

Annual Report | Jan-Dec 14

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CHAIRMAN'S MESSAGE

The current generation is indeed privileged to have not only experienced multiple technology transitions but also to be part of a movement - "Make in India", which is focussed towards projecting manufacturing strengths and leveraging the market potential of the country. A country that has 800 million of its population under the age bracket of 35 years and is bustling with aspirations, presents a huge opportunity. Hence, the "Make in India" campaign could not have come at a better time. The good part in this, my friends, is the fact that your company will be at centre stage in the "Make in India" campaign and the drive to create an identity for India. This movement, driving the already burgeoning aspirations in high growth areas such as Solar manufacturing and Solid State Lighting, I believe, will be the deciding factor for the company as well as the country in the next few years.

The global economy had continued to grow albeit at a moderate and uneven pace during 2014. The road to recovery was strewn with unfinished post-crisis adjustments, some geo-political conflicts and most importantly, identification of new markets. As per the United Nations, 'Growth of World Gross Product (WGP) is estimated to be 2.6% in 2014, marginally better than the growth of 2.5% registered in 2013, but lower than the 2.9% projected in World economic situation and prospects as of mid-2014.' Which means, global recovery had started but is yet to catch speed! One common aspect during 2014 noticed amongst the major developed countries has been their erratic quarterly GDP growth rates. For example, the economy of the United States of America oscillated from a decline of 2.1% in the first quarter of 2014 to an increase of 4.6% in the second quarter, while at the same time the economy of Japan swung from growth of 6.7% to a contraction by 7.3%.

Closer to home, developments have been multi-fold. There is a very strong positive sentiment about the country as an investment destination and as an economy that will grow steadily over the next few years. This sentiment along with the opportunities in the country forms the backbone of the country's quest to fulfil the aspirations of its young population.

The year 2014 threw up many consolidation pains led by financial constraints. However, your company with its flair for identifying future businesses, had entered into energy efficient Solid State Lighting segment a couple of years ago, on a pilot basis. Hence, today when energy efficient lighting is becoming a buzz word, your company is appropriately poised to make good the opportunity.

Make no mistake, this journey will not be easy in spite of the opportunities without your conviction and belief in the team.

Our businesses experienced the pains of consolidation during the year gone by, but the initiatives taken will pay dividends in the coming years. With the support of our key stakeholders like customers, strategic suppliers, multiple bank consortia and Moser Baer employees, we continue with our march towards sustainable technology manufacturing operations.

From a business standpoint, the period 01st January 2014 to 31st December 2014 was about consolidation and implementing rejuvenation plans. Your company

continues to enjoy leadership position in the global storage industry and not surprisingly is the No.1 Solar EPC player in the country. We believe that with the Hon'ble PM's clarion call for "Make in India", domestic manufacturing will thrive once again and this should augur well for your company in the Solid State Media segment (Flash Drives, SD and Micro SD cards) and Solar Photo-voltaic manufacturing businesses. A combination of these businesses along with energy efficient Solid State Lighting provides the roadmap for the future of your company.

As the country goes about revitalizing itself and trying to fulfil the aspirations, energy will play an important role. Not only will the focus fall on energy generation but also on energy efficient technologies. Our foray into energy efficient Solid State Lighting will get to play an important role in our nation's goal for energy conservation.

The time ahead will be defined by the people who do not lose the focus on intention and aspirations. Our existence is not complete without assuming the responsibility of the communities and the people with whom we work. Hence, protecting their interests and ensuring rounded development has been the hallmark of our existence.

I have always appreciated the commitment, support and above all the belief extended by all of you towards the organization and would look forward towards the same in the years ahead.

Best Regards,

Jutein

(Deepak Puri)

BOARD OF DIRECTORS

MR. DEEPAK PURI Chairman & Managing Director

MRS. NITA PURI Whole Time Director

MR. JOHN LEVACK Non-Executive and Nominee Director

MR. VINEET SHARMA Independent and Non-Executive Director

MR. SANJAY JAIN

Independent and Non-Executive Director

MANAGEMENT DISCUSSION & ANALYSIS

INTRODUCTION

The year ending December 31, 2014 continued to be a challenging year for Moser Baer which sustained through rationalization of business portfolio, transition of technology and continued belief in the 'Make in India' strategy. Strong impetus was given to consolidation measures and restructuring of operations as we continued to focus on our core competencies in the Storage Media market and build on strengths in emerging businesses for sustainable development, encouraging and supporting value creation for our stakeholders in the long term. After a protracted period of consolidation and transition, we have identified key areas of growth and moved forward to re-align our focus, priorities and resources accordingly.

