Premier Explosives Limited

INVESTOR PRESENTATION

AUGUST 2016

OVERVIEW

Who we are
A leading manufacturer of high energy materials for industrial and defence applications

Our facilities
Six manufacturing facilities located in M.P, Maharashtra, T.N. & Telangana

User industries
Mining, infrastructure and defence sectors

People
Highly trained manpower in handling high energy chemicals

Mission
Become a global player in quality formulations of high energy materials in a safe, green and economical way through an employee empowered organization

Vision
We envisage to be a global leader in our segment through relentless research and development of knowledge-based products for defence applications, mines, infrastructure and allied sectors

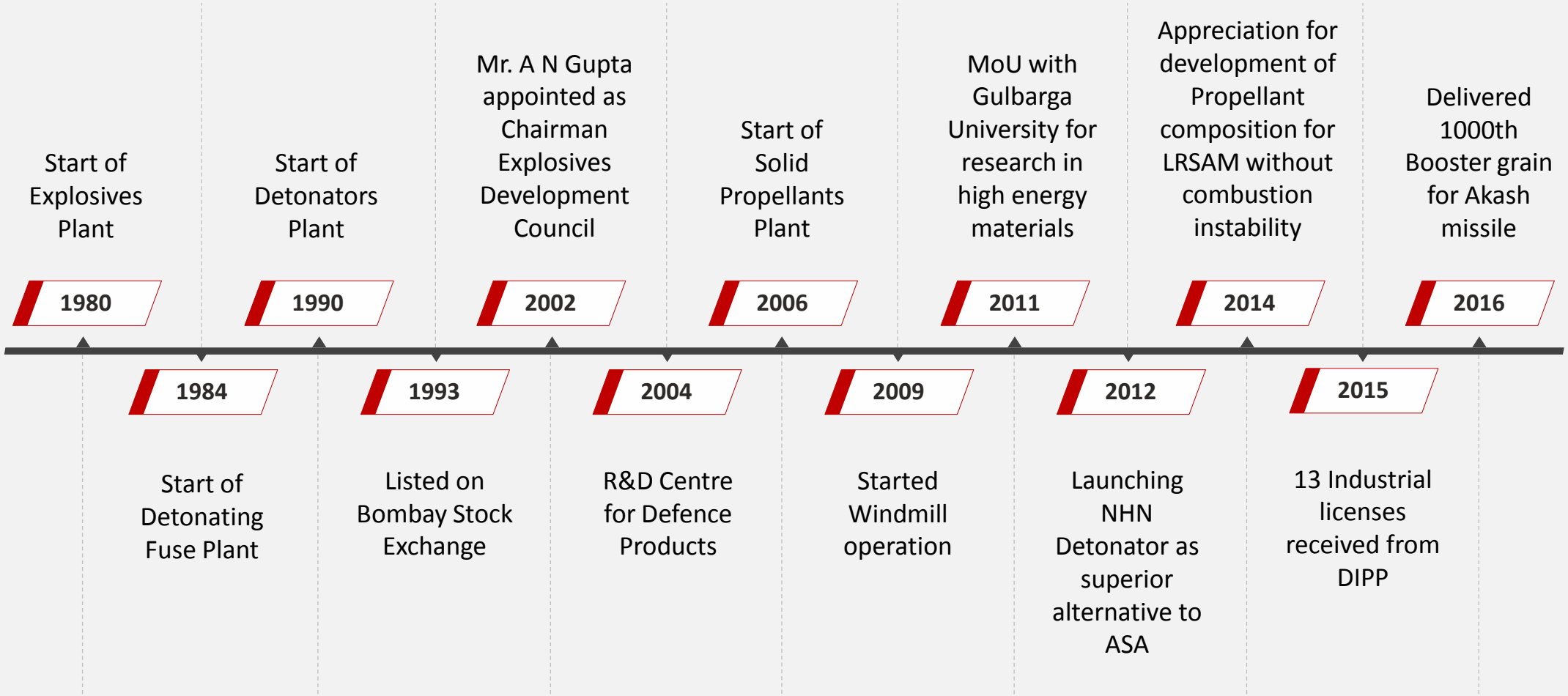
OVERVIEW

1st Company in India to have deployed indigenous technology for manufacturing explosives and detonating fuels

1st Company in the world to produce safer and greener NHN detonators on commercial scale replacing ASA detonators

