

Haryana is the 11th state in the country in terms of GSDP, with growth rate of around 6.5%. Haryana contributes to nearly 3.4% of the India's GDP. With just 1.37% of the country's geographical area and 1.97% of country's total population, the state is counted among the top few states with highest per capita income. The state economy is predominantly agriculture.

Figure 1: GSDP Composition 2015-16



The industry sector contributes about 18% of the total GSDP of the state. Haryana is fast emerging as one of the most favoured investment destinations in India. The globalization of markets and a resilient economy have given an incredible drive to the industrial sector in Haryana, which already has a competitive advantage in terms of strategic location, basic infrastructure and large number of skilled, educated and young workforce. Besides, the State has an

[1] DIC, Gurugram

investor-friendly policy and regulatory environment. It is one of the leading states in terms of industrial production, especially passenger cars, mobile cranes, two-wheelers & tractors. It is the 2nd largest contributor of food grains to India's central pool, accounts for more than 60% of the export of basmati rice in the country, and is 3rd largest exporter of software.

Gurugram is a city and municipal council in the Gurugram district of the Indian state of Haryana. The District is situated in the NCR of Delhi and is one of Delhi's four major satellite cities within the NCR. It is located 30 km south of national capital New Delhi, about 10 kilometres from Dwarka sub-city and 268 km south of Chandigarh, the state capital. It is within commuting distance of Delhi via an expressway and Delhi Metro. The District is the second largest city in the Indian State of Haryana and is the industrial and financial centre of Haryana. It has the 3rdhighest per capita income in India after Chandigarh and Mumbai[2]. It is also the only Indian city to have successfully distributed electricity connections to all its households. Witnessing rapid urbanisation, Gurugram has become a leading financial and industrial hub with the third-highest per capita income in India.

Haryana Urban Development Authority (HUDA) and Haryana State Industrial and Infrastructure Development Corporation (HSIIDC) have multiple industrial estates and areas in the district, which house facilities belonging to a plethora of sectors. The district has positioned itself as an industrial hub for sectors such IT and auto & auto-component manufacturing with a major chunk of industrial units in these sectors. The district has local offices for more than 250 fortune 500 companies.

1.3 Industrial Scenario of Gurugram District

A number of policy initiatives announced by the Haryana Government from time to time have provided impetus to rapid industrialization in the district. Gurgaon houses number of prominent units involved in the manufacturing of cars, motors cycles, automobile parts, telecommunication equipment, electrical goods, software development, hardware, sports goods, rubber products, readymade garments, light engineering goods, pharmaceuticals, terry towels, food items, air conditioners, shoes, pesticides, and insecticides among other.

Post the announcement of IT policy by the Government of Haryana, Gurgaon has emerged as a preferred destination for IT Industry. The state government through its enterprise Haryana State Electronics Development Corporation Limited (HARTRON) has been undertaking various schemes and activities for the development of the electronics and IT industry in a systematic and scientific manner in the state.

There is an IT and telecommunication complex in the electronic city in Gurgaon spread over 40 acres. This complex has been planned for computer/software export and is equipped with excellent facilities such as earth station, teleconference, internet, e-mail service, and other state-of-the-art communication services. Further, there is a software technology park allotted to software units within this area that occupies an area of 14,000 sq. ft. The park provides satellite communication links to the units located within the park. Multiple world-renowned IT companies such as Hughes Software, Tata Consultancy

[2]The Economic Times. ET Bureau. Retrieved 2 October 2013

Service, Alcatel, HCL, Siemens, GE Capital, and Silicon Graphics have their units located at Gurgaon.

Government of Haryana has been encouraging promotion of Special Economic Zones (SEZs) which are considered as growth engines to boost manufacturing, augment exports and generate employment. The industries in the district are engaged in the manufacturing of various items such as agro based, cotton textile, woollen, silk & artificial thread based clothes, ready-made garments & embroidery, wood/wooden based furniture, paper & paper products, leather based, chemical/chemical based, rubber, plastic & petro based, mineral based, metal based (steel fab.), engineering units, electrical machinery and transport equipment etc.[3].

As on Oct 2017, Gurugram district had 40 SEZs, which have been formally approved by Board of Approvals after coming into force of SEZ Rules. Further, an in-principal approval has been granted to multi-product SEZ namely Reliance Haryana SEZ which covers an area of 1,000 hectares of land in Gurugram[4].

There are seven industrial areas presently operating in the district some of which include Udyog Vihar Phase I – VI, Sector 34-35, IMT Manesar Phase-I, IMT Manesar Phase-III and IMT Manesar Phase III &IV. Industrial estates in Gurgaon span over 1,722.53 hectares of land. IMT Manesar Phase I and IMT Manesar Phase III & IV are the two major industrial estates as they account for over 70% of the total area.

1.4 Geographical Traits

The present Gurugram district comprising nine blocks Tauru, Nuh, Pataudi, Nagina, Punhana, F.P.Jhirka, Sohna, Gurugram & Farrukhnagar and was created on 15 August 1979. It is the southern-most district of Haryana. The district lies between 27^0 39' and 28^0 32' 25" latitude, and 76^0 39' 30"and 77^0 20' 45" longitude. On its north, the district of Rohtak and the Union Territory of Delhi bound it. Faridabad district lies to its east. On its south, the district shares boundaries with the states of Uttar Pradesh and Rajasthan. To its west lies the district of Rewari and the State of Rajasthan. Gurgaon town is about 30 km away from New Delhi, the National Capital of India[5].

1.5 Demographic Trends and Economic Structure

In 2011, Gurugram had population of 1,514,432 of which male and female were 816,690 and 697,742 respectively with a change of 73.96 % in the population compared to population as per 2001.

The population density of Gurugram district for 2011 is 1,204 people per sq. km which stood at716 people per sq. km. The total administrable areas in Gurugram district is 1258 square kilometres.

[3] DIC, Gurugram
[4] SEZ India
[5] Brief Industrial Profile of Gurugram district 2015-16

The average literacy rate of Gurugram in 2011 was 84.70% compared to 78.50% of 2001 with the male and female literacy at 90.46% and 77.98% respectively The sex ratio in the district, as per the 2011 Census, stood at 854 per 1000 male compared to 2001census figure of 850.

Gurugram district is a major commercial hub of India and one of the most booming cities with more than half of fortune 500 companies having extensive operations in the city. Due to its commercial significance, Gurugram is referred to as a millennium city. Maruti Suzuki Private Limited was the first company to set up a automobile manufacturing unit in the city in 1970s[6] following by corporate giants like DLF Limited, General Electric. GE's setup in Gurugram (in 1997) prompted other companies, both international as well as domestic, to follow suit. Today, leading international companies, including Coca-Cola, Pepsi, BMW, Agilent Technologies, have chosen Gurugram to be their Indian corporate headquarters.

Despite being a strong commercial player, the district suffers from lack of reliable power, water supply, public transport, utilities, and all the major companies in the city depending on their own.

[6]http://www.forbesindia.com/article/real-issue/gurgaon-how-not-to-build-a-city/33444/0

Sector Overview

2. Sector Overview

Light engineering industry is one of the largest segment of the overall industrial growth of a nation. It is an intermediate unit whose demand depends on a variety of end-user industries such as power, mining, oil and gas, consumer goods, automotive and the general manufacturing sector. In other words, the products covered under this industry are largely used as inputs to the capital goods / heavy engineering industries. Being highly labour intensive, the light engineering sector generates ample employment opportunities in the economy, especially into the areas where there is an abundant supply of skilled and semi-skilled labour.

India has a strong engineering and capital goods base. It is a major exporter of light engineering goods, which include a wide range of items, such as forgings, fasteners, bearings, steel pipes and tubes, diagnostic medical instruments, etc. The presence of well-developed and sound 'light engineering' sector is of high importance to the Indian economy and is the basis of almost all productive and business activities in the country. The major suppliers to this industry are the companies supplying them with raw materials like steel, aluminium, etc.

In India, the Department of Industrial Policy and Promotion (DIPP), under the Ministry of Commerce and Industry, is the nodal agency for the development of light engineering industries. The Department is responsible for formulation and implementation of promotional and developmental measures for growth of entire industrial sector in general and of some selected industries like light engineering, leather, rubber, light machine tools, etc. in particular. It is involved in framing and administering overall industrial policy and Foreign direct investment (FDI) policy as well as promoting FDI inflow into the country.

Light engineering jobs usually start with draft drawings including precise measurements, then move to the light engineering stage and finally to the installation of the final project. Typical projects include loose parts, special purpose machines, structural frames for buildings and heavy equipment, and stairs and hand railings etc. for buildings. The common process involved in light engineering are:

- **Cutting:** Done by sawing, shearing, or chiselling (all with manual and powered variants); torching with hand-held torches (such as oxy-fuel torches). Sometime laser cutting required for precision and has to outsourced from market with heavy charges. Thus, they lose competitiveness in market
- **Bending:** Bending of metal sheets and bars are done by hammering (manual or powered) or via press brakes and similar tools.
- **Assembling (joining of the pieces):**Assembly is the final stage and done by welding, binding with adhesives, riveting, threaded fasteners, or even more bending in the form of a crimped seam. Structural steel and sheet metal are the usual starting materials for light engineering, along with the welding wire, flux, and fasteners that will join the cut pieces.

As with other manufacturing processes, both human labour and machines are commonly used. Light engineering applies to the processes like cutting, shaping and assembling components made from raw materials (sheet metal and rolled) by using various mechanical processes such as welding, soldering, brazing, forming, pressing, bending and stress removal. Welding is a major process input in most light engineering jobs.

The light engineering sector forms a sub segment of the engineering industry and is one of the smallest in terms of turnover. However, it is closely linked with the overall growth of the engineering sector, infrastructure development, favourable government policies and new investments in power projects, metals, oil & gas, and petrochemicals industries.

The demand for light engineering sector comes from the engineering sector, especially capital goods; the growth of light engineering industry largely depends on the overall industrial growth scenario. The light engineering industry mainly caters to sectors such as agriculture, transportation, packaging, consumer products, and construction. The major user industry for the light engineering sector is the general structural light engineering followed by the transportation, railway & shipping, machine building and construction including home, office and institutional furniture. The raw material for the light engineering industry is easily available in India except for special steel which needs to be imported. Imported steel is cheaper also than indigenously available steel. The metal light engineering industry also varies greatly in the size, type, and distribution of facilities found across the nation.

2.1 Global Scenario

At the global level, the light engineering sector growth depends on the industrial and manufacturing growth and with enhanced export opportunities. Emerging trends like outsourcing of engineering services have also provided opportunities for growth with engineering and design services (such as new product designing, product improvement, maintenance, designing manufacturing systems) getting increasingly outsourced to Asian countries like India. The global market for metal light engineering is fueled by continued investments in electric furnace and metals processing, the growing aluminum consumption, the reshoring of manufacturing practices in the automotive industry, recovery in non-residential investments, and growing aerospace demand. The global light engineering market was valued at US$16.35 bn. in 2015 and is forecasted to expand at a CAGR of 3.0% to reach US$21.38 by 2024[7].

Europe was identified as the key metal light engineering market, holding approximately 1/4th of the global market share in 2015. The growing number of metal light engineering units in Europe is mainly attributed to the growing demand for metal fabricated products from the automotive and manufacturing sectors. In Europe, the industrial scenario is mainly adjudged by the overall growth in the manufacturing and automotive industries. Furthermore, favorable government regulations have strengthened the European metal light engineering market. Germany held the leading market share in the European region

[7]http://www.transparencymarketresearch.com/technology-market/

and is expected to witness rapid growth during the forecast period, expanding at a CAGR of 4.3%.

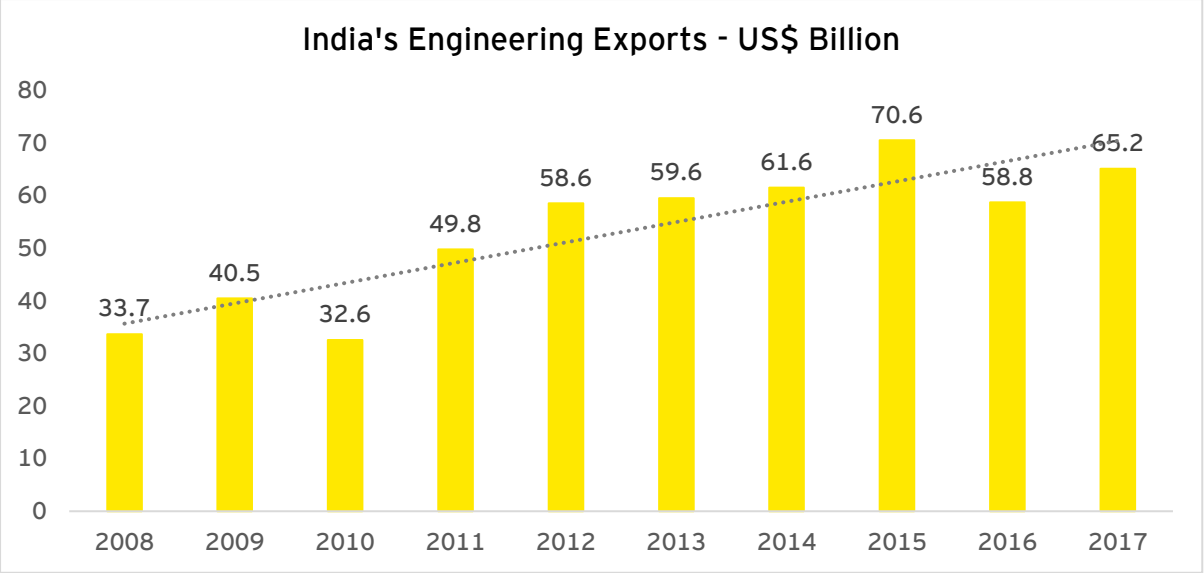
Asia Pacific has been one of the key regions holding a comparatively larger share in the global metal light engineering market in 2015 and is expected to dominate the market throughout the forecast period. China holds the majority of the market share in Asia Pacific as well as globally and the growth is projected to expand at a CAGR of 2.4% from 2016 to 2024. The establishment of new metal light engineering plants in Japan, China, India, Singapore, and South Korea is mainly driven by the rise in construction activities, the growing number of iron and steel manufacturing units, and an overall rise in the number of manufacturing plants. Furthermore, the growth of the industrial sector across Asia Pacific has positively influenced the expansion of the metal light engineering market in the past few years.

2.2 India Scenario

The Indian Engineering sector has witnessed a remarkable growth over the last few years driven by increased investments in infrastructure and industrial production. The engineering sector, being closely associated with the manufacturing and infrastructure sectors, is of strategic importance to India's economy. India's exports of engineering goods have been growing steadily over the last decade, reflecting a double digit growth rate. Exports declined during FY10 as the global financial crisis severely impacted global trade.

While engineering exports recovered during FY11 and FY12, it again contracted during FY13 in tandem with a decline in overall exports. Engineering exports returned to growth in FY14, growing by 8.1% as India's overall exports grew by 4.7% during the year. As per data provided by the Engineering Export Promotion Council of India (EEPC) for FY15, India's export of engineering goods grew by 14.7% in spite of a decline in overall exports. In FY15, India's exports of engineering goods stood at USD 70.7 bn. as compared to USD 61.6 bn in FY14. The sector's share in overall exports stands at around 23%. Figure 4 presents a decadal analysis of India's engineering exports.

Figure 2: India's Engineering Exports



As per IBEF reports, engineering exports from India stood at USD 65.23 billion in FY17. During FY08–FY17, engineering exports from India registered growth at a CAGR of 7.61%. Engineering exports include transport equipment, capital goods, other machinery/equipment and light engineering products such as castings, forgings and fasteners. In August 2016, engineering exports by India, to its top 25 destinations, registered a growth of 5.8% over August 2015. With the revival of demand for iron and steel in China and the US, India's engineering exports reached USD 58.8 billion in FY16. During the fiscal year 2016-17, the exports have touched USD 65.23 billion, which exceeds the total shipment of USD 58.8 billion in 2015-16.

2.3 Cluster Scenario

There are about 2000 light engineering units exist in Gurugram district, which are engaged in light engineering related works such as production of auto component, machines, spares, SPMs, fabricated products etc. Out of those 2000 units, 60% are engaged in light engineering and metal cutting operations[8]. 60% of those 2000 units fall into micro category, 20% are belonging to small category and 10% units are of medium category. Most of units are manufacturing for OEMs & few units are manufacturing to Tier-I suppliers too. The Micro and Small Units in cluster mostly manufacture products for their forward linkages. This is a highly fragmented and labour intensive sector with micro and small-scale industries dependent on job work. About 15000 persons employed in cluster in which about one third of workforce comprising of women. The main products of cluster are SPM, auto components, fabricated products, machines and spares etc.

[8] DIC, Gurugram

Diagnostic Study Findings

3. Diagnostic Study Findings

The diagnostic study has undertaken in the cluster during January 2018 to map the existing business processes in the cluster, identify the gaps, and understand the requirements of the cluster. The diagnostic study report (DSR) was compiled with inputs from cluster members in close coordination with the DIC, Gurugram. It was observed that most of the cluster units deploy obsolete technologies and are unable to meet the requirements of the market due to lack of availability of modern light engineering machines/equipment such as laser cutting and 3D printing facility. They are currently availing these services from external service providers at high prices, and often with delayed supplies manifesting into production delays.Additionally, the finishing of products is ordinary due to dependence on manual techniques and conventional machines.

The DSR was validated on 10.01.2018 and was subsequently accepted and approved by Director Industries on 25.01.2018. The approval letter of DSR and permission to undertake the Detailed Project Report (DPR) is provided in Annexure 1. The SPV was granted permission to go ahead and EY was directed to prepare the DPR for the cluster.

The major findings of the DSR are presented below:

3.1 Cluster Actors and their role

Many support institutions and agencies such as industry associations, government agencies, academic/R&D institutes, financial institutions, BDS providers etc. situated within and outside the cluster play a key role in developing the cluster as well in complementing initiatives of the cluster SPV. The key stakeholders of the cluster are:

A. Government Bodies

- **District Industries Centre (DIC), Gurugram**

  DIC is the most important government stakeholder for the cluster. The office of DIC comes under the Dept. Of Industries and is headed by General Manager who is assisted functional managers and technical field officers. DIC promotes and routes subsidy to micro and small enterprises in the region. The Mini Custer Scheme under which the Light engineering units want to set up a CFC will also be implemented through the DIC office. The Gurugram DIC is actively promoting cluster development in the district and helps the local units register under Unique Aadhar Memorandum (UAM). It would play a key role in formulation of the light engineering units SPV.

- **MSME-Development Institute (MSME-DI), Karnal**

  MSME-Development Institute, Karnal is a field office of the Development Commissioner (MSME), Ministry of MSME, New Delhi, which is an apex body for formulating, coordinating and monitoring the policies and programmes for promotion and development of MSMEs in the country. MSME-DI provides a wide range of extension / support services to the MSMEs in the state.

- **Haryana State Infrastructure & Industrial Development Corporation (HSIIDC)**

  HSIIDC is a major agency in the State to promote the setting up and promotion of small, medium and large-scale industrial units. The Corporation also acts as a State-level financial institution and provides long-term loans for industrial projects. The important activities of the Corporation are:

  - Development of industrial areas/ estates
  - Helps entrepreneurs on matters such as securing registrations/ licences/ clearances from the statutory/other authorities.
  - Provision of term-loans

- **National Small Industries Corporation (NSIC)**

  National Small Industries Corporation (NSIC) was established in the year 1955 with a view to promote aid and foster growth of small industries in the country. Gurugram industry is served by the NSIC branch office in Gurugram. It provides diverse services to MSMEs in Gurugram such as:

  - Helps entrepreneurs in purchasing machinery and equipment
  - Equipment leasing and working capital finance
  - Information on technological up gradation
  - Composite loan scheme and export assistance

B. Industry Associations

- **Gurgaon Chamber of Commerce and Industry**

  The chamber works towards the promotion and development of industrial commerce and trade in the Gurugram. It is a well-recognised by the State/Central Governments. The Chamber serves Gurugram, Udyog Vihar, Sohna, Roz Ka Meo, IMT Manesar, Pataudi and Dharuher industrial belts and enjoys representation on various Advisory/Consultative committees. The Chamber is well equipped to take up members problems with the concerned authorities. The Chamber acts as a common point of contact with the collective strength of its members on issues of local, regional and National importance. It is responsible for organizing, from time to time, meetings with Government officials to voice trade and industry's problems/suggestions on various issues and to seek on the spot decision. It is affiliated to apex bodies like FICCI, CII, ASSOCHAM, and PHD Chamber. The chamber is also affiliated to international Chambers namely Indo American Chamber and Indo German Chamber. It also enjoys affiliation with the Government of India to issue Certificate of Origin for Exports and several Embassies and High Commissions in the country recognise its recommendations for grant of VISA.

- **Gurgaon Industrial Association (GIA)**

  Gurgaon Industrial Association (GIA) is an apex and the oldest industrial outfit of Gurugram. It works to create and sustain an environment conducive to the growth of industry in Gurugram, collaborating the government through advisory and

consultative process. GIA is a non-government, not for profit, industry-managed organization that plays a proactive role in the industry's development.

Founded over 44 years ago, GIA has been Gurugram's premier industrial association with a present membership of about 400 organizations in big, medium and small categories. A facilitator, GIA has been catalysing change by working closely with the government on policy issues, enhancing efficiency, competitiveness and expanding as well as exploring business opportunities for industry through various specialized services.

Gurgaon Industrial Association also provides a platform for making entrepreneurs more innovative and efficient to gain competitive edge at global, national, state and regional levels. GIA works closely with different governmental agencies and infuses synergies to elevate the industry by accelerating the tempo of its constant growth. It endeavours to articulate the genuine and legitimate interests and concerns of its members so that the balanced industrial growth is fostered in Gurugram.

Besides industrial activities, GIA aims to achieve industrial health, good environment and harmony for the success of development of the millennium town. In addition to holding seminars, workshops and conferences on subjects of importance, GIA also organizes the socio-cultural programs including the family get-together functions for the families of the members in order to bring them closer as a well-knit social body.

- **Manesar Industries Welfare Association (MIWA), Gurugram**

  Constituted in 2009, MIWA – Manesar Industries Welfare Association has been formed by operating Industrialist of IMT Manesar to address & resolve numerous issues affecting them.

  With over 500 entrepreneurial members, MIWA has been spearheading the movement for the betterment of business scenario in Manesar and simultaneously fighting for the cause of improving the deteriorating ecological environment.

  MIWA, with an objective to bring simplicity in the complexity has acted as a common platform for the micro, small and medium enterprises of Manesar and the collective force of all its members has yielded the desired results.

- **NCR Chamber of Commerce and Industry (NCCI), Gurugram**

  NCR Chamber of Commerce and Industry, established in 2004, is a proactive and dynamic organisation working at the grass-root level with strong National and International linkages. NCR Chamber acts as a catalyst in the promotion of industry, trade and entrepreneurship. Through its research-based policy and advocacy role, positively influences the economic growth and development of the Nation.

  The Chamber located in Sushant Lok, Gurugram is a story of an institution dedicated to serve the interest of Commerce, Industry and Profession in particular and the economic development of the Country in general. NCCI has cultivated a

flair for service orientation, which made it a matter of substance for business enterprises to seek membership and the benefit from such services, that they derive. With the in-house expertise, it gives business and legal advice to Indian companies on most aspects of their business. Apart from National and Regional economic and industry related issues, it also includes corporate affairs, taxation, finance and banking, capital markets, infrastructure and energy, labour and industrial relations, human resources and skill development, tourism, agri-business and environment etc.

NCR Chamber of Commerce and Industry provides a social platform to network and liaise with Member Constituents, Institutions, Central and State Government Officials, Diplomats etc., which helps the industrialists to expand their business by conducive learning environment and finding prospective solutions to their major problems. The NCR Chamber of Commerce also provides opportunities to industrialists to build their business connections via several events organized by the chamber time to time.

C. Educational Institutes

- **Government Polytechnic, Manesar**

  Govt. Polytechnic, Manesar is a well-established college in the region. The aim of the college is to provide latest technical skills for suitable employment through technical education. Diploma courses are running under 6 specific trades i.e. automobile engineering, civil engineering, computer engineering, electronics engineering, electrical engineering and mechanical engineering. The Institute has spacious and well-ventilated classrooms, labs equipped with latest and modern machinery to impart practical knowledge to the students. The Institute is spread over and washed area. The campus is laid out with teaching blocks, Boys Hostel, a Girls Hostel, Canteen, Play Ground, and Guest House.

- **Industrial Training Institute, Gurugram**

  ITI Gurugram was established in 1959 with an objective of imparting skills in various vocational trades to meet the skilled manpower requirement of industry.

  Institute Managing Committee (IMC) is constituted in 2006 for Improvement in the field of vocational training to equip the youth with skills, education & discipline for suitable industrial employment as well as self-employment.

  ITI is housed in 17.5 acres of land in centre location of Gurugram. The institute has all infrastructure facilities needed for overall development of skilled labor, like workshops, theory rooms, library, playground, audio visual aids, and Hi-Tech Computer labs for awareness about computer to trainees of all trades.

  There are 25 different trades of Engineering & Non-Engineering field, of one or two year's duration, with 865 intakes per year. The courses are affiliated to

National Council for Vocational Training (NCVT), through the Directorate General of Employment and Training (DGET), Government of India in the Ministry of labour, New Delhi. Some of the trades and units in this I.T.I are also run under approval of State Council for Vocational Training (SCVT).

Apart from government technical institutes, there are various private polytechnics and ITIs running at NCR region for developing technical workforce for the cluster.

- **Somany Institute of Technology and Management (SITM), Rewari**

  Somany Institute of Technology and Management, Rewari (Haryana) was established in year 2000 with a vision to providing quality technical education for higher studies and one of the oldest institute in the region. The institute is known for imparting excellent education in the field of engineering and management. Famous for its knowledge generation and curriculum delivery mechanism, SITM enjoys the acceptance of its 6000 students and their families.

  College also assists the Students in their Training & Placement. The college while realizing its importance in shaping the future of the students has established a Full-fledged Department of training & placement. It has an updated databank of requirements of corporate / Industrial sector. Regular communication takes place to assist placement. Their TPO regularly interacts with them from time to time for placement. SITM is claiming 100% placement in Printing Technology & Mechanical Engineering.

  To keep pace with ever changing world technology, each student has to undergo summer training in industries. The college is surrounded by many industries within a radius of 25kms. That directly results into excellent placement. We work on placing our students with best of the leading companies.

- **Gurugram Institute of Technology and Management (GITM), Gurugram**

  Gurugram Institute of Technology & Management was established by a philanthropic society in the name of Lord Krishna Charitable Trust (Regd.) to impart higher education at par with global standards to cater the need of today's industries and technocrats with sound knowledge and managerial skills. GITM is approved by AICTE New Delhi, Govt. of Haryana and is affiliated to Maharishi Dayanand University Rohtak.

  GITM conduct B.Tech. and M.Tech. Courses under mechanical engineering, computer science engineering, electronics, communication, electrical engineering, and offer management courses.

  In a short span, GITM has emerged as a sought-after institution, and is growing in popularity at a fast pace its reputation of being a place offering high quality professional education is spreading in India as well as in other parts of the world.

The mission of the college is to impart higher education at par with global standards.

D. Banks / FIs

- **Haryana Financial Corporation (HFC)**

  The Government of Haryana and the Industrial Development Bank of India (IDBI) promoted Haryana Financial Corporation, based in Chandigarh jointly. HFC has been approved by SEBI as a category-I merchant banker. The corporation's activities include merchant banking, trade finance, lease finance and term lending. The corporation has diversified its range of financial services to include no-fund-based assistance in the form of guarantees, letter of credit and forex services. The DPR for the project shall be appraised by HFC.