As per IMF's World Economic Outlook (April 2015) report, global growth remains moderate, with uneven prospects across the major countries and regions. Global growth in 2014 was a modest 3.4%, reflecting a pickup in growth in advanced economies relative to the previous year and a slowdown in emerging market and developing economies. In 2014, emerging markets and developing economies grew at 4.6%, at a rate lower than the previous year while still accounting for three-fourths of global growth. The outlook for 2015 for advanced economies is improving, while growth in emerging market and developing market and developing economies is projected to be lower, primarily reflecting weaker prospects for some large emerging market economies and oil-exporting countries.

Company overview

For the year ended December 31, 2014, Moser Baer continued to witness financial constraints that impacted its operating performance. Given the need to transition in the Storage Media industry, the Company's priority continued to be on refocusing product lines accompanied by rationalization of operating costs in manufacturing and consolidation of operations.

For the year ended December 31, 2014:

- Total Revenue: The company's total revenue including other income stood at INR 10,106 million on a standalone basis;
- ✓ Cash and Liquidity: Net cash flows from operating activities stood at INR 631 million
- Net Loss: The company made a net loss of INR 7,083 million, inclusive of exceptional items amounting to INR 2,449 million

During the year, revenues were impacted primarily by lower production volumes on account of tight liquidity situation. While Average Selling Prices(ASPs) were impacted as compared to the previous year, the company witnessed marginal improvement in ASPs during the last two quarters of the year. While the overall global storage media industry remained largely stable, there were variations in the geographic and product mix compared to previous years. Moser Baer's Storage Media business undertook several steps that were aimed at lowering the operating costs and aligning manpower, cash flows and other resources to the current levels of operations.

Moser Baer continues to focus on its key strengths - wide geographic presence across the world, broad product portfolio across all formats, strong focus on quality and a strong distributor network. In a period spanning three decades, the Company has globally developed itself as a preferred OEM partner through its high quality and credible products, supplied across the globe and is thus well placed to leverage the current and emerging market opportunities. Concurrent with this, the Company continues to retain its presence in the Domestic prerecorded segment and leverage its strength in terms of brand franchise as well as distribution.

The Company has also forayed into the LED segment of the burgeoning lighting market by leveraging existing capabilities, brand presence and distribution network. With energy efficiency being a critical driver for the Indian economy, the LED lighting segment is expected to grow significantly over the medium to long term, and Moser Baer is poised to play a key role in this market.

In the solar PV segment, during 2014 the global industry grew at a slower pace than originally envisaged. The estimates for 2014 installations range from 40-45 GW with China, Japan and USA being the leading markets.

In India, 2014 was a landmark year for the solar sector, with the revision of the 2022 solar target from 20 GW to 100 GW. However, the market is still to take off. During CY 2014, the Indian market achieved 883MW of solar PV installations compared to 1,004 MW in CY 2013 (Mercom Capital). Given the government's focus on renewable energy and 'Make in India' initiative, the medium to long term outlook for the Indian market is very strong. However, it is important that the Government continues to make timely and favourable policy announcements for sustainable growth in the Solar PV sector along with support for domestic manufacturing.

During the year, liquidity pressures continued to persist and have been critically impacting our ability to enhance manufacturing operations and capacity utilization levels. However, the positive global macro environment along with a high potential domestic market provides opportunity to us to benefit from these segments, given that we are the largest integrated PV manufacturer in India. We have been focusing on high margin markets such as Japan and are poised to tap the emerging opportunities in the domestic and other export markets. Moser Baer commenced operations of its upgraded solar PV crystalline silicon cell line in January 2015 to cater to the Domestic Content Requirement market.

Moser Baer's PV Business continues to maintain its leadership position in the Indian solar EPC market with

over 310 MW of projects installed till date. With an 11.5% market share on cumulative basis, Moser Baer Solar was adjudged as India's largest solar EPC player for the second consecutive year by Bridge to India.

