



INNOVATING ENERGY

Production- Linked Incentives (PLI) Scheme - Towards an Atmanirbhar Future

INSIDE STORIES

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Head (Sales and PR),
Energy Efficiency Services Limited

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Manager - Market Intelligence,
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Associate Fellow,
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Animesh Mishra

Head (Sales and PR),
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Dear Reader,

The last few months have seen India deploy robust policies and initiatives towards the nation's vision of **Atmanirbhar Bharat**. The April edition of our newsletter recognizes some of the key initiatives in this regard.

Production-Linked Incentive (PLI) schemes, which were unveiled in the Union Budget this year, will play a key role in galvanizing India's manufacturing capabilities. Solar modules are an area of increasing importance as the nation marches towards its goal of 450 GW of installed renewable generation by 2030 much of which will be solar-powered. 'PLI has the potential to boost domestic manufacturing of solar photovoltaic modules' provides sound policy recommendations on leveraging PLI effectively to reduce our dependence on global components. In 'Atmanirbhar Lighting Industry in India', we explore the rich potential of India's domestic lighting sector and examine the contours of the Vision 2024 plan, which aims to localize lighting components in India to the largest extent while making the nation a lighting products export hub.

The PLI scheme's role in catalysing India's clean energy future, thereby contributing to energy security, energy access and climate change has been examined in greater detail in 'PLI- A step towards accelerating India's green energy transition'. In particular, the article spotlights the role that PLI is playing in supporting EV battery manufacturing, which is one of the largest economic opportunities of the twenty-first century. The PLI scheme for Advance Chemistry Cell(ACC) can incentivize large domestic and international players in establishing a competitive Indian ACC battery set-up, while enabling the nation to compete in the global market.

We also remain focused on the cause of energy efficiency and its role in sustainable business growth. As the summer approaches, the role of clean and affordable cooling has again come to the fore. Citizens today urgently need effective space cooling that is both energy and cost effective. 'Maximizing climate benefits with EESL's Super- Efficient ACs'' examines how EESL's Super-Efficient Air-conditioning (SEAC) Programme, which leverage economies of scale through demand aggregation and achieves significant price reduction and accelerated transition towards low-GWP refrigerant, is supporting the ambition of the India Cooling Action Plan (ICAP). In addition, our recent energy efficiency partnership with the Oberoi Group, has been touched upon in our 'In Focus' section.

Now, more than ever, we have an opportunity to catalyse India's clean energy future while ensuring proliferation and profitability for players across solar energy, electric mobility, energy efficiency and allied sector. It is time for India to leverage the deep interlinkages between sectors to bring the benefits of a clean energy future to citizens, communities, regions, and businesses.

Stay Indoors. Stay Safe.



PLI has the potential to boost domestic manufacturing of solar photo voltaic modules

Rishab Jain

Manager - Market Intelligence,
CEEW Centre for Energy Finance

Scaling up solar power projects will be critical to India's energy transition. The country aims to install 100 GW of solar based generating capacity by 2022, and 450 GW of renewables based generating capacity by 2030. India is currently highly dependent on imports to set up these projects as the country has limited manufacturing capacity (solar modules – 10 GW/year, solar cells – 3 GW/year). The government has announced several schemes to address this situation and to the scale-up manufacturing. Production Linked Incentive (PLI) is one such that can make the domestic manufacturing sector globally competitive. A 2020 CEEW Centre for Energy Finance (CEEW-CEF) analysis found that solar modules produced in India were upto 33 per cent more expensive when compared to those manufactured in China. The difference reduces to 22 per cent when one controls for capacity utilisation factors. This residual 22 per cent difference in costs is due to multiple reasons, including the cost of capital, bill of material (BOM), infrastructure, labour, and other overhead costs. An incentive scheme linked to factory production has the potential to address these anomalies in the short term. In this context, the government has approved the 'National Programme on High Efficiency Solar PV (Photo Voltic) Modules' to set up 10 GW of integrated solar PV manufacturing. With an outlay of INR 4,500 crores, the scheme is expected to serve the following purposes:

(i) reduce cost differential between domestic and imported modules and (ii) ensure deployment of high-efficiency products and (iii) incentivise manufacturers to procure materials from the domestic market.

To make the scheme genuinely successful, the government must design a selection criterion that has stringent technical requirements and is forward-looking in nature. The government must support a spectrum of technologies between commercialised (but not economically viable) and lab-scale (ready to be commercialised). Additional incentives can be provided to manufacturers with higher domestic value add. The scheme will also encourage manufacturers to invest in research and develop the local supply chain. While PLI is an important tool, it can only act as a catalyst. The sector would require the implementation of time-bound complementary interventions in the form of tariff restrictions, assured offtake and a certain policy eco-system. The government has already shared its intention to apply 40 and 25 per cent basic customs duty on solar modules and solar cells from April 2022 to reduce reliance on imported products. The government should also scale up programmes like CPSU and KUSUM to support the PLI scheme. However, the most essential support should be in the form of a stable and certain policy eco-system that will encourage manufacturers and investors to tap into government schemes like PLI.



