



**Websol Energy System Limited**

Annual Report 2014-2015

## Corporate Information

### Board of Directors

Mr. S. L. Agarwal, Managing Director  
Mrs. S. Jhunjhunwala, Wholetime Director  
Mr. D Sethia, Independent Director  
Mr. P. Kaushik, Independent Director

### Chief Financial Officer

Mr. Anup Kumar Agarwal

### Company Secretary

Ms. Swati Agarwal

### Bankers

Allahabad Bank  
The Federal Bank Limited  
Standard Chartered Bank  
Dena Bank  
HDFC Bank  
Axis Bank  
EXIM Bank  
ICICI Bank

### Auditors

M/s Agarwal Sangneria & Co.  
*Chartered Accountants*

### Registered Office

48, Pramatha Choudhury Sarani  
Plot 849, Block P, 2nd Floor, New Alipore  
Kolkata – 700 053, West Bengal, India  
Phone : +91-33-2400 0419  
Fax : +91-33-2400-0375  
Email : websol@webelsolar.com  
CIN : L29307WB1990PLC048350

### Corporate Office & Plant

Sector – II, Falta Special Economic Zone, Falta,  
District : South 24 Parganas, West Bengal, India  
Pin – 743 504  
Phone : +91-3174-222932  
Fax : +91-3174-222933

### Registrar & Share Transfer Agents

R&D Infotech Pvt. Ltd.  
7A, Beltala Road, 1st Floor, Kolkata -700 026  
Phone: +91-33-2419-2641/42  
Fax : +91-33-2476-1657  
Email : rd.infotech@vsnl.net



## Between the Covers

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This Annual Report is available online at [www.webelsolar.com](http://www.webelsolar.com)

## Notice

NOTICE is hereby given that the 25th Annual General Meeting of the Members of Websol Energy System Limited will be held at Webel Bhavan, Block EP & GP, Sector – V, Salt Lake Electronics Complex, Kolkata – 700 091 on, Wednesday 30th September, 2015, at 10.00 A.M. to transact the following businesses:-

### Ordinary Business:

1. To consider and adopt the Audited Balance Sheet of the Company as at 31st March, 2015 and the Statement of Profit & Loss as on that date together with Notes, Reports of the Board of Directors and Auditor's thereon.
2. To ratify the appointment of M/s Agarwal Sangneria & Co., Chartered Accountants, Kolkata (Registration No. 317224E) as the Statutory Auditors of the Company and to authorize the Board of Directors to fix their remuneration.

RESOLVED THAT pursuant to section 139,142 and other applicable provisions of the Companies Act, 2013 and the Rules made thereunder, pursuant to the recommendations of the audit committee of the Board of Directors and pursuant to the resolution passed by the members at the Annual General Meeting held on September 25, 2014, the appointment of M/s. Agarwal Sangneria & Co., Chartered Accountants, (Registration No. 317224E) as the Auditors of the Company to hold office till the conclusion of the AGM to be held in the calendar year 2017 be and is hereby ratified and that the Board of Directors be and is hereby authorized to fix the remuneration payable to them for the financial year ending March, 31,2016 as may be determined by the Audit Committee in consultation with the Auditors.

3. To appoint a Director in place of Shri. Sohan Lal Agarwal, Managing Directors (DIN 00189898), who retires by rotation and being eligible offer himself for re-appointment.

### Special Business:

To consider and if thought fit, to pass with or without modification(s), the following resolutions:

#### As Ordinary Resolution:

4. "RESOLVED THAT Mr. Prateek Kaushik (DIN: 07096599), who was appointed as a Director pursuant to the provisions of Section 161(4) of the Companies Act, 2013 and who holds office upto the date of this Annual General Meeting be and is hereby appointed as an Independent Director of the Company to hold office for a term of 5 (five) consecutive years upto the conclusion of the 30th Annual General Meeting of the Company in the calendar year 2020"

