



From the Interim Director General, ISA



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TRIPATHY**

Interim Director General, ISA

2017 has, so far, been a bright year for the solar energy sector, with record low tariffs and increased global deployment. The International Solar Alliance has also made large strides in the past few months, and had the pleasure of welcoming six new member countries on board, at an ISA event held on the sidelines of the 52nd African Development Bank (AfDB) Annual Meeting.

This brings the total count of ISA

member countries to 33, in 7 months of the opening of the ISA Framework Agreement for signatures. While interest from other countries continues to grow, with several more countries likely to join in the coming months, 6 countries have also ratified the agreement.

Even as the ISA process for legal status continues, the work on the two existing work programmes that were initiated last year, on 'Solar Applications for Agricultural Use' and 'Affordable Finance at Scale', is underway. ISA has launched a third work programme on Scaling Solar Mini-Grids on 24 May 2017 during the 52nd annual meeting of the African Development Bank. Some of the key components of this programme include spreading awareness, enhancing local capacity for setting up mini, micro and nano grids, building a skilled workforce and promoting the formulation of mini grid policies. Mini and micro-grids could be the solution for numerous communities and regions located in the ISA member countries that have plentiful access to renewable energy resources but with no access or poor access to affordable energy, to gain access, to uninterrupted power supply at affordable rates.

ISA has charted its way forward on a number of other fronts as well. A study on Common Risk Mitigation Mechanism has been commissioned, with support from 13 countries and with an aim to develop a tool for the creation of a more secure environment for private investment in solar assets in member countries. ISA has also granted Observer Status to both the International Renewable Energy Agency and the International Energy Agency. This is another major step forward for ISA in collaborating with other international organisations to take work on common identified areas forward.



▲ Hon'ble Indian Minister of State for Power, Coal, New and Renewable Energy, and Mines, Shri Piyush Goyal addresses the Diplomatic Missions of ISA Countries on 8 May 2017 in New Delhi, India

ISA continues to be a platform for its current and prospective member countries to come together, engage and ideate on solutions to the existing impediments affecting the deployment of solar power at the required scale. We will continue to respond promptly to your feedback and actively arrange for opportunities to collaborate to take us closer to achieving ISA's goals and realising ISA's potential.

Countries that have ratified the Framework Agreement:

1. India, 2. France, 3. Nauru, 4. Mauritius, 5. Fiji and 6. Tuvalu.

Signatories to the ISA Framework Agreement:

- | | |
|---------------------------------|-----------------|
| 1. Bangladesh | 17. India |
| 2. Brazil | 18. Liberia |
| 3. Burkina Faso | 19. Madagascar |
| 4. Cambodia | 20. Mali |
| 5. Comoros | 21. Mauritius |
| 6. Cote d'Ivoire | 22. Nauru |
| 7. Democratic Republic of Congo | 23. Niger |
| 8. Djibouti | 24. Rwanda |
| 9. Dominican Republic | 25. Senegal |
| 10. Ethiopia | 26. Seychelles |
| 11. France | 27. Somalia |
| 12. Fiji | 28. South Sudan |
| 13. Republic of Guinea | 29. Sudan |
| 14. Gabonese Republic | 30. Tanzania |
| 15. Ghana | 31. Tonga |
| 16. Guinea Bissau | 32. Tuvalu |
| | 33. Vanuatu |



President of the AfDB Group, Hon'ble Prime Minister of India, and other senior dignitaries from African countries inaugurated the exhibition, organised as part of the 52nd annual meeting of the African Development Bank (AfDB) held in Gandhinagar, Gujarat, India

ISA's first Exhibition at Gandhinagar, Gujarat

- The annual meeting of the AfDB group was held at Gandhinagar, Gujarat from 22 to 26 May, 2017. There were several sessions on different areas of cooperation between Africa and India. During the meeting, an exhibition was organized by AfDB and FICCI of the Indian industry working closely with different African countries involved in sectors including agriculture, health, energy, banking and financing organizations.
- The participants of the exhibition included manufacturers, suppliers, banks, NGO, bilateral and multilateral organizations. Apart from the main programme and exhibition, several side events were also organized. Hon'ble Prime Minister of India, President of the AfDB and other senior dignitaries from African countries inaugurated the exhibition. ISA stall was visited by Hon'ble Prime Minister of India, Ministers, Ambassadors, High Commissioners and other dignitaries from the African countries.

Launch of Work Programme: Scaling Solar Mini-Grids

The work programme is an attempt to address the challenges in integrating solar energy into insular or unconnected electricity grids. Participating member countries can take advantage of the available solutions to promote universal energy access and reduce electricity costs and tariffs through introduction and promotion of mini, micro, and

nano grids with smart features for harnessing solar power, in a time bound manner.