Atmanirbhar Lighting Industry in India

Sumit Padmakar Joshi

President,
ELCOMA

The Indian lighting Industry has been making most of its products in India for more than 70 years now. However, the advent of LED technology completely changed the scenario for our industry as we had to rely on imported components in order to meet the fast-growing demand for LED lighting in households, in line with the government's vision of an energy-efficient India.

Now that the usage of LED lighting products has matured in India, we have prepared a Vision 2024 plan, under which we intend to localize lighting components in India to the largest extent possible and export 40% of the Indian lighting industry's turnover to other countries. With the government's push of 'Vocal for Local' and its recent announcement of a production-linked incentive (PLI) scheme for LED lighting products to boost manufacturing in India including large scale manufacturing of various finished goods as well as components, ELCOMA is working with various ministries to create an eco-system for local manufacturing of LED lighting products and components in India. I am glad to share that all ELCOMA members have come forward and extended their support to help us achieve our Vision 2024 plan.

ELCOMA has already identified the list of components that are currently imported along with the annual volume requirement to enable interested Indian and global players to join this mission to manufacture in India.

Even though the COVID-19 pandemic disrupted the entire world and the global economy, the good news is that it is slowly ebbing down and life is returning back to normal. We are confident that the situation will be much better by the middle of this year. As most markets have now opened-up and consumer demand has also returned,

I believe that the worst is over for our industry and that we shall emerge back stronger. Our industry has been a driving force and accelerator for many innovations and breakthroughs. I am proud to share that even during the COVID-19 pandemic, ELCOMA members continued their work on bringing in new technologies and preparing standards. ELCOMA's involvement in drafting policies, standards, and labelling programs in discussion and together with the government has been commendable.

ELCOMA acknowledges the recent enforcement steps and policy decisions taken by various regulators towards curbing sales of unsafe and non-compliant LED lighting products, but we believe that a lot more needs to be done in this direction to ensure that the safety of the end consumer is not compromised. One of the key steps that the enforcement agencies need to undertake is to drive an awareness campaign for consumers to make them aware of the risks associated with buying non-compliant products and how they can identify non-compliant products using the tools made available by regulators.

With help from ELCOMA members, I am confident that we will be successful in our Vision 2024 mission. By relying on the vast experience and knowledge of all our members, I am sure that the new Vision committee will be able to fulfil the mandate to execute the various wishful programs, with a vision to promote Make in India and export locally manufactured lighting products.



PLI- A step towards accelerating India & green energy transition

Navjeet Singh Kalsi
Managing Director,
Manikaran Power Limited

The objective of the United Nations Framework Convention on Climate Change (UNFCCC), which was ratified by India and many other nations, was to stabilize greenhouse gas (GHG) concentrations at a level that will not cause “dangerous anthropogenic (human-induced) interference with the climate system. To adhere to UNFCCC, India majorly focused on GREEN ENERGY AND GREEN MOBILITY.

GREEN ENERGY:

Production Linked Incentive (PLI) scheme is an instrumental apparatus for making India a global manufacturing hub by creating an extensive & exhaustive component ecosystem and making India an integral part of the global supply chains.

But we can only achieve such economies of scale through sustainable development, which in turn is only possible through sustainable and/or renewable energy. The main objectives for any country on deploying renewable energy is to advance economic development, improve energy security, improve access to energy and mitigate climate change.

To fulfill such objectives and achieving ambitious target of 175 GW renewable energy by 2022, the government of India approved PLI scheme - & National Programme on High Efficiency Solar PV (Photo Voltaic) Modules & for achieving manufacturing capacity of Giga Watt (GW) scale in high efficiency solar PV modules with an outlay of INR 4,500 crore. The scheme was introduced to decrease the dependence on imported solar PV cells and modules and supporting our local operational & technological capacities & capabilities.

GREEN MOBILITY:

The dawn of sustainable development has increased the demand for EVs on Indian roads. Along with EVs, the manufacturing process of EV batteries have also grabbed the attention of major manufacturers. But India is still facing stiff challenge & competition from China in terms of manufacturing & technology capabilities, availability of raw material and cost effectiveness.

