Make in Steel, Make in India

Reckoner
Reform  ➔  Transform  ➔  Perform
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“National Steel Policy approved by the Cabinet reflects a long term vision for
TRANSFORMATION
OF THE STEEL SECTOR”

Shri Narendra Modi
Prime Minister of India
Steel is one of the world’s most essential materials, fundamental to every aspect of our life. Steel is vital for infrastructure and transport while tinplated steel helps preserve food. Steel is of strategic importance to a rapidly industrializing nation like India.

For the last three years, the growth of India’s steel sector has been gladdening. It is a matter of pride that in 2015, India overtook the United States to become the 3rd largest steel producer in the world and is poised to become the second largest steel producer shortly. In Stainless Steel, in the year 2016, India has already become the second largest producer. The world steel industry has been facing a crisis on account of an unprecedented steel supply glut for the past few years. I am happy to note that the Indian Steel Industry, with targeted and timely pro-active trade remedial measures, has manifested positive growth.

I am sure that the National Steel Policy 2017, as well as the policy on Domestically Manufactured Iron & Steel Products (DMI&SP), will provide a fillip to indigenous production as well as manufacturing of high end steel in the country. I am also confident that the strength of India’s steel industry would not only contribute to GDP growth but will also help the country to transform itself into a global manufacturing base. It will generate efficiency, innovations and employment, and thus strengthen the efforts towards ‘Make in India’.

I invite one and all to come forward and contribute to this grand initiative to build a strong foundation of steel, for the all-round development of India. Come ‘Make in Steel’ & ‘Make in India’.

(Narendra Modi)

New Delhi
05 June, 2017
India is on its way to become a world power in its own right under the dynamic leadership of our Prime Minister Shri Narendra Modi. Every sector of Indian economy is going through transformative changes to contribute to this phenomenon of India emerging as the economic powerhouse of 21st century. Steel industry in India is proud to be a part of this revolution to make a New India.

The Indian steel sector has grown exponentially over the past few years to be the third largest producer of steel globally, contributing to about 2% of the country’s GDP and employing about 25 lakh people directly and indirectly. In 2016, India became world’s 2nd largest stainless steel producer. India also became a net exporter of steel in 2016, after a gap of three years.

As far as Indian economy is concerned, there has been remarkable improvement in almost every parameter and the country is poised to become a leading economy of the world. Construction & infrastructure sector have been growing rapidly since 2014, strengthening the demand side of steel sector. Steel production capacity increase in primary and secondary steel sector with increasing emphasis on value-added steel production is supply side strength. Mining auctions have been made mandatory, thereby bringing transparency and efficiency in raw material scenario. Enabled by these developments, steel sector in India is leading the uptrend in world steel industry. To leverage this advantage and to chart out a well-defined roadmap for the Indian steel industry, we have come up with National Steel Policy-2017 in May this year.

A Policy on preference to domestically manufactured iron & steel products (DMI&SP) in government procurements is also being implemented to lend necessary support and a level playing field to the domestic industry.

This compendium incorporates details of these policies and other initiatives taken by Government of India like inclusion of life cycle cost concept in GFR 2017, tariff and non-tariff support to steel sector to curb unfair trade practices by other countries and other policy and regulatory framework.

I am sure this will serve as a handy reckoner for all stakeholders, procurement agencies and decision makers as a ready reference source.
The Indian Steel Sector has grown rapidly over the past few years and presently is the third largest steel producer globally. Today, global focus is on India, both as a manufacturing base, as also a market. Untapped potential with a strong policy support becomes the ideal platform for growth. Owing to the strategic importance of the steel sector along with the absence of a robust and updated policy, the need for National Steel Policy (NSP) 2017 was the need of the hour.

NSP seeks to accomplish our Hon’ble PM’s vision of “Make in India” with the objectives of nation building and encouraging domestic manufacturing. The new Steel Policy brings forth the aspirations of the domestic steel industry to achieve 300MT of steelmaking capacity by 2030-31. This would translate into additional investment of about Rs. 10 lakh Crore and 1.1 Million additional workforce employed in the steel sector by 2030-31.

Key features of NSP 2017 include creating self-sufficiency in steel production by providing policy support & guidance to private manufacturers, MSME steel producers, CPSEs encouraging adequate capacity additions, development of globally competitive steel manufacturing capabilities, cost-efficient production and domestic availability of iron ore, coking coal & natural gas, facilitating foreign investment & asset acquisitions of raw materials and enhancing the domestic steel demand.

The policy to provide preference to Domestically Manufactured Iron & Steel Products (DMI&SP) in government procurements will also be implemented to provide impetus to the domestic steel industry, by way of providing a level playing field.

I believe that there is tremendous potential in the Indian steel sector to deal with the various externalities by leveraging the existing competencies lying in the sector, like exploitation of large resources of high-grade iron ore, thermal coal, untapped coking coal reserve, utilizing the competitive workforce available and benefits of large domestic market, that provide strong economic fundamentals for future growth.

I am sure that both the policies will catapult the domestic steel sector to newer heights

(Vishnu Deo Sai)
Steel is a product of large and technologically complex industry having strong forward and backward linkages in terms of material flows and income generation. It is also one of the most important products of the modern world and of strategic importance to any industrial nation.

This booklet is a ready reckoner to anybody who wants to follow the domestic steel sector in letter and spirit and the various policy initiatives and interventions taken by the Ministry of Steel from time to time in the direction of enhancing domestic consumption, increasing domestic sector’s productivity, decreasing input costs, improving technological collaboration, improving quality standards, etc. to steer the sector towards achieving greater heights.

Owing to the glut in the global steel market, the domestic steel prices had maintained a sharp downward trend during 2014-15, which continued into 2015-16 but since then there had been a significant amount of volatility in the steel market with the prices of steel dropping, rising, falling and then rising again. Domestic prices of HR Coils declined by ~35% from April 2014 to January 2016. However, post notification of various trade measures, prices maintained an increasing trend till January 2017 leaving aside initial hiccups, before they began to stabilize in February 2017 with the current prices about 40% higher than the January 2016 prices. Today, the Indian steel industry contributes ~2% to the country’s GDP and employs about 5 lakh people directly and about 20 lakh people indirectly.

We have been talking for long about the slowdown in the domestic economy. However, when we look at the overall production and the per capita steel consumption in India, there is a vast untapped opportunity that we should look into. There is a whole new rural world evolving under the wave of urbanization, thereby creating huge demand of steel and opening newer opportunities for our steel producers. Economy grew at fast rate of 8.5 % during 2004-05 to 2009-10, and demand of steel also grew at high rate, estimated to be at a demand elasticity of 1.1. As India has developed, there is now more focus on Infrastructure, greater urbanization, and a much more focus on better management of environmental and social infrastructure.

Indian steel industry is already the third largest producer and is soon poised to become the world’s second largest producer. We have already acquired a significant position in the global steel map with our giant steel mills, joint ventures with notable global steel players, continuous modernization and up-gradation of older plants, improving energy efficiency and backward integration into global raw material resources.

The Indian steel industry also enjoys inherent advantages in terms of availability of high grade iron ore and non-coking coal – the two critical inputs of steel production. In addition, it also has a vast and rapidly growing market for steel, strong MSME sector and a relatively young work force with competitive labour costs. These factors have so far ably supported the growth of steel industry in the country.

A number of other factors like significant increase in capital inflow into the country in infrastructure and manufacturing sectors, increase in per capita income and rising average salary of working class, issues regarding land acquisition, growing concerns about raw material security for steel industry, infrastructure development, human resources for steel sector; policy on secondary steel manufacturing and finance requirement of the steel sector etc., needed to be addressed appropriately. This necessitated a new National Steel Policy 2017 to be formulated based on a detailed study and discussions with various stakeholders in the matter.

FROM THE DESK OF SECRETARY (STEEL)
The National Steel Policy-2017

• Seeks to increase consumption of steel in major segments like infrastructure, automobiles and housing.
• Thereby, expecting the per capita steel consumption to increase to the level of 160 Kg by 2030, from the existing level of 61 Kg.
• The policy stipulates that adoption of energy efficient technologies in the MSME steel sector will be encouraged to improve the overall productivity & reduce energy intensity.
• Steel Ministry will facilitate R&D in the sector through the establishment of Steel Research and Technology Mission of India (SRTMI). The initiative is aimed to spearhead R&D of national importance in iron & steel sector, utilizing tripartite synergy amongst industry, national R&D laboratories and academic institutes.
• Steel Ministry through policy measures will facilitate availability of raw materials like iron ore, coking coal and non-coking coal, natural gas etc. at competitive rates.

NSP 2017 also emphasizes on using the concept of life cycle cost while evaluating projects rather than looking at just the upfront cost in isolation. Principle of Life Cycle Cost has also been included in the Rule 136 (1) (iii) of the new General Financial Rules (GFR), 2017. This would encourage greater usage of steel in Government as well as the private sector.

The policy also seeks to facilitate the adoption of quality standards and mandatory quality certification by producers and users. Recently the Steel and Steel Products (Quality Control) Order and Stainless Steel (Quality Control) Order that mandates Bureau of Indian Standards certification for certain products was introduced. Through this the policy aims to establish India as a cost-effective and quality steel destination by bringing more and more number of steel products, which are used in critical end-use applications, under the certification mark scheme of BIS.

India, with its emphasis on manufacturing through its “Make in India” program and the planned spend in infrastructure sector, expansion of railway network, national highways, ports, airports and development of domestic shipbuilding industry etc., is expected to create significant demand for steel in the country. A significant spend is expected on iron and steel products occurring in the Public Sector and Government projects and hence, it is imperative that most if not all of this planned expenditure is done with indigenous steel. A new **Policy to Provide Preference to Domestically Manufactured Iron & Steel Products (DMI&SP)** in Government Procurement has also been formulated by Ministry of Steel and approved by the Cabinet. This policy is applicable to all procurements made by the Central Government, State Governments and all Government Agencies. Key features of the policy are:

• The policy mandates to provide preference to DMI&SP in government procurement for its own use and not with a view to commercial resale or with a view to use in the production of goods for commercial sale.
• The policy is applicable to all such projects and procurements, where the aggregated estimated value of the “iron & steel products” is either INR 50 crores or more.
• DMI&SP has been defined as those iron and steel products, in which a minimum value addition of 15% has taken place domestically.
• The policy is envisaged to promote growth and development of domestic steel industry and reduce the inclination to use, low quality and low cost imported steel in Government funded projects.

This booklet hence aims to provide readers with an overview of the various aspects of the National Steel Policy 2017, Policy on Preference to DMI&SP and other key initiatives of the Ministry of Steel. I am sure that this will help the industry to chart its course to achieve new milestones and be a major force to reckon with, globally, in the future.

*(Dr. Aruna Sharma)*
Steel is one of the most important products of the modern world and is of strategic importance for any industrialized nation. Historically, all nations during their industrialization phase have been supported by a strong domestic steel industry.

The Indian steel industry has seen a robust growth since its deregulation in 1991-92. In 2015, India became the third largest producer of steel after China and Japan. Today, the Indian steel industry contributes ~2% to the country’s GDP and employs about 5 lakh people directly and about 20 lakh people indirectly. However, the per capita steel consumption in the country at 61 kg is much below the global average of 208 kg and that of China at 489 kg. This indicates the significant growth potential of the Indian steel industry.

The period during April 2014 to December 2015 was challenging for the domestic as well as the global steel industry. Globally, demand slowdown and overcapacity resulted in historically low international steel prices. The steel producers in China, Japan and Republic of Korea, wherein the major overcapacity exists, adopted predatory pricing strategy and were dumping their products in emerging markets such as India at prices which were often lower than their cost of production. Such imports had adversely impacted the domestic steel prices and the viability of domestic steel producers. Declining prices led to lower sales realization for domestic steel producers. In the period April-December 2015, the top three companies in India viz. SAIL, Tata Steel and JSW, witnessed severe erosion in their profits as compared to the same period last year. Aftermath of the increased imports was evident from the poor cash flows and also from the debt serviceability of the major steel producers in the country. As per the offsite returns submitted by banks to Reserve Bank of India in March 2016, the total exposure of the steel sector to banks has mounted to over Rs. 3.1 lakh crores. Of this, 48% is estimated to be in the stressed category as per RBI data (37% classified as NPAs & 11% as restructured).

Over the last two years, the Government of India has taken number of proactive measures including -

- Notification of various trade remedial measures such as Minimum Import Price, Anti-Dumping Duty and Safeguard Duty
- Easing out financial re-structuring norms through RBI and Ministry of Finance
- Steps to reduce input cost, replace imports & enhance domestic consumption

All these interventions were aimed to tackle the global glut in steel industry leading to effective decision making and a series of milestones and achievements in the sector including improved capacity utilizations, increased cash flows & profit margins for steelmakers, reduced imports and significantly high exports.

In addition to above mentioned measures, Government is continuously focusing on expansion of MSME sector, improved raw material security, enhanced R&D activities, reduction in import dependency and cost of production and thus aims to develop a “technologically advanced and globally competitive steel industry that promotes economic growth” eyeing self-sufficiency in production, developing globally economical steel manufacturing capabilities by facilitating investments and cost efficient productions with adequate availability of raw materials.

India is now all poised to become the second largest producer of steel in the world after China. The key strategies adopted by the government include continuous pursued trade remedial measures with an aim to improve price realizations and decrease imports and improve capacity utilizations of existing facilities.

The ambitious vision backed by strong administration leading to effective decision making and implementation of the correct measures have led to a series of milestones and achievements in the sector including

- Capacity addition at steady CAGR of about 7% over the past three years with an improvement in the overall capacity utilization even with enhanced capacity.
- 97% spike in overall exports and a 37% decline in imports of steel products during 2016-17 over the same time frame in the previous year
- Considerable improvement in EBITDA margins of major steelmaking companies

Today, the Indian steel sector is in a position where continued positive actions in terms of investments and Government interventions can take it to a position of global leadership yielding accelerated GDP, industrialization and massive employment opportunities. With such an immense potential to be tapped and with flagship initiatives like Make in India which forms the key impetus for enhanced steel demand across sectors from Infrastructure, Construction, Power & Energy, Defense and Aerospace, the Indian steel sector is soon expected to achieve new heights.
Huge untapped potential in the steel sector and an absence of a robust and updated policy necessitated the formulation of new National Steel Policy (NSP) 2017, key features of which are:

- Achievement of 300 MT of steelmaking capacity by 2030-31 which would translate roughly into Rs. 10 lakh Crore investment and 1.1 million additional workforce getting employed.
- Increased emphasis on infrastructure, automobiles and housing as major segments for steel consumption.
- Increase in per capita steel consumption to 160 kg by 2030-31 from current level 61 kg.
- Wider presence in the production of value added steel globally
- Development of cost-effective and quality focused steel industry
- Tapping the potential of MSME sector with an overall improvement in their productivity and energy efficiency.
- Ensuring sufficient availability of raw materials like iron ore, coking coal and non-coking coal, natural gas etc. at competitive rates.
- Emphasizing on usage of concept of life cycle cost while evaluating projects rather than looking at just the upfront cost in isolation. Principle of Life Cycle Cost has also been included in the Rule 136 (1) (iii) of the new General Financial Rules (GFR), 2017.
- Attainment of global standards in Industrial Safety & Health.

