Indo-German Energy Forum Support Office

INDO-GERMAN ENERGY FORUM NEWSLETTER

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GOVERNMENT OF INDIA MINISTRY OF POWER

GOVERNMENT OF INDIA MINISTRY OF NEW AND RENEWABLE ENERGY

आर्थिक कार्य विभाग DEPARTMENT OF ECONOMIC AFFAIRS

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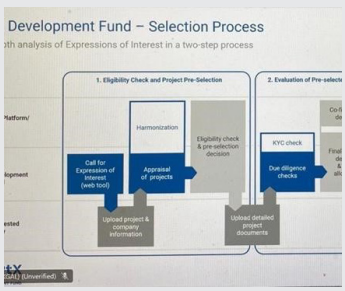

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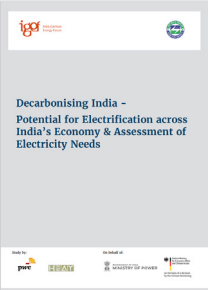

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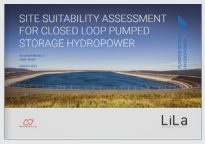

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1 Introduction

Shri Abhay Bakre,
Mission Director, National Green Hydrogen Mission, Ministry of New & Renewable Energy (MNRE) and Co-Chair of IGEF Subgroup V on Green Hydrogen.

> "The Indo-German Green Hydrogen Roadmap reflects our shared commitment to making green hydrogen a key pillar of the clean energy transition. Through this partnership, we aim to accelerate technology development, investments, and innovation for a sustainable and self-reliant energy future."

Shri Abhay Bakre serves as the Mission Director of the National Green Hydrogen Mission (NGHM) under MNRE, spearheading policy initiatives to scale up the green hydrogen production, adoption, and infrastructure development in India. With green hydrogen being a crucial enabler for the decarbonisation of India's economy, he plays a pivotal role in shaping the energy transition of the country.

As Co-Chair of the Indo-German Energy Forum (IGEF) Subgroup V on Green Hydrogen, Shri Bakre together with his German counterpart, steers and monitors the advancing of the Indo-German Green Hydrogen Roadmap. The Indo-German Green Hydrogen Roadmap was agreed on October 25, 2024, during the 7th Indo-German Inter-Governmental Consultations (IGC) in New Delhi and launched in the presence of Indian Prime Minister Narendra Modi and German Chancellor Olaf Scholz, reinforcing both nations' commitment to accelerating green hydrogen development, fostering trade, strengthening financial mechanisms, and enhancing cooperation in the harmonisation of green hydrogen standards and their certification as well as on Research and Development (R&D).

Before assuming his role as Mission Director, for almost a decade he served the nation as Director General of the Bureau of Energy Efficiency (BEE) under the Ministry of Power (MoP). To accelerate India's climate actions, he introduced crucial amendments to the Energy Conservation Act and was responsible for key inputs to the Energy Transition Roadmap for the Indian economy. During his time as the Director General of the BEE, he introduced and led innovative national energy efficiency programs of high national and international relevance. This includes the development of the Indian Carbon Market. Shri Bakre also played a key role in formulating Indias Cooling Action Plan (ICAP), which gained international recognition. As Co-Chair of the Indo-German Energy Forum Subgroup III on Energy Efficiency, Shri Bakre had initiated numerous bilateral strategic partnerships and initiatives with Government of Germany. Amongst others a bilateral cooperation on district cooling and on energy efficiency in the steel sector. Amongst many other recent assignments, Shri Bakre was a key negotiator for the COP 26 at Glasgow and Indian Sherpa for the Clean Energy Ministerial (CEM) platform. He represented India in the G20 Energy Transitions Working Group as well as G20 Energy Ministerial meetings.

Shri Abhay Bakre holds an M. Tech in Electrical Engineering from IIT, Kharagpur. He joined the Indian Railway Service of Electrical Engineers in the 1988 batch and worked on several major railway assignments, including the development of a roadmap for reducing greenhouse gas emission in the national railways sector.

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2 Events and Activities

Official Release of the Indo-German Green Hydrogen Roadmap

25 October 2024 | New Delhi, India

On behalf of the Governments of Germany and India, the Hon'ble Vice Chancellor and Minister for Economic Affairs and Climate Action (BMWK), Dr. Robert Habeck and Hon'ble Minister of Commerce and Industry, Shri Piyush Goyal, officially agreed and exchanged the Indo-German Green Hydrogen Roadmap in the august presence of the German Chancellor Shri Olaf Scholz and the Indian Prime Minister Shri Narendra Modi during the 7th Inter-Governmental Consultations (IGC) in New Delhi, on 25 October, 2024.

During the last IGC, both leaders had tasked the Indo-German Green Hydrogen Task Force to develop an Indo-German Green Hydrogen Roadmap that would define the future cooperation between India and Germany.

The roadmap outlines key strategies to encourage private sector investment, promote green hydrogen trade and export, and facilitate the exchange of information, particularly around challenging hard-to-abate sectors and certification standards. Specific dialogue formats will enhance communication and cooperation, ensuring that stakeholder perspectives are considered in the decision-making process.

Germany and India share the common goals of reducing their reliance on fossil fuel imports, decarbonising their economies, and establishing robust national green hydrogen economies. By working together and leveraging their unique strengths, both nations aim to make green hydrogen economically viable on a global scale, contributing to the goals of the Paris Agreement.

To institutionalise ongoing dialogue, a permanent working group under the Indo-German Energy Forum will replace the existing Indo-German Green Hydrogen Task Force. For further details, access the Indo-German Green Hydrogen Roadmap and learn more about the Indo-German Green Hydrogen Task Force.

Dr. Robert Habeck, Hon'ble Vice Chancellor and Minister for Economic Affairs and Climate Action (BMWK) and Shri Piyush Goyal, Hon'ble Minister of Commerce and Industry, officially exchanged the Indo-German Green Hydrogen Roadmap.

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teri school of
advanced studies

Win-win scenarios through decarbonisation discussed by the German Vice Chancellor and students from TERI School of Advanced Studies

26 October 2024 | New Delhi, India

Dr. Robert Habeck, German Vice Chancellor and Minister for Economic Affairs and Climate Action, engaged with students from TERI School of Advanced Studies (TERI SAS) to discuss opportunities and challenges of the energy transition in both India and Germany, with a particular focus on win-win scenarios through decarbonising economies.

In his opening remarks, Dr. Habeck emphasised India's immense renewable energy potential, particularly in solar and wind, which allows for green electricity generation at globally competitive prices. He highlighted the importance of international cooperation, which offers mutual benefits, and encouraged students to see their essential role in this journey toward sustainable development. As future engineers, scientists, policymakers, and entrepreneurs, students have a critical role in making green development a reality.