STORAGE MEDIA

STORAGE MEDIA INDUSTRY

During the year ended December 31, 2014, the ongoing re-alignment and transition in the global Optical Media industry continued to impact the demand for all the top tier players. The Storage Media business includes Solid State Media segment (Flash Drives, SD and Micro SD cards) which however continued to witness healthy growth in India, though demand was seen stabilizing globally. The consolidation of players also led to stable ASPs and improvement in margins. The developed world has continued to witness a downtrend in traditional formats like DVD and CD. Emerging markets (including the home market), on the other hand, remained stable for DVD and Blu-ray products, while Latin America continued to show overall growth. Blu-ray formats have seen a stable market in Japan, which is the largest Blu-ray consumer.

The drive towards mandatory digital signature spurred the market for e-tokens, as a consequence of which, volumes in India for this segment have shown a significant upswing.

MOSER BAER'S STORAGE MEDIA BUSINESS

The company continues to supply its products across all regions and maintains its position as one of the leading players in the global Storage Media industry. Its strength, both in terms of low cost mass manufacturing and in offering a wide range of high quality products spread across all formats, has ensured that even with global consolidation and challenges, the company has maintained its standing in the industry.

Given the need to transition in the Optical Media industry, our focus continued to be on rationalization of operating costs in manufacturing and consolidation of operations to generate cost efficiencies. Its high quality standards and strong service offering continued to help maintain business alliances with leading OEMs across the world.

The thrust to pursue new geographies in order to capture incremental markets and acquire new customers to increase our market share in the medium term has found signs of acceptance. Going forward, this is expected to ensure better capacity utilization and growth while demanding near term liquidity support.

In the home market, we have been maintaining our leadership position in the CD segment and have increased our market share in DVD segment. The Blu-ray disc adoption has also been slowly increasing in the country.

Given the liquidity constrained manufacturing environment and the need to become more working

capital efficient, we further optimized raw material as well as finished goods inventory levels and set new reference levels in this important area.

However, constrained by liquidity, the Solid State Media (SSM) operations was not able to realise its full potential in the growing market. While Moser Baer as a brand has been strong in this segment, and SSM operations continue to be profitable, we expect an upswing in the segment with improvement in liquidity.

During the period under consideration, we continued to expand our product offerings with a range of innovative product offerings. Moser Baer's collaboration with Giesecke & Devrient (G & D), which is amongst the world's Top 3 players in smart cards/ SIM solutions, to manufacture and supply security tokens is yielding results. With secure digital signatures being an integral way of life for all e-governance activities as well as Income Tax filings, this segment is witnessing strong growth. Moser Baer is also one of the chosen suppliers to government customers through National Informatics Centre (NIC). The company is also targeting the security tokens business in public sector banks under the domestic manufacturing preference policy of the Government.

During the year, following the expiry (and only selective renewal) of existing film and non-film rights, and as a part of further integration of sales and distribution network, the company integrated its 'Pre-recorded'based content sales with the existing domestic distribution organisation to optimise costs. However, the disc replication business for third parties continued to show steady growth and profitability.

OUTLOOK

In the medium term, the Optical Media industry is expected to continue to witness overall volume decline globally. The trend is more accelerated in the developed economies. However, emerging markets such as Africa, Eastern Europe and parts of Asia would continue to remain stable with pockets of growth in DVD and Blu-ray formats. Select markets like Latin America are expected to continue to see overall albeit marginal growth in this sector. It may however be noted that while CD as a format has declined over time, the existing demand supply balance and economies of scale ensure that it remains cash accretive for Moser Baer.

Furthermore, with potential improvement in liquidity as well as cost rationalization, we plan to target a higher market share in select markets, both through OEM and non-OEM channels.

In the near future, the Solid State Media segment will continue to show healthy growth, given the market demand and strong brand equity of Moser Baer in India and is limited only by liquidity constraints. In the Security Token business, the government has taken steps to have increased security for e-governance and has advised the use of USB security tokens even in Class II in addition to Class III Digital Signatures. This is expected to multiply the market in the medium term. Steady growth in capacity utilization driven by liquidity support would be a key success factor.

The Company continues to focus on product innovation, upholding of its high quality standards, increase in its cost competitiveness and widening of its distribution network.

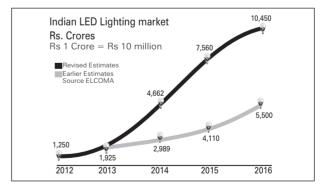
Within the storage media business, both content replication as well as Solid State Media product lines continue to represent opportunities for profitable growth. However, blank optical media will continue to dominate volumes and turnover in the near term.