The sector is also expected to focus on indigenous production of value added capacities by large players for auto grade steel, CRGO, CRNO, etc. by 2019-20. The government is fully aware of the need for extensive research and development in order to achieve its vision. In order to promote R&D in the sector, Ministry of Steel has taken full cognizance of the technological scenario in Indian steel industry and has initiated a fresh move for preparation of a comprehensive blue print for promotion of R&D in Iron & Steel sector. To bring in all the stakeholders under one platform and promote steel research on themes of critical and vital national importance, an institutional platform called “Steel Research and Technology Mission of India” has been established with an objective to spearhead R&D of national importance in Iron & Steel, creating state-of-art facilities to conduct cutting-edge research, develop expertise & skill development, manage human resources and bolster a tripartite synergy amongst industry, national R&D laboratories and academic institutes.

It is also important to note that India, with its emphasis on manufacturing through its “Make in India” programme and the planned spend in infrastructure sector, expansion of railway network, national highways, ports, airports and development of domestic shipbuilding industry etc., is expected to create significant demand for steel in the country, with a large part of the growth in demand occurring in the public sector and Government sphere. It is thus imperative that most, if not all of this planned spend is done using indigenous steel and hence the government has brought a policy on preference to domestically manufactured iron & steel products (DMI&SP) in Government procurement, key features of which are:

- Accomplishment of Hon’ble Prime Minister’s vision of ‘Make in India’ with objective of nation building and encouraging domestic manufacturing.
- Mandates to provide preference to DMI&SP in government procurement, being applicable on all government tenders where price bid is yet to be opened.
- Provides a minimum value addition of 15% in notified steel products which are covered under preferential procurement.
- The policy poses trust on each domestic manufacturer who shall provide self-certification regarding prescribed domestic value addition to the procuring Government agency.
- A grievance redressal committee setup under the Ministry of Steel shall dispose of any complaint in a time bound manner of four weeks.
- There are provisions in the policy for waivers to all such procurements, where specific grades of steel are not manufactured in the country, or the quantities as per the demand of the project cannot be met through domestic sources.

With the roll out of the National Steel Policy 2017 and the DMI&SP policy, it is envisaged that the industry can be steered with appropriate policy support in creating an environment for promoting domestic steel and thereby ensuring a scenario where production meets the anticipated pace of growth in consumption. Thus, the Indian steel sector is all set to achieve its vision thereby setting a global benchmark in terms of quality, standards and technology.
1. National Steel Policy (NSP) 2017

The last National Steel Policy (NSP) was formulated in the year 2005. Since then, there have been a number of significant developments and these have led to outdating of the various projections, in the existing policy. The strategic goal of steel production of over 100 MT by 2019-20, has already been achieved and India is now poised to become the 2nd largest steel producer in the world. These developments necessitated the review of the extant policy for the inclusive development of the Indian steel industry.

1.1 Need for formulation of new National Steel Policy

Economy grew at much faster rate of 8.5% during 2004-05 to 2009-10, and demand of steel also grew at higher rate, estimated to be at demand elasticity of 1.1. As India has developed, there is now more focus on Infrastructure, greater urbanization, & a much more focus on better management of environmental and social infrastructure.

Besides this, there were a number of other factors like significant increase in capital inflow into the country, in infrastructure and manufacturing sectors; increase in per capita income and rising average salary of working class; issues regarding land acquisition; growing concerns about raw material security for steel industry; infrastructure development; human resources for steel sector; policy on secondary steel manufacturing and finance requirement of the steel sector etc., which needed to be addressed appropriately. There have been international developments/agreements for environmental protection, and also rationalization of excess steel capacity in China, and also need for much greater domestic R&D to be done under auspices of SRTMI etc. All of which necessitated the formulation of a new National Steel Policy.

1.2 The salient features of the National Steel Policy 2017

- The National Steel Policy, 2017 aspires to achieve 300 MT of steelmaking capacity by 2030. This would translate into additional investment of Rs. 10 lakh Crore and 1.1 million additional workforce getting employed in the steel sector by 2030-31.
- The policy seeks to increase consumption of steel and major segments are infrastructure, automobiles and housing.
- National Steel Policy 2017 seeks to increase per capita steel consumption to the level of 160 Kg by 2030-31 from existing level of around 61 Kg.
- Potential of MSME steel sector has been recognised. Policy stipulates that adoption of energy efficient technologies in the MSME steel sector will be encouraged to improve the overall productivity & reduce energy intensity.
- Steel Ministry will facilitate R&D in the sector through the establishment of Steel Research and Technology Mission of India (SRTMI). The initiative is aimed to spearhead R&D of national importance in iron & steel sector utilising tripartite synergy amongst industry, national R&D laboratories and academic institutes.
- Ministry through policy measures will ensure availability of raw materials like iron ore, coking coal and non-coking coal, natural gas etc. at competitive rates.

With the roll out of the National Steel Policy 2017, it is envisaged that the industry will be steered in creating an environment for promoting domestic steel and thereby ensuring a scenario where production meets the anticipated pace of consumption, through a technologically advanced and globally competitive steel industry. This will be facilitated by Ministry of Steel, in coordination with relevant Ministries, as may be required. The National Steel Policy 2017 is appended as Appendix 1.
2. Policy on ‘Preference to DMI&SP’ in Government Procurements

The past 3 years have been challenging for the domestic as well as the global steel industry on account of a global supply glut. Between January 2014 and March 2016, global steel prices declined by ~35%. Imports of finished steel in 2014-15 increased by 71% and another 26% in 2015-16 (year on year). The sector also saw significant financial stress, with NPAs amounting to 37% of loans outstanding as on March 2016. This prompted the government to take several trade remedial measures like imposition of anti-dumping duty, safeguard duty, MIP, etc. While some of these measures have been effective to some extent, they are no guarantee to future protection against unfair trade practices followed by steel majors, on account of subsidies provided by their Governments.

Growth in the steel sector also has a significant multiplier effect on the overall economy in terms of employment (direct and indirect) generation and demand on supplier industries (coal, iron ore, other minerals etc.). Thus, the growth of the domestic steel industry is important for the overall growth of the country.

It is important to note that in India, with its emphasis on manufacturing through its “Make in India” programme and the planned spend in infrastructure sector, expansion of railway network, national highways, ports, airports and development of domestic shipbuilding industry etc. is expected to create significant demand for steel in the country, with a large part of the growth in demand occurring in the public sector and Government sphere. It is thus imperative that most, if not all of this planned spend is done using indigenous steel and hence the government has brought this policy on preference to DMI&SP.

2.1 Salient features of the policy

- This policy seeks to accomplish PM’s vision of ‘Make in India’ with objective of nation building and encourage domestic manufacturing.
- The policy mandates to provide preference to Domestically Manufactured Iron & Steel Products (DMI&SP) in government procurement. The policy is applicable on all government tenders where price bid is yet to be opened.
- DMI&SP policy provides a minimum value addition of 15% in notified steel products which are covered under preferential procurement. In order to provide flexibility, Ministry of Steel may review specified steel products and the minimum value addition criterion.
- While implementing the policy, it poses trust on each domestic manufacturer who shall provide self-certification to the procuring Government agency declaring that the iron & steel products are domestically manufactured in terms of the domestic value addition prescribed.
- In case any manufacturer is aggrieved, a grievance redressal committee setup under the Ministry of Steel shall dispose of the complaint in a time bound manner of four weeks.
- There are provisions in the policy for waivers to all such procurements, where specific grades of steel are not manufactured in the country, or the quantities as per the demand of the project cannot be met through domestic sources.

The policy is envisaged to promote growth and development of domestic steel industry and reduce the inclination to use, low quality and low cost imported steel in Government funded projects. It shall be the responsibility of every Government Agency to ensure implementation of the policy.

The Policy is appended as Appendix 2.

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1 FOB China Price of Hot Rolled Coil and Cold Rolled Coil in USD/tonne
2 Source: Reserve Bank of India, Off-site returns as reported by banks, domestic operations
3. Implementation of Product Quality Standards

3.1 Bureau of Indian Standards (BIS), has formulated a large number of Indian Standards for most of the iron and steel products produced in the country. Actual implementation of these standards by the industry is however limited, resulting in large scale production, imports and use of sub-standard material, putting infrastructure and public safety at risk.

3.2 Quality Control Order: Adoption of the standards by producers and users will be facilitated and mandatory quality certification will be ensured. Recently the Steel and Steel Products (Quality Control) Order and Stainless Steel (Quality Control) Order that mandates Bureau of Indian Standards certification for certain products was introduced. The implementation of this order will be closely monitored in conjunction with Bureau of Indian Standards. Thirty three (33) steel products have already been notified under the mandatory quality certification mark scheme of BIS. Efforts will be made to bring in additional steel products, which are used in critical end-use applications, under the mandatory scheme to ensure protection of human health, environment, and safety.

3.3 MSME sector units, particularly the small re-rolling mills and Induction Furnace units lack in-house quality testing facilities. Quality testing facilities would be set up in steel hubs and already established facilities would be further strengthened to cater to possible rise in demand.

Apart from the adherence to conditions under Steel and Steel Products (Quality Control) Order, Ministry of Steel is also facilitating the production of quality steel, particularly in MSME sector by carrying out R&D and technological interventions and providing financial assistance. More steps in this direction will be encouraged.
4. GFR Amendment

Principle of Life Cycle Cost has been included in the Rule 136 (1) (iii) of the new General Financial Rules (GFR), 2017. In many projects of the Government of India and the State Governments like Roads, Bridges Projects, Building Projects, Construction of Railway Projects, Shipping Projects and Rural Roads Projects, the principle of Life Cycle Cost is going to play a decisive role while sanctioning the detailed design of the project. The use of steel has a major bearing on the life of the project which in long run is going to reduce the Life Cycle Cost. The decisions regarding the tenders would have to be taken after the life-cycle cost analysis. The amendments made in the rules/guidelines are appended as Appendix 3.

There might be several projects in which the initial cost comes out to be slightly higher, but in the long run, the overall cost for the project comes down – depending on the factors such as material, quality, repairs needed, the time for setting up the projects, etc. Steel might turn out to be more viable in the long run for the infrastructure projects such as bridges, housing projects, doors, etc. Even the time span for construction and installation would be much lesser with steel. For instance, a bridge may have an average life of around 30 to 40 years, but a steel bridge - with higher investment requirement in the beginning - can last more than 100 years. Its repair requirements would be lesser and cheaper as well.

All these projects are going to add on to the inventory of the national assets, thus by using steel, India will be creating the long term national assets with low cost keeping in mind the Life Cycle Cost concept.
5. “Right of Way” for Slurry Pipelines

To have an alternative to dependency of transporting fines by railways, the advantages of transportation of iron-ore fines by a network of slurry pipelines to pellet plant clusters were envisaged by the Ministry of Steel. It was observed that not only the cost of transportation would be brought down substantially, the dependence on the over stretched railway network could also be reduced. The highway of slurry pipeline was proposed and it was also proposed that the slurry pipelines projects could be funded from private steel plants, NMDC and also explore using district/state mineral funds.

The slurry pipeline network will reduce the cost of freight. Pellet Manufactures Association of India has suggested few locations for transportation of iron ore by slurry pipelines, feasibility of which would be examined by the project proponent. Further, railways has shown interest in jointly setting up slurry pipelines with steel industry. In this connection as a first step NMDC & Railways are examining the technical feasibility of setting up a slurry pipeline using Railways land from Nagarnar to Vishakhapatnam.

Ministry of Railways has agreed to give right of way for slurry pipe lines. The relevant clearances have been accorded by Indian Railways vide Circular No. 97/ LML/24/3, dated 23rd November 2016 (Appendix 4).
6. Potential areas of domestic consumption

6.1 In 2015, India was the only large economy in the world where steel demand continued to demonstrate positive growth at 5.3%, as against negative growth in China -5.4%, and Japan -7.0%.

6.2 Notwithstanding the current challenges, Indian steel industry still has significant potential for growth, underscored by the fact that the per capita steel consumption in the country at 61 kg (incl. rural consumption at 10 kg) is much lower than the global average of 208 kg. Going forward, the accelerated spend in infrastructure sector, expansion of railways network, development of domestic shipbuilding industry, opening up of defense sector for private participation, anticipated growth in automobile and capital goods industry and the construction in urban & rural areas, are expected to create significant demand for steel in the country.

6.3 Creation of steel demand in the country is one of the major tasks to be undertaken. To drive steel demand, Ministry has identified construction and manufacturing sectors like Rural development, Urban infrastructure, Roads & Highways, Railways etc. to be the key focus areas and will take necessary steps to achieve the same through following:

6.3.1 Steel structures are highly cost effective and have shorter lead time for erection and have greater durability with high design comfort. Hence usage of steel needs to be encouraged in all buildings and structures. Efforts will be made to emphasize the lower lifecycle costing while evaluating projects rather than looking at just the upfront cost in isolation, which would encourage greater usage of steel in Government as well as the private sector.

6.3.2 The Government has chalked out an extremely ambitious plan of Housing for all by 2022 as well as schemes such as Pradhan Mantri Awas Yojna, Saansad Adarsh Gram Yojna etc. These provide a huge opportunity for use of steel intensive structures and designs, usage of pre-fabricated and precast steel structures, etc. Hence, Ministry will take all necessary measures to promote the increased usage of steel intensive structures/designs under these schemes.

6.3.3 Commercial, residential buildings and flyovers also provides immense opportunities. Necessary efforts will be made in conjunction with Ministry of Road, Transport & Highways to evaluate the replacement benefits of the existing bridges, pavements and crash barriers used in Roads & Highways and consider for projects in steel bridges, steel reinforced pavements and steel crash barriers respectively.

6.3.4 Usage of steel in railways is limited to laying of railway tracks, rolling stocks, wagons, platforms and coaches. Efforts will be made to increase the steel usage in making railway station, foot over bridges, rail coaches, construction of steel based railway colony buildings especially in seismic prone areas, construction of dedicated freight corridors & superfast rail corridors and construction of more steel bridges for saving time & capital expenditure.

6.3.5 The “Make in India” initiative is expected to witness significant investments in Construction, Infrastructure, Automobile, Shipbuilding and Power sectors, which will stimulate steel demand. Hence, efforts will be made to pass on such benefit to the domestic steel producers. Use of cost efficient and competitive ‘Indian Made steel’ will pave the way for infrastructure development and construction activities in the country.