The discussion with the students covered decarbonisation of economies, globalisation, diversified supply chains, and international cooperation. Students explored Germany's approach to achieving an 80% renewable electricity share by 2030 and discussed challenges in managing hard-to-abate sectors, potential job impacts, and the necessity for public support in the energy transition. Topics also included opportunities in trade, specifically in solar, battery manufacturing, and green hydrogen.

Prof. Suman Kumar Dhar, Vice Chancellor, TERI SAS, highlighted, "Dr. Robert Habeck engaged students in a vibrant dialogue titled 'Inspiring Minds, Empowering Change - Navigating the Future Together'. His insights on sustainable development and climate action ignited passion among future leaders, highlighting the impact of collaboration. Through critical discussions on innovative solutions, Dr. Habeck inspired a generation to think creatively and act decisively in addressing global challenges, showcasing education's role in shaping a sustainable future."

Following the student exchange, Dr. Habeck and Shri Abhay Bakre, Mission Director, National Green Hydrogen Mission, Ministry of New and Renewable Energy (MNRE), jointly presented the Indo-German Green Hydrogen Roadmap. Officially agreed upon at the 7th Indo-German Inter-Governmental Consultations on 25 October 2024, this roadmap outlines a shared path to achieving a sustainable energy future.

The Indo-German Green Hydrogen Roadmap can be found here.

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Sub-group IV meeting: Green Energy Financing and Grid Integration

18 December 2024 | New Delhi, India

The Indo-German Energy Forum (IGEF-SO) held the Subgroup IV meeting on 18 December 2024 in New Delhi, focusing on Green Energy Financing and Grid Integration. The discussions covered opportunities, challenges, and priorities within the scope of Indo-German Financial Cooperation.

In her welcome remarks, Ms. Aparna Bhatia, Economic Adviser at the Department of Economic Affairs (DEA) and Indian Co-Chair of Subgroup IV, emphasised the close partnership between India and Germany under the IGEF. Ms. Barbara Schäfer, Head of Division for South Asia, German Federal Ministry for Economic Cooperation and Development (BMZ) and German Co-Chair, reaffirmed Germany's commitment to supporting Green Energy Corridors (GEC) projects and strengthening cooperation in green hydrogen.

Mr. Anirban Kundu, Co-Director, IGEF-SO, and Mr. Stefan Kliesch, Head of Energy, KfW Office Delhi, provided updates on the subgroup's progress and upcoming activities. Discussions covered emerging financial cooperation areas such as green hydrogen, offshore wind, and repurposing coal mines/power plants, along with financing mechanisms like policy-based loans, credit guarantee facilities, equity funds, and the PtX Development Fund. KfW also shared updates on loan agreements, GEC portfolio status, and announced the 2nd Call for Expression of Interest for the PtX Development Fund on 8 January 2025.

Representatives from MNRE, the Ministry of Power, POWERGRID, NTPC, and other key stakeholders provided insights. Dr. Prasad Chaphekar, Deputy Director, MNRE, highlighted challenges in green hydrogen adoption, including offtake agreements and high international lending costs, while discussing H2Global funding and state-level efforts to mobilise CAPEX alongside MNRE funding. Mr. Tarun Singh, Scientist-E, MNRE, provided updates on GEC Phase III, noting that four states have submitted proposals for Viability Gap Funding (VGF) under the Tariff-Based Competitive Bidding (TBCB) framework.

Dr. Gaurav Mishra, Scientist-F, MNRE, emphasised the urgent need for private investment to meet India's renewable energy targets and highlighted the India-Germany Platform for Investments in Renewable Energies Worldwide as a key tool for

mobilising private capital. POWERGRID updated the forum on the Leh-Haryana transmission line project, with further discussions planned with KfW on financing options.

Mr. Rahul Pataballa, DGM, NTPC-REL, shared progress on NTPC's 1,200-acre Hydrogen Hub in Pudimadaka, Andhra Pradesh, which will produce 2.5 million tonnes of green chemicals such as green urea, SAF, methanol, and ammonia. The hub will feature a 7 GW RE-RTC power supply, a desalination plant, and a captive port, with interest from Shipping Corporation of India and Maersk in green methanol offtake. Updates were also provided on hydrogen mobility projects in Leh and Greater Noida.

Ms. Schäfer introduced the Indo-German Platform for Investments, highlighting its role in connecting private sector investments and creating a comprehensive digital tool for the energy sector.

The meeting reaffirmed key areas of future collaboration, including green hydrogen clusters, GEC Phase III, the Leh-Haryana Transmission Line, offshore wind projects, and repurposing old coal mines for renewable energy. Innovative solar and round-the-clock renewable energy projects remain a priority, with IGEF exploring GEC financing under the TBCB framework.

The discussions reinforced the strong Indo-German partnership in advancing green energy initiatives, concluding with a shared commitment to accelerating India's energy transition.

The presentation on the Subgroup IV meeting can be accessed here.

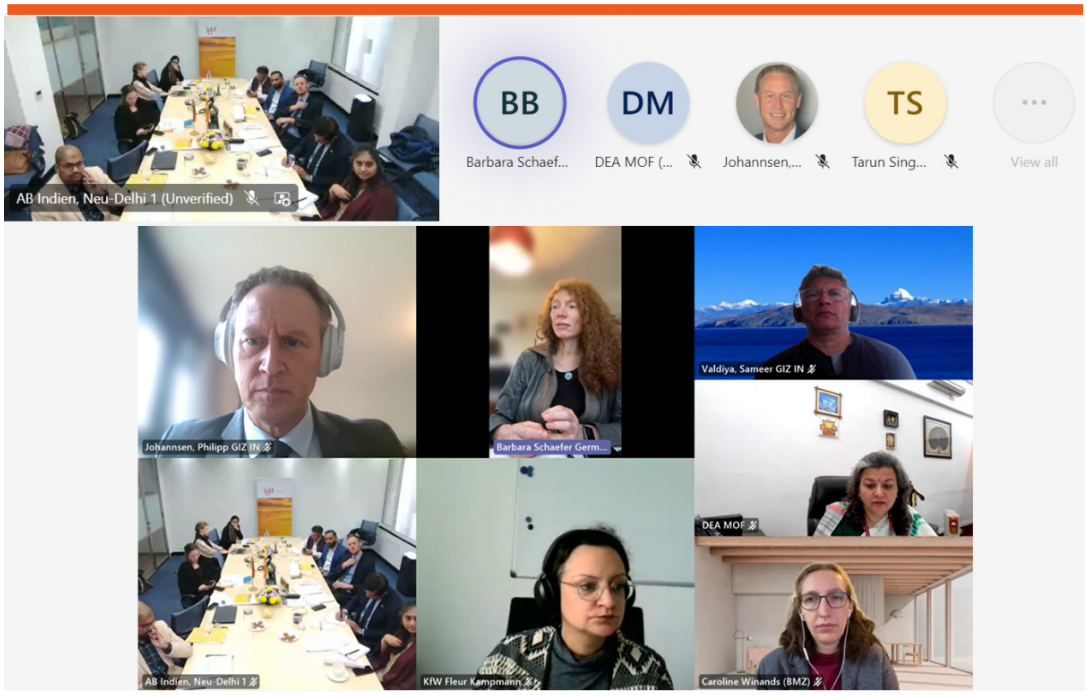

Figure 1. Participants of the Subgroup IV meeting on 'Green Energy Financing and Grid Integration'.