- **Small Industries Development Bank of India (SIDBI)**

  SIDBI is the apex financial institution responsible for the growth and development of the MSME sector. Almost all the government subsidy schemes and bilateral lines of credit are implemented through SIDBI. The business strategy of SIDBI is to address the financial and non-financial gaps in MSME eco-system. Financial support to MSMEs is provided by way of (a) Indirect / refinance to banks / Financial Institutions for onward lending to MSMEs and (b) direct finance in the niche areas like risk capital, sustainable finance, receivable financing, service sector financing, etc.

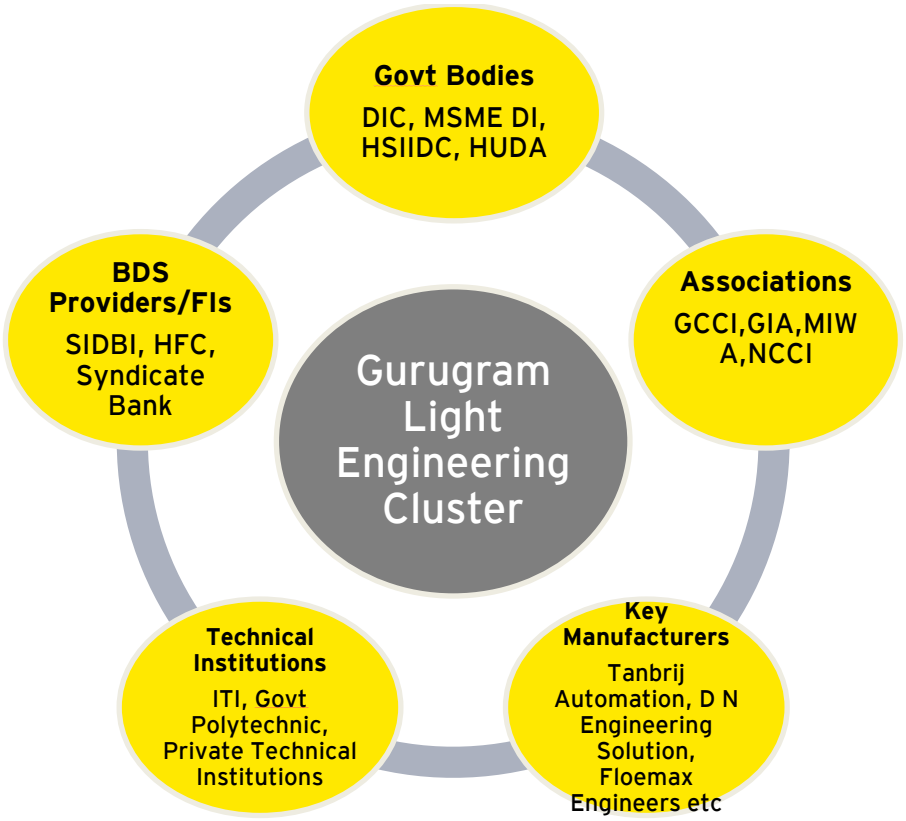
- **Syndicate Bank, Gurugram**

  Syndicate bank is the lead bank of the Gurugram district and many local light engineering units have a banking relationship with the Syndicate Bank.

E. Leading Manufacturers

Some of the leading fabricators in the Gurugram are M/s Tanbrij Automation, M/s D N Engineering Solution, M/s Floemax Engineers etc.

Figure 3: Key Cluster Actors



3.2 Cluster Turnover, Market and Employment

The cumulative annual turnover of the light engineering cluster in Gurugram is estimated to be INR 3000 crores. However, there is an enormous potential of increasing the production of cluster units by reducing the outsourcing of activities i.e. laser cutting, 3D printing etc. by units. This would also result in enhanced turnover. With the help of proposed CFC, entrepreneurs will get better facilities that will reflect in their improved and polished work. Recommendations around these have been provided in the DSR.

The major products of the cluster includes auto components, special purpose machines, other machines, spare parts and fabricated products etc. Due to use of obsolete technology, lack of quality, lower production capacity and poor quality of products, cluster units are unable to obtain and cater to bulk orders from large customers. This cluster has ability to increase its output and market share through manufacturing quality products at competitive prices.

The units in the cluster are catering market of Noida, Delhi, Manesar, Bawal, Chandigarh, Mohali, Gurugram etc. They supply to domestic market only. Some of the leading customers are M/s Continental Automotive, M/s Kaparo Maruti, M/s Hella Lighting, OEMs and tier-1 suppliers etc. Manufacturing is predominantly done to order, and is usually based on the buyer's specifications. The MSEs cater to relatively smaller / niche orders, while larger players in the market cater to high volume orders.At present, the units in cluster are not exporting due to absence of high quality and finishing of products, which is a prime requirement form any overseas customer.

The Gurugram light engineering cluster is quite labor intensive. The cluster provides employment to about 15,000 persons in which one-third of women workforce involved.

Light engineering process includes various activities such as cutting, bending, welding, notching, broaching etc. On an average, light engineering units employ approximately 5-10 people.

The average salaries of the light engineering industry workforce are of Rs. 8000 per month for workers operating on 8-10 hour shift. The average wages of skilled labor for precision activities such as cutting, welding, etc. is around Rs. 12,000- 15,000 per month.

The proposed facility will be open to all cluster firms to enable them to get job work done in order to cater to the product requirements of the market. The proposed CFC will provide an opportunity to micro units to get job work done on modern machines and manufacture high quality products, thereby increasing their individual capacity utilization and profitability. The facility will provide a major infrastructural push to the units reeling under high competition and will enable the local light engineering units to operate in better manner. The CFC will also lead to creation of several jobs for supervisors, machine operators, skilled and unskilled workers like helpers both within the CFC and at an individual unit level due to enhanced capacity utilization.

3.3 Production Process

The units in the cluster are engaged in various activities across the value chain of light engineering process. From selection of raw materials, to the finished products, various engineering activities are involved in this process.Following are some common activities generally used for light engineering process.

Light engineering Process

Designing and approval

1. **Designing of Machine/Equipment:** On the very first step, as per customer's requirement and need, a sample design is made which contain dimensions, location of various fittings, look of proposed machine etc. Design is very useful while calculating estimates of equipment.
2. **Approval by Client:** Design made in first step, shared with client for his satisfaction and approval. Client may also change design as per his desire before giving approval
3. **PO received:** Client give purchase order to manufacturer if he satisfied with all the projections and details.

Operations

4. **Material Segregation:** Raw material segregated from current stock as per requirement of proposed equipment.
5. **Material Purchase:** After segregation if some of the raw material found missing from current stock then required raw material purchased from open market or routed through dealer.
6. **Fabrication:** Fabrication is very critical process. It involves various operations like marking, cutting, bending, shearing, welding, notching, broaching etc.

Assembly and Installation

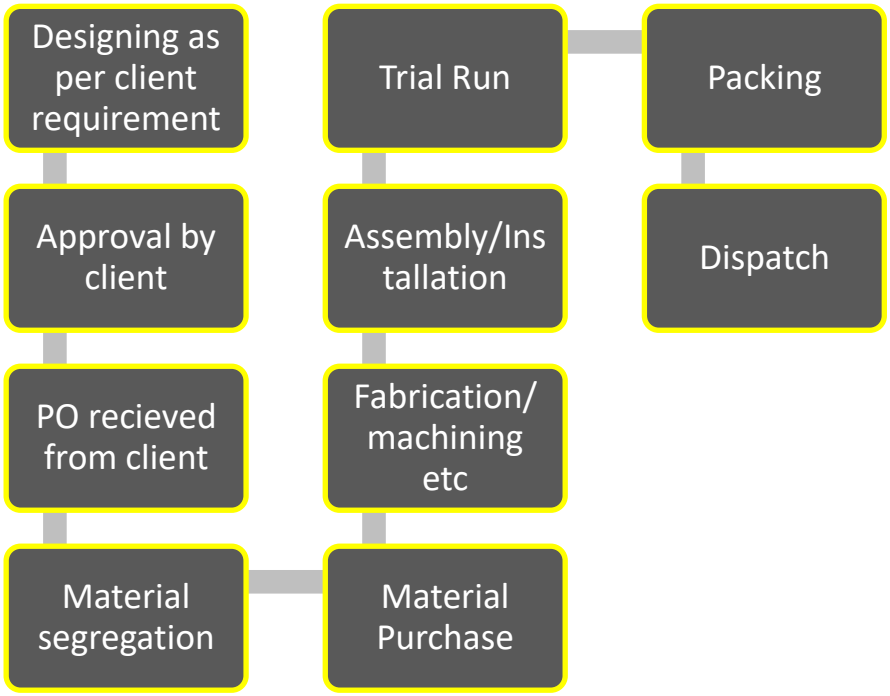
7. Installation: As per requirement, various parts need to be assembled and installed. Welding, riveting and fastening are major assembly and installation process.
8. Trial Run: Trial run executed before delivery to find if there are any defects.

Post Production

9. Packing: If equipment found in OK condition on trial run then packed accordingly.

Dispatch: Packed equipment shipped to client's premises as per agreement.

Figure 4: Flow Chart of the Process



Value Chain Analysis

Value chain analysis of the most commonly produced cluster products (conveyor) has been conducted to ascertain the major cost areas and identify suitable interventions. The value chain analysis of a conveyor is provided in table:

Table 1: Value Chain Analysis of Conveyor

Particulars	Value Added	Total Value (INR)	% of cost of production
Designing		4000	9.09
Material Cost	25000	29000	56.82
Fabrication	4000	33000	9.09
Labour	7000	40000	15.91

Particulars	Value Added	Total Value (INR)	% of cost of production
Packing Cost	2000	42000	4.55
Transportation	2000	44000	4.55
Total Production Cost			44000
Profit Margin (12%)			6000
Selling price			50000

The value chain analysis has been prepared based on the stakeholder consultation. It can be observed that the raw materials amount to more than **56%** of total cost of production including hardware and other components. The industry is labor intensive, with labor costs accounting for approximately **16%** of total production cost of a conveyor. The competitiveness of the cluster units can be increased by targeting the major cost area of machinery and providing common facilities to the units in order to undertake process at a lower cost.

.

3.4 Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis

A SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis of the MSME light engineering units in the cluster is carried out keeping in mind the technology, marketing, product quality, skills, inputs, innovation, business environment and energy/environment compliance of the units. The SWOT analysis provided in table 2:

Table 2: SWOT analysis of the cluster

Area	Current situation		Future	
	Strengths	Weaknesses	Opportunities	Threats
Market	▶ Steady local and international demand for cluster products. ▶ Cluster located within the Gurugram Industrial area, which is well connected with all major national and international industrial hubs. ▶ Cluster located in the proximity of NCR, which is a major supply hub. ▶ Strong natural business ecosystem in the region with presence of a large number of buying houses.	▶ Presence of other large players to whom bulk orders are made. These units have a well-established clientele. This makes market penetration, a challenge. ▶ Units are unable to market their products directly to OEMs due to inconsistent product quality. ▶	▶ Rising income levels and increasing industrialization driving the growth of SPM machines ▶ Potential to price products competitively with acquisition of technology	▶ Intense competition from global markets. ▶ Competition from other major players.
Technology /Product Quality	▶ Each unit undertakes inspection of products at each stage in their manufacturing process	▶ Lack of access to technologies like prototype printing and moulding centre. ▶ Heavy reliance on traditional methods. ▶ Lack of relevant	▶ Setting up of CFC for advance machining centre for job work and setting up rapid prototype printing and moulding centre, resulting in units being	▶ Increase in cost of production ▶ Increase in awareness of people on quality certifications shall lead to losing out to business / requirement for more

Area	Current situation		Future	
	Strengths	Weaknesses	Opportunities	Threats
		machining facility, in-house, results in units having to obtain these from private service providers at higher costs.	able to obtain these services both timely and at lower costs and price their products competitively.	stringent testing procedures. ▸ Competition from vendors manufacturing products at lower costs. ▸ Rapid technology obsolescence.
Skill/Manpower	▸ Skills acquired on-the-job ▸ Presence of technical institutes such as Govt. Polytechnic and Industrial Training Institutes.	▸ High labour costs ▸ Lack of interaction between MSMEs and technical institutes for providing technical training	▸ Customized training programs on required skills (operations, soft skills etc.) ▸ Engage technical institutes for skill development programs	▸ Youth interested to work in other lucrative sectors
Innovation	▸ Ability to manufacture products as per the manufacturers specifications ▸ Some units create their own designs (using conventional methods at present) and sell these	▸ Lack of a standardised ERP solution for light engineering units ▸ Low investment in development of designs ▸ Lack of process automation ▸ Lack of adoption of lean manufacturing clusters such as Six Sigma, Kaizen	▸ Development of a standard IT based ERP solution ▸ Structured processes for information sharing among MSMEs in the cluster	▸ Could lose business to other more price competitive manufacturers from neighbouring states
Business Environment	▸ Gurugram well known as a leading industrial hub of India ▸ Steady growth in domestic demand ▸ Cluster well known as a	▸ High cost of industrial land in the cluster ▸ Lack of common infrastructure/CFC facilities ▸ No long term vision of	▸ Establish CFC with latest technologies for light engineering practices ▸ Create better awareness of government schemes and regulations	▸ Change in policies and regulatory environment ▸ Increase in rate of raw material

Area	Current situation		Future	
	Strengths	Weaknesses	Opportunities	Threats
	engineering hub across North India ► Conducive policy and regulatory initiatives ► Active State Govt. and schemes for development of the sector ► Proactive industries associations in Gurugram ► Satisfactory knowledge on govt. schemes	industrialists		
Energy/Environment	► Increased focus on environment due to requirement from buyers	► Lack of knowledge of energy efficiency resulting in higher energy consumption ► High energy cost structure because of lack of efficient processes	► Regular checks on maintaining quality and safety standards ► Potential to reduce energy costs by energy auditing	► Increase in power tariff ► Increased focus on environment standards

3.5 Major Issues / Problem Areas of the Cluster

As can be deciphered from the analysis, cost competitiveness of MSME units engaged in light engineering process in the cluster is affected by absence of **in-house 3D prototype printing, alser cutting a, modern machines like VMC and designing software like Catia and/or SolidWorks etc.** Most of the MSEs are unable to individually afford these facilities. As per discussion with stakeholders, it is found that, as of now, they are heavily dependent upon private players for some essential operation like laser cutting and designing. Those private players charge exorbitant price for their services. Specifically, there is a need of 3D prototype printing machine to make a dummy model of proposed machine (as per need of client) or spare part in a quick succession. This facility would enable them to save their raw material (which costs more than 50% of the total product cost.) As of now, they are using hit and trial method to get final product, which results in wastage of raw material, money, and time, affecting their competitiveness in the market.

The key problems cluster related problems identified are:

- **Absence of Modern Machinery:** The major problem of the cluster is lack of modern machinery. The units are using conventional machines and methods for processes, which need to be upgraded. The machineries are out-dated, cannot match the quality / standard of modern age and consume time and energy.

- **Lack of Space: The** units in the cluster are very small because of which they are unable to stock bulk quantity of raw material in their place which can otherwise help this save money and cut down the production cost.

- **Marketing: Presently,** 80-90% market for the cluster is within Delhi and Haryana. Therefore, there is scope for expansion of the market. Towards expanding the market share, units have to increase their capacity and capability in terms of technology, buying power, manufacturing etc. to meet the customer's expectations.

- **Technology:** The cluster units are dominated by low technology and very rare technological innovation. However, in recent years, the demand of automatic and semi-automatic production systems are rising. This made them to look for modernisation and adaptation of latest machine and technology.

- **Lack of skilled manpower:** The lack of skilled manpower is responsible for wastage of raw material, higher production time, low accuracy and low productivity results.

- **Business Development Service Providers (BDSP**): In Gurugram, light engineering cluster, there is low awareness of schemes and incentives of the Government. There is a scope for propagation schemes such as Energy audit, lean etc. which can result in the development of cluster by helping save money, providing better working atmosphere and safer working conditions.

Also due to lack of these facilities, the units face higher costs, thereby reducing their competitiveness, especially compared to other competitive areas. This results in loss of market share.

3.6 Key technologies missing

The technological gaps on various fronts that the proposed CFC seeks to address, along with scope and illustration of major facilities is provided in table 3.

Table 3: Rationale for hard interventions

Rationale for proposed hard interventions under CFC mode	
Critical technology gaps in the cluster	**Proposed technology interventions to enhance cluster's competitiveness through CFC mode**
3D Scanner/ 3D printer Facility	
3D scanning is used to get accurate dimensions of an object by means of laser rays. The facility is most useful for measuring objects with complicated dimensions. Presently the cluster deals with complicated designs and it takes considerable time to obtain all dimensions properly and with accuracy as this facility is unavailable in the cluster. This is resulting in delayed execution.	The proposed CFC with 3D scanner and 3D printing machine would enable the cluster units to get quick and accurate measurement of typical objects and produce a prototype of desired work piece. This will help save raw material and production time. The facility will be used on user charge basis.
Laser Cutting Facility	
Laser cutting is required for metal forming operation for objects with complex design and finishing requirements. Presently, the cluster lacks in-house laser cutting facility, and have to outsource the laser cutting operations to private service providers at exorbitant prices.	In-house laser cutting facility is required for conducting metal operations-laser cutting job work at competitive prices. This would help units to produce superior metal cut designs, reduce their final product cost and become more competitive in the market.
Designing Software	
Designing software will be used to make the design of proposed machinery or spare. At present, designing services are out-sourced to private players at high prices, given the absence of in-house designing facilities.	Designing software like Catia and SolidWorks are proposed for the CFC, which will help entrepreneurs with in-house designing facilities at competitive prices.
General Machining Facility	

Currently the light engineering units are using manual machining methods and out-dated machines. The use of out dated technology result in operational delays and it is very difficult to get precision work out from them. Further, maintenance of the old machines is also time consuming. Unlike modern machines, these machines cannot handle multiple operations at a time, which leads to slower process, and higher production time.	Installation of modern machine i.e. MIG welding machine, surface grinder, VMC, sheet shearing machine provides better usage of raw material, shorter production time and multiple operations at a time. These machines require low maintenance and offers lower production time.

Diagnostic Study Recommendations

4. Diagnostic Study Recommendations

Based upon the diagnostic study report and subsequent discussions with various cluster stakeholders and members of Gurugram light engineering cluster during formulation of this Detailed Project Report (DPR), hard interventions are being proposed to enhance the competitiveness of the cluster units. These have to be undertaken with government support to ensure the survival and growth of the light engineering units in Gurugram.

Cluster enterprises have also been undertaking several soft interventions (before, during and after the DSR) on their own and have been active in enhancing their awareness and exposure. The units have conducted several awareness programs and trainings in collaboration with DIC, Gurugram and BDS providers. They have also conducted exposure visits to other developed clusters, visited various places for acquiring knowledge and understanding of new technologies and machineries and facilitated UAM registrations.

Hence, the cluster does not intend to obtain government funding for soft interventions. Details of the initiatives undertaken during the course of the DPR by the cluster are mentioned in the section below. The recommendations for hard interventions have been elaborated in subsequent sections.

The recommendations were finalized in a stakeholder consultation conducted with all the members of the cluster in Gurugram in January and February 2018. Subsequent discussions for finalizing the technology, financial aspects, user charges/revenue with all the SPV members were held in February 2018.

4.1 Soft Interventions Undertaken

1. **Capacity Building and Awareness Generation:** To build the capacities of cluster units and generate awareness among stakeholders regarding cluster development (collective approach to address their issues) and benefits available to them in the form of cluster, a series of workshops, the details of which are provided below:

    - **Member Meetings:** Cooperation and trust building among members is foremost for smooth functioning of the cluster and SPV. A meeting was organized by cluster members during the month of December 2017 in Gurugram to enhance cooperation among member units and to obtain inputs for the DSR. Members of the cluster were informed about the registration of the cluster and identification of building for the CFC. Members of the cluster raised their concerns during the meeting that were resolved by other members of the cluster.

      Awareness Programme on Mini Cluster Development Scheme: A programme for awareness of SPV members of light engineering cluster Gurugram on state mini cluster development scheme was conducted in December 2017. The EY

team highlighted the major benefits of the scheme, and the application process.

- **UAM registration campaign:** Many of the cluster members, who did not have UAM (Udhyog Aadhar Memorandum), got their unit registered under UAM. They have not only supported cluster members in online filling of UAM but also informed them about benefits of UAM.

2. **Exposure Visits and Participation in Trade Fairs:** In order to enhance the exposure of cluster units on new and emerging technologies in the light engineering cluster, a number of exposure visits were conducted. The objective was to gain technical knowledge and expertise required for making the cluster competitive. Additionally, recommendations for participation in trade fairs and exhibitions were made to cluster units to promote their products as well as witness innovative products being brought out in the market. The following actions were taken in this regard:
   - **Meeting at M/s Lucky Machines Pvt. Ltd. at Faridabad**: Addressed by Sales Executive Mr. Prasant Hegde, the industrial use of the different machines was empathized upon. Mr. Parteek Sharma marketing executive , highlighted the wide gap in demand and supply of machine in manufacturing industries

   - **Attended Engineering and Manufacturing Expo 2017, Pune:** Mrs. Pranita Yadav discussed the role of automation and robotics and the application of different automation equipment.

   - **Visit to M/s Pioneer Cranes & Elevators (P) Ltd, Ludhiana:** Mr. Paramjeet Singh Manager (Marketing) discussed about with the different types of cranes and elevators in the manufacturing unit

   - **Visit to Exhibition Centre, Gandhinagar:** A visit to the exhibition centre in Gandhinagar, related to Engineering machines and machine tool was conducted to increase awareness about the latest developments in the engineering industry. Similar visits were conducted to **Bhavna Udhyog Ludhiana and SPM Exhibition at Bengaluru.**

4.2 Hard Interventions (Machines / Technology in the proposed CFC)

The light engineering units in the Gurugram need technological support to enhance their competitiveness and ensure their survival. Those units are reeling under bitter competition and low margins. They require modern **high capacity automatic machines** and other related equipment to get their job work done and reduce their production costs.

The following common infrastructural facilities are being proposed for the CFC, with support from the state industry department.

- **3D Printing Machine:** 3D printing or additive manufacturing is a process of making three-dimensional solid objects from a digital file. The creation of a 3D printed object is achieved using additive processes. In an additive process, an object is created by laying down successive layers of material until the object is created. Each of these layers can be seen as a thinly sliced horizontal cross-section of the eventual object. 3D printing is the opposite of subtractive manufacturing which is cutting out / hollowing out a piece of metal or plastic with for instance a milling machine. 3D printing enables you to produce complex (functional) shapes using less material than traditional manufacturing methods.

- **Laser Cutting Machine:** Laser is used primarily for cutting metal plates. On mild steel, stainless steel, and aluminium plate, the laser cutting process is highly accurate, yields excellent cut quality, has a very small kerf width and small heat affect zone, which makes it possible to cut very intricate shapes and small holes. When cutting stainless steel or aluminium, the laser beam simply melts the material, and high pressure nitrogen is used to blow the molten metal out of the kerf. On a laser cutter, the laser cutting head is moved over the metal plate in the shape of the desired part, thus cutting the part out of the plate.

- **Designing Software (SolidWorks):** SolidWorks is a solid modelling computer-aided design (CAD) and computer-aided engineering (CAE) computer program that runs on Microsoft Windows (published by Dassault Systèmes). It helps to create 2D or 3D models without any complexities, faster and in the cost effective way. The main advantage of the solid modeller is that very easy to use, simple graphic user interface and much more friendly, as compare with other CAD solid modelling software. It contains solid modelling, Motion, Simulation, Tool box, Tool Analyst, Circuit works, Photo view 360, Scan to 3D, e-drawings and drawing editor.

- **Sheet Shearing Machine:** The first step in fabricating a sheet metal component is cutting to size. Shearing machines and shearing machinery perform this function. Shearing machines are multipurpose devices used in the cutting of alloys

and other sheet metal. Some shearing machines use a scissor-like, angular shear action to cut metal into sheets or strips. Other, larger machines use a straight shear action with the blade fixed at an angle as opposed to the angular movement. Shearing operations are performed by the action of two blades, one fixed in the shear bed and the other moving vertically with little or no clearance.

- **Surface Grinder:** Surface grinding is the most common of the grinding operations. A finishing process uses a rotating abrasive wheel to smooth the flat surface of metallic or non-metallic materials to give them a more refined look by removing the oxide layer and impurities on work piece surfaces. This will also attain a desired surface for a functional purpose.

The surface grinder is composed of an abrasive wheel, a work-holding device known as a chuck, and a reciprocating or rotary table. The chuck holds the material in place while it is being worked in two ways: a) ferromagnetic pieces held in place by a magnetic chuck, b) non-ferromagnetic and non-metallic pieces held in place by vacuum or mechanical means.

- **VMC (Vertical Machining Centre):** A VMC is a type of CNC machine, typically enclosed and most often used for cutting metal. Most VMC machines have three axes, the x, y, and z-axis. Axis stands for the number of motors that can be individually driven for positional control of the tool. The x-axis is usually from left to right, the y-axis is front to back, and the z-axis is up and down. On a standard 3-axis VMC, the cutter stays in the vertical direction. In VMC's, one can add 4th or even 5th axis as well to increase the benefits of the VMC. If the 4th-axis is added in VMC, then the cutter can rotate around the x-axis, which allows the VMC machine to drill holes in the front and back of the product. Hence, VMC that have an additional rotary axis are 4 axis machines. There is a fifth axis as well which adds complexity to the VMC.

- **MIG Welding Machine:** MIG stands for "Metal Inert Gas." The technical name for it is "Gas Metal Arc Welding" (or GMAW), and the slang name for it is "wire welding. MIG

welding is an arc welding process in which a continuous solid wire electrode is fed through a welding gun and into the weld pool, joining the two base materials together. A shielding gas is also sent through the welding gun and protects the weld pool from contamination. The MIG process enables the home-hobby, artist, farmer/rancher, motorsports enthusiast or DIY welder to make most types of fabrication and maintenance/repair welds on material from 24-gauge up to 1/2-inch thickness.

- **3D Scanner:** 3D Scanning is a non-contact, non-destructive technology that digitally captures the shape of physical objects using a line of laser light. 3D laser scanners create "point clouds" of data from the surface of an object. In other words, 3D laser scanning is a way to capture a physical object's exact size and shape into the computer world as a digital 3-dimensional representation.3D laser scanners measure fine details and capture free-form shapes to quickly generate highly accurate point clouds. 3D laser scanning is suited to the measurement and inspection of contoured surfaces and complex geometries, which require massive amounts of data for their accurate description, and where doing this is impractical with the use of traditional measurement methods or a touch probe.

4.2.1 Expected Outcome after Intervention

The project will be beneficial for light engineering units in the cluster as a whole. The setting up of the CFC is expected to generate the following benefits for the cluster units:

- Enhanced value addition for cluster products
- Significant reduction in cost of production and higher capacity utilization by each unit
- Higher degree of competitiveness of cluster enterprises
- Scope for the cluster to target new market segments by developing new and improved products
- The requirements of SPV members are adequate to utilize the capacity of the CFC. Nevertheless all cluster firms shall be encouraged to use the facility.
- The CFC will generate more job opportunities at both the cluster and individual unit level due to enhanced capacity utilization.
- The CFC is also expected to enhance the levels of cooperation and joint-action amongst cluster stakeholders and SPV members to cooperate in other areas such as joint marketing initiatives, common raw material procurement and so on.

It will also complement the efforts of state government in promoting clusters in the state and serve as a model for upgrading micro enterprise clusters.

Special Purpose Vehicle (SPV) for Project Implementation

5. SPV for Project Implementation

The micro units at light engineering cluster, Gurugram came together to form a Special Purpose Vehicle (SPV) as a private limited company under sub section (2) of section 7 of the Companies Act, 2013 (18 of 2013) and rule 18 of the Companies (Incorporation) Rules, 2014. The SPV is incorporated under the name and style of **'N2D FUTURETECH PRIVATE LIMITED'** with CIN U28999HR2018PTC072461 and PAN AAFCN9259C. The SPV was registered on 2nd February 2018. The Certificate of Registration along with Memorandum of Association (MoA), Articles of Association (AoA) and PAN number of the SPV are provided in ***Annexure – 2 and 3.*** The company has an authorized and paid up capital of Rs. 1 Lakh, which shall be enhanced in the near future. The members are micro-sized firms (registered units) involved in light engineering related activities, predominately based in Basai industrial area of Gurugram.

