



COVERAGE REPORT ON

Standards and Labeling Program for Grid Connected Solar Inverter Launch

15TH MARCH, 2024

Standards and Labeling Program for Grid Connected Solar Inverter









Draft Press Release

Standards and Labeling Program for Grid Connected Solar Inverter Launched; Union Power and New & Renewable Energy Minister hails Program, stating that it enables consumers to make informed choices which align with nation's sustainability goals

S&L Program for Solar Inverters aims to further optimize efficiency of solar PV system, enabling consumers to assess overall efficiency and performance of inverters

S&L Program for Grid Connected Solar Inverter expected to save 21.1 billion kWh of energy and reduce 15.1 million tonnes of carbon dioxide emissions between 2024-25 and 2033-2034

New Delhi, 15th March, 2024: The Minister of Power, Shri R K Singh today launched Standards and Labeling (S&L) Program for Grid Connected Solar Inverter under voluntary phase at Shram Shakti Bhawan, New Delhi. This initiative will facilitate common user in selecting better quality invertors used with solar system.

The program will function as MEPS (Minimum Energy Performance Standard) and will be initially valid from 15th March, 2024 to 31st December, 2025. The scope of Solar Inverter under S&L program includes grid connected solar inverter without storage with rated capacity up to 100 kW, which is align with recent MNRE Quality Control Order (QCO) for solar photovoltaic inverters. BIS certified solar inverters complied with safety standard IS 16221-2:2015, are eligible to take part in the BEE's S&L program.

On the occasion, **Shri R K Singh, Minister of Power, Government of India,** said, "India's commitment to sustainability in the power sector is resolute, aiming to achieve the ambitious goal of 50% installed capacity from non fossil sources by 2030. At the forefront of this endeavour is the Bureau of Energy Efficiency's (BEE) Standards & Labeling (S&L) program, a flagship initiative propelling India's sustainable aspirations forward. Specifically, the S&L program for grid-connected solar inverters is a significant stride, offering consumers insight into the performance and quality of products. With this, consumers can make informed decisions, aligning their choices with the better system.

"S&L Program empowers individuals and reinforces India's leadership sustainability"

Power Minister said, "The S&L Program for grid-connected solar inverters is set to revolutionize India's renewable energy sector. By offering consumers clear insights, it empowers them to invest wisely in reliable, efficient, and durable solar solutions. This initiative serves as a catalyst for India's transition towards sustainable energy, underscoring our dedication to a cleaner, greener future.

"Introducing the S&L Program for grid-connected solar inverters marks a pivotal moment in our quest for transparency, quality, and sustainability in the solar sector. It signifies a bold stride forward





in our dedication to a greener, more energy-efficient world. Through this initiative, we empower consumers while fast-tracking our journey towards a brighter, more sustainable future."

About Grid Connected Solar Inverter Labeling program

Renewable Energy sector has become increasingly attractive with the government's increased support and improved economics. One of the key factors driving the Indian solar power market is the increasing investments in renewable energy. In addition, there are favorable regulations and policies such as the National Solar Mission implemented by the Government of India in order to encourage the adoption of solar energy. Moving forward, Hon'ble Prime Minister of India has announced PM Surya Ghar: Muft Bijli Yojana under which a rooftop solar system will be installed on 1 crore households.

To avoid inefficient solar PV system, it became essential to optimize the performance through energy efficiency guidelines or standards. The two major components of the solar PV system are Solar Panels and Solar Inverters. To regulate the solar modules market, the Bureau of Energy Efficiency (BEE) earlier launched Standards & Labeling (S&L) Program for solar PV module on 20th October 2023. BEE further aims to optimize the efficiency of the solar PV system by launching this program for Solar Inverter.

Market Scenario

The current market size of all types of solar inverters is close to 2,520 MW. The grid connected solar inverter dominated the market with 80% of the total solar inverter market share. It is expected that the solar inverter market will be INR 9,352 crore by 2026, with a projected CAGR of 14.4% from 2020 to 2026. As per BEE's market assessment, it is revealed that nearly 63% market share of grid connected solar inverter is of the models with rated output power capacity ranging from 1 kW to 10 kW, 13% share of models are from 11 kW to 20 kW and 24% share of models are above 20 kW rated output capacity.