Main activities under the Programme: Design and deployment of small grids, adoption of common standards, aggregation of demand, help in establishing global credit enhancement and de-risking mechanisms, call for expression of interest, assessing demand and costs requirement for mini grid projects, identifying/ developing attractive payment models for consumers, and persuading member countries with overseas assistance budgets to earmark a portion of their soft loan for this work programme.



- ▲ **Launch of the third ISA Work Programme on "Scaling Solar Mini-Grids":** Mr Piyush Goyal, while launching the third ISA Work Programme on Scaling Solar Mini-Grids on the sidelines of the 52nd Annual Meeting of AfDB, stated that "ISA can act as a medium to help achieve the target of Universal Energy Access by 2025."

Signing and Ratification of ISA Framework Agreement at the AfDB Annual Meeting

- MEA opened the ISA Framework Agreement for signatures and also accepted ratification instruments at the AfDB group meeting held at Gandhinagar, Gujarat.
- Somalia, Cote d' Ivoire, Djibouti, Ghana, Mauritius and Comoros became signatories.



- ▲ *Indian Finance Minister Shri Arun Jaitley with the representatives of the signatory countries at the signing and ratification event*

Meanwhile in the world of solar...

- IKEA Foundation's Brighter Lives for Refugees campaign has funded a programme that has resulted in the setting up of a 2 MW solar PV farm that will provide electricity and light to more than 20,000 Syrian refugees living in the Azraq refugee camp in Jordan. Azraq is the second largest Syrian refugee camp in the country. According to a statement by the UNHCR, the solar farm will result in immediate savings of USD1.5 million per year. The construction of the plant has also provided work opportunities for some 50 refugees.
- Chinese energy company Sunpower Power Supply has built a 40 MW solar power plant, situated atop a flooded former coal-mining town in the Anhui province of eastern China. "The plant not only makes full use of this area, reducing the demand for lands – but also improves generation due to the cooling effects of the surface," a local government official said.
- Researchers with the Japanese chemical manufacturer Kaneka Corporation have built a solar cell with a photo conversion rate of 26.3%, breaking the previous record of 25.6%. Kaneka will work with Japan's New Energy and Industrial Technology Development Organization to bring the levelized cost of solar cells down to \$0.06 per kilowatt-hour by 2030.



Member Country Spotlight: Brazil

Brazil has an abundance of primary energy sources for electricity power generation: hydroelectric potential, coal, and uranium (nuclear power). However, the country is promoting the adoption of renewable energy beyond hydro power. The renewable energy power capacity (utility scale) in Brazil currently stands at 125,251 MW. Of this, 98,737 MW is from hydropower, 10,474 MW is from wind power, and only 24 MW from solar energy. Approximately 41% of Brazil's energy demand is met by renewable energy, making it one of the least carbon-intensive markets in the world.

As per Brazil's National Electric Energy Agency, a further 7.6 GW of wind and 2.98 GW of solar power have been tendered and this tendered power will represent a 12,417% increase in installed solar capacity. Brazil has Latin America's largest renewable energy market. In its nationally determined contributions to the UNFCCC, Brazil committed to increasing the share of renewables (other than hydropower) in the power supply to at least 23% by 2030, including by raising the share of wind, biomass and solar.

Installing new solar and wind power capacity is of strategic importance to Brazil not only to hedge against periods of low rainfall, and the associated slump in hydropower, but also for economic purposes in order to hedge against volatility in electricity prices and fluctuating natural gas prices

The Brazilian Development Bank has been the major source of low-cost financing for renewable energy project in Brazil and it expects to invest USD 2.5 billion in solar development through 2018. However, since under the current rules, BNDES loans are available only to companies that commit to using locally produced equipment, a major focus area for Brazil has also been to attract other solar panel manufacturers into the country.

The lowest solar bid in India was recorded in May 2017 at the Bhadla solar park in Rajasthan, with the winning bids being as low as **INR 2.44 /kWh** (US Cents 3.78/kWh), fixed for a period of 25 years.



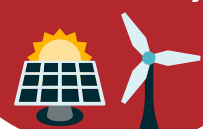
Analysis by the Council on Energy, Environment and Water (CEEW): 66% of the INR 2.44/kWh tariff is the cost of finance



"We still have a long way to go. We can not fight against technological innovations such as distributed generation, and our role here in the Ministry of Mines and Energy is to arbitrate and harmonize this transition, so that everyone can get together to reach the other side of the river, trying to meet everybody's expectations and our commitments."