1st Indian private entity manufacturing and supplying solid propellants to India's prestigious missile programmes

TIMELINE


1980
Start of Explosives Plant
1984
Start of Detonating Fuse Plant
1990
Start of Detonators Plant
1993
Listed on Bombay Stock Exchange
2002
Mr. A N Gupta appointed as Chairman Explosives Development Council
2004
R&D Centre for Defence Products
2006
Start of Solid Propellants Plant
2009
Started Windmill operation
2011
MoU with Gulbarga University for research in high energy materials
2012
Launching NHN Detonator as superior alternative to ASA
2014
Appreciation for development of Propellant composition for LRSAM without combustion instability
2015
13 Industrial licenses received from DIPP
2016
Delivered 1000th Booster grain for Akash missile

MANAGEMENT

Dr. A. N. Gupta | Chairman Promoter

Having earned his Masters degree in mining engineering, he has developed a penchant for learning and R&D. He has actively involved himself in product development projects of defence, new products and processes. A recipient of "Pickering and ISM Medal" from, Indian School of Mines, Dhanbad and Gold Medalist from Mining Geological and Metallurgical Institute of India. He is a Member of Society of Explosives Engineers, U.S.A. and was Chairman of Explosives Development Council constituted by Government of India and Chairman of Explosives Manufacturers Association of India. He has been given Asia Pacific Entrepreneurship Award 2015 in the Outstanding Category. He authored various articles about high energy materials including "Scaling up of CL-20 production to pilot plant scale" presented at the proceedings of National Symposium on Trends in Explosive Technology. He has been conferred Doctor of Science (Honoris Causa) by Gulbarga University in recognition of his rare distinction and distinguished contributions to the field of science and technology.

Mr. T. V. Chowdary | Deputy Managing Director

A chemical engineer with over 33 years of experience in production of explosives, detonator, petrochemicals, coal tar pitches & enamels, mushrooms and solid propellants. Having project execution as his forte, he is excellent in HR management and is a steadfast trouble-shooter.

Dr. N. V. Srinivasa Rao | Director (Production)

He is a doctorate in chemistry with over 30 years of experience in the field of explosives & accessories and chemicals. He has published about 35 papers in various national and international journals. He is a member of High Energy Materials Society of India and also a Governing Body member there. HR management and is a steadfast trouble-shooter.

Col. Vikram Mahajan (Retd.)| Director (Marketing)

27 years of working with army, he holds an M.Tech & MBA in marketing. He has extensive knowledge about opportunities in defence sector.

Sharp research focus has lead PEL won several awards including the "Defence Technology Absorption Award 2007" from DRDO, presented by the Prime Minister of India

HUMAN RESOURCE

- Over 1,200 dedicated and experienced employees
- About 550 people trained in propellant and pyrotechnic products
- Team comprises of about 100 engineers / scientists
- Excellent relationship & conducive working environment
- Very low attrition rate
- Received the Best Industrial Relations Award from Government of Andhra Pradesh

AWARDS AND ACCOLADES

Year	Award	
2016	HEMSI Honorary Fellowship 2016	From High Energy Materials Society of India
2015	Outstanding Entrepreneur Award	from Enterprise Asia
2014	Appreciation for development of Propellant composition for LRSAM without combustion instability	from Director, DRDO
2013	Inc. India Innovative 100 Award for plant-scale manufacture of NHN detonators	from Inc. India
2011	Appreciation for development of Propellant Casting of Motors and Igniters for First and Second Stages of Agni-4	From Director, Advanced Systems Laboratory
2010	Appreciation for development of Pyrogen Igniters for Agni A4	from ASL
2008	Appreciation for development of Pyrogen Igniters for Agni A3	from ASL
2007	Defence Technology Absorption Award-2007, received from Dr.Manmohan Singh, Prime Minister of India	from DRDO
2007	Best R&D Effort Award	from AIMO
2005	Best Technology Development Award for R&D achievements	from FAPCCI
2004-07	Best Greenery Development Award	from AP Pollution Council

Dr. A.N.Gupta receiving the DRDO's 'Defence Technology Absorption Award'

LETTERS OF APPRECIATION

Year	Organisation	Work/Innovation/R&D
2011	DRDO	Development of Propellant Casting of Second Stage Motors and Igniters for First and Second Stages of Agni-4
2010	DRDO	Development of Pyrogen Igniters for Agni A3-04
2008	ASL	Development of Pyrogen Igniters for Agni A3-03
2007	ASL	Development of Rocket Motor Propellant casting and igniters for Composite Motor