DIC, Gurugram and the State Government both played an important role in SPV formation by cluster stakeholders. The SPV includes 10 members who are subscribing to the necessary share capital of the company. The SPV shall be open for new members to join and for the existing members to leave while maintaining a minimum member base of at least 10 at all times. The proposed CFC will be implemented on public-private partnership basis through SPV **'N2D FUTURETECH PRIVATE LIMITED'** by availing support from Government of Haryana under State Mini Cluster Development Scheme (EPP 2015).

Cluster members have been autonomously undertaking several soft interventions to enhance knowledge and exposure of the cluster units on new trends in light engineering industry and enhancing productivity of their units as mentioned in the previous sections. These include exposure to cluster development initiatives in other clusters, visits to fairs, registration under UAM and awareness programs on new trends in light engineering industry, SOPs, design interventions etc. These programs were conducted in collaboration with DIC and BDS providers.

The SPV has conducted a series of stakeholder consultations (with various members, DIC, Gurugram and EY experts) during finalization of project components, selection of technologies and development of Detailed Project Report. The SPV has been instrumental in imparting awareness about the cluster development under the State Mini Cluster Development Scheme in Gurugram and has validated findings and recommendations. It has kept the state government and the DIC Gurugram engaged during the entire period of development of DSR and DPR.

5.1 Shareholder profile and Shareholding mix

List of Directors**:** The SPV has two directors. The details of the directors are furnished in Table 4. Other than these directors, the SPV will have provision of having one nominee each from the State Government. The SPV is homogeneous in nature due to similar products and activities performed by the cluster units**.**

Table 4: List of Directors

S. No.	Director's Name	Name of the unit	Unit address
1	Mr. Anand Sharma	D N Engineering Solutions	Sec 37, Gurugram
2	Mrs. Manisha Kumari	DNES Industries	#142, Basai Industrial Area, Gurugram

The lead promoters/ shareholders have several years of successful experience in production of light engineering products. These units are financially viable in nature.

Members of the SPV have been engaged in production of light engineering products in Gurugram for several years. Directors/members have been in close interactions with technical experts, government institutions and machinery suppliers. Post the DSR validation, the DIC Gurugram also acknowledged the genuineness and enthusiasm of the SPV members to undertake project initiatives under the State Mini Cluster Development Scheme as well as verified the existence of the SPV members. The verified list is provided in **Annexure 4**.

The SPV was formed with the objective of taking up cluster level activity in a joint and coordinated manner, wherein all units have equal say. The shareholding pattern of members of the registered SPV includes the contribution from every member of SPV and no individual shareholder holds more than 10% stake in the capital of the company. Details of SPV members along with their contact persons, unit details, UAM numbers and products manufactured are provided in Table 5.

Table 5: Details of SPV Members of Light engineering Cluster, Gurugram

S.N.	Contact Person	Company Name	Contact No.	Address of Unit	UAM No	Products
1	Mr. Sanjay Mishra	Floemax Engineers	9811184778	Basai Industrial Area Gurugram	HR05A0005806	ETP Plant, STP, Industrial RO.
2	Mrs. Seema Devi	VK Engineers	92121-35295	Kadipur, Gali No. 8, Basai, Gurugram	HR05A0005567	Machining Components & Auto Components
3	Mrs Ritu Gandhi	Otway Industrial Solutions	9582262753	Basai Industrial Area, Gurugram	HR05A0005721	Manufacturing of AHU, Chillier, Cooling System.
4	Mr. Brijesh Singh	Tanbrij Automation	97189-26868	Kadipur Industrial Area, Gurugram	HR05A0005564	Auto Components
5	Mr. Anand Sharma	DN Engineering Solutions	89011-97202	Sec-37, Gurugram	HR05A0005547	Textile Machinery & machining components
6	Mr. Nawal Kishore	Gaurav Enterprises	99119-22459	Jyoti Park, Gurugram	HR05A0005590	Machinery parts & Auto Components
7	Mrs. Usha	Nishan India	9467822892	Naharpur Rupa NH 8 Gurugram	HR05A0002721	Manufacturing SPM & Machining parts Components
8	Mr. Shailesh Kumar Sahi	Saksham Tool & Engineer	70535-97727	Sarswati Enclave Gurugram	HR05A0005563	Auto components & Fabrication
9	Mr Ashok Kumar	Profile Engineers	9971007519	Plot No 350 sec 7 IMT Manesar, Gurgaon	HR05A0005718	Manufacturing SPM & Machining parts
10	Mrs Manisha Kumari	DNES Industries	8872759536	Plot no 142 Basai industrial Gurgaon	HR05A0005593	Manufacturing SPM & Machining parts

5.2 Initiatives undertaken by the SPV

As mentioned in detail in section 4.1 (Soft interventions undertaken), the SPV members have proactively undertaken many capacity building initiatives to promote the cooperation among cluster units and enhance knowledge and exposure of the units. These initiatives have been undertaken in collaboration with DIC, EY etc. The major initiatives are:

- Pursuing initiatives in close coordination with DIC, Gurugram to facilitate understanding of cluster development, common procurement, marketing, available government support, latest technology for common facility etc.
- Exposure visit to Punjab, Haryana NCR to understand the latest available technology and machinery related to light engineering. This would help them to adopt latest methods and machinery for light engineering and made them more competitive in market.
- Conducting various programs for capacity building, awareness generation and technological advancement in the cluster as well as participation in similar programs organized by stakeholders.
- Identification of building to be taken on lease for the SPV.

5.3 SPV Roles and Responsibilities

The SPV will play an important guiding role in the overall management and operations of the CFC. It will provide direction to the management of the CFC and will monitor usage and performance of the CFC. The SPV will constantly report to the state government about the performance of the CFC. The major roles and responsibilities that are envisaged to be performed by the SPV post the submission of this DPR are mentioned below:

- Coordinating with the state industry department for DPR approvals in the SLSC
- Accompanying EY experts to various meetings at the state government departments
- Building lease deed agreement in SPV name
- Garnering the SPV project contribution from the members
- Formation of purchase committees for procurement of goods and services
- Establishing, operating and maintaining all common facilities as mentioned in the DPR
- Obtain any statutory approvals/clearances from various government departments
- Recruit appropriate professionals to ensure smooth execution of the CFC
- Collection of user charges from members and other users of the facilities as per the decided rates to meet the recurring expenses and future expansions of the CFC. While various estimates on user charges / service fee are presented in this DPR, all decisions including usage priority of facilities by members will be made based on decision by members of SPV.
- Preparation and submission of progress reports to state industry department

The Memorandum and Articles of Association of the cluster SPV indicates the democratic process in terms of decision-making based on votes. All members of SPV will meet once every fortnight/month to discuss/resolve operational issues. The management of the CFC will be a two-tier structure for smooth and uninterrupted functioning. The executive body

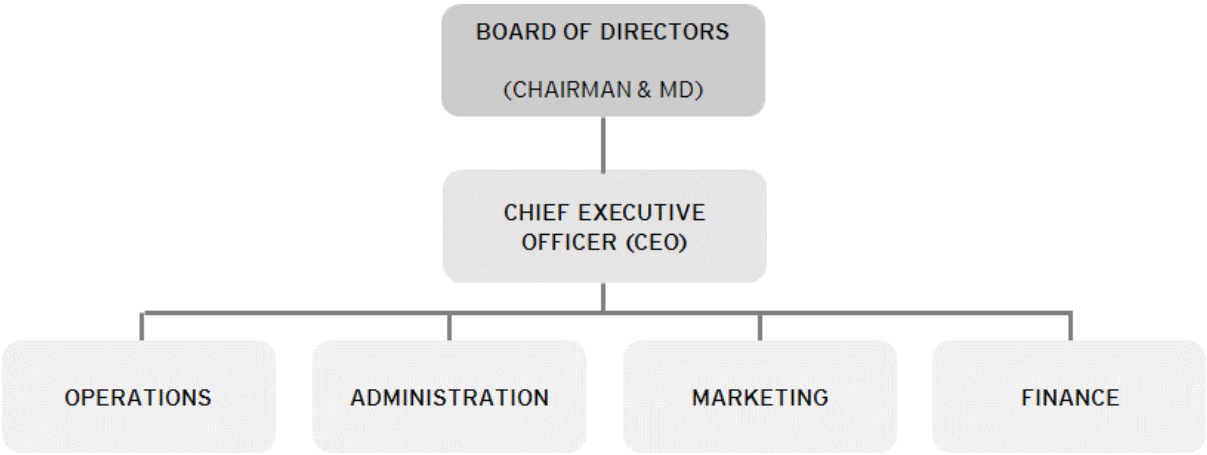
i.e. Board of Directors (BoD) will include the directors appointed, including one nominee of State Government (DIC). They will also remain present during meetings.

While various estimates on user charges/service fees are presented in this DPR, all decisions including usage priority of facilities by members will be made by unanimous decision of the members. The CFC will seek direction and guidance from the SPV BoD, and the day-to-day administration will be taken care of by the management that shall be appointed by the SPV BoD. Their role is detailed below:

1. **Board of Directors**: The BoD will be the main governing body and will oversee the operations of the CFC. They will have the decision-making power in terms of fixing user fees (for members and non-members) and usage of reserves etc. for future expansion. The Chairman will oversee the entire operations; each Director will be entrusted with specific responsibility like marketing, technical, finance, public relations etc. based on their interests and experience.

2. **Managerial, Technical and Administrative staff**: A competent and qualified professional with a background in the light engineering industry will be appointed as the Cluster Development Executive (CDE) (also referred to as Chief Executive Officer (CEO)), who will look after day-to-day operations of the CFC and shall be directly reporting to the Board of Directors. Each facility (cutting, bending, welding, assembling, etc.) will have its own expert staff (supervisors, operations and helpers) as per the requirement. The details of manpower and other requirements are already mentioned in the DPR in the Project Economics section. There shall be provisions for administrative staff such as accounts personnel, marketing professional, etc. to ensure effective functioning of the CFC. The proposed organizational structure of the CFC is given in Figure 5:

Figure 5: Organisational Structure of Proposed CFC



Project Economics

6. Project Economics

6.1 Project Cost

The estimated total cost of setting up a CFC Light engineering Cluster, Gurugram is estimated **at Rs. 243.46 Lakhs.**

The total cost estimation includes the following project components:

1. Building (on lease)
2. Machinery and equipment
3. Miscellaneous fixed assets
4. Preliminary & Pre-operative expenses
5. Contingency
6. Margin money for working capital

The detail of each project component is provided below:

6.1.1 Land and Building

The SPV has identified a double storied building for CFC and will obtain it on lease basis on its own expense. The total area is 4770 sq. ft. The proposed CFC would require space for installation of machinery and provision for stocking material. The cluster SPV has identified a building at Basai Industrial Area at Gurugram. Provision for power and water is available. The land is strategically located in the major existing industrial estate in Gurugram. The document highlighting the proof for availability of building is provided in **Annexure 5.**

Table 6 Requirement in terms of land and building

Building Lease Basis		
S. No	Particulars	Estimated Cost
1	Building Area (sq. ft.)	4770
2	Monthly Rent (INR Lakh)	0.65
3	Rent for First Year (INR Lakh)	7.80
4	Year on Year increase in rent @	10.00%

6.1.2 Plant and Machinery

As detailed in section 4.2 (Hard interventions) a number of modern automatic and high capacity machines for 3D printing, laser cutting, welding, machining, grinding etc. have been recommended to enable cluster units enhance their competitiveness. The machines have been categorized as primary and secondary. The machines that shall be used primarily for job work have been categorized as primary, whereas, the auxiliary/supporting machines have been categorized as secondary machines. The major facilities proposed at the CFC are 3D printing, laser cutting, welding and machining. The total cost of plant and machinery including secondary machinery has been estimated at Rs. 213.73 lakhs and contingency works out to Rs. 10.69 Lakhs.

The details of the proposed machinery items are presented in the Table 7. The detailed specifications and quotations of the machines are provided in **Annexure 7**. The SPV has sourced quotations for machinery from suppliers based on the manufacturer's reputation, service support, price and quality. However, an open online tendering system shall be followed for procurement of these machines during project execution.

Table 7: List of Proposed Plant & Machinery

S. No.	Machine Name	Quantity	Grand Total	Supplier Options
Primary Machinery				
Sheet Cutting Facility				
1	Fibre Laser Cutting Machine	1	116.82	MD Corporation
Product Development Facility				
2	3D Scanner	1	12.15	Rasco Automotive System Pvt Ltd
3	3D Printer	1	5.90	Additive Manufacturing India Pvt Ltd
4	Design Workstation	1	3.14	Global IT and Security Solutions
5	Screen	1	0.17	Global IT and Security Solutions
Machining Facility				
6	Bending Machine	1	10.03	Sunshine India Hydraulic Pvt Ltd
7	MIG Welding Machine (300 AMP)	1	0.89	Capital Machineries
8	MIG Welding Machine (450AMP)	1	1.00	Capital Machineries
9	Vertical Surface Grinder	1	9.44	Global Exports
10	VMC	1	36.11	S&T Machinery P. Ltd.
Secondary Machinery				
11	Online UPS	1	3.56	ABS System and Security Pvt Ltd
12	Battery	1	1.70	ABS System and Security Pvt Ltd
13	EOT Crane	1	3.68	Vishwakarma Engineering and Fabrication Works
14	Desktop set	2	1.68	Global IT and Security Solutions
15	Printer	1	0.15	Global IT and Security Solutions
16	CCTV	1	0.64	Global IT and Security Solutions
17	Electrical Panel	1	2.18	Deepti Power Solutions
18	Air Conditioner-1 ton	3	1.32	D N Engineering Solutions
19	Air Conditioner-2 ton	2	1.40	D N Engineering Solutions
20	Compressor	1	1.77	Kumar Air Services

6.1.3 Miscellaneous Fixed Assets

The CFC would also require fixed assets such as furniture, fixtures, firefighting equipment, first-aid equipment etc. for smooth running of operations. The total estimated capital expenditure for purchase of miscellaneous fixed assets is estimated to be Rs. 2.10 Lakhs. Details are provided in the table 8.

Table 8: Miscellaneous Fixed Assets

Miscellaneous fixed assets Particulars	Amount (INR in Lakhs)
Office items and allied items, furniture, fixtures, firefighting equipment and back-up power supply etc.	2.10
Total	2.10

6.1.4 Preliminary and Pre-operative Expenses

Another major component of the project cost is the preliminary and pre-operative expenses. The preliminary expenses are envisaged as expenses incurred for registration of SPV, legal and administrative expenses, tendering forms, and tendering cost etc.

Pre-operative expenses include expenses for administrative establishment, travelling, bank charges, stationery, telephone, overhead expenses during construction and machinery testing period such as salaries, machine testing cost, bank charges, travelling etc. The total expenditure for preliminary and pre-operative expenses is estimated at Rs. 6.96 Lakhs (details provided in the table 9).

Table 9: Preliminary and Pre-Operative Expenses

(Rs. In Lakh)

S. No.	Particulars	Amount
1	Company Registration Charges	0.60
2	Tender forms & tendering cost	1.00
3	Project Report Preparation (DSR & DPR)	Nil
4	Project Management Charges	Nil
5	Travelling Cost	0.50
6	Machine testing cost	0.25
7	Cost of Refurbishment, electricity fittings, plumbing	0.30
8	Lease deed registration charges	1.86
9	Security Deposit (Rent)	1.95
10	Bank Appraisal Charges	0.50
	Total	**6.96**

6.1.5 Provision for Contingencies

No contingency has been provided for on building as it is being obtained on lease. Contingency on plant and machinery @ 5% amounting to Rs. 10.69 lakh has been included in the project cost.

6.1.6 Margin Money for Working Capital

The total working capital requirement during the first year of operation at 75% capacity utilization is estimated at Rs. 36.98 lakh with margin money requirement of Rs. 9.98 lakh (more than 25% of working capital requirement as margin). The working capital requirement has been calculated based on requirement of one month of operational expenses and 3 months' debtor collection period. The calculation has been provided in the subsequent section.

6.1.7 Summary Project Cost

A summary of total estimated project cost is presented in the table 10.

Table 10: Total Project Cost

S. No.	Particulars	Project Cost (Rs in Lakh)	Amount as per Guidelines	Remarks
1	**Land & Building**			
	a. Land Value	0.00	0.00	Eligible (Max 25% of total of L&B, P&M, and Misc. F.A.)
	b. Land Development	0.00		
	c. Building & Other Civil Works	0.00		
	d. Building Value	0.00		
	Sub Total (A)	**0.00**	**0.00**	
2	**Plant & Machinery**			Eligible
	a. Indigenous	195.64	195.64	
	b. Imports	0.00	0.00	
	c. Secondary Machines	18.09	18.09	
	Sub Total (B)	**213.73**	**213.73**	
3	**Miscellaneous fixed assets (C)**	**2.10**	**0.00**	Not eligible for grant
4	**Preliminary & Preoperative Expenses (D)**	**6.96**	**0.00**	
5	**Contingency**			
	a. Building @ 2%	0.00	0.00	
	b. Plant & Machinery @ 5%	10.69	0.00	
	Sub Total (E)	**10.69**	**0.00**	
6	**Margin money for working capital @ 75% CU (F)**	**9.98**	**0.00**	
	Grand Total (A+B+C+D+E+F)	**243.46**	**213.73**	

6.2 Means of Finance

The project will be financed from two sources: equity from SPV and grant-in-aid from Govt. of Haryana (under State Mini Cluster Development Scheme, EPP-2015).Working capital loan will be secured from Bank of Maharashtra. The assistance to the project from Govt. of Haryana under the State Mini Cluster Development Scheme is envisaged to the tune of 90% of max project cost of 200 lakhs. The SPV will be required to contribute 10%

of project cost for project cost up to Rs. 200 lakh. Accordingly, the SPV members have proposed to contribute 63.46 lakh and GoH aid will be Rs. 180 lakh.

Table 11: Means of Finance

S. No.	Source of finance	Project cost up to INR 200.00 lakhs (max eligible as per scheme)		Project cost over INR 200.00 lakhs		Total Amount (INR in lakhs)
		Percentage Contribution	Amount (INR in lakhs)	Percentage Contribution	Amount (INR in lakhs)	
1	Grant-in-aid under State Mini Cluster Development Scheme (Govt. of Haryana)	90	180.00	0	0	180.00
2	Contribution of SPV	10	20.00	100	43.46	63.46
	Total	**100**	**200.00**	**100**	**43.46**	**243.46**

6.2.1 Share Capital

The contribution of the SPV members will be by way of subscription to shares in the SPV registered as a private limited company by the name of **"N2D FUTURETECH PRIVATE LIMITED"**. The extent of contribution would be Rs. 63.46 lakh contributed by the cluster SPV. The contribution of each member shall not be more than 10%.

6.2.2 Grant-in-Aid

Grant-in-aid of Rs. 180.00 lakh is expected from the Government of Haryana. The amount received by way of grant under State Mini Cluster Development Scheme will be utilized towards procurement of plant and machinery for the project.

6.3 Expenditure Estimates

In this section, a detailed estimate of expenditure of the CFC has been given on an eight-hour single shift operation basis. This has been estimated based upon extensive inputs by the cluster members and the prevalent rates of consumables, utilities and manpower in the cluster. This project considers annual cost of undertaking job work and expenditure estimates. The critical components related to expenditure comprise rent, consumables, manpower, electricity and also expenditure on repair and maintenance of assets, insurance and administrative overheads.

Other elements comprise expenditures by the way of interest toward working capital loans, miscellaneous expenses and non-cash depreciation expenditure.

6.3.1 Consumables

Machines installed in the CFC shall require consumables during operations and completion of the job work. Consumables are critical components of project facilities in terms of diesel, hydraulic oil, grease, nozzles and others, etc.

Table 12: Consumables

CONSUMABLES REQUIRED FOR MACHINES														
S. No.	Machine Name	No. Of Machines	Particulars	Rate per hour (Rs.)	No. Of working hours per day	No. Of working days per month	Total monthly Amt (Rs.)	Consumables required annually (Rs. In Lakh)	Amt (in Rs. Lakh)	Amt (in Rs. Lakh)	Amt (in Rs. Lakh)	Amt (in Rs. Lakh)	Amt (in Rs. Lakh)	Amt (in Rs. Lakh)
									Year 1	Year 2	Year 3	Year 4	Year 5	Year 6-10
									75%	80%	85%	90%	95%	95%
A.	**Primary Machines**													
1	Fiber Laser Cut	1	Nozzel, Ceramic ring, production lines, lubricants, N2, O2 gas	80	8	25	16000	1.92	1.44	1.54	1.63	1.73	1.82	1.82
2	Bending Machine	1	Lubricants, tools	10	8	25	2000	0.24	0.18	0.19	0.20	0.22	0.23	0.23
3	VMC	1	Lubricants, cutting tools, coolant	75	8	25	15000	1.80	1.35	1.44	1.53	1.62	1.71	1.71
4	Verticle surface grinder	1	Grinding wheel, lubricants and coolants	40	8	25	8000	0.96	0.72	0.77	0.82	0.86	0.91	0.91
5	MIG welding	2	welding wire, inert gas	50	8	25	20000	2.40	1.80	1.92	2.04	2.16	2.28	2.28
6	3D Printer	1	Plastic wire (nylon, ABS, PP	50	8	25	10000	1.20	0.90	0.96	1.02	1.08	1.14	1.14

CONSUMABLES REQUIRED FOR MACHINES														
S. No.	Machine Name	No. Of Machines	Particulars	Rate per hour (Rs.)	No. Of working hours per day	No. Of working days per month	Total monthly Amt (Rs.)	Consumables required annually (Rs. In Lakh)	Amt (in Rs. Lakh)	Amt (in Rs. Lakh)	Amt (in Rs. Lakh)	Amt (in Rs. Lakh)	Amt (in Rs. Lakh)	Amt (in Rs. Lakh)
			etc), Nozzel											
B.	**Secondary Machines**													
1	Compressor	1	Lubricants, belt	6	8	25	1200	0.14	0.11	0.12	0.12	0.13	0.14	0.14
2	DG Set-On rent		Diesel				5000	0.60	0.45	0.48	0.51	0.54	0.57	0.57
	Total							**9.26**	**6.95**	**7.41**	**7.87**	**8.34**	**8.80**	**8.80**
	Consumables p.m.							**0.77**	**0.58**	**0.62**	**0.66**	**0.69**	**0.73**	**0.73**

6.3.2 Manpower Requirement

Another major expenditure head is the manpower. Therefore, the facilities installed in the CFC will require manpower to function effectively as mentioned in section 5.3 of the report. The total manpower requirement for the project would be about 23 persons. The manpower required under project has been divided under two categories: Direct & Indirect. Direct manpower is required for operation of machines while indirect manpower is required for administrative purposes. The annual expenditure on salary component for direct manpower is estimated at Rs. 17.95 lakh and for indirect at 7.52 lakhs. The total expense on manpower is projected at Rs. 1.93 lakh per month or Rs. 25.48 lakh per annum. The details of monthly and yearly expenses for manpower required for running the project is provided in table 13:

Table 13: Expenditure Related to Salary (direct manpower-machine operators and helpers)

DIRECT MANPOWER				
Category	No. of Manpower Required	Salary per month per person (INR)	Total Salary Per Month (INR)	Total salary & wages per Year (INR lakh)
Laser cut operator	1	20,000.00	20,000.00	2.40
VMC operator	1	22,000.00	22,000.00	2.64
Designer	1	22,000.00	22,000.00	2.64
Welder	1	12,000.00	12,000.00	1.44
Surface grinder operator	1	15,000.00	15,000.00	1.80
Helper	4	9,000.00	36,000.00	4.32
Office Boy	1	9,000.00	9,000.00	1.08
	10	**1,09,000.00**	**1,36,000.00**	**16.32**
Add: Perquisites/Fringe Benefits @ 10%				**1.63**
Total				**17.95**

Table 14: Expenditure Related to Salary (Indirect Manpower – Administrative & Support Staff)

INDIRECT MANPOWER				
Category	No. of Manpower Required	Salary per month per person (INR)	Total Salary Per Month (INR)	Total salary & wages per Year (INR lakh)
Cluster Development Executive (CDE)	1	25,000.00	25,000.00	3.00
Accountant	1	12,000.00	12,000.00	1.44
Security Guard	2	10,000.00	20,000.00	2.40
	4	**47,000.00**	**57,000.00**	**6.84**
Add: Perquisites/Fringe Benefits @ 10%				**0.68**
Total				**7.52**

6.3.3 Utilities

The most important utilities required in the project are power supply. Proposed CFC requires power for operation of machinery as well as other supporting equipment for smooth operations. The total connected load requirement has been estimated at 94 KW. The table below shows the equipment wise power requirement in the CFC. The drawn power is conservatively assumed at 60% of the connected load in the case of operating facilities and shop floor.

Table 15: Machine & Equipment (facility) wise power requirement

UTILITIES			
S. No.	Machine & Equipment	Power Requirement (kW)/ Connected Load	Total power requirement (60% of drawn power) kWh
1	3D Scanner	1.00	0.60
2	3D Printer	1.00	0.60
3	Vertical Surface Grinder	10.00	6.00
4	VMC	15.00	9.00
5	Bending Machine	10.00	6.00
6	MIG Welding Machine 300AMP	3.00	1.80
7	MIG Welding Machine 400AMP	4.00	2.40
8	Fibre Laser Cutting Machine	30.00	18.00
9	EOT Crane	2.00	1.20
10	Air Conditioner	8.00	4.80
11	Air Compressor	5.00	3.00
12	Administrative Facilities	5.00	3.00
	Total Connected load for CFC	**94.00**	**56.40**
	Buffer Connected Load (10% of Total Connected Load)	**9.40**	
	Total	**103.40**	

The power requirement for operation of core machinery and equipment and administrative facilities is 94 kW. The facility is heavily based on electricity for operations and will also require additional 10% connected load as a buffer to get the electricity connection, accordingly and the buffer-connected load is 9.40 kW. The total connected load for the CFC is estimated to be 103.40 kW.

Fixed charges for connection of 103.40 kW @ Rs. 173 per kW equal Rs. 17,888/- per month and monthly consumption charges @ Rs. 7.50 per unit for consumption of 11280 units amounts to Rs. 84,600/- per month. This has been calculated based on the prevalent rates of the power provider.

The table below presents the envisaged annual expenditure in terms of power related charges.

Table 16: Annual Expenditure Statement vis-à-vis Power Charges

Power charges at various C.U.										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	75%	80%	85%	90%	95%	95%	95%	95%	95%	95%
Fixed	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Variable	7.61	8.12	8.63	9.14	9.64	9.64	9.64	9.64	9.64	9.64
Total	9.76	10.27	10.78	11.28	11.79	11.79	11.79	11.79	11.79	11.79
Per month	0.81	0.86	0.90	0.94	0.98	0.98	0.98	0.98	0.98	0.98

6.3.4 Annual Repairs and Maintenance Expenses

The annual repair and maintenance expenses have been estimated to be Rs. 6.91 lakh. The details are presented in the table 17 below:

Table 17: Annual Repairs and Maintenance Expenditure

REPAIR & MAINTENANCE as per Capacity Utilisation										
Annual Repair & Maintenance	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	75%	80%	85%	90%	95%	95%	95%	95%	95%	95%
Building and P&M	5.18	5.53	5.88	6.22	6.57	6.57	6.57	6.57	6.57	6.57

6.3.5 Insurance and miscellaneous Administrative Expenses

Insurance is a critical component of asset protection at the CFC. Insurance is computed based on 0.5 % on the fixed assets. Cost of insurance shall remain as a fixed cost. Miscellaneous administrative expenses are estimated at a lump sum of Rs. 1.20 lakh per year. The cost of miscellaneous expenses is considered to be 10% fixed and 90% variable. The details are presented in the table 18 below:

Table 18: Insurance and Miscellaneous Administrative Expenses

OTHER EXPENSES	
Insurance Charges (Estimate @ 0.5% on fixed assets (such as buildings, civil works, and Plant & machinery, including related contingency expenses of approx. Rs. Lakh)	1.12
Miscellaneous Expenses (Stationery, communication, travelling, and other misc. overheads)	1.20
Total	**2.32**

6.4 Working Capital Requirements

Working capital has been calculated in terms of one month's operating expenses required for the CFC. The operating expenses include consumables, salaries, utilities and rent. The details are presented in the table below.