Current and estimated sector wise steel demand in India is also given in Appendix 5.
7. Present Structure of Duties

7.1 Import Duties on Finished Products
The Ministry of Finance in June 2015 and August, 2015 hiked the import duty on key steel products by 2.5% each, as had been requested by the Ministry of Steel in view of increasing import from China. Current import duty (Basic Customs Duty) as applicable on steel products is mentioned in Table 1.

Table 1: Steel Products Import Duty

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<th>Description of goods</th>
<th>Rate of Import duty</th>
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</thead>
<tbody>
<tr>
<td>Non-Alloy flat rolled products of Steel</td>
<td>12.5%</td>
</tr>
<tr>
<td>Flat rolled products some specified alloy steel products</td>
<td>12.5%</td>
</tr>
<tr>
<td>Semi-Finished Steel</td>
<td>10%</td>
</tr>
<tr>
<td>Ingots</td>
<td></td>
</tr>
<tr>
<td>Stainless steel long products</td>
<td></td>
</tr>
<tr>
<td>Alloy steel long products</td>
<td></td>
</tr>
<tr>
<td>Alloy steel flat products</td>
<td></td>
</tr>
<tr>
<td>Non-alloy long products</td>
<td></td>
</tr>
<tr>
<td>Specified Hot rolled coils (Non-Alloy flat product) for use in manufacture of welded tubes and pipes (Reduced in Union Budget 2017)</td>
<td>7.5%</td>
</tr>
<tr>
<td>Stainless steel flat products</td>
<td></td>
</tr>
</tbody>
</table>

To support their domestic steel industries from the onslaught of imports, several countries have erected trade barriers. The Government of India, realizing the need for supporting the domestic steel industry, has also implemented certain measures towards this end as mentioned Appendix 6.

7.2 Import Duties on Raw Materials

Table 2: Import Duties on Raw Materials

<table>
<thead>
<tr>
<th>Raw Materials</th>
<th>Import Duty / Cess</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coking Coal</td>
<td>2.5%</td>
</tr>
<tr>
<td>Clean Environment Cess on Coking Coal</td>
<td>Rs. 400/ t</td>
</tr>
<tr>
<td>Non-Coking Coal</td>
<td>2.5%</td>
</tr>
<tr>
<td>Iron Ore</td>
<td>2.5%</td>
</tr>
<tr>
<td>Limestone</td>
<td>2.5%</td>
</tr>
<tr>
<td>Nickel</td>
<td>Nil</td>
</tr>
<tr>
<td>Ferro Nickel</td>
<td>2.5%</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>2.5%</td>
</tr>
<tr>
<td>Stainless Steel Scrap</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

Source: CBEC Notifications, as on 1st June, 2017

7.3 Export Duties on Raw Materials

Table 3: Export Duties on Raw Materials

<table>
<thead>
<tr>
<th>Raw Materials</th>
<th>Export Duty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Ore</td>
<td>30% (on &gt;58% Fe Iron Ore)</td>
</tr>
<tr>
<td></td>
<td>NIL (on &lt;58% Fe Iron Ore)</td>
</tr>
</tbody>
</table>

Source: CBEC Notifications, as on 1st June, 2017

Dhola Sadiya, longest river bridge, built using Indian Steel inaugurated by Shri Narendra Modi, Prime Minister of India
8. Guidelines for inclusion of relevant clauses in the tender documents

Template for inclusion of the policy provision regarding preference to domestically manufactured iron and steel products in the procurement tenders by Ministries/Departments

1. Purchaser undertakes to provide preference to domestically manufactured iron and steel products in terms of the Government of India policy for providing preference to domestically manufactured Iron & Steel products in Government procurement vide Government of India Notification No. G.S.R. 451(E) dated 08th May, 2017 and guidelines issued thereunder. Purchase preference for domestic manufacturers, self-certification and compliance and monitoring shall be as per the aforesaid Policy/Guidelines/Notifications, which Policy/Guidelines/Notifications shall apply mutatis mutandis to the bidding process. The Guidelines/Notifications shall be treated as an integral part of the bidding process.

2. The policy mandates to provide preference to Domestically Manufactured Iron & Steel Products (DMI&SPs) in Government Procurement. The policy is applicable on all government tenders where price bid is yet to be opened. It provides a minimum value addition of 15% in notified steel products which are covered under preferential procurement.

3. The modalities through which the preference for DMI&SPs shall be operated are as follows:-
   a. The iron and steel products for which preference will be provided to domestic manufacturers shall be as per the list mentioned in Appendix A of the policy.
   b. Percentage of domestic value addition which qualifies the iron and steel product/to be domestically manufactured shall be Y% for the year 20__
   c. The preference to DMI&SP shall be subject to meeting technical specifications.

4. Domestic manufacturers are required to indicate the domestic value addition, in terms of the aforesaid guidelines, in their bid in the following format:

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item Description</th>
<th>Manufacturer/ Supplier</th>
<th>Country of Origin</th>
<th>Value</th>
<th>Domestic Value Addition in percentage</th>
</tr>
</thead>
</table>

5. Bidders, claiming to bid in the status of domestic manufacturer, are required to give an undertaking in the format as given as Form 1 of the policy. Furnishing of false information on this account shall attract penal provisions as per Guidelines/Notification.

6. Procedure for procurement by Government and Government Agencies:
   6.1 The procuring/ Government agencies shall follow standard procurement procedures, in accordance with instructions of Ministry of Finance and CVC while providing preference to DMI&SP. The policy shall come into effect from the date of its notification in all tenders where price bid have not been opened.

6.2 The tender document should explicitly outline the qualification criteria for adherence to minimum prescribed domestic value addition by the bidder (as indicated in Appendix-A of the Policy for Providing Preference to Domestically Manufactured Iron & Steel Products), provided there is procurement of iron & steel products having estimated value of INR 50 Crores or more, forming part of the steel intensive project or overall project.

6.3 The bidders who are sole selling agents / authorized distributors /authorized dealers /authorized supply houses of the domestic manufacturers of iron & steel products are eligible to bid on behalf of the domestic manufacturers under the policy. However, this shall be subject to the following conditions:
   a. The bidder shall furnish the authorization certificate issued by the domestic manufacturer for selling domestically manufactured iron & steel products.
   b. The bidder shall furnish the Affidavit of self-certification issued by the domestic manufacturer to the procuring agency declaring that the iron & steel products is domestically manufactured in terms of the domestic value addition prescribed.
   c. It shall be the responsibility of the bidder to furnish other requisite documents required to be issued by the domestic manufacturer to the procuring agency as per the policy.
Appendix 1:
The National Steel Policy 2017
(Gazette notification G.S.R. 452(E) dated 8th May, 2017)
NATIONAL STEEL POLICY 2017

1. Introduction

1.1. Steel is a product of large and technologically complex industry having strong forward and backward linkages in terms of material flows and income generation. It is also one of the most important products of the modern world and of strategic importance to any industrial nation. From construction, industrial machinery to consumer products, steel finds its way into a wide variety of applications. It is also an industry with diverse technologies based on the nature and extent of raw materials used. In India, steel has an output multiplier effect of nearly 1.4X on GDP and employment multiplier factor of 6.8X.

1.2. A vibrant Steel industry has historically been the foundation of a nation’s rapid Industrial Development. On account of rapid industrial development, from a small capacity of 22 MT in FY 1991-92 prior to deregulation, India has become the 3rd largest steel producer in the world with a production of 90 MT and a capacity of 122 MT in FY 2015-16. Today, the Indian steel industry contributes approximately 2% to the country’s GDP and employs about 5 lakh people directly and about 20 lakh people indirectly. The National Steel Policy 2017 (NSP 2017) is an effort to steer the industry to achieve its full potential, enhance steel production with focus on high end value added steel while being globally competitive.

1.3. The National Steel Policy 2005 (NSP 2005) sought to indicate ways and means of consolidating the gains flowing out of the then economic order and charted out a road map for sustained and efficient growth of the Indian steel industry. However, the unfolded developments in India as also worldwide, both on the demand and supply sides of the steel market, have warranted a relook at the different elements of the NSP 2005.

1.4. India’s competitive advantage in steel production is driven, to a large extent, from the indigenous availability of high grade iron ore and non-coking coal – the two critical inputs of steel production. In addition, it also has a vast and rapidly growing market for steel, strong MSME sector and a relatively young work force with competitive labour costs.

1.5. Driven by the positive demand outlook and prevailing high prices of steel in the period post 2004, the Indian steel sector witnessed a wave of investments in the states of Odisha, Jharkhand, Karnataka and Chhattisgarh. Substantial new capacity was created and existing plants were modernized. A significant portion of these investments were funded by banks and other forms of borrowings.

1.6. India became the 3rd largest producer of steel in 2015 and is now well on track to emerge as the 2nd largest producer after China. There is significant potential for growth given the low per capita steel consumption of 61 Kg in India, as compared to world average of 208 Kg. Indian economy is rapidly growing with enormous focus on infrastructure and construction sector. Several initiatives mainly, affordable housing, expansion of railway networks, development of domestic shipbuilding industry, opening up of defence sector for private participation, and the anticipated growth in the automobile sector, are expected to create significant demand for steel in the country. Further, while the main focus of the industry is on the domestic market, being in close vicinity of the developed west and developing east, provides it a strategic location that augurs well for the industry seeking opportunities for exports of finished goods and imports of some scarce raw materials.

1.7. The Indian steel industry is structured in between three broad categories based on route wise production viz. BF-BOF, EAF and IF. BF-BOF route producers have large integrated steel making facilities which utilize iron ore and coking coal for production of steel. Unlike other large steel producers, the Indian steel industry is also characterized by the presence of a large number of small steel producers who utilize sponge iron, melting scrap and non-coking coal (EAF/IF route) for steelmaking. As on March 2016, there were 308 sponge iron producers that use iron ore/ pellets and non-coking coal/gas providing feedstock for steel production; 47 electric arc furnaces & 1128 induction furnaces that use sponge iron and/or melting scrap to produce semi-finished steel and 1392 re-rollers that rolls out semi-finished steel into finished steel products for consumer end use.

As per the MECON Estimates
1.8. Over the past two decades, the Indian steel industry has developed capabilities of producing a wide range of value added steel at par with global best practices addressing diverse needs of the end user industries. However, India still needs to make a special effort to domestically produce number of value added products like automotive steel for high end applications, electrical steel (CRGO), special steel and alloys for Power equipment, Aerospace, Defense and Nuclear applications.

1.9. However, the Indian steel sector is disadvantaged due to limited availability of some of the essential raw material such as high grade lumpy Manganese ore & Chromite, coking coal, steel grade limestone, refractory raw material, Nickel, Ferrous Scrap etc. Due to shortage of domestic coking coal, both in terms of quantity and quality, pig iron producers/ BF operators in India have to significantly depend on import of coking coal.

1.10. In the recent past, multiple issues have also adversely impacted the steel sector, viz. cancellations of iron ore and coal mine allocations, delays in land acquisition, environmental clearances, which led to many of the projects facing significant cost and time overruns. Additionally, companies also faced substantially increased operating costs on account of increased logistics & raw material costs and other charges.

1.11. Post 2011, global prices of steel began to decline, marking the beginning of a downturn in the global steel industry triggered by slowdown in global demand and over capacities in a number of countries including China. By July 2015, prices had fallen by 50% compared to January 2011 - their lowest in decades, as cheap imports flooded world steel markets. This significant structural asymmetry between demand and supply also affected large number of Indian companies leading to surge in imports resulting in weak pricing conditions, low profitability, lower capacity utilization and even closure of capacities in some cases.

1.12. In the new environment, the industry has to be steered with appropriate policy support to ensure that production of steel matches the anticipated pace of growth in consumption. Special emphasis is needed to ensure that the industry follows a sustainable path of development in respect of environmental friendliness, mineral conservation, quality of steel products, use of technology and indigenous R&D efforts to ensure that the country can, over time, reach global efficiency benchmarks to become a world leader in steel production technology, as well as in production of high end steel.

Figure 1: Current steel footprint in India

Source: Ministry of Steel, JPC
2. **NSP 2017–Vision, Mission & Objectives**

   **a) Vision:** To create a technologically advanced and globally competitive steel industry that promotes economic growth.

   **b) Mission:** Provide environment for attaining –
   
   i. Self-sufficiency in steel production by providing policy support & guidance to private manufacturers, MSME steel producers, CPSEs & encourage adequate capacity additions.
   
   ii. Development of globally competitive steel manufacturing capabilities
   
   iii. Cost-efficient production and domestic availability of iron ore, coking coal and natural gas
   
   iv. Facilitate investment in overseas asset acquisitions of raw materials.
   
   v. Enhance domestic steel demand.

   **c) Objectives:** The National Steel Policy aims at achieving the following objectives –

   i. Build a globally competitive industry
   
   ii. Increase per Capita Steel Consumption to 160 Kgs by 2030-31
   
   iii. To domestically meet entire demand of high grade automotive steel, electrical steel, special steels and alloys for strategic applications by 2030-31
   
   iv. Increase domestic availability of washed coking coal so as to reduce import dependence on coking coal from ~85% to ~65% by 2030-31
   
   v. To have a wider presence globally in value added/high grade steel
   
   vi. Encourage industry to be a world leader in energy efficient steel production in an environmentally sustainable manner.
   
   vii. Establish domestic industry as a cost-effective and quality steel producer
   
   viii. Attain global standards in Industrial Safety and Health
   
   ix. To substantially reduce the carbon footprint of the steel industry
3. The current context and the long term perspectives on growth

3.1. The domestic demand backed growth of the Indian economy and consequently the steel consuming sectors has been a key trait of Indian steel industry. The decade before the liberalization of the Indian steel industry in 1991 witnessed growth in crude steel production at a CAGR of 5.2%. Post liberalization, witnessed a decadal CAGR of 6.1% which accelerated to 8.3% during 2000-01 to 2015-16.

3.2. However, today the steel industry in India faces challenging external conditions manifest in slow economic growth and idle steel capacity globally. With weak global economic prospects, the Indian steel industry will have to strongly depend on the growth of domestic consumption for its future.
4. The Policy

NSP 2017 covers the following policy areas –

a. Steel Demand
b. Steel Capacity
c. Raw Materials
d. Land, Water and Power
e. Infrastructure & Logistics
f. Product Quality
g. Technological Efficiency
h. MSME Sector
i. Value Addition in Stainless Steel
j. Value Addition in Alloy & Special Steel
k. Environment Management
l. Safety
m. Trade
n. Financial Risks
o. Role of CPSEs & Way Forward
p. Focus on High-End Research: Steel Research & Technology Mission of India

4.1. Steel Demand

4.1.1. In 2015, India was the only large economy in the world where steel demand continued to demonstrate positive growth at 5.3%, as against negative growth in China -5.4%, and Japan -7.0%. India’s growing urban infrastructure and manufacturing sectors indicate that demand is likely to remain robust in the years ahead. If India is to achieve the goal of being a “developed nation”, the steel industry must play a crucial role as has been the case with all the major developed countries and East Asian countries like Japan, South Korea and China.