REGISTRATIONS & RATINGS

- **DSIR**-recognized in-house R&D centre
- **NABL**-accredited quality control laboratory
- **ISO 9001:2008** certification
- **CE** marking for exports
- **REACH** membership
- **ICRA** rating (**A-** for long term, **A2+** for short term)
- **D&B** rating (**4A2**)
- **AS 9100C Certification** – Under implementation

BUSINESS SEGMENTS

Commercial explosives

Manufacturing a comprehensive range of sophisticated explosives at various locations. The range includes Bulk Explosives, Cartridge Explosives, Cast Booster, Detonators, Detonating Fuse, etc. These products are used by mining and infrastructure industries.

Defence products

Since 2003, PEL has been manufacturing solid propellants for Agni, Astra, Akash and LRSAM strategic missiles and Pinaka rockets. In collaboration with DRDE, PEL has been producing tear gas grenades and is the only private producer in the country. PEL also manufactures Explosive Bolts, Pyro Actuators, Smoke Markers, Cable Cutters and many other products including Blazer Plates for the Indian defence services.

Operation & Maintenance services

Undertaking Operation & Maintenance services for solid propellant plants of:

- Satish Dhawan Space Centre SHAR of ISRO at Sriharikota, Andhra Pradesh
- Solid Fuel Complex (SFC) of Advanced Systems Laboratory at Jagdalpur, Chattisgarh

Wind power

Undertaking generation and sale of wind power. Windmill located at Pushpathur (Tamilnadu)

COMMERCIAL EXPLOSIVES - OVERVIEW

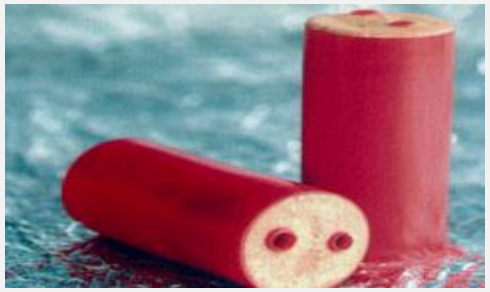
Cartridge Explosives

- Cartridge explosives are used in quarrying, construction, coal mines, limestone mines, etc.

Bulk Explosives

- Precursor emulsions manufactured at centralised facilities
- Final product is manufactured by mobile processing units (shown above) at mining site and poured directly into blast holes

Cast boosters



- High detonation pressure explosives, used in blasting relatively insensitive bulk explosives
- Detonator initiates cast boosters, which in turn initiates bulk explosives

Detonators

- A device used to trigger the explosives
- Electrical and non-electrical detonators

Detonating Fuse

- Flexible, water proof cord having PETN core
- Used to simultaneously detonate explosive charges across a fairly large area from a single detonator

COMMERCIAL EXPLOSIVES - MAJOR CUSTOMERS

- Coal India Limited
- Singareni Collieries Limited
- Neyveli Lignite Limited
- National Mineral Development Corporation
- Karnataka EMTA
- Cement manufacturers
- Exports to Greece, Jordan, Turkey, Nepal, Thailand, Philippines, Indonesia, etc.

COMMERCIAL EXPLOSIVES - SPECIAL PRODUCTS

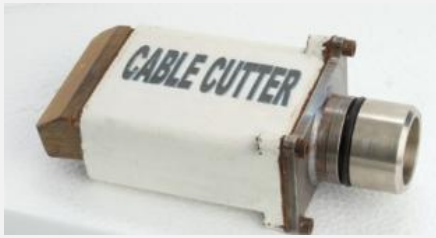
Explosive Bolts

Pyrocartidges

IR Flare

IED-3 Detonator

Cable Cutter



Pyrotechnic Igniter

COMMERCIAL EXPLOSIVES - SPECIAL PRODUCTS

Gas Generator

Riot control Devices

Canisters

TBI

Squibs

COMMERCIAL EXPLOSIVES - INDUSTRIAL LICENSES RECEIVED FROM DIPP

Product	Award Date
Site Mixed Explosives	17-Jun-16
Military fuses of all types including filling and assembling	01-Jul-15
Munition 20 mm and above including filling and assembling	01-Jul-15
War heads of all types including filling and assembling	01-Jul-15
Flexible Liner shape charge	11-Jun-15
Explosives Reacting Armour	11-Jun-15
Single Base Propellant	11-Jun-15
Ammunition of 40mm and above calibre	12-May-15
Rockets and Missiles	12-May-15
Mines related to Defence	12-May-15
Bombs related to Defence	12-May-15
Cartridge Explosives	12-May-15
Site Mixed Explosives	01-May-15
Mob Dispersion devices	20-Apr-15