Table 19: Calculation of Working capital requirement

WORKING CAPITAL (Rs. In Lakh)											
S. No.	Particulars	Period	As per Capacity Utilisation								
			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
			75%	80%	85%	90%	95%	95%	95%	95%	95%	95%
1	Consumables	1 month	0.58	0.62	0.66	0.69	0.73	0.73	0.73	0.73	0.73	0.73
2	Utilities (Power)	1 month	0.81	0.86	0.90	0.94	0.98	0.98	0.98	0.98	0.98	0.98
3	Working Expenses (Manpower)	1 month	1.75	1.82	1.90	1.97	2.05	2.05	2.05	2.05	2.05	2.05
4	Rent	1 month	0.65	0.72	0.79	0.87	0.95	1.05	1.15	1.27	1.39	1.53
5	Sundry Debtors (Sales Value)	3 months	33.19	35.40	37.61	39.83	42.04	42.04	42.04	42.04	42.04	42.04
6	Working capital (Total expenses)		36.98	39.41	41.85	44.30	46.75	46.85	46.95	47.07	47.20	47.33
7	Working Capital Margin		9.98	12.41	14.85	17.30	19.75	19.85	19.95	20.07	20.20	20.33
8	Working Capital Loan		27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00
9	Interest on Working capital loan @11% p.a.		2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97
10	Working Cap Margin %age		26.99 %	31.49 %	35.49 %	39.05 %	42.25 %	42.37 %	42.50 %	42.64 %	42.79 %	42.96 %

The working capital requirements of the project for one month of operation have been considered for consumables and expenses, and 3 months as debtor collection period. The SPV will contribute more than 25% of the Working capital requirement as margin money, and the rest will be borrowed from local bank. The total working capital required during first year of operation (75% C.U.) is estimated at Rs. 36.98 lakh. Further, total working capital required at an operating capacity of 80% comes out to Rs. 39.41 lakh. The corresponding margin money for working capital requirement at 75% & 80% capacity utilisation amounts to Rs. 9.98 lakh and Rs. 12.41 lakh respectively, and the loan amounts at Rs. 27.00 lakh.

6.5 Depreciation Estimates

Estimates of depreciation are non-cash expenditure and presented in this section based on Written Down Value (WDV) method. Accounting for depreciation would facilitate sustainability of operations in terms of developing a fund for replacement of assets. The relevant fund that is accumulated could facilitate the replacement of such assets toward the end of the envisaged asset life of 10 years. Depreciation of building is considered at 10% per year, plant and machinery at 15% a year (envisaged project life of 10 years prior to replacement of assets), furniture 10%, computer 60% and other miscellaneous fixed assets at the rate of 15% a year as per the WDV method. The calculation is provided in the tables below.

Table 20: Depreciation based on WDV

(Rs. In lakh)

DEPRECIATION (WRITTEN DOWN VALUE METHOD)										
Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Land										
Opening Balance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Less : Depreciation	-	-	-	-	-	-	-	-	-	-
Closing Balance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building and Civilwork										
Opening Balance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Less: Depreciation @ 10%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Closing Balance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Plant & Machinery										
Opening Balance	224.42	190.76	162.14	137.82	117.15	99.58	84.64	71.94	61.15	51.98
Less: Depreciation @ 15%	33.66	28.61	24.32	20.67	17.57	14.94	12.70	10.79	9.17	7.80
Closing Balance	190.76	162.14	137.82	117.15	99.58	84.64	71.94	61.15	51.98	44.18
Computers										
Opening Balance	0.80	0.32	0.13	0.05	0.02	0.01	0.00	0.00	0.00	0.00
Less: Depreciation @ 60%	0.48	0.19	0.08	0.03	0.01	0.00	0.00	0.00	0.00	0.00
Closing Balance	0.32	0.13	0.05	0.02	0.01	0.00	0.00	0.00	0.00	0.00
Furniture										
Opening Balance	1.00	0.90	0.81	0.73	0.66	0.59	0.53	0.48	0.43	0.39
Less: Depreciation @ 10%	0.10	0.09	0.08	0.07	0.07	0.06	0.05	0.05	0.04	0.04

(Rs. In lakh)

DEPRECIATION (WRITTEN DOWN VALUE METHOD)										
Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Closing Balance	0.90	0.81	0.73	0.66	0.59	0.53	0.48	0.43	0.39	0.35
Other Misc. Fixed Assets										
Opening Balance	0.30	0.26	0.23	0.21	0.19	0.17	0.15	0.14	0.12	0.11
Less: Depreciation @ 15%	0.05	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Closing Balance	0.26	0.23	0.21	0.19	0.17	0.15	0.14	0.12	0.11	0.10
Total Depreciation	34.29	28.92	24.50	20.80	17.67	15.02	12.77	10.85	9.23	7.85
Depreciated value	192.23	163.31	138.81	118.01	100.34	85.32	72.56	61.71	52.48	44.63

6.6 Income/Revenue estimates

The CFC is expected to generate revenue by way of user charges that shall be levied based upon the hours a machine is operated for a particular job. The user charges shall vary based upon the user i.e. the SPV members and non-SPV members. The user charges will be less for the SPV members as compared to non-SPV members. The non-SPV members shall be charged a premium for availing the CFC services. The major income sources for the CFC are envisaged by the way of providing cutting facilities, welding facility, machining facilities etc.

The user charges have been estimated based upon the operational expenses of the CFC and the prevalent market rates in Gurugram. User charges for secondary machinery have not been considered as a part of revenue. Estimation of user charges for availing services at CFC has been done on a conservative basis.

The relevance and appropriateness of user charges is also evident from the fact that the rates fixed help meet operating expenditures and provide sustainable replacement of assets. It is also envisaged that the CFC will generate enough income to sustain and grow, making it a viable project.

The estimated user charges for various machineries are presented in the table 21 below:

Table 21: User Charges for Machinery

REVENUE GENERATION AT CFC												
S. No.	Machine Name	No. Of Machines	User Charge per hour (Rs.)	No. Of Working hours per day	No. Of Working days per month	Revenue per month (Rs. lakh)	Annual Revenue generation (in Rs. lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)	Amour Rs. La
								Year 1	Year 2	Year 3	Year 4	Yea 5-1
								75%	80%	85%	90%	95%
Sheet Cutting Facility												
1	Fibre Laser Cutting Machine	1	2700	8	25	5.40	64.80	48.60	51.84	55.08	58.32	61.5
Product Development Facility												
2	3D Scanner/Printer	1	750	8	25	1.50	18.00	13.50	14.40	15.30	16.20	17.1
3	Designing Software	1	500	8	25	1.00	12.00	9.00	9.60	10.20	10.80	11.4
Machining Facility												
4	Vertical Surface Grinder	1	800	8	25	1.60	19.20	14.40	15.36	16.32	17.28	18.2
5	VMC	1	300	8	25	0.60	5.40	5.76	6.12	6.48	6.84	7.2
6	Bending Machine	1	750	8	25	1.50	18.00	13.50	14.40	15.30	16.20	17.1
7	MIG Welding Machine	2	500	8	25	2.00	24.00	18.00	19.20	20.40	21.60	22.8
S. No.	Machine Name	No. Of Machines	User Charge per piece (Rs.)	No. of pieces per month	No. Of Working days per	Revenue per month (Rs.	Annual Revenue generation (in Rs. lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)	Amour Rs. La

					month	lakh)						
								Year 1	Year 2	Year 3	Year 4	Year
1	3D Printer	1	11500	10		1.15	13.80	10.35	11.04	11.73	12.42	13.1
	Total						**177.00**	**132.75**	**141.60**	**150.45**	**159.30**	**168.**

6.7 Estimation of profitability: Income and Expenditure statement

The projection for income and expenditures of the CFC has been conducted for ten years. The projections have been undertaken based upon the income and expenditure heads mentioned in previous sections. The projected statements highlight income, expenses, profits earned, income tax and net profit etc. The details are presented in the table below:

The total gross revenue is estimated to be Rs. 132.75 lakhs per annum at an operating capacity of 75%. For projection purposes, operating capacity of 75% is considered during first year, 80% during next year and 95% capacity from 5th year onwards.

The income tax rates have been considered as per rates applicable to a company according to the Income Tax Act, 1961. Income tax has been considered at 25.75% per cent on taxable profit inclusive of all the tax components. The incidence of tax ranges from Rs. 10.58 lakhs in the first year to Rs. 22.08 lakhs in Year 10.

Table 22: Income and Expenditure Statement

PROFIT & LOSS ACCOUNT (Rs. In Lakh)										
Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Number of working days	300	300	300	300	300	300	300	300	300	300
Number of shift	1	1	1	1	1	1	1	1	1	1
Capacity Utilisation in %	**75%**	**80%**	**85%**	**90%**	**95%**	**95%**	**95%**	**95%**	**95%**	**95%**
A. Income										
(User/ Service Charge)	**132.75**	**141.60**	**150.45**	**159.30**	**168.15**	**168.15**	**168.15**	**168.15**	**168.15**	**168.15**
B. Cost of Production :										
1. Utilities Power (Fixed + Variable)	9.76	10.27	10.78	11.28	11.79	11.79	11.79	11.79	11.79	11.79
2. Direct labour and wages	13.46	14.36	15.26	16.16	17.05	17.05	17.05	17.05	17.05	17.05
3. Consumable	6.95	7.41	7.87	8.34	8.80	8.80	8.80	8.80	8.80	8.80
4. Repair and Maintenance	5.18	5.53	5.88	6.22	6.57	6.57	6.57	6.57	6.57	6.57
5. Depreciation	34.29	28.92	24.50	20.80	17.67	15.02	12.77	10.85	9.23	7.85

PROFIT & LOSS ACCOUNT (Rs. In Lakh)										
Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Total Cost of production	**69.64**	**66.49**	**64.29**	**62.80**	**61.88**	**59.23**	**56.98**	**55.07**	**53.44**	**52.06**
C. Administrative expenses :										
6. Manpower (Indirect)	7.52	7.52	7.52	7.52	7.52	7.52	7.52	7.52	7.52	7.52
7. Rent	7.80	8.58	9.44	10.38	11.42	12.56	13.82	15.20	16.72	18.39
8. Insurance	1.12	0.96	0.82	0.69	0.59	0.50	0.43	0.36	0.31	0.26
9. Misc Expense	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Total Administrative Expenses	**17.65**	**18.27**	**18.98**	**19.80**	**20.73**	**21.79**	**22.97**	**24.29**	**25.75**	**27.38**
D. Financial expenses :										
10. Interest on Working capital loan @ 11% per annum	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97
Total Financial Expenses	**2.97**	**2.97**	**2.97**	**2.97**	**2.97**	**2.97**	**2.97**	**2.97**	**2.97**	**2.97**
E. Total Expenses B+C+D	**90.26**	**87.73**	**86.24**	**85.57**	**85.59**	**83.99**	**82.92**	**82.32**	**82.16**	**82.41**
F. Profit A - E	**42.49**	**53.87**	**64.21**	**73.73**	**82.56**	**84.16**	**85.23**	**85.83**	**85.99**	**85.74**
G. P&P Expenses written off	1.39	1.39	1.39	1.39	1.39	0.00	0.00	0.00	0.00	0.00
H. Income before Tax (F-G)	**41.10**	**52.48**	**62.82**	**72.34**	**81.17**	**84.16**	**85.23**	**85.83**	**85.99**	**85.74**
I. Adjustment of Loss	-	-	-	-	-	-	-	-	-	-
J. Income Tax (@25.75% for company)	10.58	13.51	16.18	18.63	20.90	21.67	21.95	22.10	22.14	22.08
K. Net Profit /Loss for the year	**30.51**	**38.97**	**46.65**	**53.71**	**60.27**	**62.49**	**63.29**	**63.73**	**63.85**	**63.66**
L. Cumulative Surplus	**30.51**	**69.48**	**116.13**	**169.84**	**230.11**	**292.60**	**355.89**	**419.61**	**483.46**	**547.12**

As evident from the table below, the project is financially viable. A cumulative surplus of about Rs. 547.12 lakh shall be earned by the SPV even after accounting for taxation and depreciation at the end of ten years. This surplus generated shall be used for further addition in the machinery or improvement and up-gradation of facilities. Additionally, the SPV intends to conduct a lot of other development activities in the cluster that shall be funded through the surplus earned at the CFC.

6.8 Computation of Income tax

As per table no 25, the income tax implication is computed at the rates applicable to a company. The incidence of tax ranges from Rs. 10.58 Lakh per annum for year 1 to Rs. 22.08 lakh per annum in year 10.

6.9 Cash flow statement

Cash flow statement indicates the cash balance and the liquidity position of the project over the years. The table below presents the sources and disposal/uses of funds statement of the project.

Table 23: Cash Flow Statement

(Rs Lakh)

CASH FLOW STATEMENT											
Particulars	Construction Period	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
A. Source Funds :											
1. Cash Accruals (Net Profit + Interest Paid)		45.46	56.84	67.18	76.70	85.53	87.13	88.20	88.80	88.96	88.71
2. Increase in capital	63.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3. Depreciation		34.29	28.92	24.50	20.80	17.67	15.02	12.77	10.85	9.23	7.85
4. Increase in WC Loan		27.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Change in Expenses Payable		3.79	0.22	0.23	0.23	0.24	0.10	0.10	0.12	0.13	0.14
5. Increase in Grant-in-aid from GoH	180.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Sources of Funds	**243.46**	**110.54**	**85.98**	**91.91**	**97.74**	**103.45**	**102.24**	**101.07**	**99.77**	**98.31**	**96.70**
B. Use of Funds :											
1. P&P Expenses	6.96	-	-	-	-	-	-	-	-	-	-
2. Increase in fixed assets	226.52	-	-	-	-	-	-	-	-	-	-
3. Increase in other Assets	9.98	41.95	6.63	7.05	7.52	8.04	6.24	6.86	7.55	8.30	9.13
4. Increase in Sundry Debtors		33.19	2.21	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00
5. Interest		2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97
6. Taxation		10.58	13.51	16.18	18.63	20.90	21.67	21.95	22.10	22.14	22.08
Total Use of Funds	**243.46**	**88.69**	**25.32**	**28.41**	**31.33**	**34.12**	**30.88**	**31.78**	**32.62**	**33.41**	**34.18**
C. Net Surplus (A -B)		**21.85**	**60.66**	**63.50**	**66.40**	**69.32**	**71.37**	**69.30**	**67.15**	**64.90**	**62.52**
D. Cumulative Surplus		**21.85**	**82.51**	**146.01**	**212.41**	**281.74**	**353.10**	**422.40**	**489.55**	**554.44**	**616.96**

The cash flow statement highlights the available net surplus for 10 years of the CFC operations. Depreciation is also considered on a higher side on the Written Down Value method for cash flow calculations along with adjusted preliminary expenses. As most of the capital expenditure is supported as grant under the State Mini Cluster Development scheme, EPP 2015, therefore it does not have any negative effect on the Cash flow, in terms of interest, etc.

6.10 Projected Balance Sheets

The annual balance sheets for the CFC have been projected based upon estimates in the earlier sub-sections with regard to various current and fixed liabilities and current and fixed assets. As evident from the projections, a considerable amount of reserves and surplus is accumulated. These shall also be utilized for expansion of the CFC and undertaking other cluster development activities. Decision on deployment of reserves and surplus accumulated will be based on the performance of the project and requirements of cluster firms and members of the SPV. The projected balance sheets are provided in the table below:

Table 24: Balance Sheet

(Rs in lakh)

PROJECTED BALANCE SHEET											
Particulars	At the end of impl. Period	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
1. Fixed Assets :											
Gross Block	226.52	226.52	192.23	163.31	138.81	118.01	100.34	85.32	72.56	61.71	52.48
Less : Depreciation (WDV)		34.29	28.92	24.50	20.80	17.67	15.02	12.77	10.85	9.23	7.85
Net Block	226.52	192.23	163.31	138.81	118.01	100.34	85.32	72.56	61.71	52.48	44.63
Total Fixed Assets (A)	**226.52**	**192.23**	**163.31**	**138.81**	**118.01**	**100.34**	**85.32**	**72.56**	**61.71**	**52.48**	**44.63**
2. Current Assets :											
Cash & bank Surplus (B.F)		21.85	82.51	146.01	212.41	281.74	353.10	422.40	489.55	554.44	616.96
Sundry Debtors		33.19	35.40	37.61	39.83	42.04	42.04	42.04	42.04	42.04	42.04
Margin Money for WC Loan	9.98	9.98	12.41	14.85	17.30	19.75	19.85	19.95	20.07	20.20	20.33
Other Current Assets		41.95	46.15	50.76	55.84	61.42	67.56	74.32	81.75	89.92	98.92
P&P Exp	6.96	5.57	4.18	2.79	1.39	0.00	0.00	0.00	0.00	0.00	0.00
Total current Assets (B)		**112.54**	**180.65**	**252.02**	**326.77**	**404.95**	**482.55**	**558.70**	**633.40**	**706.60**	**778.25**
Total Assets (A+B)	**243.46**	**304.77**	**343.96**	**390.83**	**444.78**	**505.29**	**567.87**	**631.26**	**695.11**	**759.08**	**822.88**
3. Current Liabilities :											
Working Capital Loan		27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00
Expenses Payable		3.79	4.01	4.24	4.47	4.72	4.81	4.92	5.03	5.16	5.30
Total Current Liabilities (C)		**30.79**	**31.01**	**31.24**	**31.47**	**31.72**	**31.81**	**31.92**	**32.03**	**32.16**	**32.30**
4. Fixed Liabilities											
Shareholders' Contribution	63.46	63.46	63.46	63.46	63.46	63.46	63.46	63.46	63.46	63.46	63.46
Grant from GoH	180.00	180.00	180.00	180.00	180.00	180.00	180.00	180.00	180.00	180.00	180.00
Reserves and Surplus		30.51	69.48	116.13	169.84	230.11	292.60	355.89	419.61	483.46	547.12
Total Fixed Liabilities (D)	**243.46**	**273.98**	**312.94**	**359.59**	**413.30**	**473.57**	**536.06**	**599.35**	**663.07**	**726.92**	**790.58**

(Rs in lakh)

PROJECTED BALANCE SHEET											
Particulars	At the end of impl. Period	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Total Liabilities (C+D)	243.46	304.77	343.96	390.83	444.78	505.29	567.87	631.26	695.11	759.08	822.88

6.11 Break-even analysis

The break-even (BE) estimates of the project indicate the level of activity at which the total revenues of the project equal the total costs. From this point, a project is expected to start generating profits. As per the calculations, the CFC achieves break even in the first year itself as no major interest costs are being incurred. Hence, BE estimates at level of activity relevant to the first year and subsequent years of activity are provided in the table below:

Table 25: Break Even Estimates

(Rs. In Lakh)

BREAKEVEN POINT AT VARIOUS C.U.										
Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Capacity Utilization	75%	80%	85%	90%	95%	95%	95%	95%	95%	95%
A. Total Earning by way of user charges	132.75	141.60	150.45	159.30	168.15	168.15	168.15	168.15	168.15	168.15
B. Variable costs										

(Rs. In Lakh)

BREAKEVEN POINT AT VARIOUS C.U.										
Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Consumables	6.95	7.41	7.87	8.34	8.80	8.80	8.80	8.80	8.80	8.80
Utilities (power- variable charge)	7.61	8.12	8.63	9.14	9.64	9.64	9.64	9.64	9.64	9.64
Interest on WC Loan	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97
Repair & Maintenance	5.18	5.53	5.88	6.22	6.57	6.57	6.57	6.57	6.57	6.57
Manpower (Direct)	13.46	14.36	15.26	16.16	17.05	17.05	17.05	17.05	17.05	17.05
Misc. Expenditure (90% variable)	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Total Variable Cost (B)	**36.18**	**38.39**	**40.61**	**42.82**	**45.04**	**45.04**	**45.04**	**45.04**	**45.04**	**45.04**
C. Contribution (A-B)	**96.57**	**103.21**	**109.84**	**116.48**	**123.11**	**123.11**	**123.11**	**123.11**	**123.11**	**123.11**
D. Fixed Overheads (Cash)										
Manpower (Indirect)	7.52	7.52	7.52	7.52	7.52	7.52	7.52	7.52	7.52	7.52
Utilities (Power - fixed charges)	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Rent	7.80	8.58	9.44	10.38	11.42	12.56	13.82	15.20	16.72	18.39
Insurance	1.12	0.96	0.82	0.69	0.59	0.50	0.43	0.36	0.31	0.26
Misc. Expenditure (10% fixed)	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Sub-total (D)	**18.71**	**19.33**	**20.05**	**20.87**	**21.80**	**22.85**	**24.04**	**25.35**	**26.82**	**28.44**
E. Fixed Overheads (Non-cash)										
Depreciation	34.29	28.92	24.50	20.80	17.67	15.02	12.77	10.85	9.23	7.85
Preliminary & Pre-operative expenses written off	1.39	1.39	1.39	1.39	1.39	0.00	0.00	0.00	0.00	0.00
Sub-total (E)	**35.68**	**30.31**	**25.90**	**22.19**	**19.06**	**15.02**	**12.77**	**10.85**	**9.23**	**7.85**
F. Total Fixed Overheads (D+E)	**54.39**	**49.65**	**45.94**	**43.06**	**40.86**	**37.87**	**36.80**	**36.21**	**36.05**	**36.29**

(Rs. In Lakh)

BREAKEVEN POINT AT VARIOUS C.U.										
Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Break even point (F/C)	56.33 %	48.10 %	41.82 %	36.97 %	33.19 %	30.76 %	29.89 %	29.41 %	29.28 %	29.48%

Book break-even is achieved at 56.33% (of operational capacity at 75%) and at 48.10% (of operational capacity at 80%). The operation of the CFC is expected to break-even and realize profit from 1st year of operations. Therefore, very low risk is involved in the project.

Moreover, the SPV members have the potential to run the facility for longer than one shift resulting in enhanced capacity utilization and generation of more revenues. In that case, project will break even earlier than estimated. Additionally, the approach has been to develop projections based upon conservative estimates (costs on a higher side and user charge/ revenues on a lower side) whereas, in real the revenues may be far higher.

6.12 Feasibility analysis summary and sustainability indicators

A summary of the financial analysis in terms of key financial indicators such as Return on Capital Employed (ROCE), Net Present Value (NPV), Break Even Point (BEP) and the Internal Rate of Return (IRR) is presented in the table below. The indicators validate the financial viability and sustainability potential of the proposed project.

Table 26: Financial Analysis

FEASIBILITY		
S. No.	Particulars	Estimates
1	BEP (cash BEP at initial operating capacity of 75%)	56.33%
2	Av. ROCE (PAT/CE)	31.49%
3	Internal Rate of Return (IRR)	26.38%
4	Net Present Value (at a discount rate of 10 per cent) - incorporating viability gap funding (grant) by GoH	NPV is positive and high (Rs. 200.42 lacs) at a conservative project life of 10 years
5	Payback period	4.50 years with Grant-in-aid assistance from GOH
6	DSCR	Not Applicable (non-availment of term loan in this project)

The annual estimates in the context of ROCE are presented in the table 27 below:

Table 27: Calculation of Return on Capital Employed

RETURN ON CAPITAL EMPLOYED (ROCE)											
Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	AVG
Earnings Before Interest and Tax (EBIT)	44.07	55.45	65.79	75.31	84.14	87.13	88.20	88.80	88.96	88.71	76.66
Capital Employed (with grant)	243.46	243.46	243.46	243.46	243.46	243.46	243.46	243.46	243.46	243.46	243.46
ROCE =											

RETURN ON CAPITAL EMPLOYED (ROCE)											
Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	AVG
EBIT/Capital Employed											
ROCE	18.10 %	22.78 %	27%	30.93 %	34.56 %	35.79 %	36.23 %	36.47 %	36.54 %	36.44%	**31.49 %**

The average value of ROCE (with grant-in-aid) is 31.49%. This indicates the high techno-economic viability of the project should the government contribute a significant portion of the project cost as grant. Capital employed includes both the grant component as well as SPV contribution to the project.

The Net Present Value (NPV) estimated at a discount rate of 10% is Rs. 200.42. However, as reflected from the high values of NPV, it is positive at even 10%, the rate at which bank offers debt capital facility and even at higher discount rates. Project IRR is high at over 26.38% (at a conservative project life of 10 years). This substantiates the viability of the project.

6.13 Additional revenue sources

Additional sources of revenue shall also be explored by the SPV by offering procurement and marketing services in future to more enterprises. The SPV members are strong believers of the cluster concept and would like to explore the potential of undertaking cluster initiatives to improve the backward and forward linkages of the cluster units.

However, in order to ensure conservativeness in income estimates, in the initial years, the income earning possibilities of such revenues are not captured in this DPR.

6.14 Risk Analysis & Sensitivities

Risk in the project is relatively low in the context of the following:

- **Promoters are experienced**: Risk in the project is quite low given the strength and profile of the SPV members. They have considerable experience not only in the light engineering industry but also in undertaking cluster developmental initiatives.
- **Facility is pre-marketed:** Evidently, complete capacity of the core facility to be established in terms of various facilities may be easily availed by members of the SPV themselves, thus the facility would already have a captive market.
- **Sustainability indicators in terms of the strength of the SPV and the economics of the project:** Evidence of cooperative initiatives of SPV members as articulated in previous chapters; for instance, in terms of pursuing several joint efforts, registering the SPV, proceeding towards procurement of land, and securing commitment from members, vis-à-vis progressively mobilizing necessary paid up capital, all reflect the strength of the SPV.

High economic viability indicators upon considering the benefits of grant-in-aid under the State Mini Cluster Development Scheme and EPP 2015 also serve as evidence of techno-economic viability and sustainability of the project. A sensitivity analysis has been carried

out to ascertain the impact on the project, should there be any loss of revenue. This has been calculated assuming drop in user charges. Major financial parameters are still attractive. The important parameters related to the sensitivity analysis are presented in the table 28 below:

Table 28: Sensitivity Analysis

SENSTIVITY ANALYSIS					
S. No.	Particulars	Base case	With 5% decline in user charge	With 10% decline in user charge	With 15% decline in user charge
1	BEP (cash BEP at operating capacity of 75%)	56.33%	60.48%	65.30%	70.96%
2	Internal Rate of Return (IRR)	26.38%	23.95%	21.42%	18.75%
3	Av. ROCE (PAT/CE) (with Grant)	31.49%	28.41%	25.29%	22.12%
4	Net Present Value (at a discount rate of 10 per cent) - incorporating viability gap funding (grant) GoH	200.42	166.45	132.48	98.51

Even after assuming a fall in user charge, ROCE is favourable. From the above it is evident that the project is very viable even under (unlikely) risky environment circumstances.

6.15 Assumptions for financial calculations:

The financial statements and project profitability estimates in this DPR are based on the following assumptions:

1. The total project cost is pegged @ Rs. 243.46 lakh on the basis of estimates and quotations.
2. To finance the project, a total of Rs. 243.46 lakhs is required. The financing will consist of grant from Government of Haryana and contribution by SPV.
3. In the financial projections and analysis, year 2018 is the envisaged period of project implementation also involving obtaining building on lease and installation of plant, machinery and other equipment. This period will commence from the date of final approval by the State Level Steering Committee under the State Mini Cluster Development Scheme. The financial projections thereafter are prepared for 10 years of operation starting 2019.
4. The Registered SPV will manage CFC, and these services are to be provided by the SPV to member as well as non-member units. The common facility will benefit registered SPV as well as non-member firms who (in some cases) may not afford to contribute to necessary equity capital.
5. The CFC will operate for 25 days a month, that is, for 300 days a year on an eight hour single shift basis. Operation on single shift basis is assumed for purposes of projecting income estimates.