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Sub-group V meeting: Indo-German Green Hydrogen Ramp-up

17 December 2024 | New Delhi, online

The first meeting of the Indo-German Energy Forum (IGEF) Subgroup V on Green Hydrogen took place on 17 December 2024 in a hybrid format. This meeting marked a significant milestone in institutionalising the ongoing Indo-German dialogue on green hydrogen, with the establishment of a permanent working group under IGEF to replace the Indo-German Green Hydrogen Task Force.

The meeting was co-chaired by Shri Abhay Bakre, Mission Director, National Green Hydrogen Mission, Ministry of New and Renewable Energy (MNRE), and Dr. Christian Storost, Head of Division, International Hydrogen Ramp-up, Ministry for Economic Affairs and Climate Action (BMWK). Discussions focused on recent Indo-German activities in green hydrogen and the implementation of the Indo-German Green Hydrogen Roadmap, with a special emphasis on upcoming initiatives in 2025. Dr. Prasad Chaphekar, Deputy Secretary, Green Hydrogen Division, MNRE, provided an update on the National Green Hydrogen Mission. Shri Bakre highlighted that India expects 70% of the planned 5 MMTPA of green hydrogen to be exported, subject to cost fluctuations. Dr. Storost outlined Germany's hydrogen import strategy, estimating that 50–70% of its 2030 demand (1.5–2.7 MMTPA) is expected to be met through imports, with hydrogen derivatives via ship being a viable option.

Key stakeholder Contributions:

- Dr. Susana Moreira, Executive Director and Co-chair, H2Global Stiftung introduced the upcoming 2nd H2Global/HintCo tender.
- Mr. Sanjay Sharma, Executive Director (Solar), Solar Energy Corporation of India (SECI) provided insights into the ongoing collaboration between H2Global and SECI.
- Mr. Stefan Kliesch, Head of Energy, KfW India, discussed the 2nd Call for Expression of Interest for the PtX Development Fund.
- Mr. Markus Hoffmann von Wolffersdorff, Managing Director, KNPP Indigo, announced the "Indo-German Green Hydrogen Cooperation" event in the framework of the annual conference of German Hydrogen cluster HZwo e.V. in Leipzig.
- Mr. Tapas Kapadia, CEO, RWE Supply & Trading India, expressed concerns regarding slow progress in by Indian projects, citing a wait-and-watch approach for offtake agreements.
- Mr. Nishaanth Balashanmugam, Director, Green Hydrogen India, shared details about the India Green Hydrogen Assembly 2025, scheduled for 7 - 9 April 2025 in Gujarat.
- Dr. P.V. Lalitha, Chief Scientific Officer, Indo-German Science and Technology Centre (IGSTC) highlighted the Indo-German flagship research programme 2+2, with a 2025 thematic call on "Advanced Materials," expected in Feb/March 2025.
- Mr. Sanmati Naik, Fraunhofer Office India, discussed Hydrogen Valleys and the integration of electricity system to scale up green hydrogen ecosystems.
- Mr. Rajesh Mediratta, Managing Director and CEO, Indian Gas Exchange (IGX) emphasised efforts to develop an India hydrogen index, leveraging support from the European Energy Exchange (EEX).

As outlined in the Indo-German Green Hydrogen Roadmap, a joint calendar of green hydrogen-related trade fairs and conferences will be made publicly available and updated regularly.

The meeting concluded with discussion on future events and next steps to advance the activities under IGEF Subgroup V.

Webinar: PtX Development Fund

22 January 2025 | Virtual

The German government is supporting the global market ramp-up of Power-to-X (PtX) in India and six other partner countries through the PtX Development Fund. This initiative aims to promote green hydrogen production and its derivatives in developing and emerging economies by providing substantial financial incentives to attract further investments.

The German Federal Ministry for Economic Cooperation and Development (BMZ) has allocated an initial budget of EUR 270 million for the PtX Development Fund, offering grants of up to EUR 30 million for projects across the entire PtX value chain. The PtX Development Fund launched its 2nd Call for Expression of Interest from 8 January to 5 March 2025, inviting applications from 7 eligible countries, including India.

To raise awareness about these funding opportunities among Indian public and private sector stakeholders, a webinar was held on 22 January 2025, drawing over 90 representatives from the Indian hydrogen industry. The fund is managed by KGAL Investment Management GmbH & Co. KG ("KGAL"), which was appointed by KfW in July 2023.

For more information, please click here.

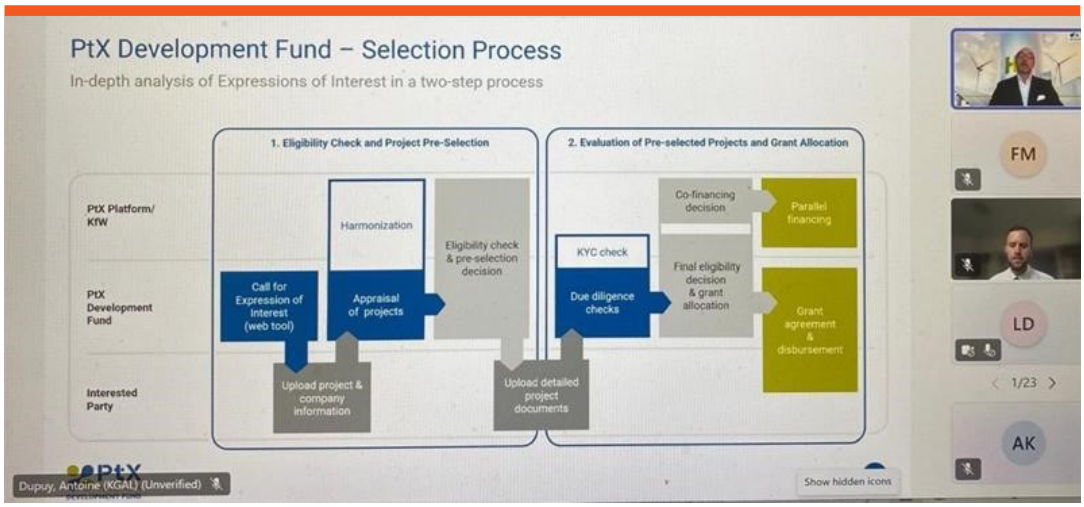

Figure 3. Source: IGEF based on POSOCO, SMARD and EIA.