The Solar Inverters are categorized based on system type, technology, rated output power and its application. In terms of system type, solar inverter is categorized into Grid Connected, Off-Grid and Hybrid solar inverters.

Energy Savings Potential

The implementation of the endorsement label for grid connected solar inverters is expected to yield energy savings of 21.1 Billion kWh between FY 2024- 25 and FY 2033-2034, leading to potential reduction in CO2 emissions amounting to 15.1 Million tons of CO₂ in the same time period.





PIB Press Release

Ministry of Power





Standards and Labeling Program for Grid Connected Solar Inverter Launched; Union Power and New & Renewable Energy Minister hails Program, stating that it enables consumers to make informed choices which align with nation's sustainability goals

Standards & Labelling Program is an important tool in reducing carbon dioxide emissions and in ensuring high product quality: Union Power and New & Renewable Energy Minister R. K. Singh

Program will help consumers in getting better-quality inverters which can be used as part of the solar rooftop system

S&L Program for Solar Inverters aims to further optimize efficiency of solar PV system, enabling consumers to assess overall efficiency and performance of inverters

S&L Program for Grid Connected Solar Inverter expected to save 21.1





billion kWh of energy and reduce 15.1 million tonnes of carbon dioxide emissions between 2024-25 and 2033-2034

Posted On: 15 MAR 2024 5:49PM by PIB Delhi

The Bureau of Energy Efficiency under the Ministry of Power, Government of India has come out with one more Standards and Labeling Program, which aims to help consumers make informed choices considering cost-effectiveness and energy performance of various energy-consuming appliances, thus enabling them to save energy, reduce electricity consumption and also contribute to a greener planet. The latest product to be added to BEE's Standards and Labeling Programs is the Grid-Connected Solar Inverter, with the launch of the Standards and Labeling Program for the solar inverter under voluntary phase, by the Union Power and New & Renewable Energy Minister Shri R. K. Singh in New Delhi today, March 15, 2024. The Program will help consumers in getting better-quality inverters which can be used as part of the solar rooftop system.



Union Power Secretary Shri Pankaj Agarwal; Secretary, New & Renewable Energy, Shri Bhupinder Singh Bhalla; Additional Secretary, Ministry of Power, Shri Ajay Tewari; Additional Secretary, Ministry of New & Renewable Energy, Shri Sudeep Jain; and Director General, BEE Shri Abhay Bakre were also present on the occasion.

"S&L Program is an important tool in reducing carbon dioxide emissions"

Speaking at the launch event, the Union Power and New & Renewable Energy Minister said that the S&L Programs of BEE have resulted in reduction in carbon dioxide emissions by 60 million tonnes per annum. "The S&L Program is an important tool in reducing carbon dioxide emissions. The other advantage is that we





save money, given the quantum of energy saved. In this way, the Program benefits both the consumer as well as the system." The Minister spoke also of the <u>Perform Achieve Trade Scheme of BEE</u>, which he said has resulted in reduction of about 110 million tonnes of carbon dioxide emissions per annum.



"S&L Program a way to ensure product quality, necessary for global competitiveness"

The Power and New & Renewable Energy Minister told the gathering that the S&L Program is a way for ensuring product quality, which is necessary for global competitiveness. "We cannot make in India for the world unless we ensure quality. The days are gone when people will accept some product just because it is made in India."







"People have been found to be willing to pay a premium if the quality is good"

The Minister informed that people will be willing to pay a premium if the quality is good. "This is seen in action in our S&L Program. This is one of our motivations behind expanding the S&L Program to more and more products. This is the secret of making Indian products competitive across the world."

"S&L Program for grid-connected solar inverters will further contribute to Rooftop Solar"

The Minister informed that the rooftop solar programme has got a huge fillip with <u>PM-Surya Ghar: Muft Bijli Yojana</u>, <u>announced by the Prime Minister on February 13</u>, <u>2024</u>. Transmission and distribution losses have come down to zero and reduction in carbon emissions are huge, since energy consumed is renewable energy, said the Minister. The Minister hoped that the S&L Program for grid-connected solar inverters will contribute to this mission.









About Standards and Labeling Program for Grid-Connected Solar Inverter

The Standards and Labeling Program for Grid Connected Solar Inverter has been launched under voluntary phase, valid from 15th March, 2024 till 31st December, 2025.