#### As Special Resolution

5. "RESOLVED THAT in pursuance of the provisions of Sections 196,197, 198 and other applicable provisions, if any, of the Companies Act, 2013 and the rules made there under (including any statutory modification(s) or re-enactment thereof, for the time being in force), read with Schedule V to the said Act and subject to such other approvals, consents as may be required, the consent of the Members of the Company be and is hereby accorded for the appointment of Mrs. Sima Jhunjunwala (DIN: 07264006) as a Whole-time Director of the Company for a period of 3 (three) years with effect from 14th August 2015, on the terms & conditions of remuneration as set out in the Explanatory Statement annexed to the notice convening the meeting, with liberty to the Board of Directors (hereinafter referred to as "the Board" which term shall be deemed to include the Nomination & Remuneration Committee constituted by the Board) to alter and vary the terms & conditions of the said appointment and / or the remuneration, subject to the same not exceeding the limits specified in Schedule V to the Companies Act, 2013, including any statutory modification or re-enactment thereof for the time being in force or as may hereafter be made by the Central Government in that behalf from time to time, or any amendments thereto".

"RESOLVED FURTHER THAT in pursuance of the provisions of Section 197(3) and other applicable provisions, if any, of the Companies Act, 2013, and the Rules framed thereunder Mrs. Sima Jhunjunwala (DIN: 07264006) Whole time Director, may be paid the above mentioned remuneration as minimum remuneration in the event of absence or inadequacy of profits in any financial year during her term of office as Wholetime Director, in accordance with the provisions of Schedule V to the Companies Act, 2013".

RESOLVED FURTHER THAT the Board be and is hereby authorized to take all such steps as may be necessary, proper or expedient to give effect to the above stated resolutions".

By Order of the Board,  
For **WEBSOL ENERGY SYSTEM LIMITED**

Sd/-

(Swati Agarwal)

Company Secretary

Place : Kolkata

Date : 14th August 2015

## Notice

- a) A MEMBER ENTITLED TO ATTEND AND VOTE AT THE MEETING IS ALSO ENTITLED TO APPOINT A PROXY TO ATTEND AND VOTE INSTEAD OF HIMSELF AND THE PROXY NEED NOT BE A MEMBER. PROXIES IN ORDER TO BE EFFECTIVE MUST BE DEPOSITED AT THE REGISTERED OFFICE OF THE COMPANY NOT LATER THAN FORTY EIGHT HOURS BEFORE THE TIME FOR HOLDING THE AFORESAID MEETING.

A person can act as a proxy on behalf of members not exceeding fifty and holding in the aggregate not more than ten percent of the total share capital of the Company carrying voting rights. A member holding more than ten percent of the total share capital of the Company carrying voting rights may appoint a single person as proxy and such person shall not act as a proxy for any other person or shareholder.