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Indo-German Cooperation Days: Green Hydrogen

9-13 December 2024 | New Delhi, Ahmedabad

As part of the Indo-German Cooperation Days on Green Hydrogen, a delegation of five German companies visited India for a week-long market exploration. The visit facilitated exchanges with key Indian representatives from the green hydrogen industry in New Delhi and Ahmedabad. Additionally, a networking session brought together 25 participants from leading Indian companies and hydrogen associations. The Indo-German Energy Forum (IGEF) and H2Uppp also organised a briefing on the development of India's green hydrogen market, highlighted opportunities for German companies.

Briefing on green hydrogen in India by H2Uppp & IGEF.

EU-India Dialogue on Green Hydrogen Cooperation

19 November 2024 | Brussels

The Indo-German Energy Forum Support Office (IGEF-SO), in collaboration with the International Hydrogen Ramp-up Programme (H2Uppp), the International PtX Hub, GH2 India, and the Indo-German Chamber of Commerce (IGCC), organised the 'EU-India Dialogue on Green Hydrogen Cooperation' in Brussels on 19 November, as part of European Hydrogen Week.

The event began with welcome remarks from Ms. Mechthild Wörsdörfer, Deputy Director General for Energy, European Commission, Dr. Andreas Nicolin, Deputy Director General, Ministry for Economic Affairs and Climate Action (BMWK); and Shri Prashant Kumar Singh, Secretary, Ministry of New and Renewable Energy (MNRE).

Mr. Jorgo Chatzimarkakis, CEO, Hydrogen Europe, emphasised the importance of simplifying regulatory frameworks to enhance Europe's competitiveness in the global market. He highlighted zoning and regulatory complexities as key challenges, stressing the need for immediate action–ideally before 2028–to maintain Europe's leadership, particularly in comparison to Japan and Korea. He also advocated for policy measures and a renewed industrial partnership to strengthen EU-India collaboration on green hydrogen.

Following the welcome remarks, Shri Abhay Bakre, Mission Director, MNRE; Dr. Christian Storost, Head of Division, Funding Instruments and Hydrogen Initiatives, BMWK; Dr. Ruud Kempener, Team Lead, European Commission; Dr. Susana Moreira, Executive Director and Co-Chair of the Board of the H2Global Foundation; and Mr. Gautam Reddy, COO, am green – Greenko, participated in a panel discussion on green hydrogen project developments in India. The discussion focused on promising offtake agreements, funding instruments, and certification of sustainability criteria. The event gathered over 70 participants, fostering insightful discussions on strengthening EU-India cooperation in the green hydrogen sector.

Participants of the panel discussion on the topic of green hydrogen project developments, promising offtake agreements, effective funding instruments and certification of sustainability criteria.

H2Uppp
International Hydrogen
Ramp-up Program

Webinar: Green hydrogen cluster in Ramagundam

22 December 2024 | online

The International Hydrogen Ramp-up Program (H2Uppp), in collaboration with the Research and Innovation Circle of Hyderabad (RICH) and the Indo-German Energy Forum (IGEF-SO), organised a webinar on 20 December 2024 to discuss the Ramagundam Green Hydrogen Cluster Roadmap.

India's National Green Hydrogen Mission (NGHM) emphasises the development of green hydrogen hubs to achieve its target of producing at least 5 MMT of green hydrogen by 2030. Given the challenges of transporting hydrogen over long distances, a cluster-based production and utilisation model is expected to enhance project feasibility by enabling economies of scale and aligning key infrastructure needs within specific regions.

In his welcome address, Mr. Kumar Abhishek, Energy Advisor, IGEF-SO, acknowledged the contributions of RICH, the Government of Telangana, and key stakeholders, including potential off-takers and producers. He highlighted the concept of hydrogen valleys and their role in India's decarbonising strategy, noting that Ramagundam's unique characteristics make it an ideal location for green hydrogen deployment, provided there is supportive policy and infrastructure.

Mr. Bhavesh Mishra, Deputy Secretary, IT & Electronics Department, Government of Telangana, emphasised the importance of energy security for India, particularly in light of rising crude oil imports and currency depreciation. He positioned Telangana as a progressive state ready to adopt green hydrogen and highlighted Ramagundam's industrial proximity as a key advantage for cluster development.

Mr. Himadri Singha from Deloitte presented study findings identifying key industries in Ramagundam with a projected hydrogen demand of 75 tons/day and an estimated investment requirement of € 0.8 billion. The roadmap outlines deployment in three phases through 2040, targeting fertilisers, transport, mining, glass, and cement sectors. Government incentives, including subsidies and tax benefits, were proposed to lower hydrogen costs and attract infrastructure investments.

Mr. Rahul Pataballa, DGM, NTPC-REL provided insights into NTPC's green hydrogen hub project in Pudimadaka near Visakhapatnam. He outlined a four-phase action plan leading up to 2032, focusing on green ammonia and methanol, with future expansions for SAF and Green Urea.

With over 120 participants, the webinar facilitated an engaging discussion on storage solutions, renewable energy integration, and cost reduction strategies. Experts including Mr. Srinivas Cherla, Director of Sustainability at RICH, Mr. Rolf Behrndt, Senior Advisor for GH2 India, and Mr. Rahul Pataballa, addressed these key topics.

The closing event of the 100-day, 100 KVKs Farmers Training Programme marked the successful

Valedictory Ceremony of Capacity Building Workshops for PM-KUSUM Comp A

7 December 2024 | Goa

conclusion of an awareness campaign that reached over 3,000 farmers on the PM-KUSUM Component A scheme. Launched in February 2019, the PM-KUSUM (Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan) scheme aims to enhance energy security for farmers while supporting India's commitment to achieving 40% of its installed power capacity from non-fossil fuel sources by 2030 under its Intended Nationally Determined Contributions (INDCs).

Held in Goa, the event celebrated the participation of 100 Krishi Vigyan Kendras (KVKs), which serve as local knowledge and resource centers for farmers. The campaign focused on building resilience among farmers by promoting the adoption of agrivoltaics, aligning agricultural development with India's clean energy transition.

The festive closing event of the 100-day programme in Goa.