The program will function as a Minimum Energy Performance Standard (MEPS) for the product, covering only grid-connected solar inverter without storage, with rated capacity up to 100 kW (in alignment with recent Quality Control Order for solar photovoltaic inverters, issued by the Ministry of New & Renewable Energy).

Only BIS-certified solar inverters complying with safety standard IS 16221-2:2015 would be eligible to take part in the program. The endorsement Label adopted is based on minimum overall efficiency criteria in accordance with IS 17980:2022 / IEC 62891:2020 as amended from time to time.

Rated Output Power (kW)	Minimum Overall Efficiency Requirement	
Rated Output Power < 1	92%	
1 ≤ Rated Output Power < 3	93%	
3≤ Rated Output Power < 5	95%	
5 ≤ Rated Output Power < 10	96%	
10 ≤ Rated Output Power < 20	97%	
Rated Output Power ≥ 20	98%	





The launch of the S&L Program follows <u>BEE's launch of Standards & Labeling (S&L) Program for solar panels, in October 2023</u>. The Program for solar inverters aims to further optimize the efficiency of the solar PV system, so that consumers are able to assess the overall efficiency and performance of the inverter before deciding to purchase or use it.

The implementation of the Program is anticipated to yield significant energy savings of 21.1 billion kWh between FY 2024-25 and FY 2033-2034, accompanied by a potential reduction in carbon dioxide emissions of around 15.1 million tonnes during this period.

The market size of all types of solar inverters was close to 2,520 MW in the year 2022-23. The grid connected solar inverter was found to dominate the market with 80% share of the total solar inverter market. It is expected that the solar inverter market will be Rs. 9,352 crores by the year 2026, growing at a projected CAGR of 14.4% during the period from 2020 to 2026.



As per BEE's market assessment, it is revealed that nearly 63% market share of grid connected solar inverter is of the models with rated output power capacity ranging from 1 kW to 10 kW, 13% share of models are those belonging to the range 11 kW to 20 kW and 24% share of models are above 20 kW rated output capacity.

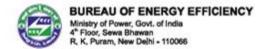
Solar Inverters are categorized based on system type, technology, rated output power and application. In terms of system type, solar inverter is categorized into Grid Connected, Off-Grid and Hybrid solar inverters.

A brief note on the S&L Program for Grid-Connected Solar Inverters can be found <u>here</u> and a more detailed brochure on the program can be found <u>here</u>.









Standards and Labeling Program for Grid Connected Solar Inverter









"Empowers consumers to invest wisely in reliable, efficient and durable solar solutions"

Speaking about the Program, Power Secretary, Shri Pankaj Agarwal said that the Program empowers consumers to invest wisely in reliable, efficient and durable solar solutions, by offering them clear insights about products. "The S&L Program for grid-connected solar inverters is set to revolutionize India's renewable energy sector. This initiative serves as a catalyst for India's transition towards sustainable energy, underscoring our dedication to a cleaner, greener future."

"A pivotal moment in the quest for transparency, quality and sustainability in the solar sector"

Director General, BEE, Shri Abhay Bakre said: "Introducing the S&L Program for grid-connected solar inverters marks a pivotal moment in our quest for transparency, quality, and sustainability in the solar sector. It signifies a bold stride forward in our dedication to a greener and more energy-efficient world. Through this initiative, we empower consumers while fast-tracking our journey towards a brighter and more sustainable future." He said that the S&L Program is a win-win by also encouraging manufacturers to come up with better quality products.



Recently, on March 1, 2024, on the 22nd Foundation Day of BEE, the Union Minister for Power and New & Renewable Energy launched two other Standards and Labeling Programs of BEE, one for Packaged Boilers and the other for Commercial Beverage Coolers, also known as Visi Coolers. More details below.

22nd Foundation Day of Bureau of Energy Efficiency Celebrated; Union Power and New & Renewable Energy Minister commends BEE for its innovative and world-leading programmes; Standards and Labeling Program for Packaged Boilers and Visi Coolers Launched





About BEE

The mission of the Bureau is to assist in developing policies and strategies with a thrust on self-regulation and market principles, within the overall framework of the Energy Conservation Act, 2001. The Vision of Bureau of Energy Efficiency (BEE) is to improve Energy Intensity of Indian Economy thereby contributing towards sustainable development of country. Read more about BEE <u>here</u>.