EMERGING BUSINESS - DEFENCE & SPACE

Propellants	Pyros	Explosives
Pyrogen igniters	Pyro cartridges	CL - 20
Case-bonded propellants	Pyro actuators	HNS - IV
Free standing grains	Smoke / flash generators	Explosive bolts
Fuel rich	IR generators	$BKNO_3$ Igniters
Gas generators	Specialized squibs	

DEFENCE - LICENCES

(INR mn)

Product	UoM	Capacity
Propellants	Tons	1,000
Pyros	Nos.	20,00,000
CL –20	Kgs.	10,000
HNS	Kgs.	10,000
HNF	Kgs.	10,000
Ammunition 40mm and above	Nos.	10,00,000
Missiles & Rockets	Nos.	1,00,000 - each
Mines, Bombs and Torpedoes	Nos.	1,00,000 - each
MOB dispersion Devices	Nos.	10,00,000

DEFENCE - STRENGTHS

In-house Development	Production under ToT
▪ **Pyrogen Igniters** for Strategic missiles Non Aluminium composition for **Astra** (Air to Air Missile) ▪ **LRSAM** composition without combustion Instability ▪ **Sledge rocket** motors	▪ **Akash** booster / sustainer grains ▪ **LRSAM** motors ▪ **MRSAM** motors ▪ **ARM** motors ▪ **Sledge rocket** motors ▪ **Pyrogen igniters** for ANSP ▪ Daisy II motor for **Agni** ▪ **Pinaka** rockets – Mark I and II ▪ **Astra** motor

DEFENCE - MAJOR CUSTOMERS

- **Bharat Dynamics Limited** (Production orders)
- **DRDO and their laboratories** (Design & Development orders)
- **Bharat Electronics Limited**
- **ECIL**
- **State police, Central police, etc.** (Tear gas grenades)

DEFENCE - PROPELLANT FOR LRSAM MISSILE

- LRSAM original composition developed after almost 5 years trials suffered the problem of combustion instability.
- PEL solved the problem and developed an alternative propellant which was successfully tested on 10th November 2014 in Israel. Successful Home-On-Target test proved PEL's propellant has performed with 100% stability.

1000th BOOSTER GRAIN FOR AKASH MISSILE

Delivery of 1000th Booster grain to Bharat Dynamics Limited, the sole integrator of Akash missile

Delivery flagged off by Sri Udaya Bhaskar (CMD, BDL)