H2Uppp
International Hydrogen
Ramp-up Program

AHK Indo-German Chamber of Commerce
Deutsch-Indische Handelskammer
Mumbai · Delhi · Kolkata · Chennai
Bengaluru · Pune · Düsseldorf

Green
Hydrogen
India

Business delegation on the topic of Green Hydrogen

17-23 November 2024 | Brussels, Rotterdam, Hamburg

The Indo-German Energy Forum Support Office (IGEF-SO, in collaboration with the Indo-German Chamber of Commerce (IGCC) and the Green Hydrogen India (GH2 India),) organised an Indian business delegation to Belgium, the Netherlands, and Germany from 17 - 23 November 2024 to explore developments in green hydrogen. The delegation included a visit to the European Hydrogen Week in Brussels from 18 - 22 November 2024.

The visit began in Brussels, where discussions focused on the EU's sustainability criteria for green hydrogen and their implications for India's green hydrogen strategy. Mr. Clemens Antretter (H2Uppp, GIZ) and Mr. Frank Mischler (International Power-to-X Hub, GIZ) provided insights into sustainable green hydrogen production and consumption in India and Europe. Ms. Veerle Dossche (Agora Industry) highlighted hydrogen's role in Europe's energy transition, while Ms. Anaïs Faucher (SolarPower Europe) shared developments from a solar industry perspective.

On the first day of European Hydrogen Week, the delegation toured key exhibitors and technology providers in the emerging hydrogen economy, including, ThyssenKrupp Nucera, Fraunhofer Hydrogen Network, Quest One, SFC Energy AG, DILO, RWE, and Sunfire. These interactions allowed the participants to engage with experts, explore new technologies, and discuss potential collaborations. The delegation also attended the inauguration of the India Pavilion on 18 November, where India was the exclusive partner country for European Hydrogen Week 2024. The event featured over 220 exhibitors and attracted more than 9,000 attendees, with 60+ government and business representatives participating in the India Pavilion's opening ceremony.

Following the Brussels visit, the delegation travelled to Rotterdam and Hamburg to gain further insights into green hydrogen developments in Europe. In Rotterdam, discussions centred on port infrastructure and hydrogen supply chains. The delegation visited the OCI ammonia terminals, where Mr. Anton Fransen(OCI Nitrogen Europe) presented hydrogen-related developments at the Port. Participants also explored the Hynetwork hydrogen pipeline and toured Shell Energy and Chemicals Park Rotterdam, Europe's largest refinery, which has a capacity of 400,000 barrels per day. The group visited Europe's largest planned electrolyser field, with projects from Shell, BP,

Participants of the business delegation at the European Hydrogen Week 2024 in Brussels.

Participants of the business delegation on green hydrogen during a visit to the Competence Center for Renewable Energies and Energy Efficiency (CC4E) in Hamburg.

and Air Liquide, and toured the SIF offshore wind foundation manufacturing and storage facility, including the GE Haliade-X 14 MW wind turbine.

In Hamburg, the delegation visited the Competence Center for Renewable Energies and Energy Efficiency (CC4E) at HAW Hamburg. This research centre focuses on addressing technological, societal, political, and economic challenges related to the energy transition. The group explored practical solutions developed by the centre, from concept to implementation.

The visit concluded with a tour of the Hydrogen Aviation Lab, a decommissioned Airbus A320 repurposed as a field laboratory for developing hydrogen-powered aircraft technologies. The project supported by Lufthansa, the German Aerospace Center (DLR), ZAL Center for Applied Aeronautical Research, and Hamburg Airport, aims to design and test maintenance and ground-based hydrogen processes. The lab is being fitted with liquid hydrogen tanks, onboard fuel cells, and hydrogen infrastructure, funded by Hamburg's Ministry of Economic Affairs and Innovation and IFB Hamburg.

The delegation's visit provided a comprehensive understanding of Europe's green hydrogen landscape, facilitating knowledge exchange, networking, and new opportunities for collaboration between India and Europe.

3

Developments in Indo-German Energy Cooperation

3rd DISCOM Conclave 2025- Green & Digital Solutions for Sustainable DISCOMs

30 January 2025 | New Delhi

The Power Committee of PHD Chamber of Commerce & Industry (PHDCCI) hosted the 3rd DISCOM Conclave on the theme Green & Digital Solutions for Sustainable DISCOMs in a hybrid format, with GIZ as the knowledge partner. The event brought together key stakeholders, policymakers, industry leaders, and technology providers to exchange insights and solutions on critical topics, including:

- Adoption of Best practices & Integration of RE for Creating Sustainable DISCOMs,
- Digital & Technology Solutions for Sustainable DISCOMs,
- Advances in Energy Storage Solutions
- Smart Metering & Demand Side Management

The conclave was honoured to welcome Mr. Shripad Yesso Naik, Hon'ble Minister of State for Power and New & Renewable Energy, Government of India, as the chief guest, and Mr. Uwe Gehlen, Head of Economic Cooperation and Development, Embassy of Germany in India, for the keynote address.

As part of the event, the IGEN – Energy Transition with DISCOMs project led a session on Best Practices & RE Integration, highlighting GIZ's support to Indian DISCOMs—primarily APDCL and KSEBL—in enhancing grid flexibility, accommodating decentralised generation, and integrating energy storage systems. The session also covered GIZ's technical studies on policies and regulatory frameworks that facilitate India's clean energy transition. Additionally, GIZ presented insights on digital technology solutions and smart metering & demand-side management to support the sector's modernisation.

3rd DISCOM Conclave 2025 focused on Green & Digital Solutions for Sustainable DISCOMs.

KFW

KfW Signed Credit Lines with SBI, REC and BoB for a Total Amount of EUR 450 Million to Support Innovative Renewable Energy Projects

Signing with SBI in October 2024; Signing with REC and BoB in December 2024 | SBI signing: GIFT City, Gandhinagar, Gujarat, India; REC and BoB signing: Delhi

Between October and December 2024, KfW signed Lines of Credit with the State Bank of India (EUR 150 million), REC Limited (EUR 200 million), and Bank of Baroda (EUR 100 million) to finance innovative renewable energy projects. These new credit lines strengthen KfW's commitment to supporting India's green energy transition on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ).

With these milestones, KfW's energy portfolio in India now stands at EUR 5.4 billion, contributing to 8.3 GW of renewable energy capacity and 17.1 million tonnes of CO2 emission savings annually.

For more information, contact Mr. Stefan Kliesch, stefan.kliesch(at)kfw.de.

Signing ceremony with SBI and KfW representatives in Gandhinagar, Gujarat in October 2024.

Loan signing at REC Headquarters in Gurgaon on 12 December 2024.

Workshop on Photovoltaic Innovation Session

21 Nov, 2024 (Delhi) and 18th and 19th Nov, 2024 (Mumbai) | Delhi and Mumbai, Maharashtra

In the third week of November, KfW, PTB and GIZ – the three implementing agencies of German development cooperation in India's energy sector, conducted two workshops on Photovoltaic innovation, followed by site visits to AgriPV projects in Maharashtra and Delhi.