4.1.2. Notwithstanding the current challenges, Indian steel industry still has significant potential for growth, underscored by the fact that the per capita steel consumption in the country at 61 kg (incl. rural consumption at 10 kg) is much lower than the global average of 208 kg. Going forward, the accelerated spend in infrastructure sector, expansion of railways network, development of domestic shipbuilding
industry, opening up of defence sector for private participation, anticipated growth in automobile and capital goods industry and the construction in urban & rural areas, are expected to create significant demand for steel in the country.

4.1.3. Growth in steel consumption in a country is typically linked to the economic growth and steel intensity. While growth in GDP is a crucial determinant of growth in overall consumption, steel intensity is the definitive parameter for an economy and determines the growth rate of steel demand vis-à-vis consumption over time.

4.1.4. It is expected that at the current rate of GDP growth, the steel demand will grow threefold in next 15 years to reach a demand of 230 MT by 2030-31 as illustrated in Annexure I. However, even with this demand of finished steel by 2030-31, India’s per capita consumption would reach only to 158 Kgs, lower than the current global average of 208 kg (Annexure II).

4.1.5. Creation of steel demand in the country is one of the major tasks to be undertaken in this direction. To drive steel demand, Ministry has identified construction and manufacturing sectors like Rural development, Urban infrastructure, Roads & Highways, Railways etc. to be the key focus areas and will take necessary steps to achieve the same through following –

4.1.5.1. Steel structures are highly cost effective and have shorter lead time for erection and have greater durability with high design comfort. Hence usage of steel needs to be encouraged in all buildings and structures. Efforts will be made to emphasize the lower lifecycle costing while evaluating projects rather than looking at just the upfront cost in isolation, which would encourage greater usage of steel in Government as well as the private sector.

4.1.5.2. The Government has chalked out an extremely ambitious plan of Housing for all by 2022 as well as schemes such as Pradhan Mantri Awas Yojna, Saansad Adarsh Gram Yojna etc. These provide a huge opportunity for use of steel intensive structures and designs, usage of pre-fabricated and precast steel structures, etc. Hence, Ministry will take all necessary measures to promote the increased usage of steel intensive structures/designs under these schemes.

4.1.5.3. Commercial, Residential buildings and flyovers also provides immense opportunities. Necessary efforts will be made in conjunction with Ministry of Road, Transport & Highways to evaluate the replacement benefits of the existing bridges, pavements and crash barriers used in Roads & Highways and consider for projects in steel bridges, steel reinforced pavements and steel crash barriers respectively.

4.1.5.4. Usage of steel in railways is limited to laying of railway tracks, rolling stocks, wagons, platforms and coaches. Efforts will be made to increase the steel usage in making railway stations, foot over bridges, rail coaches, construction of steel based railway colony buildings especially in seismic prone areas, construction of dedicated freight corridors & superfast rail corridors and construction of more steel bridges for saving time & capital expenditure.

4.1.6. The “Make in India” initiative is expected to witness significant investments in Construction, Infrastructure, Automobile, Shipbuilding and Power sectors, which will stimulate steel demand. Hence, efforts will be made to pass on such benefit to the domestic steel producers. Use of cost efficient and competitive ‘Indian Made steel’ will pave the way for infrastructure development and construction activities in the country.

4.2. Steel Capacity

4.2.1. It is anticipated that a crude steel capacity of 300 MT will be required by 2030-31, based on the demand projections as mentioned above. However, achieving crude steel capacity up to 300 MT will require extensive mobilization of natural resources, finances, manpower and infrastructure including land.

4.2.2. Considering the competitive advantage of steel production in India, the country also has the potential to export sufficient quantities of steel and become a major player in the global market, thus mitigating
the foreign exchange risk emanating out of the exposure of the industry to the global raw materials market especially for coking coal.

4.2.3. BF-BOF route is expected to contribute about 60 - 65% of the crude steel capacity & production with remaining 35 – 40% by EAF & IF route in 2030-31.

4.2.4. Demand for pig iron for merchant use, such as for castings and supplementary metallic in the electric arc or induction furnaces, is projected to increase to 17 MT by 2030-31. Similarly, demand for sponge iron is projected to increase to 80 MT by 2030-31 as illustrated in Annexure I. It is projected that the sponge iron capacity may increase to 114 MT by 2030-31 with around 30% share of gas based capacities under increased environmental considerations and long term availability of gas.

4.2.5. Creation of additional capacity for fulfilling the anticipated demand will require significant capital investment of about Rs. 10 lakh Crore by 2030-31 and will also generate significant employment in the range of 36 Lakhs by 2030-31 from the current level of 25 Lakhs depending on degree of automation resulting from adoption of different technologies.

4.2.6. In order to ensure optimal growth of the industry and to avoid situations of over or under capacity, the Ministry will work with all the stakeholders to monitor investments in the steel industry on a continuous basis and will also facilitate setting up of SPVs in mineral rich states of Odisha, Chhattisgarh, Jharkhand and Karnataka.

4.2.7. Establishment of steel plants along the coast under the aegis of Sagarmala project will be undertaken. Such plants would be based on the idea of importing scarce raw materials and exporting steel products. The Ministry will also promote cluster based approach particularly in MSME steel sector with common infrastructure on consortium approach for optimum land use, easy availability of raw materials and economies of scale.

4.2.8. Necessary policy environment will also be provided to promote gas based steel plants, electric steelmaking, auxiliary fuel injection in blast furnace and other technologies which will bring down usage of coking coal in steel production. Efforts will also be made to facilitate alternate route for steelmaking using indigenous coal with increased focus on improving energy efficiency and reducing GHG emissions.

4.2.9. Induction Furnace route of steelmaking has a number of advantages for India, namely, no requirement of coking coal, lower capital cost and smaller land requirement. This route of steelmaking is however hampered in terms of its refining capabilities. Hence, appropriate efforts will be made to promote development of consistent & cost-effective refining methods in order to produce high quality steel.

4.3. Raw Materials

Availability of raw materials at competitive rates is imperative for the growth of the steel industry. Details of the estimated raw material requirement by 2030-31 for the steel industry have been provided in Annexure III.

4.3.1. Iron Ore

4.3.1.1. The government has already come up with Mines and Minerals (Development and Regulation) Amendment Act, 2015 which gives greater emphasis on time bound mine development and increased stress on mineral exploration and sustainable mining operations. The Act has brought clarity on mine allocation process (through auction) and procedure for mining lease renewal and provides for reservation of any particular mine for a particular end use and put conditions permitting auction among such eligible end users.

4.3.1.2. As and when mining leases expire, suitable efforts will be made in conjunction with Ministry of Mines to facilitate auction of mineral blocks in a regular manner. Ministry will also facilitate to develop robust plans to guide future leases for start of mineral production in time bound manner in order to ensure adequate availability of iron ore.

4.3.1.3. Utilization of low grade fines lying at mine sites of captive iron ore miners

4 Projection of Sponge Iron Capacity represent the mean value based on the premise that 60-65 % of steel production in 2030-31 shall be coming through BF-BOF route and rest through EAF/IF route.
will be promoted and any regulatory changes that may be required will be evaluated in conjunction with concerned ministries. Beneficiation and agglomeration industries would be strengthened through suitable support.

4.3.1.4. Transportation of iron ore fines to pelletisation units will be targeted through slurry pipelines and conveyors as it will reduce pollution and de-congest transportation infrastructure in mining areas. To encourage this environment friendly transportation, Ministry of Steel will pursue timely completion of on-going slurry pipeline projects and their further expansion in the coming years.

4.3.1.5. To ensure long term supply of iron ore, intensive & deeper exploration would be promoted to augment resource base. Eco-friendly viable underground mining technique for optimal utilization of magnetite ore deposits locked in Western Ghats would also be explored in conjunction with mining research institutes.

4.3.1.6. In order to develop a strategic footprint in the global natural resource industry, acquisition of mineral assets overseas will also be facilitated through bilateral talks with the prospective nations. Steel sector players will be encouraged to acquire and develop global projects individually or on partnership basis.

4.3.1.7. Ministry of Steel in conjunction with Ministry of Mines, will facilitate creation of a uniform country-wide sales platform for bringing transparency and predictability in the process of sale of iron ore.

4.3.2. Iron Ore Pellets

4.3.2.1. During mechanized mining, 60 to 70% output is generated as fines below 10 mm size. Fines are also generated during transportation and handling. To economically utilize these fines, suitable agglomeration process is necessary for converting them into sinters or pellets.

4.3.2.2. Till the recent past, domestic steel industry was mainly using higher grades of iron ore and a higher proportion of lumps due to their easy accessibility and availability. However, there is a pressing need to utilize low grade iron ores including slimes and dump fines which are stockpiled at different mine heads.
Hence, optimal use of existing low grade iron ore resources with special emphasis on conservation of high grade ores will be encouraged. As of 2015-16, there exists pelletisation capacity of about 85 MT with a capacity utilization 32.5%. Impetus will be given to Pellet industry as it helps in mineral conservation by acting as direct feedstock in Blast Furnace in place of high grade iron ore.

4.3.3. Coking Coal & Non-Coking Coal

4.3.3.1. About 85% of the coking coal requirement of the domestic steel industry is presently being met through imports. Ministry of Steel will coordinate with Ministry of Coal to increase availability of coking coal through overseas asset acquisition and will also ensure that sufficient number of modern coking coal Washeries get established. Suitable fiscal measures will also be taken to support the rising requirement in the steel sector.

4.3.3.2. Furthermore, deliberations will be held with Ministry of Coal to persuade CIL to create special coal linkage e-auction window for steel players to ensure supply of coal to steel sector. Ministry of Steel will also facilitate periodic auction of coking coal blocks as it will encourage the steel industry to develop its own dedicated coking coal mines.

4.3.3.3. Efforts will also be made to facilitate allocation of indigenous coking coal reserves in the country exclusively to steel sector with no diversion of such coal to any other sector.

4.3.3.4. To ensure long term availability of coking coal, Ministry of Steel in conjunction with Ministry of Coal will facilitate exploration & optimal utilization of deep seated coking coal reserves. Efforts will also be made to expeditiously implement Jharia Action Plan to improve the domestic availability of coking coal.

4.3.3.5. Integrated steel plants will also be pursued to reduce their coking coal consumption at par with global best practices by Resorting to auxiliary
fuel injection technologies like Pulverized Coal Injections (PCI)/ Cold Dust Injection (CDI) or natural gas/ syngas injection along with PCI/ CDI.

4.3.4. Natural Gas

4.3.4.1. Under the Paris Treaty (COP 21), India intends to reduce the emission intensity of its GDP by 33-35% by 2030 from 2005 levels. In order to achieve this target, India needs to find energy efficient resources that are affordable and also available. Natural Gas is one such greener alternatives available.

4.3.4.2. Given the future potential of gas based technology, in terms of up-gradation of coal based DRI capacities in the MSME sector to gas based route, need for captive gas based power plants for the sector and the alternative of injecting natural gas in blast furnace to reduce dependence on imported metallurgical coal (both coking and PCI), ensuring firm supply of natural gas is imperative to boost the confidence and investment in the gas based steelmaking technology.

4.3.4.3. In case of gas based steel plants which have been stranded due to lack of supply of natural gas from domestic sources, options will be evaluated in coordination with Ministry of Petroleum and Natural Gas for restoration of domestic gas supply to steel sector. Efforts will also be made to remove the cascading effect of anomalies in the tax structure.

4.3.4.4. To ensure long term availability of natural gas, Ministry of Petroleum & Natural Gas will be approached to explore new reserves of natural gas. The technology of coal gasification to produce syngas for subsequent usage in DRI plants would also be encouraged.

4.3.5. Limestone, Manganese Ore and Chromite Ore

4.3.5.1. Ministry will suitably facilitate the increased exploration efforts to raise resources of limestone, manganese and chromite ore in the country. In the case of steel grade limestone, high grade low phosphorus manganese ore and high grade chromite lumpy ore, the steel industry is likely to remain dependent on imports. Suitable measures will be taken to encourage imports of these materials since they are available in limited quantities. Ministry will also facilitate in exploring the possibility of optimally utilizing the high grade limestone available in Himachal Pradesh and Rajasthan in an environmentally sustainable manner. The industry will also be encouraged to acquire such assets globally to maintain a steady supply of these materials to the growing industry. Necessary efforts will be made for greater exploration of manganese and chromite ore.

4.3.6. Ferro-Alloys

4.3.6.1. Ferro-alloy is a power intensive industry. Hence, captive power generation in the ferro-alloys plants will be extensively supported. Since the demand for ferro-alloys is likely to grow along with steel production in the country, the industry may be encouraged to set up larger units to achieve adequate economies of scale. Efforts will be made to provide necessary raw materials linkages and stable supply of power to grow Ferro-alloys units on priority.

4.3.7. Refractory Raw Material

4.3.7.1. India is not endowed with high quality reserves of key refractory raw materials viz. bauxite (refractory grade) and magnesite and is largely dependent on imports. Suitable measures and procedural simplifications will be done to support the rising requirement of refractories in the steel sector.

4.3.7.2. Geologically, fire clay, an important raw material for making refractories, exists concurrently with coal deposits. However, there have been difficulties in full utilization of the domestic resources found alongside coal deposits. The potential of fire clay extraction will be examined in order to raise supplies of the same to the domestic industries.
### 4.3.8. Nickel

4.3.8.1. Nickel has been under constant demand from the ferro-alloys and alloy / stainless steel industry. Nickel is practically unavailable in the country and the entire quantity of unwrought and other forms of the nickel needs to be imported. Hence, the industry may be encouraged to acquire such assets globally to maintain a steady supply to the industry. Simultaneously, R&D will be pursued to extract Nickel from the lateritic ore overburden available in Sukinda Valley, Orissa.

### 4.3.9. Ferrous Scrap

4.3.9.1. In order to promote use of scrap based steelmaking technologies inter-alia to reduce GHG emission intensity in the country, actions will be initiated to increase availability of ferrous scrap. Options will also be evaluated in coordination with other concerned ministries to develop a scrap segregation (quality-wise), collection, processing and recycling policy.

4.3.9.2. In order to ensure availability of sufficient quantities of good quality scrap, establishment of an organized and environment friendly steel scrap processing units within the country will be facilitated by promoting modern steel shredding plants.

4.3.9.3. In order to promote increased use of scrap based steel-making in the country, efforts will be made in coordination with Ministry of Power to ensure availability of electricity to the sector.

### 4.4. Land, Water & Power

4.4.1. The growth plans of the Indian steel industry have also been hindered by difficulties in land acquisition. Many projects have stuck due to delays in acquisition of adequate land at the preferred locations due to policy and procedural issues. In order to reach crude steel capacity of about 300 MT, additional land requirement is estimated to be ~91,000 acres considering green field expansion. To help in early implementation of projects, Ministry will coordinate with respective State Governments to ensure timely availability of litigation-free lands to the industries.