SOLID STATE LIGHTING

LED LIGHTING INDUSTRY

According to Digitimes Research, the global LED (Light Emitting Diode) lighting market (the current mainstay of Solid State Lighting) for 2014 is estimated at US\$ 25.8 billion accounting for 23% of the global market for all lighting products.

The market comprises of a broad range of lighting products that use LED (packaged silicon chip diodes with high energy efficiency) as light source. Using imported LED source, the domestic LED market has emerged as one of the fastest growing industries in India. According to Electric Lamp and Component Manufacturers Association of India (ELCOMA), the LED lighting market in India achieved an impressive CAGR of 46% over 2010 to 2013. ELCOMA estimates 2014 revenues to be approximately Rs 45 billion. The growth in the sector has resulted in ELCOMA revising its earlier projections for the LED lighting market from Rs 55 billion by 2016 to Rs 104.6 billion. Further ELCOMA estimates LED Lighting market to reach Rs 216 billion by 2020.



LEDs' outstanding energy efficiency (40-60% more than conventional lighting technologies), longer lifespan, and eco friendliness have popularized them among both outdoor and indoor lighting applications. LEDs produce less heat compared to conventional counter parts and dissipate it more efficiently, making them one of the greenest and coolest light sources available.

Key growth drivers for LED lighting in India include Government initiatives to promote LED light adoption, increasing efficiencies and declining prices, all of which have reduced pay back periods and improved overall economics considerably.

Strong Government Focus

Recognizing the energy demand supply gap and the key role that energy efficiency can play in addressing this gap, the Government is keenly promoting the use of LED. The Government has made it mandatory for deployment of LED lighting in all new street light installations. In 2014, the Ministry of Power issued a directive to all Central Government departments and Ministry offices to switch to LED lights.

All existing government schemes to distribute CFL are being modified with LED lamp distribution. Under the Rajiv Gandhi Grameen Vidyuthikaran Yojana (RGGVY), an estimated 3.4 million LED bulbs are expected to be distributed in rural areas.

In May 2014, Ministry of Communications & Information Technology notified its policy for giving preference to domestically manufactured LED lights in Government procurement. The policy is applicable to all Ministries / Departments (except Ministry of Defence) and their agencies for LED lighting products purchased for Government purposes.

Additionally, in the 2015-16 budget, Finance Minister Arun Jaitley announced a reduction in excise duty on the LED manufacturing inputs from 12% to 6%. Also, Special Additional Duty has been reduced from 4% to Nil on inputs used in the manufacturing of LED driver and MCPCB for LED lights, fixture and LED lamps.

Declining Prices

The increasing penetration of LEDs in the lighting market is driven significantly by the decline in the price of LEDs in recent years. In its findings, IHS technology reported that the average global LED bulbs retail price fell by 19% during September 2013 to September 2014. Since most of the LED components are primarily imported into India, the component prices and hence the market prices in India are also following the global trend.

Increasing efficiency

According to the U.S. Energy Information Administration (EIA), LED efficiency jumped from just over 60 lumens per watt to nearly 100 lumens per watt between 2012 and 2014, and the target is to hit 150 lumens per watt by 2020. In comparison, efficiency of compact fluorescent lights (CFLs) is 55-70 lumens per watt and of traditional incandescent bulbs is 13-18 lumens per watt.

Chinese Imports

China, Taiwan and Korea have emerged as the dominant LED chip manufacturing base for the world. The Chinese Government has been incentivizing the growth of the LED Chip industry through various initiatives including capital subsidy, tax breaks, land subsidies, etc. In addition to approximately 4,000 local companies, all major lighting companies in the world also own or outsource to LED manufacturing facilities in China. As a consequence of the economies of scale and access to the complete LED supply chain, Chinese manufacturers have managed to reduce product pricing quite significantly. Chinese Companies are exporting LED lighting products and components to all major countries in the world including India. Unfortunately, some low quality Chinese imports have failed to deliver and have consequently been hurting the perception of LED products in the Indian market. However, this issue is likely to be addressed with the introduction of BIS certification (ISI marking) for selling LED Bulbs and Tube lights in India with effect from May 2015.