Chief guest Dr. Satish Reddy, Scientific Advisor to Raksha Mantri

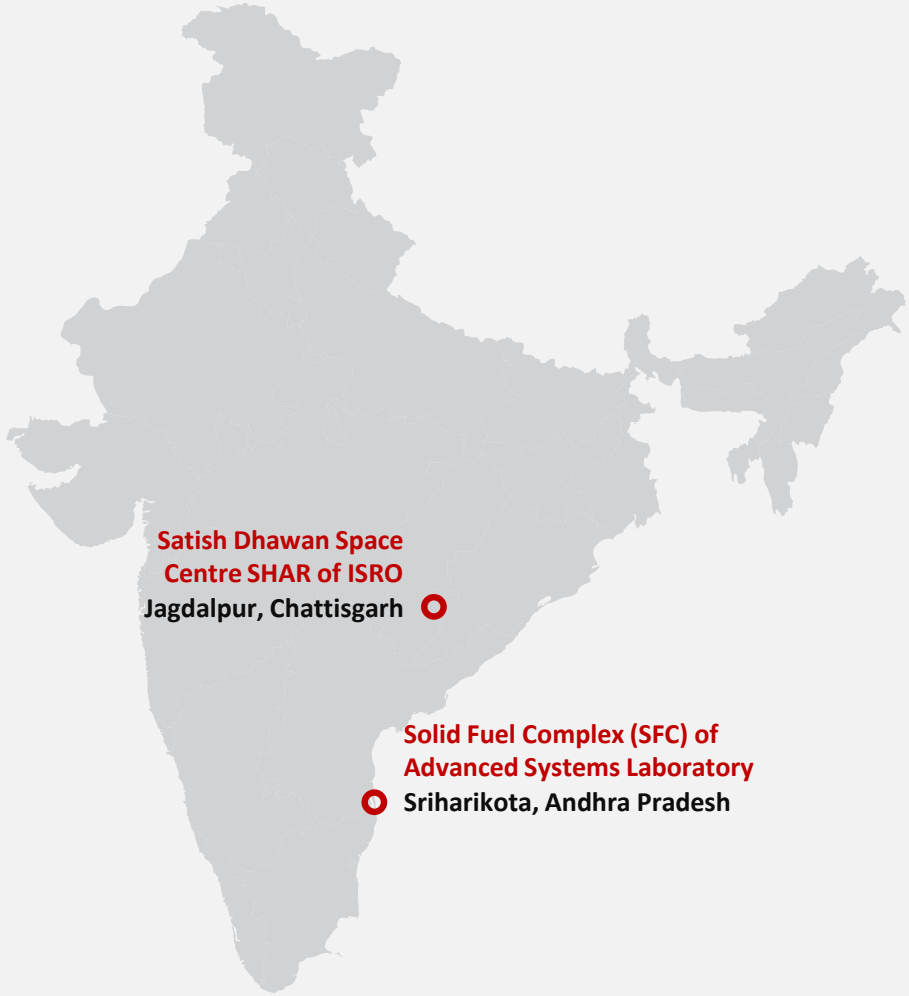
1000 is not just a number. It is the demonstration of consistency, sustainability and promptness in delivery of quality materials.

OPERATION AND MAINTENANCE

- Operating and maintaining the solid propellant production facilities of two prestigious agencies, namely:

  1. Satish Dhawan Space Centre SHAR of ISRO at Sriharikota, Andhra Pradesh
  2. Solid Fuel Complex (SFC) of Advanced Systems Laboratory at Jagdalpur, Chattisgarh

- These operations exposed PEL to advanced processes in manufacture of solid propellants



WIND POWER

- 800 kw wind mill at Pushpathur, Tamilnadu (PPP with TNEB)
- 250 kw solar pv plant at Peddakandukuru factory (captive consumption)
- 20 kw roof top solar plant at HO, Secunderabad (captive consumption)

- Green power generation > Grid power consumption
  (no carbon footprint)

PLANT LOCATIONS

Peddakandukur (Telangana)
Detonator, Detonating fuse,
Packaged explosives,
product research &
Special Products Divisions

Bulk Explosives
Singrauli (Madhya Pradesh)
Chandrapur (Maharashtra)
Godavarikhani (Telangana)
Manuguru (Telangana)
Neyveli (Tamil Nadu)

Pushpathur (Tamil Nadu)
Windmill

UNIQUELY POSITIONED FOR GROWTH

STRENGTHS

- **First mover advantage**
- **First private producer of propellants**
- **Orders on hand Rs.72 crores spreading up to 2017**
- **Trained manpower**
- **Available spare capacity for propellant production & expanding**
- **250 acres of land available for expansion**

OPPORTUNITIES

- **'Self reliance' in defence products**
- **'Make in India' in general manufacturing**
- **Got Industrial Licences for ammunition, etc.**
- **Advanced stage of negotiations with OEMs**
  - meeting the defence offset obligations
  - forming partnership for manufacture in India
- **Export of defence products in long term**

ROADMAP

- **Enhance production of solid propellants (Akash, Astra, LRSAM, MRSAM, etc.)**
- **Increase product offerings within missiles (Sustainer grains, Insulation)**
- **Backward integration**
- **Gain volumes in Premier Air Target, Chaff Cartridge, etc.**
- **Obtain technology and start production of ammunition (BMCS, APFSDS, etc.)**

RESEARCH AND DEVELOPMENT

Company ensures and thrives to remain at the forefront of technology in its field and new product development

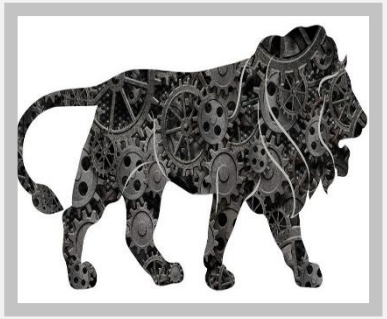
Collaboration with Gulbarga University, IIT Madras and BITS Pilani for research in high energy materials