- b) Corporate members intending to send their authorised representatives to attend the Meeting are requested to send to the Company a certified copy of the Board Resolution authorizing their representative to attend and vote at the Meeting.
- c) Members are requested to bring their attendance slip along with their copy of annual report to the Meeting.
- d) Pursuant to provisions of Section 91 of the Companies Act, 2013, the register of members and transfer books of the Company will be closed from Friday, 25h September, 2015 till Wednesday, 30th September, 2015 (both days inclusive), for the purpose of Annual General Meeting.
- e) The Securities and Exchange Board of India (SEBI) has mandated the submission of Permanent Account Number (PAN) by every participant in securities market. Members holding shares in electronic form are, therefore, requested to submit the PAN to their respective Depository Participants (DP). Members holding shares in physical form can submit their PAN details to the Company's Registrars & Share Transfer Agent, M/s R&D Infotech Private Limited.
- f) Members holding shares in physical mode are requested to notify immediately changes, if any, in their registered address and bank particulars, to the Company at its Registered Office or to its Registrars & Share Transfer Agent.
- g) Members holding shares in single name and physical form are advised to make nomination in respect of their shareholding in the Company. Members can avail of the nomination facility, under Section 72 of the Companies Act, 2013, by submitting Form No. SH 13 of the Companies (Central Govt's) General Rules and Forms, 2013, with the Company's Registrar and Share Transfer Agent.
- h) Members who hold shares in physical form in multiple accounts in identical names or joint accounts in the same order or names are requested to send the share certificates to the Company's Registrar and Share Transfer Agent for consolidation of such shareholdings into a single folio.
- i) The Ministry of Corporate Affairs ("MCA") has taken a "Green Initiative in the Corporate Governance" by allowing paperless compliances by Companies for servicing of various notices and documents to their members through electronic mode. To support this green initiative of the Government in full measure, members who have not yet registered their e-mail address with the Company can now register the same by intimating their e-mail address to the Company's Registrar and Share Transfer Agent and to the Depository Participant (DP) in respect of shares held in physical mode and demat mode, respectively. Even after registering for e-communication, the members of the Company shall be entitled to receive such communication in physical form, upon request.
- j) Explanatory statements pursuant to Section 102(1) of the Companies Act, 2013 relating to the Special Business to be transacted at the meeting under Item No. 4 & 5 is Annexed hereto.
- k) Information relating to the Directors proposed to be appointed and those retiring by rotation and seeking re-appointment at this Meeting, as required under Clause 49 (VIII)(E) of the Listing Agreement with the Stock Exchanges, is annexed to this Notice.
- l) The instructions for shareholders voting electronically are as under:

### Voting through electronic means

- I. In compliance with provisions of Section 108 of the Companies Act, 2013, Rule 20 of the Companies (Management and Administration) Rules, 2014 as amended by the Companies (Management and Administration) Amendment Rules, 2015 and Clause 35B of the Listing Agreement, the Company is pleased to provide members facility to exercise their right to vote on resolutions proposed to be considered at the Annual General Meeting (AGM) by electronic means and the business may be transacted through e-Voting Services. The facility of casting the votes by the members using an electronic voting system from a place other than venue of the AGM ("remote e-voting") will be provided by National Securities Depository Limited (NSDL).
- II. The facility for voting through ballot paper shall be made available at the AGM and the members attending the meeting who have not cast their vote by remote e-voting shall be able to exercise their right at the meeting through ballot paper.  
NOTE: The Facility for Voting shall be decided by the company i.e. "remote e-voting" or "Ballot Paper" or "Poling Paper"
- III. The members who have cast their vote by remote e-voting prior to the AGM may also attend the AGM but shall not be entitled to cast their vote again.

## Notice

- IV. The remote e-voting period commences on 27th September, 2015 (9:00 am) and ends on 29th September, 2015 (5:00 pm). During this period members' of the Company, holding shares either in physical form or in dematerialized form, as on the cut-off date of 24th September, 2015, may cast their vote by remote e-voting. The remote e-voting module shall be disabled by NSDL for voting thereafter. Once the vote on a resolution is cast by the member, the member shall not be allowed to change it subsequently.
- V. The process and manner for remote e-voting are as under:
  - A. In case a Member receives an email from NSDL [for members whose email IDs are registered with the Company/Depository Participants(s)] :
    - (i) Open email and open PDF file viz; "remote e-voting.pdf" with your Client ID or Folio No. as password. The said PDF file contains your user ID and password/PIN for remote e-voting. Please note that the password is an initial password.
    - (ii) Launch internet browser by typing the following URL: <https://www.evoting.nsdl.com/>
    - (iii) Click on Shareholder - Login
    - (iv) Put user ID and password as initial password/PIN noted in step (i) above. Click Login.
    - (v) Password change menu appears. Change the password/PIN with new password of your choice with minimum 8 digits/characters or combination thereof. Note new password. It is strongly recommended not to share your password with any other person and take utmost care to keep your password confidential.
    - (vi) Home page of remote e-voting opens. Click on remote e-voting: Active Voting Cycles.
    - (vii) Select "EVEN" of "WEBSOL ENERGY SYSTEM LIMITED".
    - (viii) Now you are ready for remote e-voting as Cast Vote page opens.
    - (ix) Cast your vote by selecting appropriate option and click on "Submit" and also "Confirm" when prompted.
    - (x) Upon confirmation, the message "Vote cast successfully" will be displayed.
    - (xi) Once you have voted on the resolution, you will not be allowed to modify your vote.
    - (xii) Institutional shareholders (i.e. other than individuals, HUF, NRI etc.) are required to send scanned copy (PDF/JPG Format) of the relevant Board Resolution/ Authority letter etc. together with attested specimen signature of the duly authorized signatory(ies) who are authorized to vote, to the Scrutinizer through e-mail to [scrutinizer@gmail.com](mailto:scrutinizer@gmail.com) with a copy marked to [evoting@nsdl.co.in](mailto:evoting@nsdl.co.in)
  - B. In case a Member receives physical copy of the Notice of AGM) [for members whose email IDs are not registered with the Company/Depository Participants(s) or requesting physical copy] :
    - (i) Initial password is provided as below/at the bottom of the Attendance Slip for the AGM :
 