6. Capacity utilization is assumed at 75% in the first year; 80% for second, 85% for third year, 90% for fourth and 95% thereafter. This is a conservative estimate as SPV members alone could avail of over 100% of the installed capacity on single-shift basis.
7. The workings with regard to expenses related to the project have been tabulated and categorized in terms of those related to consumables, manpower, electricity, and miscellaneous administrative expenditures.
8. Repairs and maintenance is provided @ 3% of plant and machinery cost at varying capacity utilization.
9. Insurance is provided @ 0.5% on fixed assets including machinery and contingency as fixed cost at all capacity utilization.
10. No separate electricity connection will be required as the same will be provided by the property owner of the building to be taken on lease.
11. Fixed charges per kW of electric connection shall be charged @ Rs. 173 and variable charges @ Rs. 7.5 per unit consumed.
12. Income estimates have been projected most conservatively. The prescribed user charges are competitive vis-à-vis charges for similar services in other regions.
13. Depreciation on fixed assets is calculated on Written Down Value (WDV) method.
14. Provision for income tax has been made at 25.75%. This is the rate prescribed for companies as per the recent Budget 2018 .
15. Profitability estimates in terms of ROCE, NPV, and IRR are computed considering operating results for first 10 years of operation.
16. Expenses Payables in Balance Sheet include one month's payables for consumables, power, work force and rent.
17. Debtors Collection Period for the purposes of calculation of Working capital is taken as 3 months.
18. Interest on WC Loan is taken at 11%.

Project Implementation and Monitoring

7. Project Implementation and Monitoring

7.1 Envisaged Implementation Framework

1. **Time-frame:** Project implementation is envisaged to involve a time frame of about 6 months upon receipt of final approval of grant-in-aid assistance from the Government of Haryana under state mini cluster development scheme.

2. **User Base:** SPV members and non-members may use the facilities. However, the charges will vary. The SPV will also be open for new entrants subject to them subscribing to the shareholding of the SPV, and them being genuinely pro-active and interested in cluster initiatives. The board of directors of the SPV can decide on same or differential user charges for both members and non-members or based upon the volume of the output.

3. **Project implementation schedule:** The project implementation schedule envisaged over a period of 6 months involves several activities. The schedule is elaborated in table 29 below:

Table 29: Project Implementation Schedule

Activity/Month	1	2	3	4	5	6
Collecting Contribution from SPV members						
Land agreement for rent						
Formation of purchase committee						
Inviting E tenders for purchase of equipment						
Purchase of machinery and equipment						
Installation and trial run of machinery and equipment						
Arrangement of working capital						
Monitoring of the project by BoD						
Monitoring of the project by PMC						
Commencement of operations of the facility						

4. **Contractual agreements/MoU with member units:** Agreements have been finalized in terms of utilization of assets in respect of shareholders. A total of 10 units have agreed to contribute towards the SPV share of the project cost. The consent letter wherein the member units agree for payments of 10% share of cost of CFC will be submitted in due course of and as per final approval from Government of Haryana.

5. **Registration of the Private Limited Company:** Company registration is indicative of the management and decision making structure of the SPV. All the members of SPV have paid an advance and are members of the Registered Private Entity. Few other units are also willing to be members of the SPV and once the CFC is approved and sanctioned from government of Haryana, many more members will be interested to subscribe to the shares of the SPV.

6. **Availability of Land & Status of Acquisitions**: Building for proposed CFC will be taken on lease by the SPV at Basai Industrial area in Gurugram district. A plot of land of area 4770 sq. feet has already been identified by the SPV and shall be taken on lease by SPV soon subjected to approval from GoH.

7. **Availability of Requisite Clearances:** A building with all required clearances will be leased by the SPV. Electricity is already available in the area and the building is connected to the grid. The other required clearances (environment, labor etc.) shall be obtained in due course.

8. **O & M Plan:** The revenue stream for O&M is dependent on realization of user charges from the SPV members and other users/MSMEs in the case of various facilities. As detailed in the financial section, the cash incomes are sufficient to meet operating expenditures, overheads as well as depreciation for sustainable replacement of assets. The SPV will also have to keep a track of maintenance of assets through collection of user charges from the members/ users.

7.2 Monitoring Mechanism

As mentioned in the implementation schedule, the following key activities shall be conducted during establishment of the CFC:

- Purchase of machinery & commissioning
- Trial production
- Commercial production

The successful implementation of above activities will depend on the following aspects:

- Implementation of above within the time frame
- Supervising and overseeing the implementation of the proposals and fine tuning and advocating more measures if needed, depending on the site conditions
- Project level monitoring indicators to evaluate the implementation of the CFC proposal at recommended intervals

- Suitable purchase mechanisms for proposed plant & machinery
- Periodical reporting of the status of implementation and monitoring of the results of key performance indicators, and
- Constant evaluation of the measures implemented based on the data available from project level monitoring and status reports and providing directions accordingly.

It is proposed to constitute a governance mechanism in the form of a **Cluster Development Co-ordination Committee (CDCC) under the chairmanship of Director of Industries, Government of Haryana** to oversee all cluster development projects in Haryana. The CDCC will look after the project under State Mini Cluster Development Scheme to be implemented under the state's Enterprise Promotion Policy 2015.

The members may comprise the following:

i. Director, Industries and Commerce, Government of Haryana (Chairman)
ii. JD, DIC Gurugram
iii. Directors of related SPV
iv. EY Cluster Development Expert under MSME project

The meeting of CDCC may be held on a quarterly basis to review performance of the clusters. The CDCC will guide monitoring and implementation of the project.

The project will be implemented through SPV and PMC will report progress of implementation to the CDCC and DIC Gurugram.

Conclusion

8. Conclusion

The light engineering units of Gurugram, are dependent on manual, low capacity and obsolete technologies for production and are facing intense competition from large and medium units. The increasing cost of raw materials coupled with higher production costs is driving many micro players out of the market. The micro units do not have high-end machines i.e. 3D printing machine 3D scanner, laser-cutting machine, VMC, designing software etc. Hence are unable to procure orders from MNCs. To add to their woes, the micro and small units are unable to produce quality products for the biggest market segment in the region.

Against this backdrop, it is inevitable to support the micro units in Gurugram to adopt modern and automatic machines for various operations like designing, cutting, grinding, welding etc. This will reduce their processing costs significantly while increasing the quality.

The future of light engineering industry is bright and is poised to grow at a steady rate with major applications being in engineering and consumer goods. Several factors are enhancing the demand and supply of engineering products in India such as high growth of end-user industry, dynamically changing lifestyles, ready to use products etc. Particularly in the Gurugram region, the market possibility for high quality engineering products is promising. The only constraint is the lack of technologies and related infrastructure, which can be removed by setting up a CFC. The cluster firms have not been able to obtain bulk orders from large customers due to lack of quality and production capacity. The technologies required for up-gradation are highly expensive and any individual units in the cluster cannot adopt the same. Hence, the following facilities have been proposed in the CFC:

- 3D printing and 3D scanning facilities
- Laser Cutting facilities
- Designing Facility
- Value added grinding facilities
- Value added machining facilities

The total project cost (including plant/machinery and buildings) is estimated to be Rs. 243.46 lakhs. The project shall be implemented by the SPV 'N2D Futuretech Pvt. Ltd.' which has been constituted by the cluster firms. The SPV has proactively undertaken a number of initiatives and a number of capacity building programs and exposure visits have been organised by the SPV for the benefit for its members.

The CFC will be set up with support from DIC and the state government (Department of Industries) under PPP mode. The building for the project has already been identified by the SPV and shall be taken on lease immediately upon final approval by State Government. The state industry department is envisaged to provide grant for setting up of the CFC under the State Mini-Cluster Development scheme, Haryana EPP 2015. The SPV members have proposed to contribute Rs.63.46 lakhs of the project cost. Support from Mini Cluster Development Scheme of the State Government of Haryana is envisaged for Rs. 180.00 lakh. Bank of Maharashtra will provide working capital requirement for the project, if

required. The project is financially viable and is expected to generate enough revenue to ensure its sustainability.

Annexures

9. Annexures

1. DSR Approval Letter from Department of Industries & Commerce, Government of Haryana

From

The Director of Industries & Commerce, Haryana,
Chandigarh.

To

M/s Ernst & Young LLP,
SCO-166-167, 1st Floor, Sector 9-C, Madhya Marg,
Chandigarh.
Email :- upinder.dhingra@in.ey.com

Memo No. Mini Cluster/Light Engineering/Gurugram/ 1092-A
Dated:- 25/01/18

Subject: **Approval of DSR and directions for preparation of Detailed Project Report of Gurugram Light Engineering Cluster.**

Kindly refer to the subject cited above.

It is informed that the Diagnostic Study Report (DSR) of Gurugram Light Engineering Cluster has been approved by Director of Industries and Commerce under the state mini cluster scheme.

Therefore, EY LLP is directed to initiate steps for preparation of Detailed Project Report (DPR) of the cluster.

(R.C Dahra)
Consultant (Cluster)
for Director of Industries & Commerce, Haryana

Endst. No. Mini Cluster/Light Engineering/Gurugram/ 1093-A Dated:- 25/01/18

A copy of the above is forwarded to

1. SPV, Light Engineering Cluster for Information. They are directed to provide the requisite information desired by EY so as to enable them to prepare the DPR at the earliest. dnesolutions79@gmail.com
   mahender131singh@gmail.com
2. Joint Director, DIC, Gurugram.

Consultant (Cluster)
for Director of Industries & Commerce, Haryana

2. Certificate of Incorporation

GOVERNMENT OF INDIA
MINISTRY OF CORPORATE AFFAIRS

Central Registration Centre

Certificate of Incorporation

[Pursuant to sub-section (2) of section 7 of the Companies Act, 2013 (18 of 2013) and rule 18 of the Companies (Incorporation) Rules, 2014]

I hereby certify that N2D FUTURETECH PRIVATE LIMITED is incorporated on this Second day of February Two thousand eighteen under the Companies Act, 2013 (18 of 2013) and that the company is limited by shares.

The Corporate Identity Number of the company is U28999HR2018PTC072461.

The Permanent Account Number (PAN) of the company is **AAFCN9259C** *

Given under my hand at Manesar this Second day of February Two thousand eighteen .

Digital Signature Certificate
Mr. ATMA SAH
Deputy Registrar of Companies
For and on behalf of the Jurisdictional Registrar of Companies
Registrar of Companies
Central Registration Centre

Disclaimer: This certificate only evidences incorporation of the company on the basis of documents and declarations of the applicant(s). This certificate is neither a license nor permission to conduct business or solicit deposits or funds from public. Permission of sector regulator is necessary wherever required. Registration status and other details of the company can be verified on www.mca.gov.in

---

Mailing Address as per record available in Registrar of Companies office:

N2D FUTURETECH PRIVATE LIMITED
Plot No.-122/142, Gali No.-3, Basai Industrial Area, GURUGRAM,
Gurgaon, Haryana, India, 122001

* as issued by the Income Tax Department

3. 3 (a) Memorandum of Association (MoA)

THE COMPANIES ACT, 2013
(COMPANY LIMITED BY SHARES)
MEMORANDUM OF ASSOCIATION
OF

N2D FUTURETECH PRIVATE LIMITED

The Name of the Company **N2D FUTURETECH PRIVATE LIMITED**.

I. The Registered Office of the Company will be situated in the State of Haryana.

II. The objects for which the Company is established are :-

(A) THE MAIN OBJECTS TO BE PURSUED BY THE COMPANY ON ITS INCORPORATION ARE:-

1) To function as Special Purpose Vehicle (SPV) and Set up Common Facilities Centre(CFC) and other infrastructure activities for Light Engineering Industry and for the benefits of its members and Industry/concerned stake holders following the guidelines and notifications for Mini Cluster Scheme of Government of Haryana.
2) To undertake works/scheme/programs of Government relating to growth and development of Light Engineering Industry and carry out/conduct soft and/or hard intervention activities under Mini Cluster Scheme of Government of Haryana.
3) To act as a resource centre for development and strengthening network as Business development Services related to Technology, Market, Capacity building and Hand holding support for the purpose of growth and development of the Light Engineering Industry under Mini Cluster Scheme of Government of Haryana.
4) To arrange latest technology for upgrading all manufacturing units to provide Quality certificate to its members.
5) To render assistance and encouragement as may be necessary to persons engaged in Light Engineering and/or Manufacturing Industry.
6) To undertake and to do trading, manufacturing of all type of Light Engineering products and research work in connection with development of Light Engineering Industry.
7) To conduct trainings, programs/seminars.

(B) Matters which are necessary for furtherance of the objects specified in clause III(a) are:

1) To purchase, exchange or otherwise any movable or immovable property and any rights or privileges which the Company may deem necessary or convenient for the purpose of its main business.
2) To enter into partnership or into any arrangement for sharing profits, union of interest, joint venture, reciprocal concession or co-operation with persons or companies carrying on or engaged in the main business or transaction of this Company.
3) To import, buy, exchange, alter, improve and manipulate in all kinds of plants, machinery, apparatus, tools and things necessary or convenient for carrying on the main business of the Company.
4) To vest any movable or immovable property, rights or interests required by or received or belonging to the Company in any person or company on behalf of or for the benefit of the Company and with or without any declared trust in favour of the Company.
5) To purchase, build, carry out, equip, maintain, alter, improve, develop, manage, work, control and superintend any plants, warehouse, sheds, offices, shops, stores, buildings,

machinery, apparatus, labour lines, and houses, warehouses, and such other works and conveniences necessary for carrying on the main business of the Company.

6) To undertake or promote scientific research relating to the main business or class of business of the Company.
7) To takeover the whole or any part of the business, goodwill, trade-marks properties and liabilities of any person or persons, firm, companies or undertakings either existing or new, engaged in or carrying on or proposing to carry on business this Company is authorised to carry on, possession of any property or rights suitable for the purpose of the Company and to pay for the same either in cash or in shares or partly in cash and partly in shares or otherwise.
8) To negotiate and enter into agreements and contracts with Indian and foreign individuals, companies, corporations and such other organizations for technical, or any other such assistance for carrying out all or any the main objects of the Company or for the purpose of activity research and development of manufacturing projects on the basis of know-how, or technical collaboration and necessary formulas and patent rights for furthering the main objects of the Company.
9) Subject to the Provisions of the Companies Act 2013, to amalgamate with any other company of which all or any of their objects companies having similar to the objects of the Company in any manner whether with or without the liquidation.
10) Subject to any law for the time being in force, to undertake or take part in the formation, supervision or control of the business or operations of any person, firm, body corporate, association undertaking carrying on the main business of the Company.
11) To apply for, obtain, purchase or otherwise and prolong and renew any patents, patent-rights, brevets, inventions, processes, scientific technical or other assistance, manufacturing processes know-how and other information, patterns, copyrights, trade-marks, licenses concessions and the like rights or benefits, conferring an exclusive or non-exclusive or limited or unlimited right of use thereof, which may seem capable of being used for or in connection with the main objects of the Company or the acquisition or use of which may seem calculated directly or indirectly to benefit the Company on payment of any fee royalty or other consideration and to use, exercise or develop the same under or grant licenses in respect thereof or otherwise deal with same and to spend money in experimenting upon testing or improving any such patents, inventions, right or concessions.
12) To apply for and obtain any order under any Act or Legislature, charter, privilege concession, license or authorisation of any Government, State or other Authority for enabling the Company to carry on any of its main objects into effect or for extending any of the powers of the Company or for effecting and modification of the constitution of the Company or for any other such purpose which may seem expedient and to oppose any proceedings or applications which may seem expedient or calculated directly or indirectly to prejudice the interest of the Company.
13) To enter into any arrangements with any Government or Authorities or any persons or companies that may seem conducive to the main objects of the Company or any of them and to obtain from any such Government, authority, person or company any rights, charters, contracts, licenses and concessions which the Company may think desirable to obtain and to carry out, exercise and comply therewith.

14) To procure the Company to be registered or recognised in or under the laws of any place outside India and to do all act necessary for carrying on in any foreign country for the business or profession of the Company.
15) To draw, make, accept, discount, execute and issue bills of exchange, promissory notes bills of lading, warrants, debentures and such other negotiable or transferable instruments, of all types or securities and to open Bank Accounts of any type and to operate the same in the ordinary course of the Company.
16) To advance money either with or without security, and to such persons and upon such terms and conditions as the Company may deem fit and also to deal with the money of the Company not immediately required.
17) To undertake and execute any trusts, the undertaking of which may seem to the Company desirable, either gratuitously or otherwise.
18) To establish, or promote or concur in establishing or promote any company for the purpose of dealing all or any of the properties, rights and liabilities of the Company.
19) To sell, mortgage, exchange, grant licenses and other rights improve, manage, develop and dispose of undertakings, properties, assets and effects of the company or any part thereof for such consideration as may be expedient and in particular for any shares, stocks, debentures or other securities of any other such company having main objects altogether or in part similar to those of the Company.
20) Subject to the Provisions of Companies Act 2013, to distribute among the members in specie or otherwise any property of the Company or any proceeds of sale or disposal of any property of the Company in the event of winding up.
21) To distribute as dividend or bonus among the member or to place to reserve or otherwise to apply, as the Company may, from time to time, determine any money received by way of premium on debentures issued at a premium by the Company and any money received in respect of forfeited shares, money arising from the sale by the Company of forfeited shares subject to the provisions of Sec. 52 of the Companies Act, 2013.
22) To employ agents or experts to investigate and examine into the conditions, prospects value, character and circumstances of any business concerns and undertakings and generally of any assets properties or rights which the Company purpose to acquire.
23) To create any reserve fund, sinking fund, or any other such special funds whether for depreciation, repairing, improving, research, extending or maintaining any of the properties of the Company or for any other such purpose conducive to the interest of the Company.
24) Subject to the provisions of Section 179 to 183 of Companies Act, 2013, to subscribe contribute, gift or money, rights or assets for any national educational, religious, charitable, scientific, public, general or usual objects or to make gifts or such other assets to any institutions, clubs, societies, associations, trusts, scientific research associations, funds, universities, college or any individual, body of individuals or bodies corporate.
25) To establish and maintain or procure the establishment and maintenance of any contributory or non-contributory pension or superannuation, provident or gratuity funds for the benefit of and give of procure the giving of the gratuities pensions, allowances, bonuses or emoluments of any persons who are or were at any time in the employment or service of the company or any company which is a subsidiary of the Company or is allied to or associated with the Company or with any such subsidiary company or who are or were at any time Directors or officers of the Company or any other company as aforesaid and the

wives, widows, families and dependents of any such persons and also to establish and subsidise and subscribe to any institutions, associations, club or funds calculated to be for the benefit of or advance aforesaid and make payments to any such persons as aforesaid and to do any of the matters aforesaid, either alone or in conjunction with any such other company as aforesaid.

26) To establish, for any of the main objects of the Company, branches or to establish any firm or firms at places in or outside India as the Company may deem expedient.

27) To pay for any property or rights acquired by or for any services rendered to the Company and in particular to remunerate any person, firm or company introducing business to the company either in cash or fully or partly-paid up shares with or without preferred or deferred rights in respect of dividend or repayment of capital or otherwise or by any securities which the company has power to issue or by the grant of any rights or options or partly in one mode and partly in another and generally on such terms as the company may determine.

28) To pay out of the funds of the company all costs, charges and expenses of and incidental to the formation and registration of the company and any company promoted by the company and also all costs, charges, duties, impositions and expenses of and incidental to the acquisition by the company of any property or assets.

29) To send out to foreign countries, its director, employees or any other person or persons for investigation possibilities of main business or trade procuring and buying any machinery or establishing trade and business connections or for promoting the interests of the company and to pay all expenses incurred in the connection.

30) To compensate for loss of office of any Managing Director or Directors or other officers of the Company within the limitations prescribed under the Companies Act or such other statute or rule having the force of law and to make payments to any person whose office of employment or duties may be determined by virtue of any transaction in which the Company is engaged.

31) To agree to refer to arbitration any dispute, present or future between the Company and any other company, firm, individual or any other body and to submit the same to arbitration in India or abroad either in accordance with Indian or any foreign system of law.

32) To appoint agents, sub-agents, dealers, managers canvassers, sales, representatives or salesmen for transacting all or any kind of the main business of which this Company is authorised to carry on and to constitute agencies of the Company in India or in any other country and establish depots and agencies in different parts of the world.

IV. The Liability of the members is Limited this liability is limited to the amount unpaid, if any, on the shares held by them.

V. The Authorised Share Capital of the Company is Rs. 100,000/- (Rupees One Lac) divided into 10,000 (Ten Thousand) Equity Shares of Rs. 10/- (Rupees Ten) each.

We the several persons, whose names and addresses are subscribed, are desirous of being formed into a Company in pursuance of this Memorandum of Association and we respectively agree to take the number of shares in the Capital of the Company set opposite to our respective names.

Sl. No.	Names, Addresses, descriptions and occupations of subscribers	No. of Shares taken by each Subscriber	Signature of Subscriber & Photograph	Signature, Names, Addresses, Descriptions and Occupations of witnesses
1)	Anand Sharma S/o JAGDISH CHANDER SHARMA Occ.- Business Add.- S/o. Jagdish Chander Sharma, 678B Pancho Wala, Ward No.- 31, Qutubpur, Rewari-123401, Haryana	5000 Five Thousand		I Witness to subscribers who have subscribed and signed in my presence. Further I have verified their identity details (ID) for their Identification and Satisfied myself of their Identification particular as filled in. CA Sunny Chartered Accountant M No.- 527277 Occupation: Professional
2)	Manisha Kumari, D/o. of Ranveer Occ.- Business Add.-House No.- 258, Village Berli Kalan, Tehsil Rewari-123401, Haryana.	5000 Five Thousand		
		10000 **Ten Thousand**		

Place : Haryana

Dated this 02nd February day of 2018

3 (b) Article of Association (AoA)

THE COMPANIES ACT, 2013

(COMPANY LIMITED BY SHARES)

ARTICLES OF ASSOCIATION

OF

N2D FUTURETECH PRIVATE LIMITED

PRELIMINARY

1. Subject as hereinafter provided the Regulations contained in Table 'F' in the First Schedule to the Companies Act, 2013 shall apply to the Company except in so far as otherwise expressly incorporated herein below.

INTERPRETATION

2. (1) In these Regulations:-

(a) "Company" means **N2D FUTURETECH PRIVATE LIMITED.**

(b) "Office" means the Registered Office of the Company.

(c) "Act" means the Companies Act, 2013 and any statutory modification thereof.

(d) "Seal" means the Common Seal of the Company.

(e) "Directors" means the Directors of the Company and includes persons occupying the position of the Directors by whatever names called.

(2) Unless the context otherwise requires words or expressions contained in these Articles shall be the same meaning as in the Act, or any statutory modification thereof in force at the date at which these Articles become binding on the Company.

PRIVATE COMPANY

3. The Company is a Private Company within the meaning of Section 2(68) of the Companies Act, 2013 and accordingly:-

(i) restricts the right to transfer its shares;

(ii) limits the number of its members to two hundred:

Provide that where two or more persons hold one or more shares in a company jointly, they shall, for the purposes of this clause, be treated as a single member:

Provided further that-

(a) persons who are in the employment of the company; and
(b) persons who, having been formerly in the employment of the company, were members of the company while in the employment and have continued to be members after the employment ceased,

shall not be included in the number of members; and

(iii) Prohibits any invitation to the public to subscribe for any securities of the company;

SHARE CAPITAL

4. The Authorised Share Capital of the Company shall be such amounts and be divided into such shares as may, from time to time, be provided in Clause V of the Memorandum of Association with power to increase or reduce the capital in accordance with the Company's regulations and legislative provisions for the time being in force in that behalf with the powers to divide the share capital, whether original increased or decreased into several classes and attach thereto respectively such ordinary, preferential or special rights and conditions in such a manner as may for the time being be provided by the Regulations of the Company and allowed by law.

5. The business of the Company may be commenced soon after obtaining Certificate of Incorporation.

6. The shares shall be under the discretionary control of the Directors who may allot or otherwise dispose of the same, to such person at such time and on such term & conditions as they may in their absolute discretion think fit & proper.

7. Shares may be registered in the name of any minor through a guardian only as fully paid shares.

8. The Directors may allot and issue shares in the Capital of the Company as partly or fully paid up in consideration of any property sold or goods transferred or machinery supplied or for services rendered to the Company in the conduct of its business.

9. Subject to the provisions of section 68, 69, and 70 of the Companies Act, 2013 and any statutory amendments or reenactments thereof and compliance of the provisions thereof by the Company, the Company is authorised to purchase its own shares or other specified securities.

10. The Company in general meeting may decide to issue fully paid up bonus share to the members if so recommended by the Board of Directors.

11. The Share Certificate to the Share registered in the name of two or more person shall be delivered to first named person in the register and this shall be a sufficient delivery to all such holders.

12. Each fully paid up share shall carry one vote.

13. Subject to the provisions of Section 55 of the Companies Act, 2013, the Company may issue preference shares, which shall be redeemed within a period not exceeding Twenty Years from the date of their issue.

INCREASE AND REDUCTION OF CAPITAL

14. The Company in General Meeting may, from time to time, by ordinary resolution increase the share capital of the Company by the creation of new shares by such sum, to be divided into shares of such amount as may be deemed expedient.

15. Subject to any special rights or privileges for the time being attached to any shares in the capital of the Company when issued, the new shares may be issued upon such terms and conditions and with such preferential, qualified or such rights and privileges or conditions there to as general meeting resolving upon the creation thereof shall direct. If no direction be given, the Board shall determine in particular the manner in which such shares may be issued with a preferential or qualified right to dividends and in the distribution of assets of the Company.

16. Before the issue of any new shares, the Company in General Meeting may make provisions as to the allotment and issue of the new shares and in particular may determine to whom the shares be offered in the first instance and whether at par or premium. In case no such provision is made by the Company in General Meeting, the new shares may be dealt with according to the provisions of these Articles.

16A. Whenever the company proposes to increase its subscribed capital by the issue of further shares, such shares shall be offered either to its existing share holders or employees under ESOP scheme or to any other person subject to the provisions of Section 62 of the Companies Act, 2013. Such existing Shareholders shall have right to renounce the shares offered to him in favour of any other person;

17. Subject to the provisions of the Companies Act 2013, the Company may, from time to time in any manner, by special resolution and subject to any consent required under the Companies Act 2013, reduce:

(a) its share capital,

(b) any capital redemption reserve account; or

(c) any share premium account

18. Subject to provisions of the Companies Act 2013, the Board may accept from any member, to surrender, on such terms and conditions as shall be agreed, of all or any of his shares.

ALTERATION OF SHARE CAPITAL

19. The Company, by ordinary resolution may, from time to time:

a) Consolidate and divide all or any of its share capital into shares of larger amount than its existing shares.

b) sub-divide its share or any of them into shares of smaller amount than is fixed by the Memorandum of Association so, however, that in the subdivision the proportion between the amount paid and the amount, if any, unpaid on each reduced share shall be the same as it was in the case of the share from which the reduced share is derived.

c) Cancel any shares which, at the date of the passing of the resolution, have not been taken or agreed to be taken by any person and diminish the amount of its share capital by the amount of share so cancelled. Where any share capital is sub-divided, the Company in General Meeting, subject to the Sections 43, 47 and other provisions of the Companies Act, 2013, may determine that as between the holders of the shares resulting from sub-division, one or more of such shares shall have same preferential or special rights as regards dividend, payment of capital, voting or otherwise.

LIEN

20. Subject to the provisions of Companies Act, 2013 the Company shall have a first and paramount lien upon all the shares (not being a fully paid up share) for all monies (presently payable) registered in the name of such member (whether solely or jointly with others) and upon the proceeds of sale thereof for his debts, liabilities and engagements (whether presently payable or not) solely or jointly with any other person, to or with the Company, whether the period for the payment, fulfillment or discharge thereof shall have actually lien or not and such lien shall extend to all dividends, from time to time, declared in respect of shares, subject to section 123 of the Companies Act 2013. The Board of Directors may at any time declare any shares to be wholly or in part exempt from the provisions of this clause.