4.4.2. The formation of steel clusters (especially for MSME steel units), service centers and steel processing centers will be facilitated. Creation of related common infrastructure on partnership basis will be promoted to optimize land use. Small and medium steel enterprises, including FDI projects, will be encouraged to be set up in industrial corridors and in clusters under PPP (Public Private Partnership) to ease land acquisition.

4.4.3. It has been observed that the water allocation for steel industry is generally accorded low priority. But it is forecast that by 2030-31, the steel industry will annually require approximately 1500 million cu. meter of water. Keeping this in view, the Ministry will coordinate with respective State governments to allocate water to steel projects on priority basis. Water conservation at all levels will be encouraged and the industry’s efforts will be supported.

4.4.4. Considering the importance of water as a scarce resource, there has been a major thrust by the Government on reduction of discharge from the steel plants which will require innovative solutions and techniques to effectively recycle treated waste water. Hence, the steel industry will be encouraged to pursue plans and strategies to reduce specific water consumption per tonne of steel produced.

4.4.5. Since steel is an energy intensive industry, Ministry will focus on availability of power to steel making facilities. The power required by the industry is estimated to increase to 27,717 MW by 2030-31. Post de-allocation of coal blocks, various units in steel sector, especially the sponge iron plants, have been procuring power at high cost. Ministry of Steel will deliberate with Ministry of Power to make power available to such units through open access.

4.4.6. Ministry of Steel will facilitate the use of waste heat recovery in Steel plants in consultation with other ministries. Efforts will also be made to facilitate usage of captive power for MSME sector and remove the cascading effect of anomalies in the tax structure.

4.4.7. In view of impending growth scenario in steel sector, Ministry of Steel will facilitate mechanism of Special Purpose Vehicles (SPVs) for Greenfield capacity additions.
Steel SPV would acquire the land, get the necessary statutory approvals, water linkage and iron ore linkage and develop the minimum necessary infrastructure for setting up of steel plants. The Steel SPV would thereafter be put to open bidding in a transparent manner for setting up of the steel plant by interested parties. Similarly, the mining SPV will provide long term iron ore linkage to the Steel SPV.

4.5. Infrastructure & Logistics

4.5.1. Since bulk of the capacity additions are likely to come up in the three eastern states of Odisha, Chhattisgarh and Jharkhand, Ministry of Steel will pursue for the adequate and timely infrastructure growth in these regions to address the increased industry requirement in areas such as railways, roadways, power generation and distribution etc.

4.5.2. With the increase in steel demand and production, the requirement of adequate infrastructure will further increase. Government will need to invest heavily in development of evacuation infrastructure to minimize turn-around-time as well as to build the necessary linkages to reduce the length of haulage.

4.5.3. With plans to have large number of blast furnaces in future, the use of pellets shall also increase, requiring grinding of ores/ fines to ultra-fine size, hence increased investment in slurry pipelines. This will be encouraged through suitable policy support from the government.

4.5.4. Alternative modes for transportation of raw materials such as slurry pipelines and conveyors will go a long way in reducing the problems of pollution and congested transportation network in the mining areas. To encourage environment friendly transportation of raw material, efforts will be made to accord all the benefits available to the infrastructure industries, to slurry pipelines also.

4.5.5. Transportation of raw materials and finished goods through inland waterways and coastal shipping will also be promoted. Necessary efforts will be made in conjunction with Inland Waterways Authority of India along with other concerned ministries to facilitate
debottlenecking of inland waterways transportation through dredging, modernization of jetties, simplifying the approval process for environmental clearances & coastal regulation zone (CRZ) clearances, improved connectivity with road through dedicated corridors and rail etc.

4.5.6. To encourage export opportunities and be competitive, the Government of India is contemplating port-led development of steel clusters under the aegis of Sagarmala program. Establishment of coast based steel plants will suitably be undertaken in conjunction with Ministry of Shipping.

4.5.7. Given the expected growth in demand in steel production and the corresponding requirement for raw materials, the port infrastructure in the country, especially at coking coal importing ports needs to be significantly strengthened. Such ports will be identified in conjunction with the steel industry and would be taken up with Ministry of Shipping to ensure uninterrupted supply of coking coal to steel industry.

4.6. Product Quality

4.6.1. Bureau of Indian Standards (BIS), has formulated a large number of Indian Standards for most of the iron and steel products produced in the country. Actual implementation of these standards by the industry is however limited, resulting in large scale production, imports and use of sub-standard material, putting infrastructure and public safety at risk.

4.6.2. Quality Control Order: Adoption of the standards by producers and users will be facilitated and mandatory quality certification will be ensured. Recently the Steel and Steel Products (Quality Control) Order and Stainless Steel (Quality Control) Order that mandates Bureau of Indian Standards certification for certain products was introduced. The implementation of this order will be closely monitored in conjunction with Bureau of Indian Standards. Thirty Three (33) steel products have already been notified under the mandatory quality certification mark scheme of BIS. Efforts will be made to bring in additional steel products, which are used in critical end-use applications, under the mandatory scheme to ensure protection of human health, environment, and safety.

4.6.3. MSME sector units, particularly the small re-rolling mills and Induction Furnace Units lack in-house quality testing facilities. Quality testing facilities would be set up in steel hubs and already established facilities would be further strengthened to cater to possible rise in demand.

4.6.4. Apart from the adherence to conditions under Steel and Steel Products (Quality Control) Order, Ministry of Steel is also facilitating the production of quality steel, particularly in MSME sector by carrying out R&D and technological interventions and providing financial assistance. More steps in this direction will be encouraged.

4.7. Technological Efficiency

4.7.1. Though the choice of technology will be determined by entrepreneurs based on techno-economic considerations, Ministry of Steel would encourage adoption of technologies, which:

4.7.1.1. Are conducive to effective & efficient utilization of domestic resources with minimum damage to environment and production of high-end and special steel required for sophisticated industrial and scientific applications.

4.7.1.2. Minimize environmental damage at various stages of steel making.

4.7.1.3. Optimize resource utilization and facilitate modernization of the steel industry so as to achieve global standards of productivity and efficiency.

4.7.1.4. Led to the development of front end and strategic steel based materials.

4.7.2. Improving the techno-economic performance of steel units is crucial to improving competitiveness of the industry. Details of the estimated techno-economic performance parameters by 2030-31 for the steel industry have been provided in Annexure IV. Ministry of Steel, in association with suitable agency, will constantly monitor techno-economic performance of all the steel plants within the country vis-à-vis the global best practices. Furthermore, increased use of prepared burden in charge mix and greater use of PCI in blast furnaces will also be promoted.
4.7.3. Steel companies will be encouraged to have strategic joint ventures for production and development of technologically more advanced products. Transfer of technology for production of automotive steel and other special steels including Product Development/ Acquisition of Technology for Boiler Quality Plates and Alloy Steel Tube Material, Electrical Steel will be facilitated.

4.7.4. Ministry will encourage the research institutes within the country to develop less resource intensive and less energy intensive steelmaking technologies as well as new products.

4.8. MSME Steel Sector

4.8.1. India over the years has developed a strong MSME sector (comprising of DRI-EAF/IF route based steel producers and rolling mills) which is unique to India. It embodies the entrepreneurial and innovative strengths of Indian steel industry which turned the unavailability of coking coal – a key input for BF-BOF route into an opportunity.

4.8.2. However, there exists large variations amongst various units in terms of scale of operations, product-mix and technology. The MSME sector, including sponge iron industry, plays an important role in providing employment, meeting demand of some special products required in small volumes and local demand of steel in hinterlands. Apart from this, the sector is also highly export oriented which helps in earning foreign exchange for the country.

4.8.3. Various measures as mentioned below will be taken to improve the performance of MSME steel sector and sponge iron industry-

4.8.3.1. Availability of raw materials will be ensured by facilitating auction of non-coking coal exclusively for steel/ sponge iron sector and increasing the iron ore availability in the domestic market.

4.8.3.2. Adoption of energy efficient technologies in the MSME steel sector will be encouraged to improve the overall productivity & reduce energy intensity.

4.8.3.3. Small and medium iron and steel making units will be encouraged to be set up in the proposed industrial corridors and clusters for optimal utilization of land and reach economies of scale.
4.9. Value addition in Stainless Steel

4.9.1. Though India is 3rd largest producer of steel globally, it is still a net importer of stainless steel used in high-end applications. With increased demand of steel and need to build 200 MTPA additional capacity by 2030-31, considerable capacity addition of stainless will also be required. Like most segments of the Indian steel sector, stainless steel industry has also been facing difficulty over the last 3-4 years. Today, the domestic stainless steel industry has a low capacity utilization of around 50% due to the surge in low priced imports and fall in prices. Hence, necessary efforts will be made to protect the existing & upcoming stainless steel facilities from unfair trade practices through suitable trade remedial measures.

4.9.2. Besides price consideration, import of stainless steel takes place on quality considerations. Country is dependent on import of most of the super duplex, super austenitic and high alloyed varieties of stainless steel for stringent end use applications. Ministry will encourage steel producers to have strategic ventures in production and development of technologically more complex products including high end varieties of stainless steel.

4.9.3. To counter threats from competing materials, promotion of stainless steel through mass campaigns, particularly in rural areas will be encouraged. Greater use of stainless steel in residential or commercial constructions in coastal and earthquake prone areas of the country will also be promoted. Use of high quality stainless steel in drinking water pipelines, water storage, packaging of food grains etc. will be promoted to prevent intake of hazardous impurities.
4.10. Value addition in Alloy & Special Steel

4.10.1. While large varieties of value added steel products are now being produced indigenously but the country is still dependent on import of several high performance & value added steel products like electrical steel, automotive grade steel and steels for specialized use in defence, space and nuclear applications.

4.10.2. With better demand prospects and mega expansion plans in the pipeline, there is a need to sharpen the focus on alloy & special steels as it guarantees better premium to both steel makers and consumers. These products are mainly finished steel and are termed so depending on their treatment or their end use in automobile and consumer durable sectors. Hence, necessary efforts will be made to collaborate with foreign players for technical and strategic cooperation for this purpose.

4.10.3. For the past couple of years, demand for alloy & special steel, or value-added steel, with superior quality to meet stringent application norms of various market segments, has been growing. Future growth of Indian steel makers will also be driven by these value-added products. Production of these premium grade products will not only help them improve realizations but will also add to the topline growth of steelmakers. Hence, Ministry will encourage steel producers to have strategic ventures in production and development of these technologically more complex products including high end varieties of alloy steel and electrical steel.

4.11. Environment Management

4.11.1. While steel companies are themselves addressing the energy & environment issues in the plants through technological upgradation/ modernisation, and/or diffusion of energy efficient & environment friendly technologies in the plants, Ministry will facilitate improvement in the energy & environment scenario of steel plants through various forums/ mechanisms.

4.11.2. Ministry will facilitate the formation of a forum to chalk out best practices and promote policies and programs that encourage and expedite the transition to a clean energy economy. Apart from the adherence to these stringent energy efficiency parameters, steel companies will also be encouraged to adopt best available technologies & practices to provide clean & green environment.

4.11.3. Energy & Environment management is an on-going process and is directly related to the technologies adopted by the iron & steel plants. So far, Ministry has successfully implemented certain mechanisms such as NEDO model projects in CPSEs and UNDP-AUSAID-MOS steel project in steel re-rolling mills to facilitate improvement in energy efficiency. Efforts will further be made to scale up these mechanisms with enlarged coverage in steel re-rolling mills and induction furnace units.

4.11.4. Considering all waste materials as an economic asset, Ministry will encourage the steel companies to develop a Waste Management Plan for additional impetus on zero-waste or complete waste recycling. Concrete efforts will further be made by Ministry to promote use of iron & steel slag in alternate uses like road making, rail ballast, construction material, soil conditioner etc. Simultaneously, steel plants will be pursued to set up SMS slag weathering/ steam ageing plants to enable them to supply processed/ sized SMS slag for road making, rail ballast etc.

4.11.5. Ministry of Steel will also facilitate the formulation and adoption of standards at par with global best practices with regard to particulate matter emissions, SOx & NOx, water consumption and zero or near zero liquid discharge.

4.11.6. India has recently signed Paris Declaration (COP 21) under which intends to reduce the emission intensity of its GDP by 33-35% by 2030 from 2005 levels. Towards this end, Ministry of Steel has already submitted the Intended Nationally Determined Contributions (INDC) for reducing GHG emissions in iron & steel sector which inter-alia projects CO₂ emission of 2.2 – 2.4 tonnes per tonne of crude steel in BF-BOF route and 2.6 – 2.7 tonnes per tonne of crude steel in DRI-EAF route by the terminal year of 2030. Ministry will find ways and means in consultations with industry to achieve aforesaid standards at par with the global best practices to the extent possible.

4.11.7. Capacity additions through coal based routes will have far reaching implications
for India in terms of environmental degradation. Hence, necessary efforts will be made to have a judicious mix of production routes to reduce the carbon footprint of steel sector in line with the INDC targets.

4.12. Safety

4.12.1. Ministry of Steel will continuously monitor the safety performance of all its steel companies including those in private sector through periodic reviews. Necessary efforts will be made to encourage the development of clearly defined safety standards and goals to become a zero accident workplace.

4.12.2. Ministry of Steel will coordinate with steel companies to ensure that on the job trainings on maintaining a safe workplace are provided to employees of the steel companies. Small sized units which cannot afford to conduct such trainings on their own will be facilitated by Steel Research and Technology Mission of India (SRTMI) for organizing the same.

4.13. Trade

4.13.1. India was a net exporter of steel in 2013-14. However, due to global downturn in steel demand and excess capacities in major steelmaking countries such as China and Japan, India witnessed a significant surge in imports in 2014-15, which continued in 2015-16 as well. Production, consumption, imports and exports of finished steel since 2013-14 are provided in Annexure V.

4.13.2. Given the cyclical nature of steel industry, there would be situations of unfair trade practices in the future also. To prevent occurrence of the same, Government will continue to be vigilant and will intervene in the market as and when required with suitable trade remedial measures in line with WTO guidelines and/or India’s Foreign Trade Policy to protect the interests of the domestic producers.

4.13.3. Steel industry will be encouraged to be competitive and to develop a global presence, not just in base grades of steel, but also in high quality steel, which are currently produced by selected few international steel companies. Ministry of Steel will also deliberate with Ministry of Commerce to ensure that export production is zero rated with regard to various central & state taxes and levies.

4.13.4. In addition, certain trade restrictions have been imposed on Indian steel products by other countries. Hence, domestic steel industry will be encouraged to convey their grievances during trade remedial proceedings with those countries.

4.13.5. Considering the importance of information in today’s world, the existing institutions such as Joint Plant Committee (JPC) and the Economic Research Unit (ERU) will be further strengthened to meet the requirement of industry and market information related to steel and its raw materials. Continuous strategic research in the steel and related areas, constant tracking of developments in global trade, global investment in the steel industry, emerging technologies in steel & its related areas and data on new mining assets in iron ore, coal, etc. in foreign countries will also be supported. Continuous research on international and domestic steel demand will also be encouraged and risks of investments in foreign countries in steel and related industries will be continuously assessed.