EVEN (Remote e-voting Event Number)	USER ID	PASSWORD/PIN
-------------------------------------	---------	--------------
    - (ii) Please follow all steps from Sl. No. (ii) to Sl. No. (xii) above, to cast vote.
- VI. In case of any queries, you may refer the Frequently Asked Questions (FAQs) for Members and remote e-voting user manual for Members available at the downloads section of [www.evoting.nsdl.com](http://www.evoting.nsdl.com) or call on toll free no.: 1800-222-990.
- VII. If you are already registered with NSDL for remote e-voting then you can use your existing user ID and password/PIN for casting your vote.
- VIII. You can also update your mobile number and e-mail id in the user profile details of the folio which may be used for sending future communication(s).
- IX. The voting rights of members shall be in proportion to their shares of the paid up equity share capital of the Company as on the cut-off date of 24th September, 2015.
- X. Any person, who acquires shares of the Company and become member of the Company after dispatch of the notice and holding shares as of the cut-off date i.e. 24th September, 2015., may obtain the login ID and password by sending a request at [evoting@nsdl.co.in](mailto:evoting@nsdl.co.in) or Issuer/RTA.  
However, if you are already registered with NSDL for remote e-voting then you can use your existing user ID and password for casting your vote. If you forgot your password, you can reset your password by using "Forgot User Details/Password" option available on [www.evoting.nsdl.com](http://www.evoting.nsdl.com) or contact NSDL at the following toll free no.: 1800-222-990.
- XI. A member may participate in the AGM even after exercising his right to vote through remote e-voting but shall not be allowed to vote again at the AGM.
- XII. A person, whose name is recorded in the register of members or in the register of beneficial owners maintained by the depositories as on the cut-off date only shall be entitled to avail the facility of remote e-voting as well as voting at the AGM through ballot paper.

## Notice

- XIII. has been appointed for as the Scrutinizer for providing facility to the members of the Company to scrutinize the voting and remote e-voting process in a fair and transparent manner.
- XIV. The Chairman shall, at the AGM, at the end of discussion on the resolutions on which voting is to be held, allow voting with the assistance of scrutinizer, by use of "remote e-voting" or "Ballot Paper" or "Poling Paper" for all those members who are present at the AGM but have not cast their votes by availing the remote e-voting facility.
- NOTE: The Facility for Voting shall be decided by the company i.e. "remote e-voting" or "Ballot Paper" or "Poling Paper"
- XV. The Scrutinizer shall after the conclusion of voting at the general meeting, will first count the votes cast at the meeting and thereafter unblock the votes cast through remote e-voting in the presence of at least two witnesses not in the employment of the Company and shall make, not later than three days of the conclusion of the AGM, a consolidated scrutinizer's report of the total votes cast in favour or against, if any, to the Chairman or a person authorized by him in writing, who shall countersign the same and declare the result of the voting forthwith.
- XVI. The Results declared alongwith the report of the Scrutinizer shall be placed on the website of the Company [www.webelsolar.com](http://www.webelsolar.com) and on the website of NSDL immediately after the declaration of result by the Chairman or a person authorized by him in writing. The results shall also be immediately forwarded to the stock exchanges.