CALLS ON SHARES AND TRANSFER OF SHARES

21. The Directors are empowered to make call on members of any amount payable at a time fixed by them. However, the Company may accept from any member, the whole or a part of the amount remaining unpaid on any shares held by him, even if no part of that amount has been called up.

22. Any member desiring to sell any of his shares must notify the Board of Directors of the number of shares, the fair value and the name of the proposed transferee and the Board must offer to the other share holders the shares offered at the fair value and if the offer is accepted, the shares shall be transferred to the acceptor and if the shares or any of them, are not so accepted within one month from the date of notice to the Board the members proposing transfers shall, at any time within Two months afterwards, be at liberty, subject to Articles 23 and 24 hereof, to sell and transfer the shares to any persons at the same or at higher price.

In case of any dispute, regarding the fair value of the share it shall be decided and fixed by the Company's Auditor whose decision shall be final.

23. No transfer of shares shall be made or registered without the previous sanction of the Directors, expect when the transfer is made by any member of the Company to another member or to a member's wife or child or children or his heirs. The Directors may decline to sanction the transfer subject to Section 58 of the Companies Act, 2013.

24. The Directors may refuse to register any transfer of shares (1) where the Company has a lien on the shares or (2) where the shares are not fully paid up shares, subject to Section 58 of the Companies Act, 2013.

25. Subject to Section 58 of the Companies Act, 2013 the Directors may in their discretion, refuse to register the transfer of any shares to any person, whom it shall, in their opinion, be undesirable in the interest of the Company to admit to membership.

26. At the death of any members his or her shares be recognised as the property of his or her heirs upon production of reasonable evidence as may required by the Board of Directors.

27. Subject to Sec 56 of the Companies Act 2013, every instrument of transfer, duly stamped must be accompanied by the certificate of share proposed to be transferred and such other evidence as the director may require.

28. The Certificate of title of share shall be provided attaching of the seal of the Company.

FORFEITURE OF SHARES

29. If a member fails to pay any call, or instalment of a call, on the day appointed for payment thereof, the Board may, at any time thereafter during such time as any part of the call or instalment remains unpaid, serve a notice on him requiring payment of so much of the call or instalment as is unpaid, together with any interest which may have accrued.

30. The notice aforesaid shall—

    (a) name a further day (not being earlier than the expiry of fourteen days from the date of service of the notice) on or before which the payment required by the notice is to be made; and

    (b) state that, in the event of non-payment on or before the day so named, the shares in respect of which the call was made shall be liable to be forfeited.

31. If the requirements of any such notice as aforesaid are not complied with, any share in respect of which the notice has been given may, at any time thereafter, before the payment required by the notice has been made, be forfeited by a resolution of the Board to that effect.

32. (i) A forfeited share may be sold or otherwise disposed of on such terms and in such manner as the Board thinks fit.

    (ii) At any time before a sale or disposal as aforesaid, the Board may cancel the forfeiture on such terms as it thinks fit.

33. (i) A person whose shares have been forfeited shall cease to be a member in respect of the forfeited shares, but shall, notwithstanding the forfeiture, remain

liable to pay to the company all monies which, at the date of forfeiture, were presently payable by him to the company in respect of the shares.

(ii) The liability of such person shall cease if and when the company shall have received payment in full of all such monies in respect of the shares.

34. (i) A duly verified declaration in writing that the declarant is a director, the manager or the secretary, of the company, and that a share in the company has been duly forfeited on a date stated in the declaration, shall be conclusive evidence of the facts therein stated as against all persons claiming to be entitled to the share;

(ii) The company may receive the consideration, if any, given for the share on any sale or disposal thereof and may execute a transfer of the share in favour of the person to whom the share is sold or disposed of;

(iii) The transferee shall thereupon be registered as the holder of the share; and

(iv) The transferee shall not be bound to see to the application of the purchase money, if any, nor shall his title to the share be affected by any irregularity or invalidity in the proceedings in reference to the forfeiture, sale or disposal of the share.

35. The provisions of these regulations as to forfeiture shall apply in the case of nonpayment of any sum which, by the terms of issue of a share, becomes payable at a fixed time, whether on account of the nominal value of the share or by way of premium, as if the same had been payable by virtue of a call duly made and notified.

BUY-BACK OF SHARES

36. Notwithstanding anything contained in these articles but subject to the provisions of sections 68 to 70 and any other applicable provision of the Act or any other law for the time being in force, the company may purchase its own shares or other specified securities.

GENERAL MEETINGS

37. All General Meetings other than the Annual General Meeting shall be called Extra-ordinary General Meetings.

38. (a) The Board may whenever it thinks fit, call an Extra-ordinary General Meetings.

(b) If at any time directors capable of acting who are sufficient in number to form a quorum are not within India, any director or any two members of the company may call an extraordinary general meeting in the same manner, as nearly as possible, as that in which such a meeting may be called by the Board.

(c) The Board shall, on a requisition made by, such number of members who hold, on the date of the receipt of the requisition, not less than one-tenth of such of the paid-up share capital of the company as on that date carries the right of voting call an Extraordinary General Meeting.

39. At least twenty-one days, clear notice of General Meetings of the Company, specifying the date, day, hour and place of meeting and the objects shall be given. In every such

notice calling meeting of the Company there will appear a statement that member is entitled to appoint proxy to attend and to vote instead of himself. A General Meeting may be called after giving a notice shorter than twenty-one days if consent is accorded in case of any general meeting of all the members entitled to vote thereat and in case of any other meeting by members holding not less than 95 (Ninety Five) percent of the paid up share capital and is given a right to vote in a meeting.

40. No business shall be transacted at any general meeting, unless quorum of members in present. At least two members present in person shall be the quorum for general meeting subject to the provisions of Section 103 of the Companies Act, 2013.

41. The Chairman, if any, of the Board, shall preside as Chairman of all Board and general meetings, of the Company. If at any time the Chairman is not present within 15 minutes after the time appointed for holding the same, the Directors present shall elect one of the Directors present to be Chairman of such meeting. If no director is present or unwilling to act as Chairman, the members may appoint one of their members as Chairman.

42. No member shall be entitled to exercise any voting rights either personally or by proxy at any meeting of the Company in respect of any shares registered in his name on which any calls or other sums presently payable by him have not been paid or in regard to which the Company has exercised any right of lien.

MINUTES

43. Directors shall respectively cause minutes of all proceedings of General Meetings and of all proceedings at meetings of Board of Directors or of committee of the Board or by postal ballot to be duly entered in books to be maintained for that purpose in accordance with Section 118 of the Companies Act, 2013.

The minutes of each meeting shall contain:

(a) The fair and correct summary of the proceedings thereat.

(b) The name of the Directors present at the meeting in case of meeting of Board or committee of Board of Directors.

(c) The name of the Directors, if any, dissenting from or not consenting to the resolution, in the case of each resolution passed at the meeting of Board or committee of Board of Directors.

(d) All appointments made at any meeting. Any such minutes, purposing to be signed in accordance with the provisions of Section 118 of the Act, shall be evidence of the proceedings.

8

DIRECTORS

44. The number of Directors shall not be less than two and not more than fifteen.

45. The following shall be the First Directors of the Company.

    1. ANAND SHARMA

    2. MANISHA KUMARI

46. The Directors may from time to time, appoint one or more of their body to the office of the Managing Director for one or more of the divisions of the business carried on by the Company and to enter into agreement with him in such terms and conditions as they may deem fit.

47. The Directors shall have the power, at any time and from time to time, to appoint any person as additional Director in addition to the existing Director so that the total number of Directors shall not at any time exceed the number fixed for Directors in these articles, Any Directors so appointed shall hold office up to the date of the next Annual General Meeting or the last date on which the Annual General Meeting should have been held, whichever is earlier.

48. The Managing Director may be paid such remuneration as may, from time to time, be determined by the Board and such remuneration as may be fixed by way of salary or commission or participation in profits or partly in one way or partly in another and the same has to be ratified by the share holders in the General Meeting as per the provisions of Section 196 and Schedule V of the Companies Act 2013.

49. The quorum necessary for the transaction, of the business of the Board meeting subject to Section 174 of the Companies Act 2013, shall be one third of the total strength or at least two whichever is higher.

50. The Company shall not, directly or indirectly, advance any loan, or a loan represented as a book debt, to any of its Managing/Whole Time directors or to any person in whom such Managing/Whole Time director is interested or give any guarantee or provide any security in connection with any loan taken by him or such other person unless the same is approved by the members in general meeting or as a part of conditions of service extended to all of its employees by the Company subject to the provisions of section 185 of the Companies Act, 2013.

51. Subject to section 175 of the Companies Act 2013, a resolution in writing signed by the Director's except a resolution which the Act specifically required it to be passed at a Board meeting shall be effective for all purposes as a resolution passed at a meeting of Directors duly called, held and constituted.

52. Subject to the provisions of Section 161 of the Companies Act, 2013, the Board of Directors may, by passing a resolution in Board Meeting, appoint a person as an alternate director in place of a director who is absent from India for a period not less than 3 (three) months. Such alternate director while so acting shall exercise and discharge all functions and powers and be subject to all the duties and limitations of the Director which he represents and shall be entitled to receive notice to attend and to vote a Director's meeting on behalf of meeting attended by him. Such alternate director shall not hold office for a period longer

than that permissible to the director in whose place he has been appointed and shall vacate the office if and when the director in whose place he has been appointed returns to India.

53. The Director shall have power for engagement and dismissal of managers, engineers, assistants, clerks and others and shall have power of general direction, and management and superintendence, of the business of the company with full powers to do all such acts, matters and things deemed necessary, proper or expedient for carrying on the business and concern of the Company including the power to make such investment of the Company's fund as they shall think fit, subject to the limit fixed by the Board of Directors under Section 179 of the Companies Act 2013 and sign contracts and to draw, make sign, accept, endorse and negotiate on behalf of the Company all bills of exchange, promissory notes, hundies drafts, Government Promissory Notes and other Government securities and such other instruments.

54. The Director may delegate all or any of their powers to such other Directors, Managers or other persons as they think fit and shall have power to grant to any such person such power of attorney, as they deem expedient and such powers at pleasure to revoke, subject to Section 179 and 166 of the Companies Act, 2013.

55. Subject to Provision under section 197 and Schedule V of the Companies Act, 2013 the director shall receive such remuneration for their services as may, from time to time, be determined by the Company in general meeting or in a Board Meeting or may be contained in an agreement, if any, between the Company and any Director or Directors.

56. A Director shall not be required to hold any qualification shares in the Company and also not required to retire by rotation.

57. The Director shall also be paid travelling and other expenses of attending and returning from meeting of the Board (including hotel expenses) and any other expenses incurred by them in connection with the business of the Company. The Directors may also be remunerated for any extra services rendered by them outside their ordinary duties as Director, subject to the provisions of Section 188 of the Companies Act 2013.

58. Subject to the provisions of the companies Act, 2013 and the Rules framed there under, Board may decide to pay a Director out of the funds of the Company by way of sitting fees a sum to be determined by the board for each meeting attended by him.

59. The Board of Directors may participate in board meeting by telephone or video conferencing or any other means of contemporaneous communication.

60. A Written Resolution circulated to all the Director, whether in India or overseas and signed by majority of them as approved, shall (subject to the provisions of section 175 of the Companies Act 2013.) be as valid and effective as a resolution duly passed at the meeting of the Board.

61. The controlling shareholders shall have the right to appoint managing director of the company. Wherever, the Managing Director has been appointed in a Board Meeting and has not been approved by shareholders in the General Meeting, all the acts done by such person in such duration shall not be invalid.

10

POWERS AND DUTIES OF DIRECTORS

62. The following powers shall be exercised by the Board or any Committee of the Board, or otherwise by the Company as may be so required:

a) To make calls on shareholders in respect of moneys unpaid on shares held by them.

b) To increase or reduce the Company's capital.

c) Consolidate and divide all or any of its share capital into shares of a larger amount than its existing shares

d) Convert all or any of its fully paid-up shares into stock, and reconvert that stock into fully paid-up shares of any denomination

e) Cancel shares which, at the date of the passing of the resolution in that behalf, have not been taken or agreed to be taken by any person, and diminish the amount of its share capital by the amount of the shares so cancelled

f) To issue and allot new shares.

g) To make any Rights Issue of shares.

h) To adopt any resolution to alter the Memorandum and Articles of Association.

i) To invest or to join any company to invest in any other company.

j) To Issue Debentures.

k) To undertake or permit any merger, consolidation or reorganization of the Company.

l) To decide on the declaration of dividends and appropriation of profits according to provisions of Section 51 of the Companies Act, 2013.

m) Subject to the provisions of Section 186 of the Companies Act 2013, to give to make any loan to any person or other body corporate or give guarantee or provide security in connection with a loan made by any other person to or to any other person by any body corporate.

63. The business of the Company shall be managed by the Board of Directors who may pay all such expenses preliminary and incidental to the promotion, formation, establishment and registration of the Company as they think fit and may exercise all such power of the Company and do on behalf of the Company all such acts as may be exercised or done by the Company in general meeting and are not barred by statute or by these Articles and are required to be exercised or done by the Company in General Meeting, subject nevertheless to any regulations of the Articles, to the provisions of the statute and to such regulations not being inconsistent with aforesaid regulations or provisions as may be prescribed by the Company in general meeting but no regulation made by the Company general meeting shall invalidate any prior act of the Directors which would have been valid if such regulations had not been made.

64. The Board of Directors may from time to time, pay to the members such interim dividends as appear to be justified from the profits of the Company Subject to the provisions of Section 123 of Companies Act, 2013.

BORROWING POWERS

65. Subject to section 73-76A and 179 of the Companies Act 2013, and Regulations made thereunder and Directions issued by the RBI the directors may, from time to time, raise or borrow any sums of money for and on behalf of the Company from the member companies or banks or they may themselves advance money to the company on such interest or no interest as may be approved by the Directors, without security or on security.

66. The Directors may, from time to time, secure the payment of such money in such manner and upon such terms and conditions in all respects as they deem fit and in particular by the issue of bonds or debentures or by pledge, mortgage, charge or any other security on all or any properties of the Company (both present and future) including its uncalled capital for the time being.

67. Any debenture, bonds, or other securities may be issued at premium or otherwise and with special privileges as to redemption, surrender, drawing and allotment of shares of the Company and otherwise.

OPERATION OF BANK ACCOUNTS

68. The Directors shall have the power to open bank accounts, to sign cheques on behalf of the Company and to operate all banking accounts of the Company and to receive payments, make endorsements, draw and accept negotiable instruments, hundies and bills or may authorize any other person or persons to exercise such powers.

ACCOUNTS

69. (a) The Board shall, from time to time, determine whether and to what extent and at what times and places and under what conditions or regulations, the accounts and books of the Company, or any of them, shall be open to the inspection of members (not being Director).

(b) No members (not being Director) shall have any right of inspecting any accounts or books or documents of the Company except as conferred by law or authorised by the Board or by the Company in General Meeting.

70. The Directors shall in all respect comply with the provisions of Section 128, 129, 133, 134, 137, 207of the companies Act, 2013, profit and Loss Account, Balance Sheet and Auditors Report and every other document required by law to be annexed or attached as the case may be, to the Balance Sheet, to be sent to every member and debenture holder of the Company and every trustee for the holders of the debentures issued by the Company at least twenty one days before the date of Annual general meeting of the Company at which they are to be laid, subject to the provisions of section 136 of the Act.

AUDIT

71. (a) The first Auditor of the Company shall be appointed by the Board of Directors within thirty days from the date of registration of the Company and the Auditors

so appointed shall hold office until the conclusion of the first Annual General Meeting.

(b) Subject to the provisions of Chapter X of the Companies Act, 2013, the Company shall, at first Annual General Meeting, appoint an individual or a firm as an auditor who shall hold office from the conclusion of that meeting till the conclusion of its Sixth Annual General Meeting and thereafter till the conclusion of every sixth meeting.

(c) The remuneration of the Auditor shall be fixed by the Company in the Annual General Meeting or in such manner as the Company in the Annual General Meeting may determine. In case of an Auditor appointed by the Board his remuneration shall be fixed by the Board.

(d) The Board of Director may fill any casual vacancy in the office of the auditor and where any such vacancy continues, the remaining auditor, if any may act, but where such vacancy is caused by the resignation of the auditors and vacancy shall be filled up by the Company in General Meeting.

COMMON SEAL

72. (a) The Directors may, with a resolution passed in Board meeting, decide to have a Common seal in place, be made of metal.

(b) The Board shall provide for the safe custody of the Company's Common Seal.

(c) The Seal shall not be affixed to any instrument except by the authority of a resolution of the Board or of a Committee of the Board authorised by it in that behalf and except in the presence of at least one director who shall sign every instruments to which the seal of the Company if so affixed.

SECRECY

73. Subject to the provisions of law of land and the act, every manager, auditor trustee, member of a committee, officer servant, agent accountant or other persons employed in the business of the company shall, if so required by the Board of Directors before entering upon his duties, sign, declaration, pledging himself to observe strict secrecy respecting all transactions of the Company with its customers and the state of account with individuals and in matters relating thereto and shall by such declaration pledge himself, not to reveal any of the matters which may come to his knowledge in the discharge of his duties except when required to do so by the directors or by any court of law and except so far as may be necessary in order to comply with any of the provisions in these presents.

WINDING UP

74. Winding up when necessary will be done in accordance with the requirements of the Companies Act, 2013 or statutory modification thereto.

13

INDEMNITY

75. Subject to the provisions of Companies Act 2013, every Director, Manager, Auditor, Secretary and other officers or servants of the Company shall be indemnified, out of the assets of the Company against any bonafide liability incurred by him in defending any bonafide proceedings, whether civil or criminal, in which judgment is given in his favour or in which he is acquired or in connection with any application under section 463 of the Companies Act 2013, in which relief is granted to him by the Court.

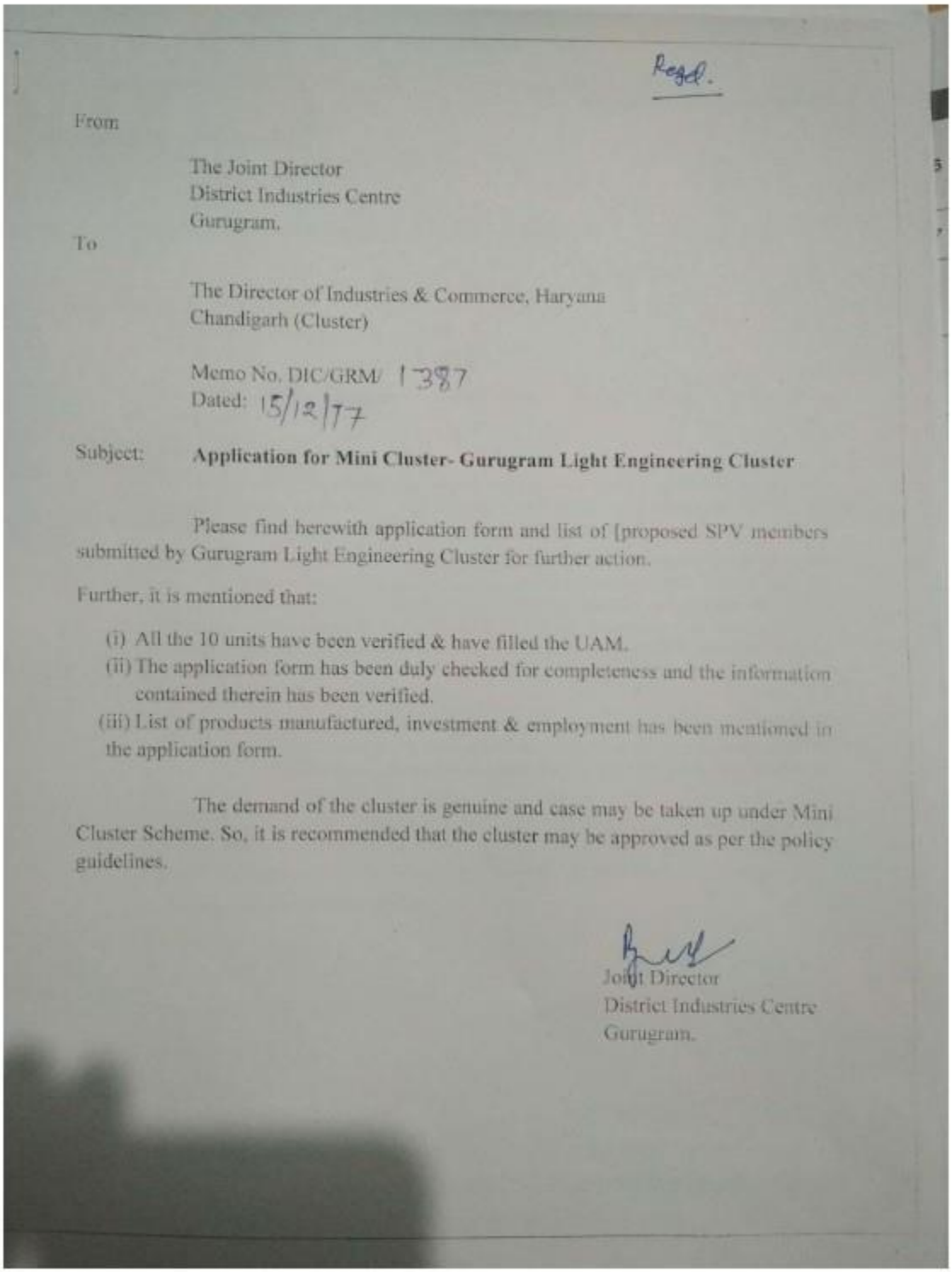
14

We, the several persons, whose names, address and occupations are hereinafter subscribed below, are desirous of being formed into a Company in pursuance of this Articles of Association.

Sl. No.	Names, Addresses, descriptions and occupations of subscribers	Signature of Subscriber & Photograph	Signature, Names, Addresses, Descriptions and Occupations of witnesses
1)	Anand Sharma S/o. JAGDISH CHANDER SHARMA, Occ.- Business Add.- S/o. Jagdish Chander Sharma, 678B Pancho Wala, Ward No.- 31, Qutubpur, Rewari-123401, Haryana		I Witness to subscribers who have subscribed and signed in my presence. Further I have verified their identity details (ID) for their Identification and Satisfied myself of their Identification particular as filled in. CA Sunny Chartered Accountant M No.- 527277 Occupation: Professional Add- 206 Tirupati Plaza, Street no.-1, Shakarpur, Delhi-110092.
2)	Manisha Kumari, D/o. Ranveer, Occ.- Business Add.- House No.- 258, Village Berli Kalan, Tehsil Rewari-123401, Haryana.		

Place: Haryana Dated this 2ND February day of 2018

4. Verification of units by DIC, Gurugram



Regd.

From

The Joint Director
District Industries Centre
Gurugram.

To

The Director of Industries & Commerce, Haryana
Chandigarh (Cluster)

Memo No. DIC/GRM/ 1387
Dated: 15/12/17

Subject: **Application for Mini Cluster- Gurugram Light Engineering Cluster**

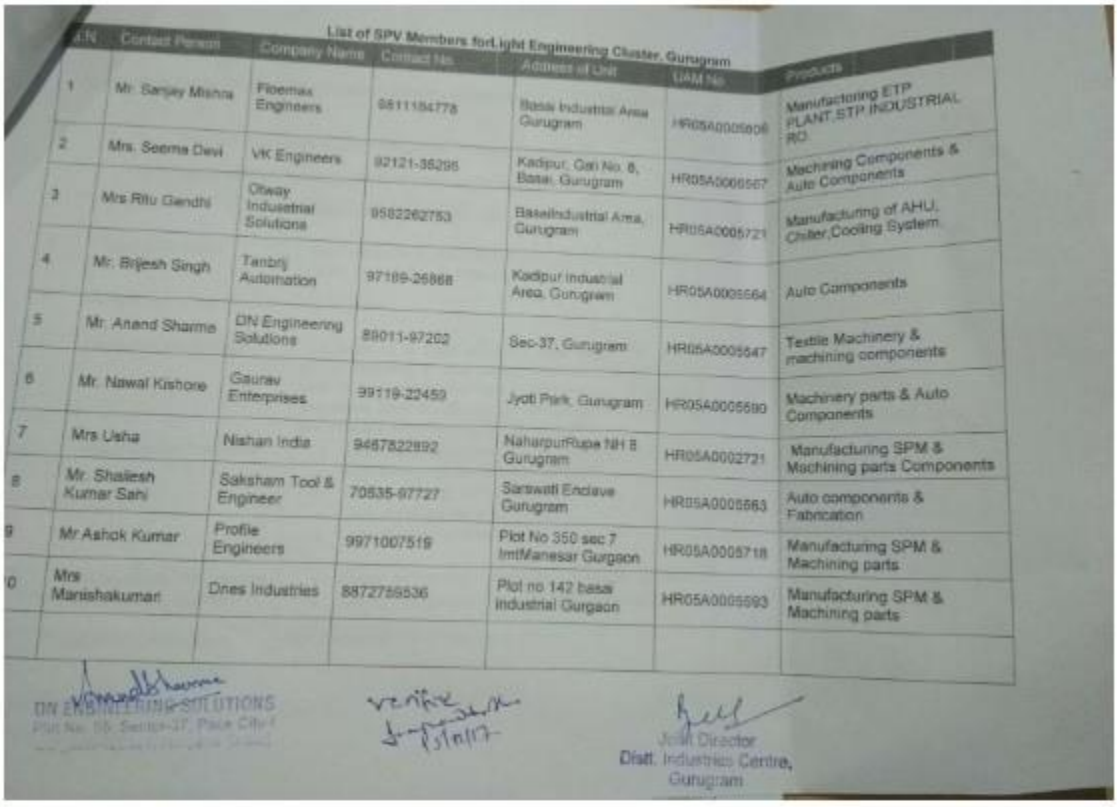
Please find herewith application form and list of [proposed SPV members submitted by Gurugram Light Engineering Cluster for further action.

Further, it is mentioned that:

(i) All the 10 units have been verified & have filled the UAM.
(ii) The application form has been duly checked for completeness and the information contained therein has been verified.
(iii) List of products manufactured, investment & employment has been mentioned in the application form.

The demand of the cluster is genuine and case may be taken up under Mini Cluster Scheme. So, it is recommended that the cluster may be approved as per the policy guidelines.

Joint Director
District Industries Centre
Gurugram.