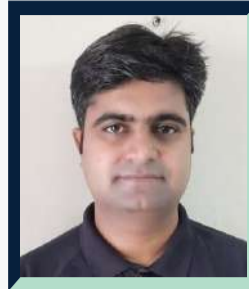
To create a level playing field, Indian government has approved the PLI scheme in advance chemistry cell (ACC) battery manufacturing. ACC battery manufacturing represents one of the largest economic opportunities of the twenty-first century for several global growth sectors, such as consumer electronics, electric vehicles and renewable energy. The PLI scheme for ACC battery is aimed to incentivize large domestic and international players in establishing a competitive ACC battery set-up in the country and would enable India to compete in Global Market.

Manikaran Group being a Power Solutions company with extensive knowledge & expertise in Renewable Energy Forecasting & Scheduling Services, Solar EPC Services, RE Asset Acquisition and EV Ecosystem development (Lithium Refinery Plant & Li-Ion Battery Recycling) welcomes & support various PLI schemes by the government which envisage India’s Green Energy transition & propels vision of Atmanirbhar Bharat.

Maximizing climate benefits with EESL's Super-Efficient ACs

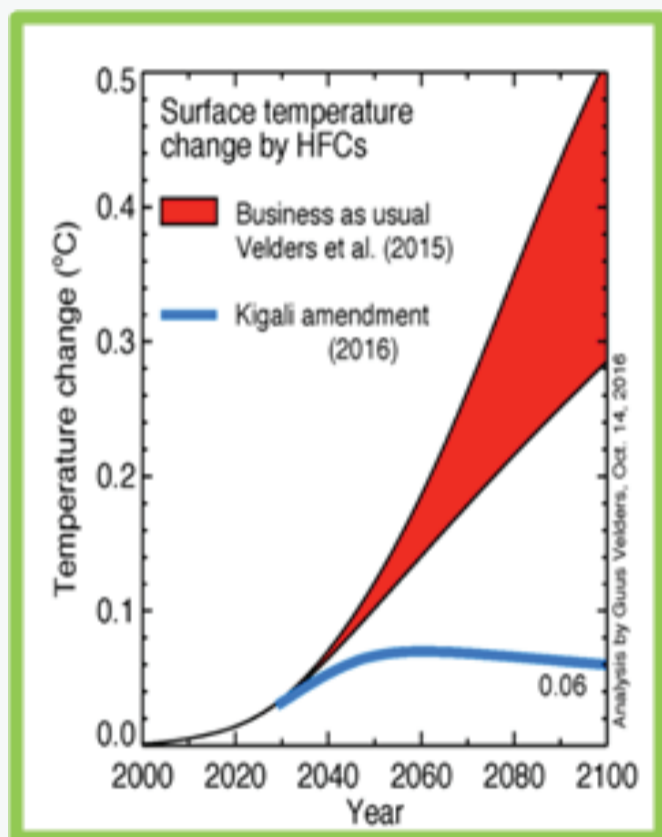


Girja Shankar
General Manager
(Technical),
EESL

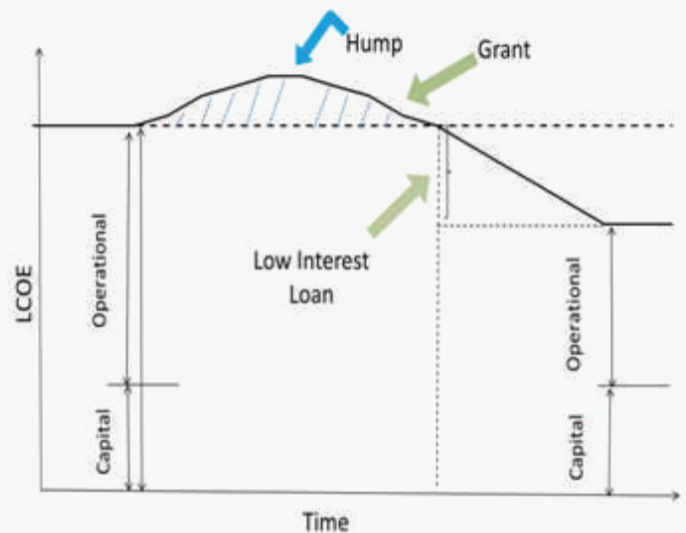


Manjeet Singh
Associate Fellow,
TERI

Energy efficiency is being looked as resource to address some of the critical problems related to energy and environment. This has probably been the most cost effective way to address energy security, peak demand management, electricity access while mitigating climate change impacts.