4.14.1. Given the enormity of requirement of financial resources to add the required steel capacity and the current conditions of steel industry, mobilizing adequate capital for the industry will be a challenging task in future. Hence, the steel industry will be encouraged to reduce capital costs and remain innovative in developing appropriate structure of the capital to minimize debt and service equity.

4.14.2. Ministry of Steel will also make necessary efforts to identify bad debts in the steel sector. Such companies will be encouraged to lower their Debt/EBITDA ratio by adopting appropriate debt restructuring in consultation with banks as per the RBI guidelines.

4.15. Role of CPSEs and Way Forward

4.15.1. The Companies Act, 2013 was enacted on 29th August 2013 replacing the Companies Act, 1956. In addition, the Ministry of Corporate Affairs has also notified Companies Rules 2014 on Management and Administration (March 2015), Appointment and Qualification of
Directors (January 2015), Meeting of Board and its powers (March 2015) and Accounts (October 2014). The Companies Act 2013 together with the Companies Rules provide a robust framework for corporate governance. These statutory provisions are also applicable to CPSEs.

4.15.2. In the current scenario, steelmaking CPSEs need to not only compete with private integrated steel players and cater to the requirements of the MSME steel sector but are also required to be globally competitive. In order to provide economies of scale, CPSEs will be encouraged to increase focus on their core competencies and divest their non-core assets through mergers and restructuring.

4.15.3. As of now, CPSEs have primarily focused and invested more in brown-field expansion of similar steel capacity with limited value addition in terms of high end product development. Ministry will encourage the CPSEs to develop a policy for future investment, so that impetus could be given for development of value added steel capacity and adoption of latest technologies at par with global best practices.

4.15.4. Besides, the CPSEs will also be encouraged to take leadership role in development of steel industry & the community, adopt a more inclusive business model, increase their CSR spends, invest in R&D for indigenous design & engineering and product development for replacement of import. Further, CPSEs will also be encouraged to take lead in promoting steel usage through developing steel intensive structural designs for roads, railways, bridges, crash barriers etc. with proper technical consultations and setting up of service centers for more customized and de-centralized product delivery.

4.15.5. Further to encourage synergy across similar CPSEs, efforts will be made to ensure appointment of independent directors across similar / independent CPSEs.

4.16. Focus on High-End Research: Steel Research & Technology Mission of India (SRTMI)

4.16.1. In India, substantial R&D in Iron and Steel sector is currently being carried out by the leading steel companies like SAIL, Tata Steel, JSW Steel, etc. who have accomplished some significant work in the areas of raw material beneficiation,
agglomeration and product development. However, in general, major focus of R&D is limited to day to day operations and hence, lacks disruptive innovation.

4.16.2. India’s R&D investment in steel sector is limited not only in absolute terms but also as percentage of turnover which is 0.05 – 0.5% as against 1% in leading steel companies abroad. The Indian steel companies need to evolve a time bound action plan to enhance their R&D expenditure to at least 1% of the turnover.

4.16.3. Efforts will be made through joint collaborative R&D programmes to create manufacturing capabilities for development of process and products in synergy with natural resources of the country with an aim to minimize damage to the environment.

4.16.4. Ministry of Steel has taken full cognizance of the technological scenario in Indian Steel Industry and has initiated a fresh move for preparation of a comprehensive blue print for promotion of R&D in Iron & steel Sector. To bring in all the stakeholders into one platform and promote steel research on themes of critical and vital national importance, an institutional platform called “Steel Research and Technology Mission of India” has been established with an objective to spearhead R&D of national importance in iron & steel, creating state-of-art facilities to conduct cutting-edge research, develop expertise & skill development, manage human resources and bolster a tripartite synergy amongst industry, national R&D laboratories and academic institutes.

4.16.5. In order to boost innovation in the steel sector (future technologies), a time bound action plan will be evolved under the aegis of SRTMI to enhance the R&D expenditure of Indian steel CPSEs. The Ministry through SRTMI will also encourage corporates in steel sector, private and public sector alike, to direct certain sums from their profits towards continuous industry collaborative research. Apart, they would also be encouraged to set up their own steel technology centres and steel sector oriented research and education wings at universities in order to focus on technology based solutions for development of high quality, low cost steel products and to build greater interface between academia, R&D institutions and industry.

4.16.6. Product development is yet another challenge faced by the Indian steel industry which has given rise to import of most of the value added products like automotive steel for high end applications, electrical steel like CRGO & amorphous steel as well as special steel and alloys for the Power Equipment, Aerospace, Defense and Nuclear applications. Production of these value added, front end, and strategic products will be facilitated through acquisition of foreign technology by setting up of joint ventures, or subsidiaries of foreign companies or by indigenous development. Measures will also be taken to ensure development of all such special steel and alloys to minimize import dependence.

4.16.7. Indian steel industry is currently importing technology & critical equipment and systems for steel plants. Hence, necessary efforts will be made under the aegis of SRTMI to raise the level of R&D and acquire best in class manufacturing capabilities to develop all these equipment and systems.

4.16.8. CPSEs will be encouraged to reduce manpower and overhead expenses based on domestic and peer group benchmarking. Besides, the CPSEs will also be encouraged to right size their manpower over time through Superannuation/ Separation/ intakes in conformance with technological advances and suitably exercise the option of Voluntary Retirement Scheme (VRS) to improve labour productivity.

4.16.9. As a part of skill development initiative, the Ministry will coordinate with the technical institutes under its aegis and INSDAG to re-align the education system to attract, facilitate and generate steel domain experts.
5. Power to amend the Policy

5.1. Notwithstanding anything contained in the foregoing paras, the Ministry of Steel, with the approval of Competent Authority, may amend various aspects of this Policy from time to time depending upon the experience gained during implementation, market dynamics, end user interest etc.
Annexure I:
Forecast of iron and steel demand and production by 2030-31

(All values in MT unless otherwise stated)

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Parameters</th>
<th>Projections (2030 – 31)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total crude steel capacity</td>
<td>300</td>
</tr>
<tr>
<td>2</td>
<td>Total crude steel demand/production</td>
<td>255</td>
</tr>
<tr>
<td>3</td>
<td>Total finished steel demand/production</td>
<td>230</td>
</tr>
<tr>
<td>6</td>
<td>Sponge iron demand/production⁵</td>
<td>80</td>
</tr>
<tr>
<td>7</td>
<td>Pig iron demand/production</td>
<td>17</td>
</tr>
<tr>
<td>8</td>
<td>Per Capita Finished Steel Consumption in Kgs</td>
<td>158</td>
</tr>
</tbody>
</table>

Source: Ministry of Steel, INSDAG, MECON

Projections of Pig Iron & Sponge Iron represent the mean value based on the premise that 60-65 % of steel production in 2030-31 shall be coming through BF-BOF route and rest through EAF/IF route.

Assumptions:

i. GDP growth rate assumed at 7.5%⁶ y-o-y
ii. Elasticity of steel demand with GDP = 0.8 till FY 20 and 1.0 from FY 20 onwards
iii. Steelmaking capacity to reach 300 MT by 2030-31

Kalyani - 4160 M³ Blast Furnace, Burnpur

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⁵ DRI made through coal based route : 70% (Balance through gas based route)
⁶ Average GDP growth rate of India was 7.5% during 2010 – 2015 (World Bank)
Annexure II:
Sector wise steel consumption in India in MT
(unless otherwise stated)

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Item</th>
<th>Current demand 2015-16</th>
<th>Projected demand in 2030-31</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Construction &amp; Infrastructure (Projects - Steel, Oil, Highways, Bridges, Airports, Ports, Urban Infrastructure, Water Transportation, Pre-fabricated Buildings, Power Projects including Transmission, Oil &amp; Gas Pipelines Real Estate – Residential &amp; Industrial)</td>
<td>50.5</td>
<td>138</td>
</tr>
<tr>
<td>3</td>
<td>Automotive</td>
<td>8.2</td>
<td>28</td>
</tr>
<tr>
<td>4</td>
<td>Other Transport (Rail lines, Wagons Coaches, Ship Building, Coastal)</td>
<td>2.4</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>Packaging &amp; Others (not included above) (Petroleum, non-petroleum, LPG Gas Cylinders)</td>
<td>2.4</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td><strong>Total Finished Steel Consumption in MT</strong></td>
<td><strong>81.5</strong></td>
<td><strong>230</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Per Capita Finished Steel Consumption in Kgs</strong></td>
<td><strong>61</strong></td>
<td><strong>158</strong></td>
</tr>
</tbody>
</table>

*Source: Ministry of Steel, MECON*
Annexure III:
Forecast of major raw material requirement by 2030-31

(All values in MT unless otherwise stated)

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Raw materials</th>
<th>Projections (2030 – 31)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Iron ore requirement</td>
<td>437</td>
</tr>
<tr>
<td>2</td>
<td>Coking coal requirement</td>
<td>161</td>
</tr>
<tr>
<td>3</td>
<td>Non-coking coal requirement for PCI</td>
<td>31</td>
</tr>
<tr>
<td>4</td>
<td>Non-coking coal requirement for DRI</td>
<td>105</td>
</tr>
<tr>
<td>5</td>
<td>Natural Gas (in MMSCMD7)</td>
<td>20</td>
</tr>
<tr>
<td>6</td>
<td>Manganese ore requirement</td>
<td>11</td>
</tr>
<tr>
<td>7</td>
<td>Chromite ore requirement</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>Limestone &amp; Dolomite requirement</td>
<td>86</td>
</tr>
<tr>
<td>9</td>
<td>Ferro-alloys</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>Refractories</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>Scrap</td>
<td>16</td>
</tr>
</tbody>
</table>

Source: Ministry of Steel, MECON

Projections represent the mean value based on the premise that 60-65 % of steel production in 2030-31 shall be coming through BF-BOF route and rest through EAF/IF route.

Assumptions:

- BF-BOF route: 60-65%; EAF/IF route: 35-40% (2030-31)
- % Scrap in Charge mix of BOF: 15
- DR-EAF charge mix considered: 63% DRI, 35% Hot Metal & 2% Scrap
- DR-IF charge mix considered: 80% DRI & 20% Scrap
- Charge mix in BF considered: 60% Sinter, 25% Pellet & 15% Lump ore
- Charge mix in gas based DR plant considered: 30% Lump ore & 70% Pellet
- Charge mix in Coal based DR plant (50% kilns running on pellet & 50% on lump ore)
- DRI made through coal based route: 70% (Balance through gas based route)
- Skip Coke required in BF: 450 kg/thm
- Avg. PCI Injection in BF considered: 150 kg/thm
- Iron Ore required /t of Hot metal in BF: 1.65 t
- Iron ore required /t of solid charge in DR plant: 1.55 t
- Natural gas required /t of DRI production: 280 SM3

7 Million Metric Standard Cubic Meter Per Day
(Assumed that 100 % DRI through gas based route would be produced using natural gas. In case DRI is produced using other gases such as syngas, coke oven gas, Corex gas, etc., the natural gas demand shall accordingly reduce)
**Annexure IV:**
**Targets for techno-economic performance**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>International Best Practices</th>
<th>Current Value</th>
<th>Target for 2030-31</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coke Rate</td>
<td>Kg/thm</td>
<td>275 - 350</td>
<td>400 - 600</td>
<td>300 – 350</td>
</tr>
<tr>
<td>CDI Rate</td>
<td>Kg/thm</td>
<td>200 – 225</td>
<td>50 – 200</td>
<td>180 - 200</td>
</tr>
<tr>
<td>BF Productivity</td>
<td>tonnes/m³/day</td>
<td>2.5 – 3.5</td>
<td>1.3 – 2.2</td>
<td>2.5 – 3.0</td>
</tr>
<tr>
<td>Specific Energy Consumption</td>
<td>Gcal/tcs</td>
<td>4.5 – 5.0</td>
<td>6.2 – 6.7</td>
<td>5.0 – 5.5</td>
</tr>
</tbody>
</table>

*Source: Ministry of Steel*

Pursuing a clear agenda of growth, the Ministry of Steel has had many firsts to its credit. In the year 2015, India became the third largest producer of steel in the world.
Annexure V:
Production, consumption, imports and exports of finished steel

(in MT)

<table>
<thead>
<tr>
<th>Period</th>
<th>Production for sale</th>
<th>Import</th>
<th>Export</th>
<th>Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr 2016 – Jan 2017</td>
<td>82.9</td>
<td>6.1</td>
<td>5.9</td>
<td>68.9</td>
</tr>
<tr>
<td>2015-16</td>
<td>91</td>
<td>11.7</td>
<td>4.1</td>
<td>81.5</td>
</tr>
<tr>
<td>2014-15</td>
<td>91.5</td>
<td>9.3</td>
<td>5.6</td>
<td>77</td>
</tr>
<tr>
<td>2013-14</td>
<td>87.7</td>
<td>5.5</td>
<td>6</td>
<td>74</td>
</tr>
</tbody>
</table>

Source: Ministry of Steel, JPC

India has become a net exporter of Steel
## Annexure VI: Indian Steel sector – Industry Analysis

<table>
<thead>
<tr>
<th>Suppliers’ power</th>
<th>Threat of new entrants</th>
<th>Buyers’ power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron ore- dependent on NMDC, OMC and Odisha miners</td>
<td>100% FDI in Steel sector</td>
<td>Increasing demand at 5-6% CAGR</td>
</tr>
<tr>
<td>Coking coal/ Natural Gas- dependent on imports</td>
<td>Government facilitating investment</td>
<td>E-Platform – MSTC Metal Mundi launched to facilitate transparent sale of finished &amp; semi-finished steel products</td>
</tr>
<tr>
<td>Thermal Coal- CIL/ SCCL</td>
<td>Very few players have economies of scale</td>
<td>Steel used in automobile &amp; engineering goods market are dominated by private players</td>
</tr>
<tr>
<td>Natural Gas- Government allocation, R-LNG contracts</td>
<td>Easier access to key inputs (Auction)</td>
<td>— Unregulated sector, but Govt. may take trade remedial measures that indirectly influences the domestic retail prices</td>
</tr>
<tr>
<td>Huge dependency on major suppliers</td>
<td>Low brand identity (commodity) and low switching cost</td>
<td>Steel used in construction &amp; Infra sector mainly procured by Govt. entities</td>
</tr>
<tr>
<td>High switching cost for steelmakers</td>
<td>Fewer proprietary products and low chances of retaliation</td>
<td>— Fragmented MSME steel players</td>
</tr>
<tr>
<td>Very few steelmakers have captive mines and are not dependent on the vagaries of the market</td>
<td>High capital costs and entry barriers</td>
<td></td>
</tr>
<tr>
<td>High cost of raw material relative to total purchases in industry</td>
<td>High psychological costs for switching suppliers</td>
<td></td>
</tr>
<tr>
<td>Fragmented coke suppliers</td>
<td>Raw material security &amp; high logistics cost issues</td>
<td></td>
</tr>
<tr>
<td>Low threat of forward integration by major suppliers</td>
<td>Steel sector recognised as stressed by the banks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Time consuming land and environmental approvals</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Highly capital &amp; technology intensive industry</td>
<td></td>
</tr>
</tbody>
</table>