The workshop explored innovative solar applications such as Agri-Photovoltaics (APV) and Floating Solar (FPV), presented by GIZ under the NISA (New and Innovative Solar Applications) project. These technologies offer solutions for expanding solar capacity while minimising additional land use. PTB provided insights into global advancement in metrology and standardisation within India's PV sector. KfW emphasised the significance of long-term durability and performance for the economic success of solar PV projects and shared key measures from the EPC Best Practice Guidelines 2.0, published by SolarPower Europe.

The sessions saw participation from state-generation companies, NBFCs, private sector representatives, and consulting firms.

For more information, contact Mr. Abhishek Dalal, abhishek.dalal(at)giz.de, Mr. Daniel Etschmann, daniel.etschmann(at)kfw.de.

AgriPV plant visit in Issapur village (Najafgarh).

Concluding session with German Embassy, GIZ, PTB and KfW.

Participants of the Innovative Solar Workshop in Delhi on 21st Nov, 2024.

Women-Focused RE Development in State for Livelihood Generation

6 - 8 November 2024 | Bhubaneshwar, Odisha

A recent meeting involving representatives from GIZ Implementation of Energy Plans, along with key stakeholders from Odisha's key government departments and industry stakeholders, focused on identifying renewable energy (RE) activities aimed at empowering women through sustainable development. The discussion emphasised integrating Distributed Renewable Energy (DRE) technologies into sectors where women's participation can be enhanced, contributing to social empowerment and environmental sustainability.

One key resolution was the introduction of solar-powered spinning machines in the handloom sector, a traditionally women-driven industry. This innovation is expected to enhance productivity, improve working conditions, and preserve cultural heritage by sustaining traditional weaving skills. Additionally, transitioning diesel-powered boats at Chilka Lake to electric alternatives was prioritised to reduce pollution and support livelihoods linked to the lake's ecosystem.

The proposal for 'Mission RE-SHAKTI' emerged as a transformative initiative aimed at scaling renewable energy- driven empowerment programmes within Odisha's Mission Shakti framework. By linking women-centric enterprises such as weaving, fisheries, and food processing to clean energy solutions, the initiative seeks to create sustainable economic opportunities for women entrepreneurs.

GRIDCO's renewable energy policy will align with these projects, ensuring a more integrated implementation framework. By fostering synergies across departments like Tourism, Fisheries, and MSMEs, Odisha aims to create a cohesive ecosystem where renewable energy projects drive both economic development and environmental conservation.

These decisions support India's NDCs under the Paris Agreement by targeting emission reductions, promoting clean transport, and reducing fossil fuel reliance. The meeting highlighted the need for inter-departmental collaboration, capacity building, technological innovation, and community empowerment through knowledge-sharing and skill development. Odisha's proactive approach positions it as a leader in renewable energy-driven socio-economic development, offering a replicable model through policy, technology, and social integration.

For more information please contact Mr. Pulkit Shrotri (pulkit.shrotri(at)giz.de) and Mr. Krushna Kaant Gupta (krushna.gupta(at)giz.de).

Representatives at the meeting. ©Pulkit, GIZ India

Elevate your Energy Strategy with ISO 50001: Enhance Efficiency, Cut Costs, and Lead in Sustainability

October-November 2024 | States of Maharashtra, Karnataka, Uttar Pradesh and Punjab

To promote energy efficiency, operational performance, and sustainability in the steel and paper sectors, a two-day training workshop on ISO 50001 was conducted across 6 clusters with more sessions planned in Maharashtra, Karnataka, Uttar Pradesh, and Punjab. Participants from State Designated Agencies (SDAs) attended these sessions to gain practical knowledge and insights on implementing energy-saving frameworks, reducing costs, and ensuring regulatory standards.

The training provided a comprehensive understanding of Energy Management Systems (EnMS), hands-on experience with Excel tools and EnMS formats, and exposure to industry best practices and regulatory requirements. Participants also had the opportunity to network with industry experts and peers, enriching their learning experience.

Upon completion, participants received a certificate recognising their commitment to energy efficiency.

For more information, contact Ms. Priyanka Chandra, Priyanka.chandra(at)giz.de.

Session on ISO 50001 at Hubli. ©GIZ India

Promoting Sustainable Aquaculture Through DRE Technologies

8 November 2024 | NABARD regional office, Guwahati, Assam

Over the past two years, GIZ, in collaboration with Assam's Department of Fisheries and Kalong Kapili, has worked to empower the Aquaculture sector through decentralised renewable energy (DRE) solutions. Awareness campaigns, workshops, and site assessments were conducted across Sonitpur, Biswanath, Karbi Anglong, and Nagaon to introduce solar such as water pumps, aerators, dryers, and refrigerators. Fish farmers, government officials, financial institutions, and NGOs were trained, resulting in the deployment of ten DRE units in individual and group models, promoting sustainable and eco-friendly practices.

Building on this success, GIZ has partnered with the SELCO Foundation and National Bank for Agriculture and Rural Development (NABARD) to further scale DRE adoption in Assam's aquaculture sector. Over the next two years, 20 additional DRE technologies will be deployed in Nagaon district, benefiting 10 selected fish farmers, each receiving two DRE units. This initiative aims to enhance farm productivity, boost income, and promote renewable energy adoption.

GIZ's collaboration with like-minded partners accelerates the scaling up of DRE solutions in agriculture and allied sectors. Tapping into government initiatives and programs, these efforts foster integrated and sustainable models for renewable energy in aquaculture.

For more information, contact Mr. Anuj Hemant Xess, anuj.xess(at)giz.de.

NABARD, Selco Foundation, Kalong Kapili, and GIZ collaboration to scale up DRE Tecnologies for fishery and aquaculture sector of Assam.

Closing workshop with Assam Power Distribution Company Ltd. (APDCL) under "Indo-German Energy Program, Energy Transition with Distribution Companies" for implemented activities

12 November 2024 | Vivanta, Guwahati

On November 12, 2024, the "Indo-German Energy Program, Energy Transition with DISCOMs" project, in collaboration with Assam Power Distribution Company Ltd. (APDCL), hosted a workshop to launch the executive summary report. The event launched the executive summary report, showcasing various activities carried out under the project aimed at advancing energy sustainability, resilience, and digitalisation in Assam's power sector. Key activities discussed included.

- EV Charging Infrastructure Planning
- Disaster Resilient Infrastructure
- IT Policy Development
- Battery Energy Storage System (BESS) Planning
- Digital Asset Register Development.