MOSER BAER'S SOLID STATE LIGHTING (LED LIGHTING) BUSINESS

In the recent past, Moser Baer has been operating in the Solid State Lighting (SSL) segment in pilot phase, targeting mainly the professional segment and is now in the process of ramping it up as a full scale business. We believe that Moser Baer is well positioned to tap this opportunity in India on account of the strong Brand recall and key capabilities including:

- Surface Mount Technology (SMT) Assets and capabilities (from our Solid State Media Business)
- Relevant experience and knowhow relating to Product Quality and Reliability, Design, Product Development, Testing and Optics
- ✓ Global Sourcing strengths and
- Strengths in Indian Sales, Marketing and Distribution which can be synergistically exploited

Moser Baer's LED business model does not require any immediate capital expenditure since the company utilizes its existing assets and manufacturing knowhow. However it incorporates adequate value addition to qualify as domestic LED manufacturer for preferential purchases by Government Departments and Ministries.

SSL lighting business strategy focuses on product innovation, providing comprehensive lighting solutions to customers with strong after sales support. The R&D team has product development, product testing and product qualification capabilities. The current focus areas of our R&D team include better light management, energy efficient optics development, improvement in moulding, material sciences, etc.

We have commenced production of LED lighting products in our manufacturing facility leveraging our

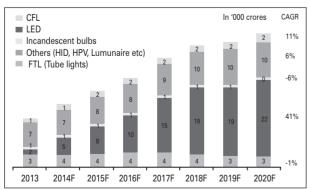
existing asset and skill base (with imported LED Chips and some other components).

We are currently active in four business segments:

- B to B (Institutional and project sales): We offer innovative lighting solutions to customers based on their unique requirements. We have achieved successful installations in more than 250 establishments.
- B to G (Government business): The focus is on Government business through strategic partnerships or through bidding process depending upon the nature of the project. We are ensuring that our products are empanelled with various Government agencies including Indian Railways, Indian Oil Corporation, West Bengal State Electricity Distribution Company, Gujarat State Electricity Corporation, Power Finance Corporation etc. Moreover, Moser Baer LED lights have been approved by Rural Electrification Corporation (REC) for use in their projects under the scheme RGGVY (Rajeev Gandhi Grameen Vidyut Vikas Yojana).
- B to C (Consumer sales): We are in the process of expanding our existing Sales and Distribution network across the country to further penetrate the Electrical Distribution segment of the market. This would also be accompanied by suitable brand promotional activity
- Ø OEM for large brands: We have already developed a few OEM customers, but expect to prioritize efforts for building sales under the Moser Baer brand.

OUTLOOK

McKinsey in a 2012 LED lighting report had projected the global LED lighting market to reach US\$ 74 billion by 2020, with a 62% share of the overall lighting market. ELCOMA projects that India LED lighting market will become Rs 216.3 billion industry in 2020 and would account for ~60% of the overall lighting industry in 2020.



Source: ELCOMA Vision 2020

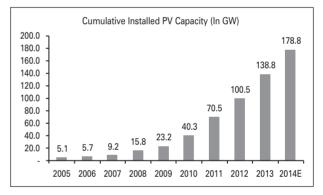
- The company has successfully entered the professional segment of the LED lighting industry with a marquee list of customers/ installation across segments and established Moser Baer as a competitive player in this product category
- The company recently commenced implementation of plans to scale up operations in LED lighting products, leverage its brand strength and expand its distribution network nationally

SOLAR PHOTOVOLTAIC

PHOTOVOLTAIC (PV) INDUSTRY

In CY 2014, the global solar PV industry grew at a slower pace than originally envisaged. Various research firms have provided differing estimates for installations of 2014 ranging from 40GW to 45GW. According to EPIA, approximately 40 GW of solar installations were completed in CY'14, an 8% increase over installations of 37 GW in CY 2013. According to IHS, global solar PV installations in 2014 reached 44.2 GW. China, Japan and the USA continued to lead the world's solar market for the second year in a row.

Evolution of Global Cumulative Installed PV Capacity - 2005-2014 (Figures in GW)



Source: EPIA

Key Solar Markets of 2013 continue to dominate – China, Japan and USA

The Government in China indicated its focus on distributed generation/ rooftop PV in the early part of 2014. The National Energy Administration announced a 14.05 GW target to be installed in2014, divided into 8.0 GW (distributed generation) and 6.05 GW (utility-scale, ground-mounted). However, the country fell short of its target, and 2014 installations in China are estimated to be in the range of 10.5 GW to 12 GW. Japan was the second largest market in the world with 9.7 GW of installations reported. In the US, GTM Research and the Solar Energy Industries Association (SEIA) estimated that installed solar photovoltaic (PV) capacity for 2014 achieved a level of 6.2 GW, growing 30% over the previous year. An additional 767 MW of concentrating solar power (CSP) came on-line in the same period.