PIB DELHI | Alok Mishra / Dheep Joy Mampilly

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Read this release in: Hindi





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PTI

ptinews.com/story/business/Grid-connected-solar-inverter-new-addition-to-Standards-and-Labeling-Programme/1360804



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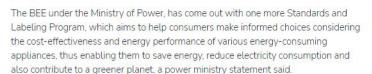


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Grid connected solar inverter new addition to Standards and Labeling Programme



NEW DELHI: The Bureau of Energy Efficiency (BEE) has added a grid-connected solar inverter to the Standards and Labeling Program, which will help consumers get better-quality products for use as part of solar rooftop systems, a statement said on Friday.



The program will help consumers in getting better-quality inverters which can be used as part of the solar rooftop system.

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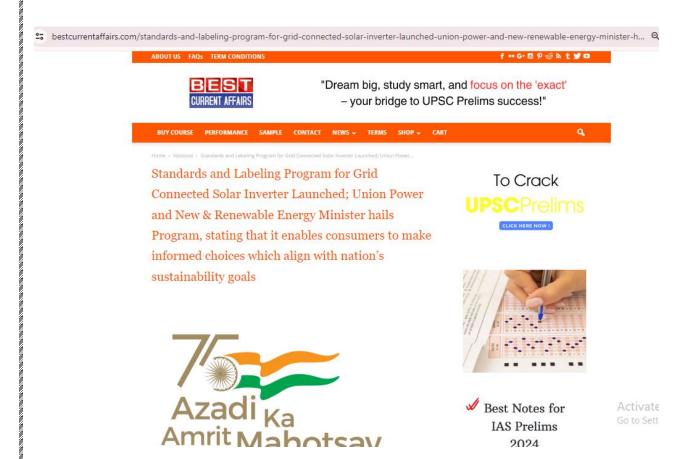
Congress ruled for seven decades but

URL- https://www.ptinews.com/story/business/Grid-connected-solarinverter-new-addition-to-Standards-and-Labeling-**Programme/1360804**





BEST CURRENT AFFAIRS



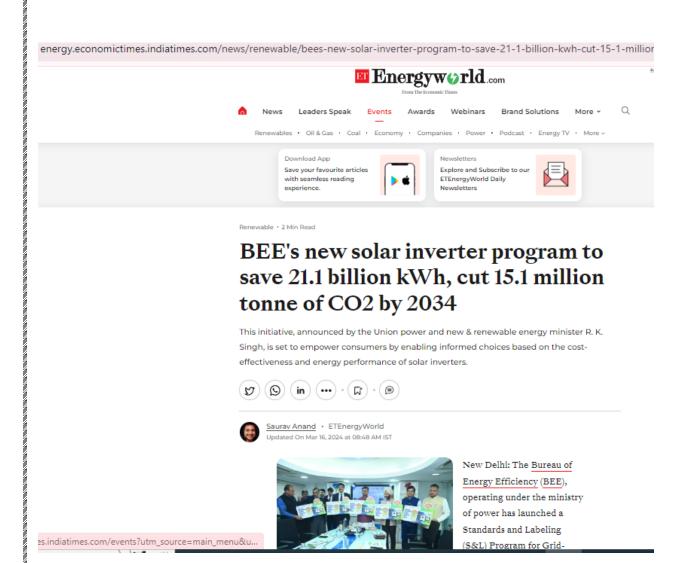
<u>URL- https://bestcurrentaffairs.com/standards-and-labeling-program-for-grid-connected-solar-inverter-launched-union-power-and-new-renewable-energy-minister-hails-program-stating-that-it-enables-consumers-to-make-informed-</u>

choices/#:~:text=The%20latest%20product%20to%20be,today%2C%20March%2015%2C%202024.