These initiatives represent significant strides towards a greener and more resilient energy ecosystem, integrating RE based grid-edge technologies, disaster resilience, digital transformation, and sustainable transportation. The workshop highlighted the collaborative efforts between India and Germany under the Green and Sustainable Development Partnership (GSDP), reinforcing the commitment to a clean energy transition.

For more information, contact Mr. Kuldeep Sharma, kuldeep.sharma(at)giz.de.

Launch of Executive Summary for Assam Projects at the project closure workshop.

Memorandum of Understanding with Kerala State Electricity Board Limited (KSEBL)

22 March 2024 | KSEB office, Trivandrum

Under the Energy Transition with DISCOMs programme, GIZ partnered with Kerala State Electricity Board Limited (KSEBL) to implement technical pilot projects across key areas of the distribution network. KSEBL (a public entity wholly owned by the Government of Kerala) manages electricity generation, transmission, and distribution for approximately 14 million consumers across Kerala.

Following the preparatory and design phase, a MoU was signed on 22 March, to formalise collaboration under the Indo-German cooperation. The pilots aim to demonstrate the potential of advanced technologies–such as AI/ML, Drones, smart meters, and IoT - to enhance KSEBL's operational efficiency and financial sustainability, with a vision for future scalability. 7 core areas were identified for pilot implementation:

- Asset Inspection using Drones
- Short-term load forecasting using AI/ML
- Substation Automation Roadmap
- Impact of EV/RE – need assessment on grid strengthening
- Community Grid
- Health monitoring of Distribution Transformers using Smart Meters/IoT devices
- Long-term load forecasting

Capacity building and sustainability aspects are part of the design of pilots. Learnings and outcomes from the pilots will be shared with the Ministry of Power, for the benefit of other Indian DISCOMs.

For more information, contact Mr. Kuldeep Sharma, kuldeep.sharma(at)giz.de.

MoU Signing with Kerala State Electricity Board.

Distribution Utility Meet-2024

14 - 15 November 2024 | Lucknow, Uttar Pradesh

The 8th edition of the "Distribution Utility Meet" was held by Indian Smart Grid Forum (ISGF) with GIZ as the knowledge partner. The conference provided a valuable platform for DISCOMs to discuss and share experiences on key challenges such as energy transition, grid modernisation, and digitalisation, as India accelerates its journey towards a net-zero power sector.

On Day 2, GIZ hosted a dedicated session titled "RE, EV, and Grid Stability" and "Challenges of 10 Million Rooftop Solar PV Systems." Mr. Kuldeep Sharma from GIZ opened the session, setting the stage for in-depth discussions on the integration of renewable energy (RE), electric vehicles (EV), and grid stability. Other prominent experts, including Mr. Zakir Hussain, Mr. Eckehard Troster (CEO, Energynautics), Prof. Zakir Rather (IIT Bombay), and Mr. Anish Mandal (Deloitte South Asia), joined the session to share insights on the challenges of scaling rooftop solar and integrating these technologies into the grid.

The conference highlighted the critical role of digital solutions, grid modernisation, and sustainable energy integration in supporting India's energy transition, and the need for industry collaboration to meet the challenges of a rapidly evolving energy landscape.

GIZ Session on "RE, EV, and Grid Stability" and "Challenges of 10 Million Rooftop Solar PV Systems" at the Distribution Utility Meet.

Training Program on 'Grid Integration of Renewable Energy and Electric Vehicles: Best Practices and Emerging Trends'

November 2023 to December 2024 | GETRI, Vadodara; Leh, Ladakh; Trivandrum, Kerala

The training program on 'Grid Integration of Renewable Energy and Electric Vehicles: Best Practices and Emerging Trends' provided a comprehensive overview of India's evolving energy landscape. The sessions focused on the integration of renewable energy sources like solar and wind into the power grid, emphasising grid management techniques such as forecasting, balancing, and dispatching. The program also covered the integration of electric vehicles (EVs), exploring their potential to provide grid services and the impact of EV charging on grid stability.

A total of six training sessions were conducted over 16 months, benefiting key stakeholders such as the Ladakh Power Development Department (PDD), Kerala State Electricity Board (KSEB), and Gujarat DISCOMs (DGVCL, MGVCL, PGVCL, UGVCL), under the guidance of GETRI. These sessions equipped participants with the latest best practices and emerging trends in grid integration, helping to advance India's clean energy goals.

For more information, contact Mr. Kuldeep Sharma, kuldeep.sharma(at)giz.de.

Training on Grid Integration of Renewable Energy and Electric Vehicle Integration at GETRI.

Regional Workshop on Cooling India's Cities in Vijayawada

26 September 2024 | Vijayawada, Andhra Pradesh

Cooling is critical for Andhra Pradesh, which endures South India's highest number of heatwave days. District Cooling Systems (DCS) offer a centralised approach to cooling energy production and distribution, enhancing energy efficiency, enabling renewable energy use, and integrating technologies like Sewage Treatment Plants and Waste-to-Energy facilities. These systems reduce resource waste and environmental impact while promoting sustainable urban cooling.

The Regional Workshop convened stakeholders from across Andhra Pradesh to explore the implementation of DCS, particularly in the planned capital city of Amaravati, which could attract significant district cooling investments. The workshop, part of a GIZ-Tabreed MoU under India's Energy Efficiency Cooling programme, underscored the transformative potential of DCS. 30% of participants were women, highlighting the critical role of diverse perspectives in driving progress toward energy efficiency and sustainable cooling solutions.

A key highlight was the launch of the report Andhra Pradesh's $5 Billion Energy Transition – Investment Opportunity through District Cooling. This report outlines DCS's ability to foster a circular approach to urban cooling and positions Andhra Pradesh as a pioneer in sustainable energy solutions.

Under the leadership of the Hon. Chief Minister, Andhra Pradesh signed India's first Public-Private Partnership with Tabreed in 2019. This agreement targets the development of a 20,000 RT DCS for Amaravati's government complex, projected to reduce cooling energy demand by 50%. By scaling this model across high-density areas, Andhra Pradesh could unlock $4 billion in investments, decrease power demand by 1.8 GW, and cut carbon emissions by 2.6 million tonnes.

These initiatives demonstrate the state's commitment to combating climate challenges while fostering economic growth through innovative, sustainable, and inclusive approaches to energy and cooling systems.

Find the link to report here: https://iki-india.com/public/index.php/1727691362_Amaravati%20DCS%20Report_web.pdf

For more information, contact Ms. Lena Kliesch, lena.kliesch(at)giz.de.

Vijayawada Roundtable on District Cooling, ©GIZ India

4 Quote of the Month from India and Germany

Quote of the Month from India

Shri Pralhad Joshi,
Hon'ble Union Minister for New and Renewable Energy, Govt. of India

"India is not only witnessing an energy revolution but also becoming the renewable energy capital of the world."