By Order of the Board,  
For **WEBSOL ENERGY SYSTEM LIMITED**  
Sd/-  
**(Swati Agarwal)**  
Company Secretary

Place: Kolkata  
Date: 14th August 2015

### EXPLANATORY STATEMENT OF MATERIAL FACTS IN RESPECT OF THE SPECIAL BUSINESS PURSUANT TO SECTION 102 (1) OF THE COMPANIES ACT, 2013.

#### Item No. 4

The Board has appointed Mr. Prateek Kaushik (DIN 07096599) as an Independent Director to fill up the vacancy caused by the resignation of Mr. B. R. Sengupta, for a term of 5 years, under section 164(1), of the Companies Act, 2013.

The Company has received a notice in writing from a member along with the deposit of requisite amount under Section 160 of the Act proposing the candidature of Mr. Prateek Kaushik (DIN 07096599) for the office of Director of the Company.

The Company has received the declaration of independence from him in accordance with the provisions of the act. In line with the requirements of the Act, it is therefore proposed to appoint Mr. Prateek Kaushik (DIN 07096599) as an Independent Director on the Board of the Company for a term upto five consecutive years commencing from 30th September, 2015 pursuant to the provisions of the Act, not liable to retirement by rotation. He is not holding any Equity Shares of the Company

Except for the appointee Mr. Prateek Kaushik (DIN 07096599) and his other relatives to the extent of their shareholding interest in the Company, if any, none of the other Directors / Key Managerial Personnel of the Company and their relatives are, in any way, concerned or interested in this resolution.

The Board commends the Ordinary Resolutions set out at Item No. 4 of the Notice for approval by the shareholders

#### Item No.5

The Board of Directors of the Company ("the Board") at its meeting held on 14th August, 2015 appointed Mrs. Sima Jhunjhunwala, (DIN: 07264006) as Whole Time Director, for a period of 3 years w.e.f. 14th August, 2015 at the remuneration recommended by the Nomination and Remuneration Committee ("the Committee") of the Board and approved by the Board. It is proposed to seek the members approval for the reappointment of and remuneration payable to her as Whole Time Director, in terms of the provisions of the act. Broad particulars of the terms of appointment and remuneration payable to her as Whole Time Director are as under:-

#### A. PERIOD OF APPOINTMENT:

14th August, 2015 to 14th August, 2018.

#### B. SALARY :

Basic salary Rs 45,415/- per month.

Additional increment(s) will be considered by the Board of Directors on merits and at its absolute discretion.

#### C. BONUS :

As per rules of the Company.

#### D. PERQUISITES :

## Notice

- i. Reimbursement of medical expenses for self and family and Leave Travel Concession as per the rules of the Company.

The perquisites and allowances payable to the aforesaid Wholetime Director shall include accommodation (furnished or otherwise) or house rent allowance; medical allowance/ reimbursement; leave travel concession for self and family including dependents; encashment of leave and such other perquisites and / or allowances, as per the Company policy.

The said perquisites and allowances shall be evaluated, wherever applicable, as per the Income Tax Act, 1961 or any rules thereunder (including any statutory modification(s) or re-enactment thereof, for the time being in force). However, the Company's contribution to Provident Fund, Superannuation or Annuity Fund, to the extent these singly or together are not taxable under the Income Tax Act 1961, and gratuity payable and encashment of leave at the end of the tenure, as per the rules of the Company, shall not be included in the computation of limits for the remuneration which includes salary, perquisites and allowances. The terms and conditions set out for re-appointment and payment of remuneration specified herein may be altered and varied from time to time by the Board of Directors ("the Board" which term shall be deemed to include the Nomination & Remuneration Committee constituted by the Board of the Company), as it may, at its discretion deem fit. The Board is also entitled to revise the salary, perquisites and allowances payable to the said Wholetime Director of the Company at any time, such that the overall yearly remuneration payable to the said Wholetime Director shall not exceed the limits specified under Section 197 read with Schedule V of the Companies Act, 2013 (including any statutory modification (s) or re-enactment thereof for the time being in force) or any amendment made thereto.