ET ENERGY WORLD



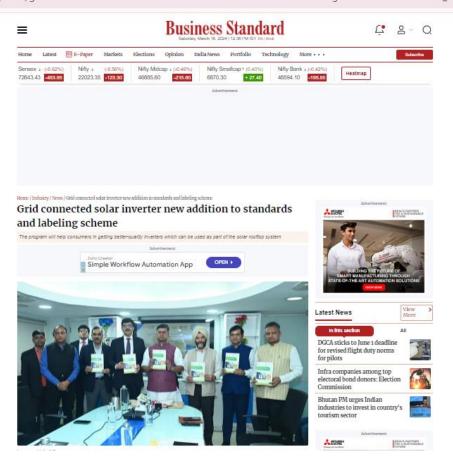
URL- <u>https://energy.economictimes.indiatimes.com/news/renewable/bees-new-solar-inverter-program-to-save-21-1-billion-kwh-cut-15-1-million-tonne-of-co2-by-2034/108538725</u>





BUSINESS STANDARD

business-standard.com/industry/news/grid-connected-solar-inverter-new-addition-to-standards-and-labeling-scheme-124031500931_1.html



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PSU WATCH

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News Updates

RK Singh launches BEE's Standards & Labeling Programme for Grid-Connected Solar Inverter

RK Singh has launched a Standards and Labeling Programme developed by the Bureau of Energy Efficiency (BEE) for Grid-Connected Solar Inverter





RK Singh launches BEE's Standards & Labeling Programme for Grid-Connected Solar Inverter X

PSU Watch Bureau

Published on: 15 Mar 2024, 10:21 pm

New Delhi: Minister for Power and New and Renewable Energy <u>RK Singh</u> launched a Standards and Labeling Programme developed by the Bureau of Energy Efficiency (BEE) for Grid-Connected Solar Inverter on Friday. Speaking at the launch event, Singh said that the S&L Programs of BEE have resulted in reduction in carbon dioxide emissions by 60 million tonnes per annum. "The S&L Program is an important tool in reducing carbon dioxide emissions. The other advantage is that we save money, given the quantum of energy saved. In this way, the Program benefits both the consumer as well as the system."

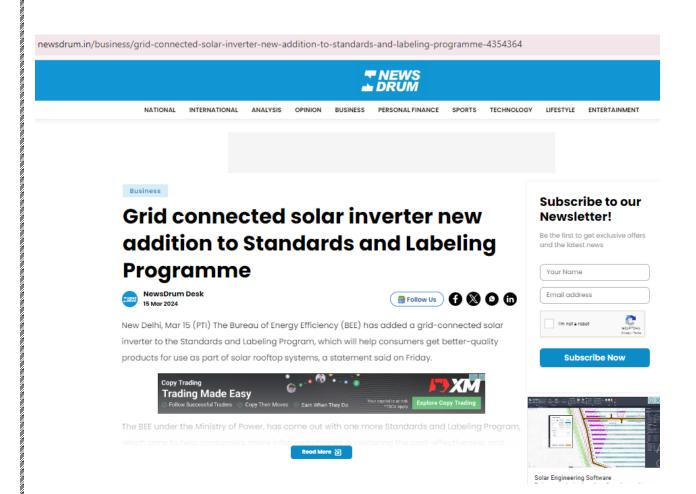
The Standards and Labeling Programme for Grid-Connected Solar Inverter has been

URL- <u>https://psuwatch.com/newsupdates/rk-singh-launches-bees-standards-labeling-programme-forgrid-connected-solar-inverter</u>





NEWS DRUM

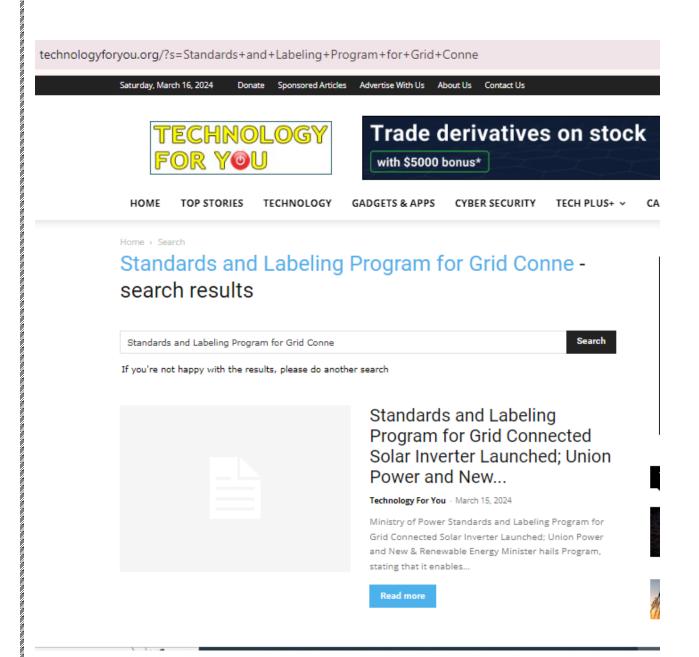


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TECHNOLOGY FOR YOU



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EPR Magazine

https://www.eprmagazine.com/news/india-launches-standards-labeling-programme-for-grid-connected-solar-inverters/