List of SPV Members fort.light Engineering Cluster, Gurugram

S.N	Contact Person	Company Name	Contact No.	Address of Unit	UAM No.	Products
1	Mr. Sanjay Mishra	Floemax Engineers	9811184778	Basai Industrial Area Gurugram	HR05A0005606	Manufacturing ETP PLANT,STP,INDUSTRIAL RO.
2	Mrs. Seema Devi	VK Engineers	92121-36295	Kadipur, Gali No. 6, Basai, Gurugram	HR05A0005567	Machining Components & Auto Components
3	Mrs Ritu Gandhi	Otway Industrial Solutions	9582262753	BasaiIndustrial Area, Gurugram	HR05A0005721	Manufacturing of AHU, Chiller,Cooling System
4	Mr. Brijesh Singh	Tanbrij Automation	97189-26868	Kadipur Industrial Area, Gurugram	HR05A0005564	Auto Components
5	Mr. Anand Sharma	DN Engineering Solutions	88011-97202	Sec-37, Gurugram	HR05A0005547	Textile Machinery & machining components
6	Mr. Nawal Kishore	Gaurav Enterprises	99119-22450	Jyoti Park, Gurugram	HR05A0005590	Machinery parts & Auto Components
7	Mrs Usha	Nishan India	9467822892	NaharpurRupa NH 8 Gurugram	HR05A0002721	Manufacturing SPM & Machining parts Components
8	Mr. Shailesh Kumar Sahi	Saksham Tool & Engineer	70535-97727	Sarswati Enclave Gurugram	HR05A0005663	Auto components & Fabrication
9	Mr Ashok Kumar	Profile Engineers	9971007519	Plot No 350 sec 7 IMTManesar Gurgaon	HR05A0005718	Manufacturing SPM & Machining parts
0	Mrs Manishakumari	Dnes Industries	8872755536	Plot no 142 basai industrial Gurgaon	HR05A0005593	Manufacturing SPM & Machining parts

DN ENGINEERING SOLUTIONS

verified

Joint Director
Distt. Industries Centre,
Gurugram

5. Building Availability Proof

Bond

Indian-Non Judicial Stamp
Haryana Government

Date : 05/02/2018

Certificate No. G0E2018B1206

GRN No. 33465241

Stamp Duty Paid : ₹ 101
(Rs. Only)

Penalty : ₹ 0
(Rs. Zero Only)

Deponent

Name : Kamlesh Sharma
H.No/Floor : 122/142 Sector/Ward : Na Landmark : Na
City/Village : Basai District : Gurugram State : Haryana
Phone : 7988070533

Purpose : OTHER **to be submitted at Concerned office**

The authenticity of this document can be verified by scanning this QrCode Through smart phone or on the website https://egrashry.nic.in

BUILIDING AVIBILITY PROOF

I am Smt. Kamlesh Sharma W/o Sh. Jagdish Chander Sharma Owner of Plot No.122/142, Gali No.3, Basai Industrial Area, Gurugram, Haryana-122001, Hereby Giving My Consent For Opening Office/CFC to N2D Futuretech Pvt Ltd.

OWNER

Kamlesh Sharma

LESSOR

N2D FUTURETECH PVT. LTD.

NOTARY
Parmod Kr. Tyagi
GURGAON
Regd. No. 6957
Exp. 13/10/18
GOVT. OF INDIA

ATTESTED
PARMOD KUMAR TYAGI
Advocate & Notary Public
Gurgaon, Haryana (India)
05 FEB 2018

6. Shareholding Pattern

S.N.	Contact Person	Company Name	Contact No.	Address of Unit	UAM No	Share holding
1	Mr. Sanjay Mishra	Floemax Engineers	9811184778	Basai Industrial Area Gurugram	HR05A0005806	10%
2	Mrs. Seema Devi	VK Engineers	92121-35295	Kadipur, Gali No. 8, Basai, Gurugram	HR05A0005567	10%
3	Mrs Ritu Gandhi	Otway Industrial Solutions	9582262753	Basai Industrial Area, Gurugram	HR05A0005721	10%
4	Mr. Brijesh Singh	Tanbrij Automation	97189-26868	Kadipur Industrial Area, Gurugram	HR05A0005564	10%
5	Mr. Anand Sharma	DN Engineering Solutions	89011-97202	Sec-37, Gurugram	HR05A0005547	10%
6	Mr. Nawal Kishore	Gaurav Enterprises	99119-22459	Jyoti Park, Gurugram	HR05A0005590	10%
7	Mrs. Usha	Nishan India	9467822892	Naharpur Rupa NH 8 Gurugram	HR05A0002721	10%
8	Mr. Shailesh Kumar Sahi	Saksham Tool & Engineer	70535-97727	Sarswati Enclave Gurugram	HR05A0005563	10%
9	Mr Ashok Kumar	Profile Engineers	9971007519	Plot No 350 sec 7 IMT Manesar, Gurgaon	HR05A0005718	10%
10	Mrs Manisha Kumari	DNES Industries	8872759536	Plot no 142 Basai industrial Gurgaon	HR05A0005593	10%

7. Machinery Quotations

QUOTATION

GLOBAL 3D LABS

ADDITIVE MANUFACTURING INDIA PVT LTD
H.O. 2nd Floor, Plot no 23 & 24, Shaktipuram Industrial Estate, Prashantinagar, Kukatpally, Telangana-500072
B.O. Guru Krupa, 69, Bhuvaneshwari Nagar, CV Raman Nagar Post, Bengaluru 560093

Contact Number: 040 48550065,
GSTIN No: 36AAMCA9397D1Z7
Email ID: accounts@global3dlabs.com
Website: www.global3dlabs.com
Date : 31/01/2018 **Q . NO :** GQ0211/17-18

To,
Mr. Anand
D N Engineering Solutions, Gurugram, Uttar Pradesh
Ph. +91-7988070533

Quotation Valid Upto : 2/3/2018

Sl. No	Product	Qty	Unit Rate (₹)	Amount (₹)
1	Pramaan 500 3D Printer	1	500000.00	500000.00

Payment: 100% Advance	**Total Amount (₹) :**	500000.00
Rupees (In Words): Five Lakh Ninety Thousand Rupees Only	**IGST (@18%) :**	90000.00
	Gross Total (₹) :	590000.00

For Additive Manufacturing India Pvt. Ltd.

For Additive Manufacturing India Pvt. Ltd.

Authorised Signatory

Authorised Signatory

ESTIMATE

 # EST-000658

RASCO Automotive Systems Private Limited
55-56 Gokhle Market
Delhi Delhi 110054
India
Provisional GST No. 07AACCR8458C1ZB
Telephone +91-11-3001-0141
Email accounts@rascoindia.com

Bill To
DN Engineering Solutions
Plot No 95, Sector 37, Pace City , Part 1
Gurugram
122 001 Haryana
India

Estimate Date : 04/01/2018
Expiry Date : 18/01/2018
Reference# : GKS/23-December-2017

#	Item & Description	Qty	Rate	Amount
1	HDIA-R1X-M - HDI ADVANCE R1X MONOCHROME LMI Technologies Inc - Canadian Make HDI Advance R1x 3D White Light Scanner Specifications: 2 x 1.3MP Monochrome Point Grey USB 3.0 Cameras 2 x 12.5mm Lenses 1 x Optema DLP Projector 1 x Manfrotto Tripod 1 x Manfrotto Geared Head 1 x Carbon Fibre Chassis 1 x 15mm Glass Calibration Board Flexscan 3D Software with Hardware Dongle 1 Year FS3D Software AMC with Upgrades Onsite Installation & Training (Anywhere in India) 1 year priority technical support via phone email and onsite support (onsite support free for Delhi NCR, Pune, Chandigarh, Ahmedabad & Vadodara only, for all other locations, travelling and lodging to be borne by customer) 1 year hardware warranty	1	1,029,600.00	1,029,600.00

Sub Total	1,029,600.00
IGST (18%)	185,328.00
Total	**Rs.1,214,928.00**

Terms & Conditions

Terms & Conditions:
1. 30% advance with PO and the remaining payment to be made on delivery.
2. All deliveries to be made via RASCO's ftp server.
3. All payments to be made in favour of "RASCO Automotive Systems P Limited"
4. All disputes subject to Delhi Jurisdiction
5. All transport charges to be borne by the customer as actuals

ORDER/QUOTATION FORM

Mobile. 7988070533

DN Engineering Solutions

To serve your needs

Deals in all type industrial utility solutions

H.O Plot No – 95 , Sec-37 , Pace City,Part-1 , Gurgaon 122001 , Haryana(India)
E-mail : dnesolutions79@gmail.com

Dated : 29/1/2018

M/S-DNES INDUSTRIES
PLOT NO 122,BASAI IND AREA,
Gurgaon,

KIND ATTENTION: Mr. Parveen Ji

Dear Sir,

Sub: Offer for Air Condition.
Ref: As per discussion & size approved by you.

We thank you very much for your above mentioned enquiry. We are pleased to submit our offer as follows.

S/N	QNTY.	DESCRIPTION	RATE	AMOUNT Rs.	P.
1	03 Set	Hitachi Make 5 star split AC 1 tone with installation,stabilizer,copper pipe,outdoor stand,drain pipe arrangement etc.	**34500/-**	103500/-	
2	02 Set	Hitachi Make 5 star split AC 2 tone with installation,stabilizer,copper pipe,outdoor stand,drain pipe arrangement etc.	**54700/-**	109400/-	
3					
4					
5					
6					
7					
8					

		Total	212900/-/-		

Terms & Condition

Schedule: 4 to 5 weeks after receipt of your official purchase order & advance.

Payment: 100% advance along with PO.

Packing & forwarding: 2%

Freight: As actual.

Taxes: Extra as applicable.

Warranty: All brought out material warranty as per OEM terms and on other items one year from date of invoice.

Validity: 2 Week

We hope that the above is clear & look forward to the pleasure of receiving your valuable order at the earliest.

Yours Truly, With Best Regards

DN ENGINEERING SOLUTIONS

Mail. Dnesolutions79@gmail.com,
Web. www.dnesolutions.in

MOB. : 9313353108
9818149108

KUMAR AIR SERVICES
(SALES SERVICE & SPARES)
Deals in : ALL TYPES OF AIR COMPRESSORS, ALL TYPES OF AIR DRYER, FRL, AUTODRAIN, PRESSURE VESSEL AND HEAT EXCHANGER
WORKS : SHOP NO.-53, 16/6 MATHURA ROAD, OLD FARIDABAD-121002 (HARYANA)
OFFICE : 1201, SECTOR-18, OLD FARIDABAD-121002 MOB. : 9313353108, 9818149108

GST NO:06 ARZPK4623M1Z3
KAS/01/Qtn/2018/1150 Dated: 29/01/2018

To
M/s DN Engineering solutions
, plot no-95 Sec-37
Pace city-1 Gurgaon

Subject: Quotation for New Air Compressor 15 H.P EIGI Type

Kind Attn: Mr. Anand Sharma

Dear Sir,

This is in reference with the above said subject as per discussion held with you. We would like to thanks and your kind gesture. We are going to give you good reasonable price of our product. Detail is given below: -

Sl. No.	Items	Qty	Unit Rate	Total
1.	New Air Compressor 15 H.P. along with all accessories. Air Receiver – 500 Ltrs. Motor Make – ABB Starter – BCH	01 No.	1,50,000/-	1,50,000/-

We hope above line is full fill of your requirement in case any clarification please full free to contract us. We are assuring our best services always.

TERM AND CONDITION: -

1. **Payment terms –50% in advance and balance against Performa invoice.**
2. **Freight & Taxes-are extra (as applicable).**
3. **Warranty period – one year from date of billing (on our site).**

Thanks and Regards

KUMAR AIR SERVICES

(SANJIV KUMAR)
Mob# 9313353108
 # 9818149108

एन. एस. आई. सी
NSIC

Mfg. of : CNC, NC, Hydraulic Press Brake,
Hydraulic Shear & Hydraulic Press,
All Special Purpose Machines

Sunshine®
HYDRAULICS INDIA PVT. LTD

STANDARD FEATURES AND ACCESSORIES. (PBR 1225)

Lever multiply force allowing smaller cylinders.
Ram parallel motion (Synchronizing) by heavy-duty torsion tube.
Main drive motor complete with hydraulic power pack.
Fine stroke adjustment rod with limit switches.
Long adjustment stroke length with adjustment speed change point.
Three speed stroke cycle long with fast approach-returns and slow pressing.
Different stroke cycles for set-up trials (inching). Production runs.
Pair of front sheet support sheet while loading.
Slide-and lock type manual back gauge with micro adjustment & flip stops for reverse bends.
Movable operator console with on-off & emergency push buttons. Cycle selector.
Switch up-down foot switch for operation from convenient location.
Slide mounted control panel housing main electrical
One suitable 5 ways Die & Punch (Unhardened & ungrounded –Not covered under warranty)
Centralized lubrication system with hand pump.
Comprehensive operation and maintenance man

TERMS & CONDITIONS

Price.	:	Ex-works Ahmadabad exclusive of Packing. Freight insurance etc.
Taxes.	**:**	**18% GST Applicable on Above Price.**
Delivery.	:	4 to 6 Weeks from date of technically – commercially order
Payment.	:	40% advance with purchase order.
	:	60% with taxes against Performa invoice before dispatch against Inspection readiness of machines.
Commissioning.	:	our technician will supervise commissioning and only brief orientation.
Warranty.	:	All mechanical parts warranted for a period of 12 months from date of dispatch.
Test &Trials.	:	at our works.

HYDRAULIC OIL.: FIRST FILL OF HYDRAULIC OIL WILL NOT BE SUPPLIED WITH THE MACHINE

Your's Faithfully
For, Sunshine Hydraulics India Pvt. Ltd.

Umesh Panchal
09998 306060, 07202078811

Plot No. 107, Tirth Bhumi Industrial Park, Opp. Gopal Estate, Bakrol, Bujrang Daskroi, Ahmedabad - 382210. (Gujarat) INDIA
M. +91 99983 06060, E-mail : sunshinehydraulics@yahoo.com, Website : **www.sunshinehydraulics.com**

एन. एस. आई. सी
NSIC

Mfg. of : CNC, NC, Hydraulic Press Brake,
Hydraulic Shear & Hydraulic Press,
All Special Purpose Machines

Sunshine®
HYDRAULICS INDIA PVT. LTD

SUNSHINE HYDRAULICS
INDIA PVT. LTD

PART LIST FOR HYDRAULIC SHEARING MACHINE.
HYDRAULIC PRESS BRAKE

1.	MOTOR.	:	ABB MAKE / SIEMENS / CROMPTON
2.	VALVE.	:	REXROTH / HYTEK / YUKEN
3.	PUMP.	:	VELJON / REXROTH / SUPREMO.
4.	ELECTRIC.	:	SIEMENS
5.	FOOT SWITCH.	:	CUTTLER HAMER.
6.	SHEARING BLADE.	:	MAGIC / ATLAS BRAND
7.	DIE – PUNCH	:	EN-9, EN-31,
8.	FASTENERS.	:	UNBREAKO / LPS
9.	HOSE PIPE.	:	STANDARD MAKES.
10.	CYLIDER	:	STANDARD (DAS SEAL)
11.	PIPE.	:	SEAMLESS PIPE.
12.	STEEL PLATES.	:	FRESS PLATE.
13.	OIL TANK.	:	OUR MAKE STANDARD 4MM PLATE.
14.	ELECTRIC PANEL.	:	OUR MAKE STANDARD POWDER COATING
15.	COLOUR.	:	APPOXY RED-WHITE
16.	PACKING.	:	PLASTIC COVER.

Plot No. 107, Tirth Bhumi Industrial Park, Opp. Gopal Estate, Bakrol, Bujrang Daskroi, Ahmedabad - 382210. (Gujarat) INDIA
M. +91 99983 06060, E-mail : sunshinehydraulics@yahoo.com, Website : **www.sunshinehydraulics.com**

Global IT and Security Solutions

Complete IT , CCTV, and EPBX Solutions under one roof

Buyers:-
ND FUTURE PVT LTD. **23-12-2017**
Plot No-142, Gali No-3, Basai Industrial Area
Gurgaon Haryana .

Subject: Hikvision IP Camera and HD Camera Quotation.
Dear Sir,
Further to the discussion we had with you we are pleased to offer you our most competitive Prices.

PI find below our price with other terms and conditions:-

CCTV IP CAMERA

1 NOS HIKVISION 16 CHANNEL NVR PRICE:-14500/-
8 NOS OF 4MP CAMERA WITH 8MM LANCE PRICE:-60000/-
4 TB WD HARD DRIVE PRICE:-11500/-
CAT6 NETWORK CABLE PRICE:-6250/-
CONDUTE/BETAN/CONNECTOR AND LAYING CHARGES @10000/-

TOTAL PRICE =153500/- + 18%

CCTV HD CAMERA PRICE

16 CHANNEL DVR PRICE :- 11500/-
2MP 8NOS OF CAMERA :- 18000/-
WD 2TB HARDDISK :- 6200/-
POWER SUPPLY :1700/-
CABLE / CONNECTR / AND INSTALLOTION CHARGES : 10000/-

TOTAL PRICE :-47400/- +18%

APC UPS

1 NOS APC 1100VA UPS PRICE :-6500/-

Add:-Plot No. 12 GF, Gail No-2, Block-C, Shiv Joyti Colony near Sector-102 Gurgaon Haryana Pin-122001,
M: +91-9911491034 Email:-gissgurgaon@gmail.com, pkjha.gurgaon@gmail.com




DEEPTI POWER SOLUTION

Shop No. 4, Jaildar Market, Teekli Road, Opp. Badshahpur Police Station, Badshahpur, Gurgaon-122001 (HR)
Contact No.: 9811681437, Telefax No. 0124- 2361050 E-mail : deeptipower26@gmail.com, d.yadav1275@g mail.com

OFFER FOR ELECTRICAL PANELS

OFFER NO. :- DPS/NDFPL/20171222 DATE :- 19.01.2018

CLIENT : ND FUTURTEC PVT LTD
ADDRESS : PLOT-142,GALI NO-3,BASAI INDUSTRIAL AREA,GURGAON

KIND ATTN : MR. ANAND SHARMA

As per our technical discussion held , We are hereby submitting our most competitive offer for supply of ITEMS as given below:

S.NO	DESCRIPTION	QTY	RATE	AMOUNT
1	MAIN PANEL 250A	1	1,85,000	1,85,000
			S.TOTAL	1,85,000
			GST@18%	33,300
			FREIGHT	As Actual
			TOTAL	2,18,300

TERMS & CONDITIONS :

Payment Terms : 30% Advance & rest 70% Against Performa Invoice before Delivery

Taxes : GST @18% or as actual shall be charged extra

Freight : Freight shall be charged Extra

With Warm Regards
DEEPTI POWER SOLUTION

DEVENDER SINGH YADAV
MOB - 9811681437

	BILL OF MATERIAL FOR ELECTRICAL PANELS					22-12-2017
S.NO	DESCRIPTION	MAKE	QTY.			
	PANEL SWITCHBOARDS					
	Designing and Manufacturing of following Powder Coated Front Operated Cubical Type ,Free Standing /Wall Mounting Type,Dust and Vermin Proof Boards with IP-52 Protection,Fabricated out of 16SWG CRCA Sheet.					
1	MAIN PANEL 250A					
A	INCOMER SECTION					
1	MCCB 250A,3P+N with S/C , O/L Protection (Thermal Release),16kA	L&T	1			
2	Spreader Links 250A,3P	L&T	1			
3	Phase Indicator Lights R,Y,B	Reputed	3			
4	Control MCB	L&T/ABB	3			
B	METERING SECTION					
1	Digital Ampere Meter 125/5A	Conzerv	1			
2	Digital Voltmeter 0-500V	Conzerv	1			
3	Metering CT 150/5A	AE	3			
C	BUSBAR SECTION					
	Electrolytic Grade Aluminium Busbar rated at 250A TPN (25x10mm) Suitable to withstand Fault Level 25kA for 1Sec.					
D	OUTGOINGS					
1	MCCB 125A,3P+N with S/C , O/L Protection (Thermal Release),10kA	L&T	4			
2	Spreader Links 250A,3P	L&T	4			
3	MCB 63A,4P 10kA	L&T/ABB	6			
E	MISC. ITEMS					
1	Panel Enclosure		1			
2	Aluminium Busbar 150A,TPN		1			
3	Busbar Supports,Hardwares, etc.		1			
4	Wires , Thimbles ,Terminals etc		1			
5	Panel Assembly Labour		1			

VISHWAKARMA

ENGINEERING & FABRICATION WORKS

Spl In : EOT Crane, H.O.T Crane, Good Lift, Electric Wire Rope Hoist, Crane Maintenance,
Spare Parts & All Type Engineering Job Works & Fabrication Works
Plot No 25, Ashok Vihar Ph-III, Near Radha Krishna Mandir, Opp Ansal C-2 Gate, Gurgaon(Haryana)
Email : vishwakarmafab13@gmail.com | Mob: +91 9811639096,
Phone: 0124 6591659

Subject: Quotation of 5TON ELECTRIC CRANE

To **Date: 18-01-2018**

PARVEEN YADAV
DN Engineering Solutions
Gurgaon (H R)

Dear Sir
With reference to your enquiry, we are pleased to quote our competitive rates for the supply of '**5 Ton Electric Crane** with the technical specifications mentioned below. I hope that you will find our rates very competitive.

Product	Cost (Rs)
5Ton Electric Hoist	1,50,000=00
Gantry [2050 kg (approx.) X Rs 70]	1,43,500=00
Civil work	18500=00

G S T ----------18%----------**RS 56,160=00**

TOTAL AMOUNT----------3,68,160=00

एन. एस. आई. सी
NSIC

Mfg. of : CNC, NC, Hydraulic Press Brake,
Hydraulic Shear & Hydraulic Press,
All Special Purpose Machines

Sunshine®
HYDRAULICS INDIA PVT. LTD

30th January 2018

M/s, DNE SOLUTIONS.
HARYANA / INDIA.
Mobile: +91-9448101894
E-mail: mahender131singh@gmail.com , dnesolutions79@gmail.com

KIND ATTN.: Mr. ANAND.

Sub: - Quotation for Hydraulic Press Brake Machine.

Dear Sir,
We thank you for your interest in our products. In line with your requirement we quote you machine of your interest.

PRICED OFFER

PBR Series Hydraulic Press Brake.
Model no. PBR 1225 Capacity 125T x 2500 (6mm x 2500 MS Bending). **Rs. 8, 50,000**

SPECIFICATION OF HYDRAULIC PRESS BRAKE.

Model		**PBR 1225**
Tonnage.	**Ton.**	**125T**
Table Width	Mm.	300
Table Length.	Mm	2550
Bending Capacity in Mild Steel.	Mm	6mm x 2500
Bending Capacity in mild Steel.	Mm	8mm x 2000
Bending Capacity in Stainless Steel.	Mm	3mm x 2500
Bending Capacity in Stainless Steel.	Mm	4mm x 2000
Die (Block)	**Mm.**	**118x118x2550**
Punch (Blade)	**Mm**	**145x20x2550**
Taper Wedge	**Mm**	**40x20x2550**
Clear pass.	Mm	2050
Ram Stroke.	Mm	150
Open Height.	Mm	350
Closed Height.	Mm	200
Throat Depth.	Mm	300
Speeds (Approach-Pressing-Returns.)	Mm/Sec.	38-5-40
Power	H.P.	10
Dimensions. (L x W x H)	Mm	2750x22500x2800
Weight (Approx).	Kgs.	7000
Oil Tank **(ENKLO 68)**	Liter	400

MD CORPORATION

NO.: 061/ 2018 Quotation Date :22 January 2018

Buyer: **D N Engineering Solutions**
Contact: **Mr Anand Sharma**
Tel: **7988070533**
Email: **dnesolutions79@gmail.com**
Address: **Plot No.142, Gali No.3, Basi Industrial Area, Gurugram**

Cargo Description

rgo picture/na	Compone nt name	Dimension (L*W*H) m	Packing size (L*W*H) m	Quantity (set)	N.W(kg)/set	G.W(kg)/set	CBM(m3)/s et	Landed PRICE	Remarks	Packing
F3015E FIBER LASER CUTTING MACHINE	Host machine bed	4.50×2.75×1.70	4.7×2.3×2.0	1set	4200	4500	22.1	99,00,000 INR	dual drive ,rack and pinion driving. Imported servo motors,IPG 2KW.	(canvas+diolame packing), wood pallet in the bottom
	Water chiller 6300	0.77×0.48×0.88	0.98*0.68*1.20							
	LCD controller	1.40×0.5×1.6	1.6*0.6*1.7							
				Total:	4200	4500	22.1			1*20GP Container

BSL-FIBER-F3015E -with 2 .2KWRaycus Source Ex Delhi including custom duty price INR 99,00,000

GST @ 18 % to be paid extra

Nozzle:single layer/dual layer 1.5/2.0 orifice	num	ceramic ring	num	protection len	num	total amount of consumables in machine for at least one year using
	6pieces		2piece		12pieces	total amount of consumables are given for free
Safety goggle			1 set			total amount of consumables using or spare .inside mahine .For our first cooperation and long-term friendship,these spare parts are free to you,if you need more,pls pay for them.
Mirror paper			2 books			
Protect lens			12 pieces			
Ceramic ring			2 pieces			
Copper gas nozzel			8 pieces			

1.Free samples making,testing as you like.
2.The quotation list valid for 30 days.
3.Payment :T/T,30% advance payment as deposit ,70% balance payment should be paid before shipment.
4. Delivery time: machine can be shipped within 28 days.(depends on stock,can be shorten)
5.Shipment:by sea .

Main parameters of machine

Laser:2KW IPG fiber laser	Pulse frequency: 1-20000HZ	X/Y axis re-orientation accuracy: ±0.03mm	Cooling type:water cooling CW6300 S&A brand
Speed reducer:France Mo	Positioning system::the red light	X-axis:1500mm Y-axis:3000mm Z-axis:1	Servo motor & driver:/Schneider(France)
Power supply:380V/50HZ/thr	Laser wavelength:1070-1080nm	Max.cutting thickness of carbon steel: ≦ 16m	Rack:KH Rack ,or YYC
Auto lubrication system:LI	Woking size:3000mm×1500mm	Graphic format supported:Auto CAD/Coreldr	track ,guideway:linear CSK/PMI Taiwan
Cuttng head:Worthing(Germany	Industrial PC(Taiwan Advantech)	.Electrical control:TENGEN/omRom/Schneider	Japan SMC gas path control

sheet metal size to be processed:3000*1500mm , Geometric positioning accuracy ≦ ±0.05mm/M. Max Idle speed 100m/Min.Idle acceleration 1.2G. Processing acceleration:1.0G

Fiber 2000w machine cutting stainless steel/Carbon steel/thickness/mm with speed m/min

	Carbon steel	Stainless steel			Aluminum (not recomended to long-time cutting)	
Thickness	O2	N2	Air	Thickness	O2	Air
0.5mm		43m/min		1mm		
1mm	38-40m/min	38-40m/min		1mm		
1.2mm				1.2mm		
1.5mm	8-9m/min			1.5mm		

2mm	11-12m/min	9-10.8m/min		2mm	8-22m/min	
2.5mm	5-6m/min			2.5mm		
3mm	4.2-4.8-5.5m/min	5.1-6.0m/min		3mm		
4mm		3-4m/min		4mm		
4.5mm				4.5mm		
5mm	3-3.3m/min				Copper	
6mm	2.8-3.0m/min			Thickness	O2	Air
8mm		0.54-0.8m/min		1mm		
10mm	1.08-1.5m/min			1.5mm		
12mm	0.96-1.2m/min			2mm	8-16M/min	
14mm	0.8-1.08m/min			2mm		
16mm	0.6-0.8m/min			2mm		

Laser principles: Laser is Light Amplification by Stimulated Emission of Radiation,it means simulated radiation of optical frequency amplifier,it is a new power with coherence,monochromaticity, directivity and VHO very high output etc characteristics.a high quality laser cut depends on many factors ,assist gas,nozzle,material,slats,skills...

Advantages of fiber laser cutting

1 Very low power draw ,hourly consumption 18KW to 21KW , cutting all kinds of sheet metal by compressed air/ N2/O2

2.International advanced IPG brand fiber lasers,high and stable function,lifespan is over 100,000 hours;

3.Higher cutting speed and efficient,speed of cutting sheet platse can reach over 40 meters; a time-saver.

4.Laser source free of maintenance.very less consumables.

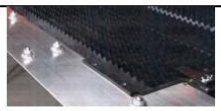
5.Smooth and fine cutting edge or surface and tiny heat-affected zone .

6.Imported servo motors and gearing system to guarantee precise cutting with high efficiency;

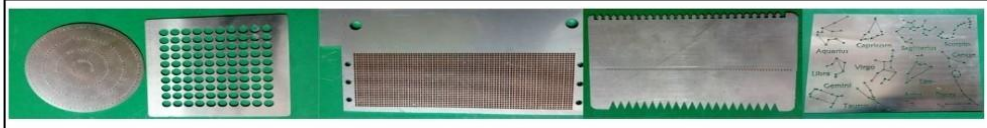
7.Dedicated laser cutting control system features graphics processing, parameter settings, custom cutting process editing, layout, path layer planning, simulation and cutting process control.automatical searching the edge.