- Fernando Coelho Filho, Minister of Mines and Energy, Government of Brazil

Target
24 GW wind and
7 GW solar by 2024



Updates from ISA Work Programme: Affordable Financing at Scale: Taskforce for developing a Common Risk Mitigation Mechanism set up

Under the Programme on 'Affordable Finance at Scale', a study has been commissioned to define and structure a Common Risk Mitigation Mechanism (CRMM) for solar power generation projects in solar rich countries. CRMM for solar generation assets is intended to identify ways to scale up investment in solar to \$1 trillion. In order to develop CRMM for ISA countries, the Interim Secretariat has constituted a taskforce, with the following member organisations: Terrawatt Initiative (Chair), The World Bank Group, The Currency Exchange Fund (TCX), The Council on Energy, Environment and Water (CEEW) and the Confederation of Indian Industry (CII).

The cost of capital remains a major burden for solar power development in many emerging economies. In India, CEEW

estimates that raising finance represents up to 70% of the total cost of developing a solar plant, and the hope is that the CRMM can lower these costs and make it easier for developers and governments to attract the right type of investment.

To do so, the Terrawatt Initiative says that it will work with the ISA to "create a secure environment for private institutional investments in solar assets", by pooling risks on mutualized public resources and ensuring collective buy-in and validation of funds from both public and private entities.

Conclusions derived from the taskforce will be presented at COP23, to be held in Bonn, Germany, in November this year.



Launch of study on Common Risk Mitigation Mechanism (CRMM) for solar power generation projects at the Leader Session organised by ISA and the Terrawatt Initiative on 18 May 2017 in New Delhi, India by H. E. Upendra Tripathy, Ms. Isabelle Kocher, Chairperson, Terrawatt Initiative, Shri Rajeev Kapoor, Secretary, Ministry of New and Renewable Energy, India and H. E. Mr Alexandre Ziegler, Ambassador of France to India



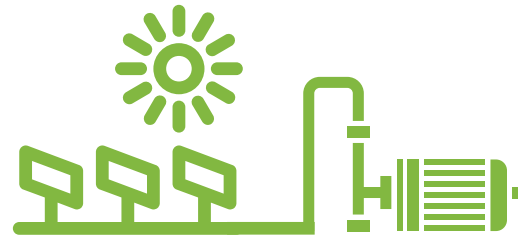
Ms. Isabelle Kocher, Chairperson, Terrawatt Initiative launched the beta version of the Digital Infopedia Platform on 18 May 2017. This platform will fill the gap of information asymmetry among the ISA member countries.

Launch of ISA's Digital Infopedia

- ISA has also decided to establish and maintain a digital infopedia. The ISA digital infopedia will be a platform that will enable policy makers, Ministers and corporate leaders from 121 countries to interact, connect, communicate and collaborate with one another. The digital infopedia will have three separate heads comprising of: (a) 121 Member countries counter for investment opportunities; (b) at least 1000 best practices on solar energy (audio/visual); and (c) Member countries of ISA and the ISA Secretariat audio and visual interaction.

Updates from ISA Work Programme: Solar Applications for Agricultural Use

- 14 companies have provided a 'Commitment certificate' for installation of 664,000 of solar pumps in ISA member countries of Africa during the period 2017-2019 under the Indian Development and Economic Assistance Scheme (IDEAS) on the occasion of the Abidjan International Parliamentary Hearing on Renewable Energy 2017 organized by the Climate Parliament for East Africa and West Africa Abidjan, Côte d'Ivoire, from 12-13 April, 2017.
- Similarly, Commitments / EOI have been received for solar mechanics training and establishing mini grids for ISA countries from 8 and 10 companies respectively.
- Based on the outcome of the video conferencing on 24 April 2017 under SSAAU programme, the targets for Bangladesh and Uganda for solar water pumping systems are identified. Targets for Bangladesh for 50000 pumps for irrigation and target of 30000 pumps for Uganda are proposed.



Expressions of interest received for the installation of

664,000

of solar pumps in ISA member countries of Africa during the period 2017-2019

ISA events in the last quarter

INDIA - PACIFIC ISLANDS SUSTAINABLE DEVELOPMENT CONFERENCE, SUVA, FIJI

- The IDG attended the India - Pacific Islands Sustainable Development Conference 'Furthering the FIPIC Agenda through Sustainability Initiatives' on 25 - 26 May, 2017 in Suva, Fiji. The IDG made a presentation on the ISA, presented the short film on ISA highlighting ISA's journey. Thereafter he moderated a panel discussion on Solar Energy Interventions in PIC and also attended a session on the role of innovative financing mechanisms. He also visited the headquarters of Pacific Islands Development Forum (PIDF) and met the Secretary General.