The overall increase in the Global market has happened despite the 36% decline in the European market, where

EPIA has indicated that installations declined from 11GW installed in 2013 to just 7GW in 2014. The only European country to show improvement from 2013 to 2014 was the UK, which increased its installed capacity from 1.5GW to 2.3GW.

Solar Power Inches Closer to Grid Parity

Given the declining costs of Solar Energy, Deutsche Bank has reported that a wide range of countries across the world are at grid parity today, particularly in high electricity price and/or high sunlight regions, including large parts of Europe (Belgium, Denmark, France, Germany, Hungary, Ireland, Italy, Netherlands, Portugal, Spain and Sweden, amongst others) and Asia Pacific (Australia, Singapore, New Zealand, Japan, etc.). In a number of other regions, including India, China, South Africa and United States, solar power is cost effective vis-à-vis the more expensive forms of energy being utilized.

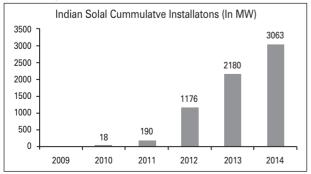
Indian Solar Market

India has long been considered one of the highest potential solar markets but developments have been slow due to the uncertain regulatory environment. The Indian Solar market is now in a very exciting phase and recent initiatives by the Government of India are putting in place the framework for India to realize its true solar energy potential.

Some of the key drivers for India's attractiveness for Solar Energy include:

- India's dependence on imported fossil fuel has increased significantly and presents significant risk to India's Energy and Economic Security;
- A significant number of India's population is not yet connected to the Grid, while the country already suffers from a deficit in electricity supply;
- India's coal and gas based generating capacity remains under-utilized on account of shortages;
- High Solar insolation helps reduce the overall cost of solar energy in India. Cost of solar electricity in some regions is below parity with thermal power plants using imported coal, and is expected to achieve parity with power from domestic coal in the coming few years.

According to Mercom Capital Group, Indian solar installations in calendar year 2014 totaled 883 MW, down 12% compared to 1,004 MW installed in 2013.



As per the data released by the Ministry of New and Renewable Energy (MNRE), Government of India, at the end of March 2015, India had 3,744 MW of installed gridconnected solar capacity and 234 MW of off-grid solar capacity.

Though the growth was muted during the year and below expectations, recent developments in the Solar PV industry have been very positive. With the new Government taking charge in mid 2014, it took a number of steps to promote the sector. In the Union Budget 2015, Government of India revised the current National Solar Mission (JNNSM) target of 20 GW by 2022 to100GW. As part of its stated vision under JNNSM, and consistent with the 'Make in India' initiative announced by the Prime Minister, the Government is keen to support manufacturing of Solar PV Cells and Modules in India. Though Anti Dumping Duties were not implemented in the sector, various other measures are being taken that give a priority to domestic manufacturing. As the Government is focusing on growing the PV Installed base in India to 100 GW over a seven year period, it plans to use this as an opportunity to promote domestic manufacturing and has provided assurances at various points of time to the domestic manufacturers regarding utilization of existing capacities.

While the formal policy announcement for Renewable Energy is yet to be made, the statements and actions of the Government indicate the following for the sector:

- Amendments proposed to Electricity Act including open access reforms and enhancement of Renewable Purchase Obligations;
- Rationalization of the Renewable Energy Certificate regime;
- Low cost financing support from bilateral and multilateral agencies;
- A certain percentage of projects will be implemented using Cells and Modules manufactured in India (Domestic Content Requirement – DCR). The Central Public Sector Units are likely to play a significant role in these projects.
- Setting up of 25 Solar Parks across the country to house up to 20 GW of capacity, aimed at addressing the land acquisition and transmission connectivity challenges faced by many developers.
- In the Union Budget 2015, the Clean Energy cess has been increased from Rs.100 to Rs.200 per metric tonne of coal to help finance clean environment initiatives.
- The Government has also included solar based power generators, non-conventional energy based public utilities viz. street lighting systems and remote village electrification as