According to the India Cooling Action Plan (ICAP), the aggregated nationwide cooling energy demand (in terms of primary energy) is expected to grow around 2.2 times in 2027, over the 2017 baseline, and the cooling demand in terms of tonnes of refrigeration is expected to grow around 3.1-times in 2027 over the 2017 baseline. This growth also portends a rise in emissions. Through the Hydrofluorocarbon (HFC) phase down decision, the Montreal Protocol has taken a paradigm shift with the discussions moving towards maximizing climate benefits to promote low GWP, energy efficient climate friendly refrigerants. According to Kigali amendment, while transitioning refrigerants, parties are encouraged to enhance the energy efficiency of the RAC system as well. The recent UNEP-IEA Cooling Emissions and Policy Synthesis Report stated that up to 0.4 o C of warming could be avoided by 2100 by transitioning to energy-efficient and climate-friendly cooling solutions.



Upfront costs, however, are a major barrier to implementing energy efficiency technologies for equipment. An important goal of efficiency policies and programs is to help minimize the upfront project costs so consumers are encouraged to invest in energy efficiency technologies. **In order to accelerate faster adoption of the super-efficient air-conditioners, overcoming strategies for crossing the price-hump of life cycle cost of equipment (LCOE) is very crucial**, and the role of business model becomes important. In this regard, examples of bulk procurement, like that of Energy Efficiency Services Limited (EESL), are worth emulating. EESL's Super-Efficient Air-conditioning (SEAC) Programme leverage economies of scale through demand aggregation and result in significant reduction of the prices of the latest equipment and their availability to the masses. Simultaneously, this program facilitates the accelerated transition towards low-GWP refrigerant by virtue of promoting relatively low-GWP refrigerant based efficient air-conditioners.

With their low lifetime costs, the air conditioners that EESL's SEAC programme has successfully brought to the market can create robust demand for a more sustainable mode of cooling. Given that ACs are a long-term investment, and that is a necessity given that scorching hot summers are becoming an annual constant, the programme can play a key role in embedding sustainable cooling across the country.



The Oberoi Group signs MoU with EESL to further its sustainability initiatives

- **Aims to reduce the group's overall carbon footprint**
- **Tailor-made energy efficiency solutions for each of the hotels & resorts**

New Delhi, 14 th April, 2021 – With the aim to augment its sustainability initiatives, The Oberoi Group has signed a Memorandum of Understanding (MoU) with Energy Efficiency Services Limited (EESL), a joint venture of 4 PSU's under the Ministry of Power. EESL through its Building Energy Efficiency Program (BEEP) will assist The Oberoi Group in implementing several well-established energy efficient initiatives, including clean energy systems across its properties. These initiatives will help reduce the Group's overall carbon footprint and strengthen its energy conservation efforts.

Under the partnership, EESL, through its nationwide network, will collaborate with all Oberoi Group Hotels to evaluate opportunities for saving energy and lowering emissions. EESL will recommend select energy programs from its portfolio with proven track records of successful implementation. Additionally, as a part of The Oberoi Group's efforts towards sustainability, tailor-made energy efficiency initiatives for each of their hotels & resorts will be executed.

EESL will provide technical support and extend its procurement advantage through its partners across the energy sector. The potential energy efficiency measures will include lighting, electric motors & pumps, air-conditioning, ventilation systems, indoor air quality systems and electric vehicles along with charging infrastructure.

Speaking about this partnership, Mr. Saurabh Kumar, Executive Vice Chairman, EESL said, *"Energy efficiency is becoming central to sustainable growth of businesses. EESL has pioneered energy efficiency improvement across India and empowered millions of people through its innovative schemes. Our partnership with The Oberoi Group stands testament to the exemplary vision and progressive approach of a hospitality leader in joining the forces of achieving sustainable development of the country."*

Mr. Vikram Oberoi, Managing Director and Chief Executive Officer of The Oberoi Group said, *"Sustainability is at the core of our ethos at The Oberoi Group. It has always been our endeavour to identify and implement innovative, ecological solutions across our hotels and businesses. Several of our hotels are powered by renewable sources and are supplemented with energy efficient measures which have progressively reduced our carbon footprint. Our partnership with EESL further strengthens our commitment towards the planet and our vision of providing sustainable luxury experiences to our guests."*

Enabling an Energy Efficient India!

Ensuring energy efficiency and improved indoor air quality



Super-Efficient Air Conditioning (SEAC) Programme

- Offering 1.5 TR split inverter AC with eco-friendly refrigerants
- At least 20% cheaper than market cost
- Upto 35% savings on annual electricity bill

Retrofit of Air-conditioning to improve Indoor air quality for Safety and Efficiency (RAISE)

- Energy Efficiency in air conditioning systems with adequate ventilation
- Controlled contaminant and pathogens
- Maintaining comfortable temperature and humidity levels

These initiatives will collectively help in



**Enhanced
Energy Efficiency**



**Improving
Indoor-Air Quality**



**Reduction in
Carbon Emissions**