Except Mrs. Sima Jhunjhunwala no other Director and Key Managerial Personnel of the Company and their relatives, is concerned or interested in the Resolution set out at Item No. 5 of the Notice convening the meeting.

The Board commends the Special Resolutions set out at Item No. 5 of the Notice for approval by the shareholders.

By Order of the Board,  
For **WEBSOL ENERGY SYSTEM LIMITED**  
Sd/-  
**(Swati Agarwal)**  
Company Secretary

Place: Kolkata

Date: 14th August 2015

### Particulars of Directors seeking appointment/reappointment at the Annual General Meeting

Name	Mr. Sohan Lal Agarwal	Mrs. Sima Jhunjhunwala	Mr. Prateek Kaushik
Date of birth	04.03.1946	13.09.1983	19.04.1986
Experience in Specific Functional Area	Solar Industry	Accounts, Tax	Indirect Taxation
Qualification	Graduate in Commerce	Chartered Accountant	Company Secretary and Cost & Management Accountant
Directorship in Companies as on 31.03.2014	S. L. Industries	NIL	NIL
No. of Shares held	NIL	NIL	NIL

### ROAD MAP OF WEBEL BHAWAN



## Management Discussion & Analysis

### GLOBAL SOLAR INDUSTRY OVERVIEW

While 2014 undoubtedly remained a challenging time for the solar industry, it did mark an inflection point in the market's development. Volume demand grew at a double-digit pace again, largely thanks to policy in China and Japan. Global solar PV installations in 2014-15 reached 44.2GW, compared to its last published forecast of installs reaching 45.1 GW, a 14% increase over 2013. One of the reasons for the lower than expected installs

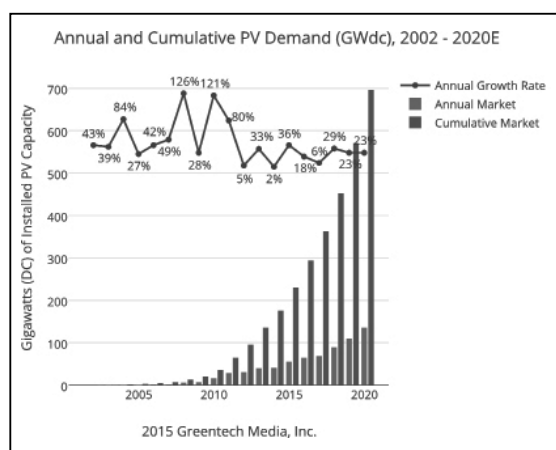
was the decline in demand within European countries, despite record installs in the UK that made it the biggest market in Europe for the first time.

#### ? DID YOU KNOW

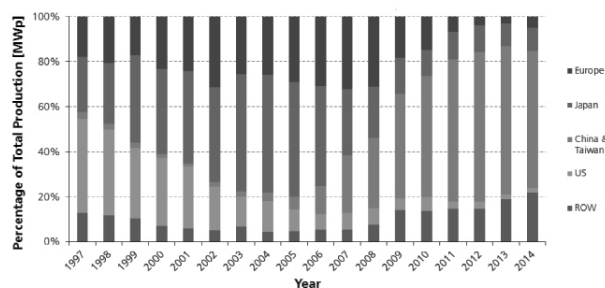
Solar energy is a completely free source of energy and it is found in abundance. Though the sun is 90 million miles from the earth, it takes less than 10 minutes for light to travel from that much of distance.