### Industry rivalry

— Industry is divided among few integrated steel manufacturers and fragmented MSME steel players
+ Competition among domestic producers
+ Competition from foreign players, esp. China
+ Disinvestment & capacity expansions by CPSEs

### Threat of substitutes

+ Limited substitutes- Aluminium, plastic and carbon fibre
— High switching cost and high performance tradeoff of substitutes
— Low buyer inclination to substitute
## Appendix I:
### List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BF-BOF</td>
<td>Blast Furnace – Blast Oxygen Furnace</td>
</tr>
<tr>
<td>CAGR</td>
<td>Compounded Annual Growth Rate</td>
</tr>
<tr>
<td>CDI</td>
<td>Coal Dust Injection</td>
</tr>
<tr>
<td>CDR</td>
<td>Corporate Debt Restructuring</td>
</tr>
<tr>
<td>CIL</td>
<td>Coal India Limited</td>
</tr>
<tr>
<td>CIS</td>
<td>Commonwealth of Independent States</td>
</tr>
<tr>
<td>COP</td>
<td>Conference of the Parties</td>
</tr>
<tr>
<td>CPSE</td>
<td>Central Public Sector Enterprises</td>
</tr>
<tr>
<td>CRZ</td>
<td>Coastal Regulation Zone</td>
</tr>
<tr>
<td>CRGO</td>
<td>Cold Rolled Grain Oriented</td>
</tr>
<tr>
<td>DPE</td>
<td>Department of Public Enterprises</td>
</tr>
<tr>
<td>DRI</td>
<td>Direct Reduced Iron</td>
</tr>
<tr>
<td>EAF</td>
<td>Electric Arc Furnace</td>
</tr>
<tr>
<td>EBT</td>
<td>Eccentric Bottom Tap</td>
</tr>
<tr>
<td>FDI</td>
<td>Foreign Direct Investment</td>
</tr>
<tr>
<td>FTA</td>
<td>Free Trade Agreement</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GHG</td>
<td>Green House Gas</td>
</tr>
<tr>
<td>GST</td>
<td>Goods and Services Tax</td>
</tr>
<tr>
<td>IF</td>
<td>Induction Furnace</td>
</tr>
<tr>
<td>INDC</td>
<td>Intended Nationally Determined Contribution</td>
</tr>
<tr>
<td>MMSCMD</td>
<td>Million Metric Standard Cubic Meter Per Day</td>
</tr>
<tr>
<td>MoPNG</td>
<td>Ministry of Petroleum &amp; Natural Gas</td>
</tr>
<tr>
<td>MoS</td>
<td>Ministry of Steel</td>
</tr>
<tr>
<td>MT</td>
<td>Million Tonnes</td>
</tr>
<tr>
<td>MTPA</td>
<td>Million Tonnes Per Annum</td>
</tr>
<tr>
<td>NMDC</td>
<td>National Mineral Development Corporation</td>
</tr>
<tr>
<td>NPA</td>
<td>Non-Performing Assets</td>
</tr>
<tr>
<td>PCI</td>
<td>Pulverized Coal Injection</td>
</tr>
<tr>
<td>PPP</td>
<td>Public Private Partnership</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>Research and Development</td>
</tr>
<tr>
<td>REC</td>
<td>Renewable Energy Certificates</td>
</tr>
<tr>
<td>R-LNG</td>
<td>Regasified Liquefied Natural Gas</td>
</tr>
<tr>
<td>TCS</td>
<td>Tonne of Crude Steel</td>
</tr>
<tr>
<td>THM</td>
<td>Tonne of Hot Metal</td>
</tr>
<tr>
<td>UHP</td>
<td>Ultra High Power</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>VAT</td>
<td>Value Added Tax</td>
</tr>
<tr>
<td>WTO</td>
<td>World Trade Organization</td>
</tr>
</tbody>
</table>
Aircraft Carrier INS Vikrant made with Indian Steel
Appendix 2:
The Policy on ‘Preference to DMI&SP’ in Govt. Procurements
(Gazette notification G.S.R. 451(E) dated 8th May, 2017)
POLICY FOR PROVIDING PREFERENCE TO DOMESTICALLY MANUFACTURED IRON & STEEL PRODUCTS IN GOVERNMENT PROCUREMENT

1. Background

1.1 This policy provides preference to Domestically Manufactured Iron and Steel Products (DMI&SP) in Government procurement.

1.2 The policy is applicable to iron & steel products as provided in Appendix A, produced in compliance to prescribed quality standards, as applicable.

1.3 The policy is applicable to every Ministry or Department of Government and all agencies/entities under their administrative control for purchase of iron & steel products for government projects and not with a view to commercial resale or with a view to use in the production of goods for commercial sale.

2. Definition

i. Bidder may be a domestic/ foreign manufacturer of steel or their selling agents/ authorized distributors/ authorized dealers/ authorized supply houses or any other company engaged in the bidding of projects funded by Government agencies.

ii. “Domestically Manufactured Iron & Steel Products (DMI&SP)” are those iron and steel products which are manufactured by entities that are registered and established in India, including in Special Economic Zones (SEZs). In addition, such products shall meet the criteria of domestic minimum value-addition as mentioned in Appendix-A.

iii. Domestic Manufacturer is a manufacturer of domestically manufactured iron & steel products (DMI&SP).


v. Government agencies include Government PSUs, Societies, Trusts and Statutory bodies set up by the Government.

vi. MoS shall mean Ministry of Steel, Govt. of India.

vii. Net Selling Price shall be the Ex-works/ Ex-factory price comprising of the landed cost of imported steel at the plant and all other cost elements forming part of the conversion cost inclusive of nominal return on investment. This price is exclusive of any duties and taxes applicable ex-factory.

viii. Semi-Finished Steel shall mean billet, blooms, slabs (cast products), which can be subsequently processed to finished steel.

ix. Finished Steel shall mean Flat and Long products, which can be subsequently processed into manufactured items.

x. Iron & Steel Product(s) shall mean such iron and steel product (s) which are mentioned in Appendix A.

3. Exclusions:

Waivers shall be granted to all such Government procurements subject to following conditions:

a) where specific grades of steel are not manufactured in the country, or

b) where the quantities as per the demand of the project cannot be met through domestic sources.

4. Standing Committee:

A Standing Committee under the Ministry of Steel (MoS) to be chaired by the Secretary (Steel), shall be constituted to oversee the implementation of the policy. The Committee shall comprise of experts drawn from Industry / Industry Association / Government Institution or Body / Ministry of Steel (MoS). The said Committee in MoS shall have the mandate for the following:

a) Monitoring the implementation of the policy

b) Review and notify the list of Iron & Steel products and the Minimum value addition criterion as mentioned at Appendix-A

c) Issue necessary clarifications for implementation of the policy including grant of exclusions to procuring agencies as per para 3

d) Constitute a separate committee to carry out Grievance redressal

e) The Standing Committee shall submit its recommendations for approval to Ministry of Steel.

5. Notifying Iron & Steel Products Procured by Government

5.1 The following guidelines may be used for identifying and notifying the aforementioned products under the policy:
a) The objective of the policy is to notify all iron & steel products which are procured by Government Agencies for government projects and not with a view to commercial resale or with a view to use in the production of products for commercial sale.

b) Only iron & steel products having aggregated estimate value of INR 50 Crores and more forming part of the steel intensive project or overall project, shall be covered under the policy.

c) Analysis of the availability of various grades of domestic iron and steel products needs to precede for notification under the policy. Only those iron & steel products, in respect of which at least one domestic manufacturer exists, shall be notified. Consultation may be carried out by the Standing Committee.

5.2 The Ministry of Steel (MoS) would notify iron & steel products along with the minimum prescribed value addition, furnished at Appendix-A. The Appendix-A will be reviewed by the Standing Committee and amended, if required with the approval of competent authority.

5.3 Government agencies which are involved in procurement of iron and steel products in government projects and if such product is not mentioned in Appendix-A, they will provide description and technical specifications of the product along with prescribed standards to the Standing Committee. The Standing Committee will act as per the mandate at para 4.

5.4 The value addition norm shall be so calibrated that it reflects the average/above average manufacturing capability of the domestic industry for the iron & steel products at a point of time. This shall be suitably reviewed as per the policy.

6. Tender Procedure for Procurement by Government and Government Agencies

6.1 The procuring/ Government agencies shall follow standard procurement procedures, in accordance with instructions of Ministry of Finance and CVC while providing preference to DMI&SP. The policy shall come into effect from the date of its notification in all tenders where price bid have not been opened.

6.2 The tender document should explicitly outline the qualification criteria for adherence to minimum prescribed domestic value addition by the bidder (as indicated at Appendix-A), provided there is procurement of iron & steel products having estimated value of INR 50 Crores or more, forming part of the steel intensive project or overall project.

6.3 The bidders who are sole selling agents/authorized distributors/authorized dealers/authorized supply houses of the domestic manufacturers of iron & steel products are eligible to bid on behalf of the domestic manufacturers under the policy. However, this shall be subject to the following conditions:

a) The bidder shall furnish the authorization certificate issued by the domestic manufacturer for selling domestically manufactured iron & steel products.

b) The bidder shall furnish the Affidavit of self-certification issued by the domestic manufacturer to the procuring agency declaring that the iron & steel products is domestically manufactured in terms of the domestic value addition prescribed.

c) It shall be the responsibility of the bidder to furnish other requisite documents required to be issued by the domestic manufacturer to the procuring agency as per the policy.

7. Value addition

7.1 Value addition shall be the difference between the net selling price and the landed cost of imported input steel (of immediate prior process) at a manufacturing plant in India.

7.2 In case, the iron & steel products are made–

a) Using domestic input steel (semi-finished/ finished steel), invoices of purchases from the actual domestic producers along with quantities purchased and the other related documents must be furnished to procuring Government agency.

b) Using a mix of imported and domestic input steel, the invoices of purchases from the actual producers along with quantities purchased and the other related documents must be furnished separately. To derive the
extent of domestic value addition, the weighted average of both (imported & domestic) input steel shall be considered to ensure that the minimum stipulated domestic value addition requirement of the policy is complied with.

c) Using only imported input steel, the following formula shall apply to calculate the percentage of domestic value-addition:

\[
\text{Domestic value addition (\%) =} \frac{(\text{Net selling price} - \text{Landed cost of imported input steel at the plant}) \times 100}{\text{Landed cost of imported input steel at the plant}}
\]

It is recommended that each bidder participating in the tender process should calculate the domestic value addition using the above formulae so as to ensure the domestic value addition claimed is consistent with the minimum stipulated domestic value addition requirement of the policy.

8. Self-Certification

8.1 Each domestic manufacturer shall furnish the Affidavit of self-certification to the procuring Government agency declaring that the iron & steel products are domestically manufactured in terms of the domestic value addition prescribed. The bidders who are sole selling agents / authorized distributors / authorized dealers / authorized supply houses of the domestic manufacturers of iron & steel products are eligible to bid on behalf of domestic manufacturers under the policy. The bidder shall furnish the Affidavit of self-certification issued by the domestic manufacturer to the procuring agency declaring that the iron & steel products are domestically manufactured in terms of the domestic value addition prescribed. The Affidavit of self-certification shall be furnished in Form 1 attached to these guidelines.

8.2 It shall be the responsibility of the domestic manufacturer to ensure that the products so claimed are DMI&SP in terms of the domestic value addition prescribed for the product. The bidder shall also be required to provide a value addition certificate on half-yearly basis (Sep 30 and Mar 31), duly certified by the Statutory Auditors of the domestic manufacturer, that the claims of value-addition made for the product during the preceding 6 months...
are in accordance with the Policy. Such certificate shall be filed within 60 days of commencement of each half year, to the concerned Government agencies and shall continue to be filed till the completion of supply of the said products.

8.3 The procuring agency shall accept the Affidavit of self-certification regarding domestic value addition in a steel product submitted by a bidder. It shall not normally be the responsibility of procuring agency to verify the correctness of the claim. The onus of demonstrating the correctness of the same shall be on the bidder when asked to do so.

8.4 In case a complaint is received by the procuring agency or the concerned Government Agency against the claim of a bidder regarding domestic value addition in iron & steel products, the procuring agency shall have full rights to inspect and examine all the related documents and take a decision. In case any clarification is needed, matter may be referred to MoS with a request for technical assistance.

8.5 Any complaint referred to the Government Agency shall be disposed of within 4 weeks of the reference along with submission of all necessary documents. The bidder shall be required to furnish the necessary documentation in support of the domestic value addition claimed in iron & steel products to the Government Agency within 2 weeks of filing the complaint.

8.6 In case, the matter is referred to the Ministry of Steel, the grievance redressal committee setup under the MoS shall dispose off the complaint within 4 weeks of its reference and receipt of all documents from the bidder after taking in consideration, the view of the Government Agency. The bidder shall be required to furnish the necessary documentation in support of the domestic value addition claimed in iron & steel products to the grievance redressal committee under MoS within 2 weeks of the reference of the matter. If no information is furnished by the bidder, the grievance redressal committee may take further necessary action, in consultation with Government Agency to establish the bonafides of the claim.

8.7 The cost of assessing the prescribed extent of domestic value addition shall be borne by the procuring agency if the domestic value addition is found to be correct as per the certificate. However, if it is found that the domestic value addition as claimed is incorrect, the cost of assessment will be payable by the bidder who has furnished an incorrect certificate. The manner of enforcing the same shall be defined in the tender document.

8.8 Each Government Agency shall clearly define the penalties, in case of mis-declaration by the bidder of the prescribed domestic value addition, in the tender document. The penalties may include forfeiting of the EMD and such other penalties, as may be prescribed by the concerned Government Agency in the tender document.

8.9 In case of reference of any complaint to MoS by the concerned bidder, there would be a complaint fee of Rs. 10 Lakh or 0.2% of the value of the DMI&SP being procured (subject to a maximum of Rs. 20 Lakh), whichever is higher, to be paid by Demand Draft deposited with the grievance redressal committee under MoS along with the complaint by the complainant. In case, the complaint is found to be incorrect, the Government Agency reserves the right to forfeit the said amount. In case, the complaint is found to be substantially correct, deposited fee of the complainant would be refunded without any interest.

9. Monitoring

9.1 MoS shall be the nodal ministry to monitor the implementation of the policy.

9.2 Every Government Agency shall ensure implementation of the policy and shall annually, in the month of June, send a declaration indicating the extent of compliance to the policy and reasons for noncompliance thereof, during the preceding financial year.