PARTICIPATION IN 'SOLAR TECHNOLOGIES FOR COMMUNITY ELECTRICITY DEVELOPMENT IN ETHIOPIA' ORGANISED BY TERI

- ISA was invited by TERI to take a session on 'Introduction to ISA and India Experience' on 15 May 2017.

GET-TOGETHER WITH THE CONTACT POINTS OF ISA PROSPECTIVE MEMBER COUNTRIES

- Get-together of Contact Points of ISA Prospective Member Countries who are nominated by member countries in their resident diplomatic missions in New Delhi, India is organised on a monthly basis at the ISA Secretariat, NISE campus. The first get together was held on 17 May 2017, where 5 countries participated.



▲ First get-together of the Contact Points of the ISA Prospective Member Countries in May 2017



◀ The International Solar Alliance, in partnership with the Confederation of Indian Industry (CII) and World Wildlife Fund - India organised a workshop on 'India and the International Solar Alliance: Accelerating Global Solar Deployment' on 26 May 2017 in New Delhi.



◀ The International Energy Agency and the International Renewable Energy Agency have expressed their support for the work being undertaken by ISA and interest in exploring opportunities for mutually beneficial collaboration.

“The IEA strongly supports the plans of the ISA to provide clarity to regulatory issues, promote common standards, attract investment and develop innovative financing models. The IEA also commends the focus ISA is giving to identifying common needs and expanding markets through collaboration and aggregation in regions between the tropics where potential benefits of solar are the highest.”

- Dr. Fatih Birol, Executive Director, IEA

“IRENA welcomes the initiative to establish the International Solar Alliance through which its members will collectively address key common challenges to the scaling up of solar energy in line with their needs.” - Adnan Z. Amin, Director General, IRENA

The Sun Trip Tour 2017

The Sun Trip Tour, being organised by the Sun Trip Company, will take place from 8 July to 21 July 2017 in the French region of Auvergne-Rhône-Alpes. The Sun Trip Tour will bring up to 50 solar cycles together and it is open to all kinds of solar cycles, with some basic technical compliance requirements. Participants making the best use of their solar recharge will get rewarded through an optional challenge

2017 SUN TRIP TOUR
Auvergne-Rhône-Alpes

17 JUILLET LAUSANNE
14/15 JUILLET VAL D'ISERE
13 JUILLET
11 JUILLET LYON
10 JUILLET
9 JUILLET
8 JUILLET
7 JUILLET
6 JUILLET
5 JUILLET
4 JUILLET
3 JUILLET
2 JUILLET
1 JUILLET

14 jours / days : 1100 km
denivélé / elevation : + 20000 m
JUILLET / JULY 2017

BusinessLine

International Solar Alliance proposes Common Risk Mitigation Mechanism

Our Business
New Delhi, May 31st:
The International Solar Alliance has proposed setting up a mechanism to lower the risk involved in financing solar power projects. Interim Director-General at the International Solar Alliance, Upendra Tripathy said, "The ISA programme, 'Affordable finance at scale', launched in April 2016 sets the ground for establishment of a Common Risk Mitigating Mechanism." This will help de-risk investments and reduce the cost of financing for solar projects in eligible ISA member countries, he added.

Emmanuel Macron to visit India for world solar alliance meet

French President Emmanuel Macron will visit India towards the end of this year for a meeting of the International Solar Alliance – an initiative of PM Narendra Modi.

India eyes cooperation with Africa on international solar alliance in renewables push

Business + Politics
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ISA pact signed by 3 more nations, India sets aside \$2 bn for solar projects in Africa

The International Solar Alliance agreement was signed by Cote d'Ivoire, Somalia and Ghana

Terrawatt Initiative and International Solar Alliance announce taskforce to lower cost of PV finance

The Common Risk Mitigation Mechanism for solar generation assets is intended to identify ways to make up investment in solar to \$1 trillion, and will be supported by members of the International Solar Alliance, the World Bank Group, and the Terrawatt Initiative.

French President Emmanuel Macron to visit India for International Solar Alliance meet

National Focal Points and Contact Points of ISA

The ISA functions through the network of National Focal Points (NFPs), which act as an interface between the ISA Secretariat and the member country and are nominated by the members.

To upload or update NFP/ Contact Point profiles, a template has been created on the ISA website. All member countries can use this template to upload/update NFP and Contact Point profiles by visiting the ISA website.

Point of contact for NFPs and Contact Points:

Dr. O.S. Sastry, Sr. Consultant, Interim Secretariat.

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Mobile: +91 9599935891; Tel: +91 124 2853077.

Dr. Sastry will create a WhatsApp group of all Focal Points and a Google group where all Focal Points can informally interact exchange ideas. WhatsApp contact numbers are solicited.



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