All of the signs point to a strengthening recovery of the solar industry in 2015 even if the recovery itself remains incredibly fragile. Policy support will continue to be key, and demand still will be highly concentrated in a handful of countries, presenting significant risk. Nonetheless, the rapid price declines seen by the industry has opened up solar to an enormous number of countries around the world, with several new business models emerging in the post-FiT world. More than 40 countries globally will install at least 100 megawatts of new solar PV capacity in 2015, signaling the true entry of solar into traditional energy generation.

The cumulative global market for solar PV is expected to triple by 2020 to almost 700 gigawatts, with annual demand eclipsing 100 gigawatts in 2019. Solar demand will likely be almost entirely market-based in 2020; a dramatic shift from 2012 when almost all demand was premised on direct incentives. One implication of an increasingly unsubsidized market is that management and governance of the electric grid will change dramatically, creating both new opportunities and challenges for solar companies. This transformation is already underway with the implementation of market-based mechanisms for PV procurement and solar companies exploring innovations in business model design.



#### PV Cell/Module Production by Region 1997-2014 Percentage of Total MWp Produced

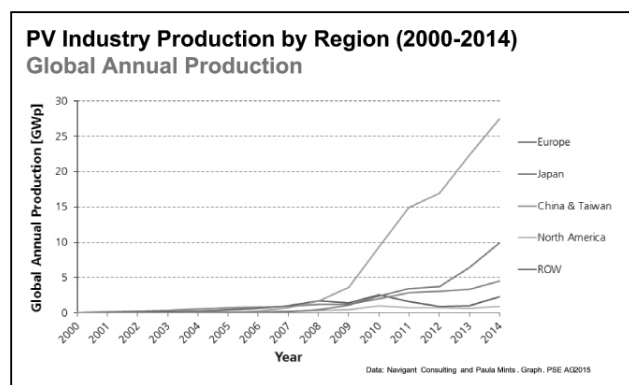


### INDIAN INDUSTRY OVERVIEW

The Ministry of New and Renewable Energy (MNRE) announced that India's total grid-connected solar capacity crossed 3 GW in December 2014. A total of 886 MW was added during the calendar year 2014, which made it another year of less than 1 GW installation. India crossed the 1 GW mark in July 2012 and the second GW mark in August 2013. The policy and regulatory uncertainties ensured that it took an inordinately long time for the 3rd GW to be completed. India is likely to become one of the largest solar markets globally in the next three years and is already on track to add more solar capacity than Germany for the year 2015.



## Management Discussion & Analysis



While the first half of 2014 was full of uncertainty and indecision due to the elections, the second half was action packed, and laid a good foundation for a vastly better 2015. The MNRE started the process for allocation of 3 GW of solar projects under the state specific programme. Several Central Public Sector Undertakings (USA) and government organizations are also in the process of setting up solar plants. 3 southern states – Karnataka, Andhra Pradesh and the newly carved Telangana – allotted 500 MW of solar projects each, and if all goes well, a majority of these projects will be commissioned by end of 2015/early 2016.

Apart from that, several projects that were started in 2014 will be completed in 2015. These projects include the 750

MW of solar projects allotted under the Phase 2, Batch 1 of JNNSM, allocation under the state policies of Uttar Pradesh, Punjab and Madhya Pradesh. Overall, it is expected that around 2 GW of solar capacity will be added in 2015.

While the 2 GW growth prospects give immediate relief to the industry, what excites and sometimes overwhelms the industry is the ambitious revision of solar targets by the new government. The government is proposing a 5-fold increase in the JNNSM targets and is planning to revise it from 20 GW of grid-connected solar to 100 GW by 2022 or even earlier. Considering the fact that it took India about 5 years to add 3 GW, adding another 97 GW in 8 years looks extremely challenging. The government has nonetheless gone ahead and released the year-wise roadmap to achieve the goal of 100 GW by 2020. The year-wise details are given below.