Home = News = India launches standards & labeling programme for grid-connected solar inverters

India launches standards & labeling programme for grid-connected solar inverters



Initiative aims to boost energy efficiency, promote sustainable choices, and drive greener energy transition

and Labeling Programme. This initiative aims to assist consumers in making informed choices regarding the costeffectiveness and energy performance of various energy-consuming appliances. The goal is to enable consumers to save energy, reduce electricity consumption, and contribute to a greener planet. The latest addition to the BEEs Standards and Labeling Programs is the Grid-Connected Solar Inverter. The program was launched by the Union Power and New & Renewable Energy Minister, R. K. Singh, in New Delhi recently. This program will aid consumers in acquiring higher-quality inverters for use in solar rooftop systems.

Also present at the launch event were Union Power Secretary Pankaj Agarwal, Secretary of New & Renewable Energy Bhupinder Singh Bhalla, Additional Secretaries of the Ministry of Power Ajay Tewari, and Additional Secretary of the

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URL -https://www.eprmagazine.com/news/india-launches-standards-labeling-programme-forgrid-connected-solar-inverters/



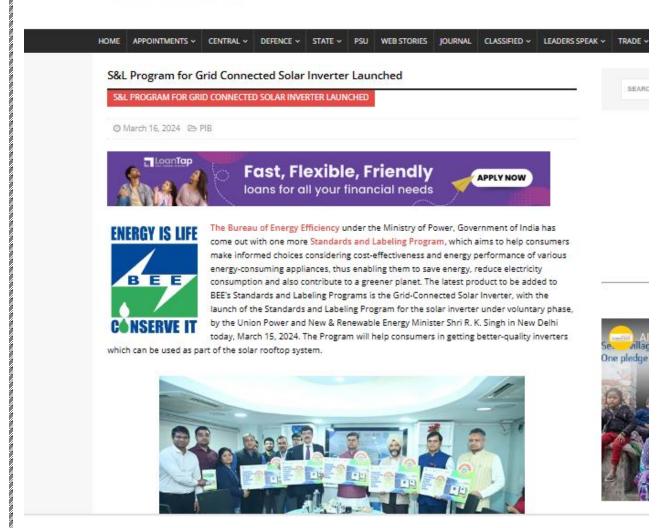


Indian Bureaucracy

https://www.indianbureaucracy.com/sl-program-for-grid-connected-solar-inverter-launched/

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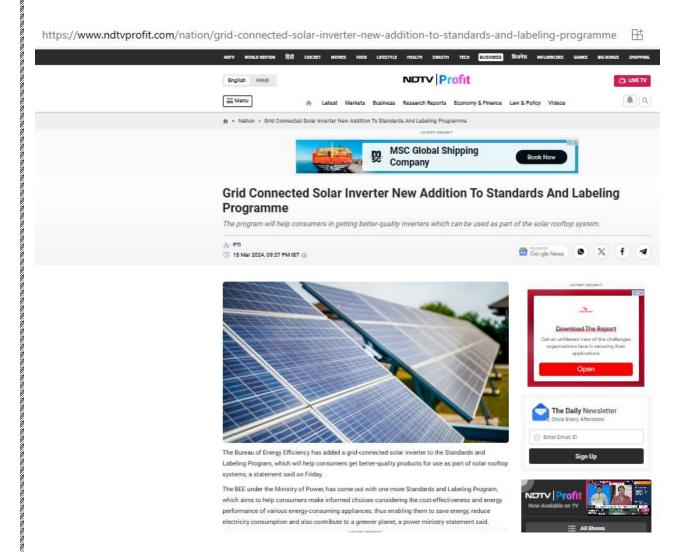


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NDTV Profit



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DD NEWSLIVE



Standards and Labeling Program for Grid Connected Solar Inverter Launched. Union Power and New & Renewable Energy Minister R. K. Singh, Minister of New and Renewable Energy hails Program, stating that it enables consumers to make informed choices which align with nation's sustainability goals.

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