World-first in production of NHN based detonators on commercial scale. It is safer and greener than traditional ASA. Acknowledged as a break-through after about 75 years. Licensed the technology to a US company for a price of USD 100,000

Developed solid propellants for various missiles including a combustion-stable propellant for Long Range Surface to Air Missile (LRSAM)

Laboratories of the company have been certified by DSIR and accredited by NABL

GROWTH DRIVERS



Defence Procurement Policy 2016; linking it to "Make in India" policy, created the top priority procurement category, Indigenously Designed Developed and Manufactured (IDDM), which will be an encouragement for local entrepreneurs.

Indian explosives industry, estimated to be INR 40 bn p.a., is considered among the top 5 in the world. Coal requirements for the power sector are projected to reach to about 1,070 MT by 2020. Out of this, domestic coal supply is projected to increase to 756 MT by 2022, *(Source: Industry)*

Defence manufacturing in India is at inflection point, with capital expenditure expected at $245 billion in next decade. At 30% of this capex, offset market is estimated at $75 billion *(Source: CII, Business Standard)*

Having been a member of Missile Technologies Control Group (MTCR), India now can access advanced technologies.

KEY STRATEGIES

Part of the '**Make in India**' initiatives

Market expansion in explosives and defence business with new Industrial licenses obtained

Signed NDAs and MOUs with global missile players

Incorporated a subsidiary company PELNEXT DEFENCE SYSTEMS PVT. LTD. for manufacture of ammunition

Capacity expansion and on going negotiations for technological tie-ups for new defence products

Reap offset opportunities

Backward integration for solid propellants – raw materials and insulation

Acquired 250 acres land for new defence projects

Explore export opportunities for NHN based detonators

Developing electronic detonator with new features

Focusing on exports to South East Asia and Africa

REVENUE BREAKUP – SEGMENT WISE

(INR mn)

(INR mn)	FY15	FY16	Chg (%)	Q1 FY16	Q1 FY17	Chg (%)
Commercial explosives	1080.8	1307.3	21.0%	**265.3**	**352.3**	32.8%
Defence explosives	249.7	371.8	48.9%	70.0	73.0	4.3%
O&M	154.9	161.2	4.1%	38.9	45.2	16.2%
Wind power	4.6	2.8	-39.1%	0.7	1.4	100.0%
Total	**1490.0**	**1843.1**	23.7%	**374.9**	**471.9**	25.9%

PROFIT & LOSS

(INR mn)

(INR mn)	FY12	FY13	FY14	FY15	FY16	Q1 FY16	Q1 FY17	Chg (%)
Revenue	**1083.2**	**1094.0**	**1454.0**	**1494.9**	**1849.8**	**376.5**	**473.0**	25.6%
Operating profit	173.9	96.9	162.6	125.4	176.1	29.9	42.4	41.8%
Profit before exceptional items	162.0	78.1	129.5	76.2	110.0	14.0	25.6	82.9%
Net exceptional items: Income / (Expense)	3.9	(3.7)	-	-	(27.0)	(37.0)	-	-
PBT	**165.9**	**74.4**	**129.5**	**76.2**	**83.0**	**(23.0)**	**25.6**	-
Tax	46.5	21.0	37.4	23.0	26.3	(8.3)	8.0	-
PAT	**119.4**	**53.4**	**92.1**	**53.2**	**56.7**	**(14.7)**	**17.6**	-
EPS (INR)	**14.69**	**6.57**	**11.17**	**6.10**	**6.41**	**(1.66)**	**1.99**	-

BALANCE SHEET

(INR mn)

(INR mn)	Mar-12	Mar-13	Mar-14	Mar-15	Mar-16
Share Capital	81.3	81.3	83.6	88.6	88.6
Reserve & Surplus	373.6	403.3	488.7	530.5	565.9
Non Current Liabilities	90.8	115.5	115.4	90.3	74.7
Current Liabilities	235.0	298.9	385.6	423.2	567.7
Total Liabilities	**780.7**	**899.0**	**1073.3**	**1132.6**	**1296.9**
Non Current Assets	430.4	491.7	520.9	499.0	522.3
Current Assets	350.3	407.3	552.4	633.6	774.6
Total Assets	**780.7**	**899.0**	**1073.3**	**1132.6**	**1296.9**

Contact

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