### ? DID YOU KNOW

The earth gets 174 Petawatts of incoming solar radiation in the upper atmosphere. About 30% is reflected back to space and the rest is absorbed by oceans, clouds and land masses.

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Rooftop Solar (GW)	3	7	9	10	11	40
Large Scale Solar (GW)	4	6	8	10	12	40
Ultra Mega Power Projects (GW)	0	5	5	5	5	20
<b>Total (GW)</b>	<b>7</b>	<b>18</b>	<b>22</b>	<b>25</b>	<b>28</b>	<b>100</b>

(Source: RE-Invest by MNRE)

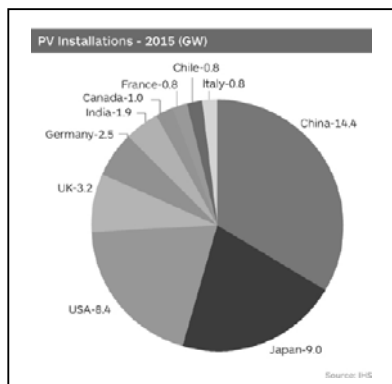
### CHALLENGES APLENTY

Reaching the ambitious target of 20 GW of installed capacity would require addressing a number of challenges including a lack of access to low cost financing, inadequate infrastructure, underdeveloped supply chain leading to high inventory costs, and a lack of raw materials for solar manufacturers. Of all these challenges, one that has acquired prominence in the recent months is the trade battle that has erupted between India and the US. The US has taken its battle to get India to open its solar market to the World Trade Organisation.

At the heart of the battle is the stipulation for "domestic content requirement" (DCR) in Phase II of the JNNSM program. The US wants India to back off from its requirement of incorporating locally-made cells and modules into solar projects as it would discriminate against US exports. India on the other hand argues that the domestic content requirement is necessary for protecting domestic solar industries that cannot match the low prices offered by other nations like China.

Some kind of protectionist policies has been present in the JNNSM program from the outset. In Phase I, DCR was limited to crystalline silicon photovoltaic (PV) panels. PV technology is broadly classified into crystalline silicon and thin film. Phase

## Management Discussion & Analysis



II of the JNNSM program expands the domestic content requirement to include thin film solar technologies which comprises the bulk of US solar products exports to India. While Indian solar cell and module manufacturers obviously support DCR, since they cannot compete with the much larger and lower cost Chinese companies, Indian installers and developers have opposed the domestic content rule as this leads to higher costs and fewer choices of suppliers.

Solar PV technology is evolving very fast and India needs to breed an environment that prioritises innovation and research in this area. Other countries like Germany and the US have been spending large amounts on R&D for a long time. In addition to investing in more R&D, forging partnerships between the country's technical colleges and universities and the solar industry as well as forging international collaborations will go a long way in moving to technologies that reduce costs, improve efficiency, and scale up the deployment of solar projects.

### OUTLOOK

To support the domestic PV industry, the Government has also declared a number of measures. The 'National Manufacturing Policy' announced in 2011 was merged with the 'Make in India' initiative launched in 2014 and a host of incentives were announced specifically for PV module and BOM manufacturers.

Exemption from custom and excise duty comprised the bulk of incentives. The exemptions were also extended to equipment purchased for manufacturing the aforementioned components. In addition, under the Modified Special Incentive Package Scheme (M-SIPS), announced by the Department of Electronics and Information Technology (DeitY), 20% and 25% subsidy on capital expenditure has been announced for entities establishing cell and module lines in Special Economic Zones (SEZ) and Non-SEZs, respectively. Reimbursement of excise duty and countervailing duty is also applicable for capital equipment purchased for Non-SEZ units. Further, for high technology units, such as fabrication units (wafer manufacturing facility), reimbursement of central taxes and duties have also been provided.



#### DID YOU KNOW

Solar energy has been used for over 2700 years. In 700 BC, glass lenses were used to make fire by magnifying the sun's rays.