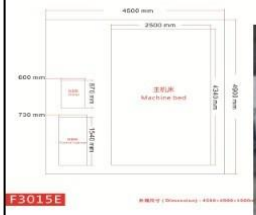
Some components of fiber laser cutting machine




Main features of fiber laser cutting machine	
	Industrial grade Gantry type mechanical structure,compact footprint ,standard 3000*1500 standard bed. The whole sheet metal welded bed: Built-in high density reinforced bars W shape, 600 °C high temperature annealing, 24H high precision machining by imported gantry milling machine, and real aging processing ,high accuracy & stability is effectively guaranteed . Side wall thickness is up to 14CM. The system is equipped with section dust collector to improve the working environment. The area beneath the cutting table is divided into several sections.
	2KW IPG，YLS-2000.the world 's No 1 medium and high power fiber laser brand ,leading the world .These lasers combine rugged industrial design and maintenance-free operation with perfect beam mode, high power and pointing stability. Laser power can be adjusted over a wide range without affecting optical parameters. The lasers are packaged as OEM modules for easy integration or 19" rack units for end users.low amplitude noise, high stability and extremely long pump diode lifetime.
	Cutting bed is shielded by Brushed stainless steel,which effectively protects the sawblade cutting bed .Two rows of sliding ball and automatically controled lifting rollers enable fast loading and unloading material.cutting table installed with pneumatical easy loading and unloading sliding bars.
	Shengzhen Worthing cutting head :Automatic Height Follower:Technology from Germany (OEM for Precitec) . An automatic sensor senses the capacitance from the tip of the isolated cutting nozzle to the metal being cut. This data is then fed into the Height Follower Controller;if the metal sheet have wavy surfaces,the focus height follower can ensure constant distance between the focal plane and the plane of the metal sheets to be cut,so that consistent cutting quality can be achieved,It can avoid defects caused by wavy metal surfaces and and also avoid the damage of the nozzle head.compact size,easy maintenance. Widely using nationally and worldwide.

	Using Japan brand Yaskawa servo motors Y axis:2*1.8KW ,or France Scheneider servo motors. 2*2.0KW in Y axix,1.5KW in X axiz ,powerful drive ,allow maximum idle travel speed up to 120M/Min Max processing speed 60M/Min . Max acceleration speed up to 1.5G .the system ensures the possibility of realizing extreme precise positioning with the excellent dynamic response acceleration property and closed loop control method, and that makes moving positioning mechanism operate smoothly, reliably and free of maintenance; Motors in X,Y,Z axis; location accuracy: ≤±0.04mm
	Baisheng Laser and machine bed separation design:Some manufacturer stow the laser inside the machine bed, to cut down the cabinet cost ,it looks more compact but it is risky and harmful to the laser because of the long time vibration and bad ventilation. and inconvenient for the maintenance.Baisheng laser ,what's more is installed as standard with top brand Tongfei industrial refrigeration system.That ensures the processing accuracy and prolongs the service life ,cuts the maintenance cost of laser.
	Control System:Industrial PC control ,with large LCD,emergency stop,power-on key,keyboard ,easy operation and automatic programming. with remote control.and USB port and USB software dog
	France Motovario: precision planetary gearbox ,Using high precision and high torque speed reducer, the highest accuracy can reach one arc, which greatly improves the dynamic performance. Thanks to its low-friction bearing design and optimized lubrication
	Shanghai ,China Bochu company;famous Operation Cut System Software,support AutoCAD,Coreldraw: The professional cutting software which supports cutting path in dxf, plt and other graphic formats;capable of setting cutting parameters in different layers;combining joined lines to ensure automatic splice of curve nodes;smoothing fold lines to obtain smooth cuts;optimized immediately after the completion of graphic design,thus improve the productivity.By making use of the compensation function of this professional cutting software,various cutting accuracy grades may be obtained.
	Light in weight ,solid aluminum die casting gantry which is made in Baisheng casting welding factory under strict quality control ,allows higher accerelation speed .less power draw.It is the highest building technology for the beam manufacture.largely better than sheet metal welding beam.

	Taiwan:YYC Rack or KH rack and pinion matched with dual drive enable a higher acceleration speed and powerful movement applicable to fast and precise positioning mechanism: (1) applicable to heavy load, high precision, high rigidity, high speed, long stroke of CNC machine tools, milling machine, drilling machine, lathe, machining center, laser cutting machinery, woodworking machinery, welding machinery, stone machinery, etc.; (2) apply to factory automation fast moving loading mechanism, the robot arm grab mechanism, and the intelligent warehouse and so on.
	Three parts collectors,movable with wheels.made with thicker steel plate ,more durable.The machine bed is with funnel structure ,the 3 collectors can effectively collect all finished parts with least scratches.
	automatical lubricaiton system ,with 2 different tanks for guideway and rack,pininion,auto alarming when in lack of oil.and lubrication intervals can set freely according servo motors movement.LED display.it is the advanced ,mainstream design.
	Assist gas System: 1, The gas can expel molten material, cools the cut part and the head.,keeps it clean of the machine and working enviroment; 2, Air, Oxygen and Nitrogen, Argon gas, Xenon gas and other inert gases can be used to cut. Oxygen cut features a darker cutting edge compared with N2 cut being of a shiny edge, but the former enables a thicker cutting . Normally, customers will buy gas from lomcal market, it's cheap and convenient, and customers can choose different gas to cut metals accroding to the metal thickness.Machine with Japan SMC gas control system ,high effieciency and save gas consumption. (these cyliners devices not including in the price)
Cutting materials & Applicable fields & engraving cutting samples	
Fiber laser cutting machine is specially for cutting middle thick and thin materials such as stainless steel,mild steel/carbon steel,copper,alloy steel,spring steel,galvanized plate,etc.	
Applicable fields:aviation,aerospace,electronics,appliances,subway accessories,automobile,machinery,precision parts,ships, saw blades,elevators,craft gifts,decoration,advertising...	
	





Pre-sales & After-sales service commitment
Pre-sales service:
1.Sample making/testing free of charge, please send your samples or products CAD Graphics layout to our company in China. Try before you buy.
2.Processing solution design: / According to customer's product processing requirement, we can design the unique solution that supports higher manufacturing efficiency and better processing quality for customer.
Commisioning and Training will be done by MD Corporation
After-sales service,crew training to machine installation (3 ways):
1.We will supply the machine with training video and user's manual in English for installing, operation, maintenance and trouble-shooting, and shall give technical guide by e-mail, fax, telephone/whatsapp /skype//and so on when you meet some problems of installation, using or adjusting.
2.You can come to Baisheng Laser factory for training on the spot. Baisheng Laser will offer professional guide. Direct and effective face-to-face training. Here we have assembled equipments, all sorts of tools and testing facility,varieties of metal plates. Training Time: 3~5 days
3.Our engineer will do a door-to-door instruction training service at your local site,on-site user's training. We need your help to deal with the visa formality, prepaid traveling expenses and accommodation to us during the business trip and service period before their dispatch. It's better to arrange a translator for both of our engineers during the training period. Training Time:
Remark: The charge of visa application ,round air ticket, accommodation expenses in your country will burden by your side.

The main training contents as follows:
1,Machine operating procedures training; 2,Panel and the significance of control parameters, the parameter range of options; 3,Common hardware failure treatment;4,The machine basic cleaning and maintenance; 5,Some operation problems that should pay attention; 6,Products processing technical support will be provided.
After machine installation and testing proper functioning, provide technical training not less than two days until the Customer's operator reaches the normal use of the device so far.
Machine-installation & debugging & training costs
1.In Chinese market:our company bears all the costs of installation, training and maintenance.
2.In Overseas market:the foreign customers can come to our Company, we provide all the place and equipment for all your training need;another way our company sent technical
Guarantee period
The guarantee period of quality shall be 12 months for whole machine(except consumables such as lens,nozzles,QBH jumper) and 2 years for the laser source ,the date counting from

ABS SYSTEMS & SERVICES PVT. LTD.

Ref: ABSSPL/17302/2017-2018 Date: 30/01/18

TO,

ND FUTURETECH PVT LTD.
PLOT NO-142, GALI NO-3, BASI INDUSTRIAL AREA.
GURGAON (HARYANA)

KIND ATTN: MR. ANAND KUMAR SHARMA.

SUB: - Techno Commercial offer for 40Kva ONLINE UPS WITH SMF BATTERIES

Dear Sir,

We, **ABS SYSTEMS & SERVICES PVT.LTD.** Take great pleasure in introducing ourselves as North India's only end-to-end application solution provider backed with value added service support. We enjoy the trust of innumerable delighted customers from the corporate sector as our clientele.

In addition to our experience, we are backed with the expertise and technology from Delta Energy Systems – "largest provider of switching power supplies & power management solutions".

Delta UPS Systems are designed on double conversion, on- Line, IGBT/PWM and fully microprocessor based platform which provides excellent and reliable protection against all input power disturbances. The solutions are offered in Rack-mount, tower and slim types unitary and modular configurations to suit all customer needs. The vast range of solution starts from 1 KVA basic to 4000 KVA configured solution. Needless to mention, all state of the art and latest functionalities such as active power factor correction (APFC), battery test, life enhancement and replacement warning, lightning and surge protection etc. are integrated into the units. Additionally, there is specifically developed power management software, UPS entry, which is provided to customers to better manage the applications from local or remote locations. This is certainly very helpful to the users for efficient and smart management, higher protection and optimized monitoring of the UPS units. Furthermore, all units offered by Delta are UL, TUV and CE (International Standards) approved for safety and reliability.

Delta Energy Systems (I) Pvt. Ltd. has been awarded ISO 9001:2000 and ISO 14001:2004 certifications by Underwriters' Laboratories, USA, for Quality, Procedures, Environment management and OHSAS 18001, 1999, which is a testimony to the high quality of products and services we offer to our customers.

ABS SYSTEMS & SERVICES PVT. LTD.

In addition to the Delta range of Online UPS Systems we offer the following portfolio of products and services for our customer:

- On-Line UPS systems from 1KVA till 4000KVA
- DC Power Supplies.
- DC-DC Converters.
- Telecom Inverters.
- Display Systems (LCD TVs, Plasma TVs, Rear Screen TVs, E-Cinema, D-Cinema & Business Projectors, etc...)
- DC Fans.
- Networking Products.
- Solar Power

We reiterate our keenness to work with your organization and look forward to your kind support for this.

We do hope that you will find our proposal in line to your requirement and look forward receiving your valuable order at an early date.

Dare to Change, and pursue sustainability.

ABS SYSTEMS & SERVICES PVT. LTD.

COMMERCIAL QUOTE

SR. NO.	PRODUCT DESCRIPTION	QTY	UNIT PRICE (INR)	AMOUNT (INR)
	40KVA DELTA makes Double Conversion Advance True Online UPS System. (3 Phase input and 3 phase out)	1No.	Rs. 2,90,000/	Rs. 2,90,000/
	Sealed maintenance Free Battery bank for a Back up of 15Min.(42AH 12V* 36Nos) (Battery Make : Quanta or Rocket)	40Nos.	Rs. 3,320/	Rs. 1,32,800/
	Open Type Battery Racks .Battery Inter-connecting links with fuse Box.	1Set.	Rs. 12,000/	Rs. 12,200/
	UPS Model : HPH40K  **PRODUCT UPS's** **> IGBT technology.** **>Parallel Redundancy connection.** **>Manual bypass switch function.** **>Fully rated power (kVA=kW) for maximum power availability** **>Leading AC-AC efficiency up to 96% saves energy costs** **>Low harmonic pollution (iTHD<3%) and high input >power factor (>0.99)** **reduce upstream investment costs**			

ABS SYSTEMS & SERVICES PVT. LTD.

COMMERCIAL TERMS AND CONDITIONS

Purchase Order to be placed on	:	M/s. ABS Systems & Services Pvt. Ltd., H-124, 1st Floor, Mohammadpur, Bhikaji Cama Place, New Delhi-110066.
GST	:	**Extra @18% on UPS & Batteries Rack and Connector. & 28% On Battery.**
Price Basis	:	Our Prices are for Gurgaon packing, forwarding, and freight & transit insurance charges.
Payment Terms	:	50% advance payment with PO & Balance 50 % on Delivery
Warranty	:	12 Month on UPS and 24Month on Battery.
Delivery	:	Within 02-03 Weeks from the date of confirmed P.O. and advance.
Transportation Charges		Inclusive.
Installation and Commissioning	:	Inclusive.
Octroi / Entry Tax	:	Octroi/Entry Tax will be charged extra as per actual if applicable. Road Permit mandatory with PO
Scope of supply	:	We shall supply UPS unit as per our standard specification enclosed and along with Batteries, Battery inter connecting links, Cabling for UPS to Battery Bank (Max 5 mts.). And Battery Racks. All Input & Output cabling are not in our scope of supply.
Validity of Offer	:	15 days.
Force Majure Clause	:	Our offered Prices are fixed. However, may change as per Indian Government regulations.
Important Note on Batteries	:	The battery manufacturers recommend putting the battery in service within maximum 2 months of supply. The reason is that Battery "Shelf life" is limited, and if not put in use, the life and performance of the batteries may be reduced. This is a universal fact, true for all battery manufacturers, and all UPS suppliers. In case the batteries cannot be put in use within 2 months after delivery, then customer is required to provide refresh charging to batteries, which he may not be able to provide at the site. Therefore, it is highly recommended that the UPS and batteries should be installed, and put in use within maximum 2 months of delivery at site. This notice is intended for the care of the customer and aims at longevity of battery life for customer's own benefit. This is also irrespective of the payment terms and scope of the UPS/battery supplier. It may be noted that non adherence to this notice may cause irrecoverable damage to the battery life, and the supplier may not withstand the warranty obligations. Again, this is a universally true condition, irrespective of supplier or battery make, and is intended for the benefit of the customer.

For **ABS SYSTEMS & SERVICES PVT. LTD.**
MANOJ KUMAR
H-124, 1st Floor,Mohammadpur, Bhikaji Cama Place, New Delhi-110066
Tel: 011-26167644, 26195237, Telefax: 011-26178536, (M): 9311582907
Email: manoj@absups.net
Visit us at: www.absups.net

34 / 313 A, Chiramel, Padivattom, Edappally, Cochin - 682024,INDIA | tel: +91 484 2806333, 6598877, fax 2806333, 2807007 e: mail@globalexports.in www.globalexports.in

080/GE-ATA/DOM-AS-GG-HR/2018-12
12/01/2018

MR. ANAND SHARMA
GURUGRAM , HARYANA

QUOTATION

SL.NO.	PRODUCT DESCRIPTION	QTY	UNIT	UNIT PRICE (INR)	TOTAL PRICE (INR)
1.	Vertical Surface Grinding Machine, **MODEL ASG 1800** ➢ Servo Control Up/Down & Table Movement ➢ Ball Screws for Up/Down & Table ➢ MPG Hand Wheel Controls ➢ Complete Electricals & Standard Accessories	01	No	8,00,000.00	8,00,000.00
				Ex. Works Coimbatore	8,00,000.00
(INDIAN RUPEE EIGHT LAKH ONLY)					

TERMS & CONDITIONS:

1. Price	: Total Price Quoted is Ex. Works Coimbatore in Indian Rupees
2. Taxes & Duties	: At present - GST @ 18% Extra
3. Transport	: Will be charged Extra At charges prevailing at the time of despatch
4. Packing	: Inclusive, Standard Wooden Base Packing
5. Bank A/c Details	: GLOBAL EXPORTS. Current A/c No. 1380 55000 13344 IFSC FDRL0001380 FEDERAL BANK LTD, Palarivattom Branch, Cochin – 682 025 INDIA
6. Payment	: 70% of F.O.R Value in Advance & balance before despatch from works.
7. Inspection	: At our Works, before despatch. To be intimated in advance.
8. Despatch	: 10-12 weeks from receipt of your Purchase Order with Payment advance.
9. Validity	: 30 days.
10. Brand	: AUTOMATIA
11. Country of Origin	: INDIA

For GLOBAL EXPORTS

MANAGER MARKETING

TERMS AND CONDITIONS OF SALE AND LIMITED WARRANTY

ACCEPTANCE – Acceptance of the products by dealer/end-user ("Customer") is EXPRESSLY LIMITED TO THE TERMS AND CONDITIONS HEREIN CONTAINED. Any term or condition in any purchase order or other form in conflict with these Terms or Conditions is hereby expressly rejected and shall not be binding on GLOBAL EXPORTS (the " Company ").Buyer shall make an examination and test of product(s) immediately upon receipt at Buyer's place of business, and failure of Buyer to give notice of any claim within 15 days after receipt of such product shall be an unqualified acceptance of such product.

PRICES – (1) Prices are subject to change without notice prior to acceptance of Buyer's order by the Company. (2) Prices are Exclusive of all Federal, State, Municipal or other Government excise, sales, use, occupational or like taxes now in force or to be enacted in the future, (3) Subject to an increase equal in amount to any tax which the Company may be required to collect or pay upon the sale of the items quoted, (4) Subject to change at any time by the Company in the event of any change in the Buyer's requirements or terms and conditions

34 / 313 A, Chiramel, Padivattom, Edappally, Cochin - 682024,INDIA | tel: +91 484 2806333, 6598877, fax 2806333, 2807007 e: mail@globalexports.in www.globalexports.in

SHIPPING AND DELIVERY - The shipping and delivery dates provided are estimates and not guaranteed or warranted. The Company shall in good faith endeavor to ship products by the estimated shipment date. The Company will not be liable for any damages resulting directly or indirectly from shipping delays, regardless of cause. The Company shall have the right to select the carrier unless Buyer and Company agree otherwise. Upon delivery of the goods by the Company to a carrier, the carrier shall be deemed to be the agent of the Buyer and risk of loss shall be on the Buyer. All products prices mentioned shall be Ex. Works, Coimbatore - point of origin, unless specified otherwise.

Cancellation of Orders: Purchaser shall not countermand or cancel any order or cause the work of shipment to be delayed, except with the written consent of, and upon terms agreed to by Seller, and full compensation to Seller for any loss sustained by reason of cancellation.

RESERVATION OF RIGHTS – The Company reserves the right to make improvements/changes in the design of its products without any obligation to make such changes or improvements on the products that are the subject of this order or on products previously manufactured and sold by the Company.

LIMITED WARRANTY – The Company warrants to the dealer/end-user ("Buyer") that the products covered will be free from defects in material and workmanship under normal conditions of use for a period of 12 months from the date of shipment from the Company. All replacement parts under warranty will be provided by the Company except, M/c lamps, fuses, belts, filters, sealing joints, retainers, lubricants, batteries, hydraulic hoses, coolant, glass, chip wipers, push buttons, and other such consumables which should be acquired by the machine end-user.

This limited warranty does not apply to (1) Defects or damage which result from accident, misuse, lack of recommended or reasonable maintenance, improper repairs or parts replacement, use of replacement parts not conforming to the Company 's standards, unauthorized modifications, or neglect. (2) Routine replacement of consumable parts such as, but not limited to, light bulbs, belts, tune-up parts, filters, oils, motor brushes, contactor tips, or switches. (3) Routine or recommended maintenance services such as, but not limited to, tune-ups, cleaning, adjustments or lubrications. (4) Components & attachments not manufactured by the Company are subject to warranties, if any, of the manufacturers of such items. (5) Normal wear and tear, accidents or misuse. (6) Operation of the machines/components by unskilled/untrained operators. Buyer acknowledges that it is Buyer's responsibility to provide proper safety training, devices and equipment for the particular application or use intended by Buyer so as to protect the operator and others from harm, and to comply with all federal, state and local laws, rules and regulations relating to safety standards and all industry safety standards. Buyer agrees to indemnify and hold the Company harmless from and against any such liability, as well as all claims and expenses resulting from Buyer's modification of the goods or failure to implement any changes to the goods directed by the Company.

The Company 's liability for any breach shall be limited to, at the Company 's option, the repair or replacement of any part or parts which are determined by the Company to be defective after it examines such part(s) or the refund of the purchase price for such defective part(s). The Company shall bear the cost and risk of ground shipment of parts and of repaired or replaced parts both to and from the Company. The cost of service for any work not covered under this limited warranty shall be as agreed in writing by the Buyer and the Company. This limited warranty completely and exclusively states the obligations of the Company for any breach of the limited warranty.

Any claim for breach of this limited warranty must be made in writing addressed to the Company and set forth in sufficient detail to permit identification of the defect. Any claim for breach of warranty must be made within 12 months from the date of shipment of the applicable product. If not made within said 12-month period, it shall be conclusively deemed to have been waived.

Under no circumstances shall the Company be liable for any other damages of any kind whether special, direct, indirect, consequential, incidental or any other sort even though the Company may have been advised of the possibility of such damages. In no event shall the company's liability exceed the purchase price, after depreciation, of the product(s).

The Company shall depute technicians/engineers for installation, maintenance, or repair of any of its products on chargeable basis at the written request of the buyer.

GOVERNING LAW – The Company's sale of products to Buyer, these Terms and Conditions and any dispute arising Here under shall be governed and interpreted under the laws of the Republic of India, subject to Ernakulam, Kerala State

********** ********** ********** ********** **********

Global IT and Security Solutions

Complete IT , CCTV, and EPBX Solutions under one roof

Buyers:-
ND FUTURE PVT LTD.
Plot No-142, Gali No-3, Basai Industrial Area
Gurgaon Haryana .

29-01-2018

Subject: Workstation, Desktop PC and Printer Quotation.

Dear Sir,
Further to the discussion we had with you we are pleased to offer you our most competitive Prices.

PI find below our price with other terms and conditions:-

HP WORKSTATION

Intel Xeon E5-1620 V4 3.5 GHz 10M 4C 2400 CPU/Nvidia Quadro P1000 4 GB / 32 GB (4x8GB) DDR-4 2133 ECC/ 4 TB HDD 7200RPM/ DVD-RW/700W Power Supply/ Win 10 Pro64 downgraded to Win7Pro 64/3 yrs

PRICE:-2, 66000/- + 18% GST

HP 24" Led screen @ 12,800/- + 28% GST

DELL DESKTOP

Dell OptiPlex 7050 MT Core i7 / 4GB / 1TB / Window 10 Pro / 19.5 LED and Keyboard Mouse.

4-UNIT PRICE: - 70500*4 =282000/- +18% GST

PRINTER

BROTHER T700 COLOR PRINTER @ 12800/- + 18% GST

Add:-Plot No. 12 GF, Gail No-2, Block-C, Shiv Joyti Colony near Sector-102 Gurgaon Haryana Pin-122001,
M: +91-9911491034 Email:-gissgurgaon@gmail.com, pkjha.gurgaon@gmail.com

Global IT and Security Solutions

Complete IT , CCTV, and EPBX Solutions under one roof

Buyers:-
ND FUTURE PVT LTD.
Plot No-142, Gali No-3, Basai Industrial Area
Gurgaon Haryana .

23-12-2017

Subject: Workstation and Desktop PC Quotation.

Dear Sir,
Further to the discussion we had with you we are pleased to offer you our most competitive Prices.

Pl find below our price with other terms and conditions:-

HP WORKSTATION

Intel Xeon E5-1607 V4 3.1 GHz 10M 4C 1866 CPU/Nvidia Quadro K620 2GB/16 GB (2x8GB) DDR-4 2133 ECC/1TB HDD 7200RPM/ DVD-RW/700W Power Supply/ Win 10 Pro64 downgraded to Win7Pro 64/3 yrs Warranty

PRICE:-1,75,000/- + 18% GS

HP WORKSTATION

Intel Xeon E5-1620 V4 3.5 GHz 10M 4C 2400 CPU/Nvidia Quadro P1000 4 GB / 16 GB (2x8GB) DDR-4 2133 ECC/ 2 TB HDD 7200RPM/ DVD-RW/700W Power Supply/ Win 10 Pro64 downgraded to Win7Pro 64/3 yrs

PRICE:-2,35,500/- + 18% GST

HP 24" Led screen @ 12,800/- + 28% GST

DELL DESKTOP

Dell Optiplex 7050 MT Core i7 / 4GB / 1TB / Window 10 Pro / 19.5 LED and Keyboard Mouse.

4-UNIT PRICE :- 70500*4 =282000/- +18% GST

Add:-Plot No. 12 GF, Gail No-2, Block-C, Shiv Joyti Colony near Sector-102 Gurgaon Haryana Pin-122001,
M: +91-9911491034 Email:-gissgurgaon@gmail.com, pkjha.gurgaon@gmail.com

Our offices

Ahmedabad
2nd Floor, Shivalik Ishaan
Near CN Vidhyalaya,
Ambawadi,
Ahmedabad - 380 015
Tel: + 91 79 6608 3800
Fax: + 91 79 6608 3900

Bengaluru
"UB City", Canberra Block
12th & 13th floor
No.24, Vittal Mallya Road
Bengaluru - 560 001
Tel: + 91 80 4027 5000,
+ 91 80 6727 5000
Fax: + 91 80 2210 6000
Fax: + 91 80 2224 0695

Chandigarh
1st Floor, SCO: 166-167
Ernst & Young Pvt. Ltd.
Sector 9-C, Madhya Marg,
Chandigarh, Punjab 160009
Tel: +91 172 6717800
Fax: +91 172 6717888

Chennai
TPL House, 2nd floor
No 3, Cenotaph Road
Teynampet
Chennai - 600 018
Tel: + 91 44 4219 4400
+ 91 44 6632 8400
Fax: + 91 44 2431 1450

Hyderabad
205, 2nd floor
Ashoka Bhoopal Chambers
Sardar Patel Road
Secunderabad - 500 003
Tel: + 91 40 6627 4000
Fax: + 91 40 2789 8851

Oval Office, 18, iLabs Centre,
Hitech City, Madhapur,
Hyderabad – 500081
Tel: +91 40 6736 2000
Fax: +91 40 6736 2200

Kochi
9th Floor, Abad Nucleus
NH-49, Maradu PO
Kochi, Kerala 682304, India
Tel: + 91 484-3044000
Fax: + 91 484 2705393

Kolkata
22, Camac Street
Block 'C', 3rd floor
Kolkata - 700 016
Tel: + 91 33 6615 3400
Fax: + 91 33 2281 7750

Mumbai
6th floor & 18th floor
Express Towers
Nariman Point
Mumbai - 400 021
Tel: + 91 22 6657 9200 (6th floor)
+ 91 22 6665 5000 (18th floor)
Fax: + 91 22 22876401 (6th floor)
+ 91 22 2282 6000 (18th floor)

Block B-2, 5th Floor,
Nirlon Knowledge Park,
Off Western Express Highway,
Goregaon (E), Mumbai – 400 063
Tel: +91 22 6749 8000
Fax: +91 22 6749 8200

15th Floor, The Ruby, 29,
Senapati Bapat Marg, Dadar (W), Mumbai
- 400 028, India
Tel: +91 22 6192 000

NCR
Golf View Corporate Tower – B
Near DLF Golf Course
Sector 42
Gurgaon – 122002
Tel: + 91 124 464 4000
Fax: + 91 124 464 4050

6th floor, HT House
18-20 Kasturba Gandhi Marg
New Delhi - 110 001
Tel: + 91 11 4363 3000
Fax: + 91 11 4363 3200

4th and 5th Floor, Plot No. 2B, Tower 2,
Sector 126, NOIDA – 201 304
Gautam Budh Nagar, UP, India
Tel: +91 120 671 7000
Fax: _91 120 671 7171

Pune
C-401, 4th floor
Panchshil Tech Park
Yerwada (Near Don Bosco School)
Pune - 411 006
Tel: + 91 20 6603 6000
Fax: + 91 20 6601 5900

Ernst & Young LLP

Assurance | Tax | Transactions | Advisory

About EY
EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services we deliver help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

EY refers to the global organization, and may refer to one or more, of the member firms of Ernst & Young Global limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients. For more information about our organization, please visit ey.com.

Ernst & Young LLP is one of the Indian client serving member firms of EYGM Limited. For more information about our organization, please visit
www.ey.com/in.

Ernst & Young LLP is a Limited Liability Partnership, registered under the
Limited Liability Partnership Act, 2008 in India, having its registered office at 22 Camac Street, 3rd Floor, Block C, Kolkata - 700016

ED 0515

Artwork by: JG