10. Reference to Ministry of Steel

In case of a question whether an item being procured is a DMI&SP to be covered under the policy, the matter would be referred to the Ministry of Steel for clarification.
List of Iron & Steel Products
(Refer Para 7.2)

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Iron &amp; Steel Products</th>
<th>Inputs (Imported or Domestic)</th>
<th>Minimum Value Addition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ductile Iron Pipe</td>
<td>Pig Iron / Liquid Iron</td>
<td>15%</td>
</tr>
<tr>
<td>2</td>
<td>Wire rod &amp; TMT bar</td>
<td>Billet</td>
<td>15%</td>
</tr>
<tr>
<td>3</td>
<td>Structural / sections</td>
<td>Bloom</td>
<td>15%</td>
</tr>
<tr>
<td>4</td>
<td>HR Coils, strips, sheets &amp; plates</td>
<td>Slab</td>
<td>15%</td>
</tr>
<tr>
<td>5</td>
<td>HR universal/Quarto Plates</td>
<td>Slab</td>
<td>15%</td>
</tr>
<tr>
<td>6</td>
<td>CR coils / strips</td>
<td>HR coils</td>
<td>15%</td>
</tr>
<tr>
<td>7</td>
<td>Coated flat steel products/ GP/GC sheets/ Al-Zn coated</td>
<td>Slab/ HR Coil/ Cold rolled coils/strips</td>
<td>15%</td>
</tr>
<tr>
<td>8</td>
<td>Color coated, painted sheets</td>
<td>Slab/ HR Coil/ Cold rolled coils/strips</td>
<td>15%</td>
</tr>
<tr>
<td>9</td>
<td>All kinds of steel pipes &amp; tubes</td>
<td>Slabs/ Plates/ HR coils</td>
<td>15%</td>
</tr>
<tr>
<td>10</td>
<td>Seamless tubes &amp; pipes</td>
<td>Bloom</td>
<td>15%</td>
</tr>
<tr>
<td>11</td>
<td>Rails</td>
<td>Bloom</td>
<td>15%</td>
</tr>
</tbody>
</table>
Howrah Bridge, Kolkata
Form-1

Format for Affidavit of Self Certification regarding Domestic Value Addition in Iron & Steel Products to be provided on Rs.100/- Stamp Paper

Date:

I ...................................................................................................... S/o, D/o, W/o, ......................................................................................................
Resident of ..................................................................................................................................................................................................... hereby
solemnly affirm and declare as under:

That I will agree to abide by the terms and conditions of the policy of Government of India issued vide Notification No:
..................................................................................................................
That the information furnished hereinafter is correct to the best of my knowledge and belief and I undertake to produce
relevant records before the procuring agency (ies) for the purpose of assessing the domestic value addition.

That the domestic value addition for all inputs which constitute the said iron & steel products has been verified by me
and I am responsible for the correctness of the claims made therein.

That in the event of the domestic value addition of the product mentioned herein is found to be incorrect and not
meeting the prescribed value-addition criteria, based on the assessment of procuring agency (ies) for the purpose of
assessing the domestic value-addition, I will be disqualified from any Government tender for a period of 36 months. In
addition, I will bear all costs of such an assessment.

That I have complied with all conditions referred to in the Notification No.___________ wherein preference to
domestically manufactured iron & steel products in Government procurement is provided and that the procuring
agency (ies) is hereby authorized to forfeit and my EMD. I also undertake to pay the assessment cost and pay all
penalties as specified in the tender document.

I agree to maintain the following information in the Company’s record for a period of 8 years and shall make this
available for verification to any statutory authority.

i. Name and details of the Bidder
   (Registered Office, Manufacturing unit location, nature of legal entity)

ii. Date on which this certificate is issued

iii. Iron & Steel Products for which the certificate is produced

iv. Procuring agency to whom the certificate is furnished

v. Percentage of domestic value addition claimed and whether it meets the threshold value of domestic value
   addition prescribed

vi. Name and contact details of the unit of the manufacturer (s)

vii. Net Selling Price of the iron & steel products

viii. Freight, insurance and handling till plant

ix. List and total cost value of input steel (imported) used to manufacture the iron & steel products

x. List and total cost of input steel which are domestically sourced.

xi. Please attach value addition certificates from suppliers, if the input is not in-house.

xii. For imported input steel, landed cost at Indian port with break-up of CIF value, duties & taxes, port handling
    charges and inland freight cost.

For and on behalf of.................................................. (Name of firm / entity)

Authorized signatory (To be duly authorized by the Board of Directors)

<Insert Name, Designation and Contact No.>
Appendix 3:
Amendments relating ‘Life Cycle Cost Analysis’ in project evaluation

Rule 136(1)(iii) of General Financial Rules 2017

Rule 136
(2) On grounds of urgency or otherwise, if it becomes necessary to carry out work or incur expenditure within a short span of time, or in a situation where it is impracticable or impossible to follow the provisions set out under sub-rule 1 of rule 136, the concerned executive officer may do so on his own judgement and responsibility. Simultaneously, he should initiate action to obtain approval from the competent authority and also to intimate the concerned Accounts Officer.

Rule 136
(3) Any development of a project considered necessary while a work is in progress, which is not contingent on the execution of work as first sanctioned, shall have to be covered by a supplementary estimate.

Rule 137
For purpose of approval and sanctions, a group of works which forms one project, shall be considered as one work. The necessity for obtaining approval or sanction of higher authority to a project which consists of such a group of work should not be avoided because of the fact that the cost of such particular work in the project is within the powers of such approval or sanction of a lower authority. This provision, however, shall not apply in case of works of similar nature which are independent of each other.

Rule 138
Any anticipated or actual savings from a sanctioned estimate for a definite project, shall not, without special authority, be applied to carry out additional work not contemplated in the original project.

Rule 139
Procedure for Execution of Works. The broad procedure to be followed by a Ministry or Department for execution of works under its own arrangements shall be as under:
(i) the detailed procedure relating to expenditure on such works shall be prescribed by departmental regulations framed in consultation with the Accounts Officer, generally based on the procedures and the principles underpinning the financial and accounting rules prescribed for similar works carried out by the Central Public Works Department (CPWD);
(ii) preparation of detailed design and estimates shall precede any sanction for works;
(iii) no work shall be undertaken before issue of Administrative Approval and Expenditure Sanction by the competent Authority on the basis of estimates framed;
(iv) Open tenders will be called for works costing Rs. five lakh to Rs. Thirty lakh;
(v) limited tenders will be called for works costing less than Rs. five lakh;
(vi) execution of Contract Agreement or Award of work should be done before commencement of the work;
(vii) final payment for work shall be made only on the Personal Certificate of the Officer-in-charge of execution of the work in the format given below:
“... Executing Officer (Name of the Work), am personally satisfied that the work has been executed as per the specifications laid down in the Contract Agreement and the workmanship is up to the standards followed in the Industry.”

Rule 140
For original/minor works and repair works entrusted as per Rule 133(2) or Rule 135(2), the Administrative Approval and Expenditure Sanction shall be accorded and funds allotted by the concerned authority under these rules and in accordance with the Delegation of Financial Power Rules. The Public Works Organisation or the Public Sector Undertaking or any Organisation allotted
Para 1.10(i) (b) of Chapter 1 of the draft manual on procurement of works circulated by Department of Expenditure

Chapter 1: Introduction to Procurement of Works

xi) Various labour laws applicable at the works’ site;

xii) Various building and safety acts, codes, standards applicable in the context of the scope of work; and

xiii) Various environmental and mining laws, codes, standards applicable in the context of the scope of work.

(For salient features of laws applicable to public procurement, please refer to Appendix 2).

1.9 The Law of Agency – applicable to Procurement of Works

In addition to Laws which are applicable to Public Procurement of Works mentioned above, legally speaking Contractor would be an Agent of the Principal/ Client/ Employer – Procuring Entity, to execute the works on its behalf. Such a relationship is covered by The Law of Agency (Section 182 to section 238, of the Indian Contract Act, 1872) and hence there exists a Principal/ Employer and Agent relationship between Procuring Entity and such Contractor. As per this law, the employer is vicariously legally and financially liable for actions of its Agents. For example, a contractor’s contract by the agents may render the employer legally and financially answerable for such violations under certain circumstances. There is a need to be aware of such eventualities. Standard Bidding Documents should take care of this aspect.

1.10 The Basic Principles of undertaking works:-

i) No new works should be sanctioned without

(a) careful assessment of the assets or facilities already available and time and cost required to complete the new works.

(b) A properly detailed design has been sanctioned. While designing the projects etc., principles of Life Cycle Cost may also be considered.

(c) Estimates containing the detailed specifications and quantities of various items have been prepared on the basis of the schedule of rates maintained by CPWD or other Public Works Organizations and sanctioned.
Appendix 4:
Indian Railways circular granting way leave for slurry pipelines

भारत सरकार GOVERNMENT OF INDIA
रेल विभाग MINISTRY OF RAILWAYS
(रेलवे बोर्ड RAILWAY BOARD)

New Delhi, Dt.: 23/11/2016

General Manager,
All Indian Railways, PUs, CORE,
Metro, Kolkata.

(ii) Board’s letter No. 97/LML/24/3 dated 16/11/2005.
(iii) Correction Slip No. 47 issued vide letter No. 97/LML/24/3 dated 24/04/2014.

Board have decided to delete Clause 16 in para 1033(E) inserted vide Railway Board letter No. 97/LML/24/3 dated 16.11.2005 and treating slurry pipeline at par with oil/gas pipeline (item no. 6 II(b) of para 1033 (E) for track crossing permission purpose.

2. This will be effective from the date of issue of this letter.

3. This issues with the concurrence of the Finance Directorate of the Ministry of Railways.

4. Please acknowledge receipt.

(Ramesh Kumar)
Director/Land and Amenities
Railway Board

DA: As above.

New Delhi, Dt.: 23/11/2016

1. The Principal Director of Audit, All Indian Railways.
2. The Deputy Comptroller & Auditor General of Indian Railways, Room No.224, Rail Bhawan, New Delhi.

Financial Commissioner Railways

Copy to:
1. All Board Members, Additional Members, Advisors and EDs.
2. Director, IRICEN, Pune.
3. Director, IRIEEN, Nasik.
4. Director, IRISET, Secunderabad.
5. Director, IRIMEE, Jharkhand.
6. Director, IRITM, Kohima, New Delhi.
7. All Directorates of Rly. Board.
8. PCEs, CAOs, FA & CAOs of All Indian Railways and Chief Engineers for Production Units.
Appendix 5:

Sector wise steel consumption in India in MT
(unless otherwise stated)

Steel Demand
81.5 MT

Steel Demand
230 MT

Source: Ministry of Steel, MECON

Main Battle Tank, Arjun made with Indian Special Grade Steel
AIIMS Bhubaneswar built with Indian Steel

800 MW KOLDAM HEP OF NTPC
Indian steel industry is integral to development of renewable energy projects in India.
**Appendix 6:**

**Current trade measures on Steel Products**

<table>
<thead>
<tr>
<th>Products</th>
<th>Trade Measure</th>
<th>Duty Type (Provisional/ Final)</th>
<th>Notified on</th>
<th>Applicable Period</th>
<th>Country of Export</th>
<th>Duty Amount in USD/tonne</th>
<th>% of landed Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specified Hot Rolled Flat Products of Stainless Steel of ASTM Grade 304</td>
<td>Anti-Dumping</td>
<td>Final</td>
<td>5th June 2015</td>
<td>5 Years from the date of notification</td>
<td>China, South Korea, Malaysia, China (309), Korea (180), Malaysia (316)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cold Rolled Flat Products of Stainless Steel of width of 600 mm upto 1250 mm of all series with a thickness of up to 4 mm</td>
<td>Anti-Dumping</td>
<td>Final</td>
<td>11th December 2015</td>
<td>5 Years from the date of notification</td>
<td>China, South Korea, Chinese Taipei, South Africa, Thailand, USA, EU</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Wire Rod of Alloy or Non-Alloy Steel (15 Tariff Lines)</td>
<td>Anti-Dumping</td>
<td>Provisional 2nd November 2016</td>
<td>Under investigation (Period of investigation – 6 months post-date of notification)</td>
<td>China 499 - 538</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Colour coated/ pre-painted flat products of alloy or non-alloy steel (2 Tariff Lines)</td>
<td>Anti-Dumping</td>
<td>Provisional 11th January 2017</td>
<td>Under investigation (Period of investigation – 6 months post-date of notification)</td>
<td>China, EU 849</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Seamless tubes, pipes and hollow profiles of iron, alloy or non-alloy steel</td>
<td>Anti-Dumping</td>
<td>Final 17th February 2017</td>
<td>5 Years from the date of imposition of provisional anti-dumping duty i.e. the 17th May, 2016</td>
<td>China 961.33 – 1610.67</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Hot-rolled flat products of non-alloy and other alloy Steel in coils of a width of 600 mm or more (37 Tariff Lines)</td>
<td>Safeguard</td>
<td>Final</td>
<td>29th March 2016 (Provisional - 14th September 2015)</td>
<td>Till 13th March 2018</td>
<td>Against all countries 49% against 18%</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*Note: The % of landed value varies depending on the importing country.*
<table>
<thead>
<tr>
<th>Products</th>
<th>Trade Measure</th>
<th>Duty Type (Provisional/ Final)</th>
<th>Notified on</th>
<th>Applicable Period</th>
<th>Country of Export</th>
<th>Duty Amount in USD/tonne</th>
<th>% of landed Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot Rolled flat sheets and plates (excluding hot rolled flat products in coil form) of alloy or non-alloy steel</td>
<td>Safeguard</td>
<td>Provisional</td>
<td>23rd November 2016</td>
<td>Till 22nd May 2019</td>
<td>Against all countries</td>
<td>----</td>
<td>Currently 10% ad valorem minus anti-dumping duty payable</td>
</tr>
</tbody>
</table>
| Hot Rolled Flat Products of Alloy or Non Alloy Steel (61 Tariff Lines with certain exclusions) | Anti-Dumping   | Final                          | 11th May 2017                   | 5 Years from the date of notification | • China  
• Japan  
• South Korea  
• Russia  
• Brazil  
• Indonesia | HR Coils – 478 & 489  
HR Plates - 561 | ---- |
| Cold Rolled Flat Products of Alloy or Non Alloy Steel (36 Tariff Lines) | Anti-Dumping   | Final                          | 12th May 2017                   | 5 Years from the date of notification | • China  
• Japan  
• South Korea  
• Ukraine | CR Products - 576 | ---- |
| 173 Tariff lines of Iron & Steel Products under Chapter 72              | Minimum Import Price | Phased Out                     | 5th February 2016               | 5th February 2017        | Against all countries | 341 – 752 (Vary w.r.t Steel Products) | ---- |

Source: CBEC Notifications
Make in Steel

Visit us at: www.steel.gov.in
Contact us at: ids@nic.in