Source: PIB

Quote of the Month from Germany

Dr. Robert Habeck,
Federal Minister for Economic Affairs and Climate Action, Govt. of Germany

"Expanding the production and use of green hydrogen serves to reach our long-term common objective to accelerate the green hydrogen ramp-up and thus make green hydrogen economically viable. In the context of our energy partnership with India, we have agreed to intensify our cooperation on the development of innovative solutions for the sustainable production of green hydrogen. This is an important milestone to reduce our dependence on fossil fuels."

Source: BMWK

5 Energy Transition News

How exactly do plug-in solar installations work?

It's easy to conserve electricity and contribute to climate action using your balcony, patio or facade. But how exactly does a balcony-based power plant work? Who can benefit and what is to be considered?

800,000 (in German only) plug-in solar installations are already generating low-cost, environmentally-friendly solar power on Germany's balconies and patios. There are manifold benefits and the Solar Package I makes these even more easily accessible. No wonder that balcony-based PV installations are becoming more and more popular. Are you interested in learning more about these miniature solar installations?

This is how a plug-in solar installation works

Plug-in solar installations consist of one or two solar modules and an inverter. The solar modules convert solar energy into direct current, which is then converted into alternating current by the inverter. This electricity is fed into the building's grid and can be used to power devices such as refrigerators, TV sets, internet routers or washing machines. Any surplus electricity is fed into the public grid.

A plug-in solar installation is connected to the building's grid via a connection cable once the solar modules and inverter have been connected to one another. The equipment usually comes with suitable fittings. Incidentally, there are many municipalities that offer co-funding for the purchase of a miniature PV installation. Even in the absence of such funding, it usually does not take long for the cost to have been recovered.

Who can benefit from a plug-in PV installation?

The more solar power a household uses, the less electricity needs to be taken off the public grid. Whether or not a plug-in solar installation pays off depends on the cost of the installation, the direction in which the module is facing, and the electricity price. The best electricity yield is achieved when modules are facing south, fitted at an angle of 30 to 35 degrees, and if there is no shade. Apart from balconies, patios, gardens, fences, carports, rooftops and facades can also be used. Ideally, the installation will generate electricity for immediate consumption. For households whose peak consumption is in the mornings and evenings, it is often more efficient to have the modules fitted facing east or westwards. Consumers can easily calculate how much electricity and money they could save with a plug-in solar installation by using the plugsolar-package-in solar simulator of Berlin University of Applied Sciences (HTW) (in German only).

Balcony-based PV rendered even more simple by the Solar Package I

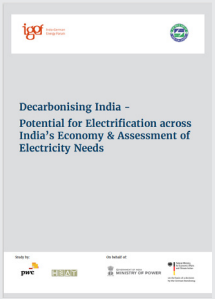
The legal changes made under the Solar Package I (in German only) (see previous article) have made it even easier to generate your own electricity on the balcony and use it in your household.

Since October 2024, apartment owners and tenants have had the right to install a plug-in solar installation. While approval must still be sought, it can now only be refused in exceptional cases and with good reason. All that is required beyond this approval is the registration with the Bundesnetzagentur (in German only). Only very little data is required for this. The grid operator automatically ascertains whether the meter fitted in the household is approved for use with a plug-in solar installation. There is also a transitional period during which any type of meter can be used.

The grid operators are gradually exchanging traditional meters for digital ones, so as to be able to register power flows in both directions. The maximum feed-in quantity for inverters has been increased to 800 watts, allowing for an even greater range of household appliances to be powered by solar power generated by a plug-in solar installation. Furthermore, these installations can also be used in addition to an existing rooftop PV installation.

For a helpful checklist with points to consider when purchasing and operating a plug-in solar installation, complete with background information, consult the following publication by the Federal Ministry for Economic Affairs and Climate Action: Kurzinformation zu Steckersolargeräten (Summary information on plug-in solar installations) (in German only)

6 Publications



Decarbonising India – Potential for Electrification across India's Economy & Assessment of Electricity Needs

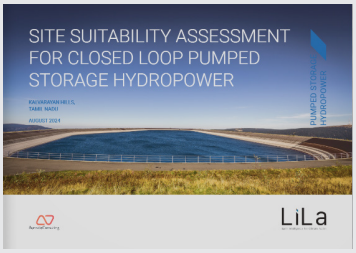
This study offers technology recommendations for all sectors of India's economy to achieve net zero CO2 emissions by 2070. The top priority is to switch to direct electrification using renewable energy to decarbonise industry, agriculture, transport, building, and appliances.

The full report is available for download here.

District Cooling's Impact on Tamil Nadu's Resource Use Landscape

Due to rising temperatures and the corresponding surge in air conditioner usage, projections indicate that, by 2050, cooling could be responsible for 60% of peak energy demand in India. Drawing upon GIZ's proficiency in sustainable development strategies, notably its collaboration with BEE on district cooling guidelines, and Tabreed's unrivalled experience in the industry, the partnership aims to promote widespread adoption of energy-efficient district cooling systems to deliver on sustainable and holistic economic and human development in India

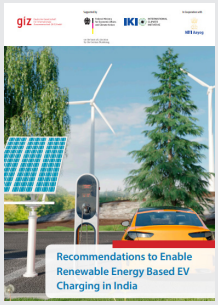
The full report is available for download here.



Site Suitability Assessment for Closed-Loop Pumped Storage Hydropower, Kalvarayan Hills, Tamil Nadu

A site suitability assessment for developing off-river pumped storage hydropower for Kalvarayan Hills in Tamil Nadu. The report identifies 311 reservoir pairings meeting the technical criteria, collectively representing a PSH capacity of 14,159 GWh.

The full report is available for download here.



Recommendations to Enable Renewable Energy Based EV Charging in India

The study carries out a comprehensive analysis of the three cities, identifies gaps with respect to international best practices and suggests recommendations (financial and non-financial) on the fronts of policy, regulations and technology.

The full report is available for download here.

7 Upcoming Events

SET Tech Festival

18 March 2025 | Berlin, Germany

Do you want to be part of the energy transition? Looking for a place to connect with other leaders in climate tech? Then join the 9th edition of the SET Tech Festival, 18 March, 2025, in Berlin.

Start Up Energy Transition

Connect with innovative start-ups, experienced investors and dedicated industry leaders to explore the latest trends, technologies, and solutions in energy and climate tech.

The pre-eminent one-day annual event for energy innovators will see:

- insightful panels and Q&A with thought-leaders on the key issues for 2025,
- numerous networking opportunities, pitches and showcases from exciting new solutions,
- pitches and interviews from the 2025 SET Award finalists

The day closes with the annual SET Award ceremony as part of the official Berlin Energy Transition Dialogue evening reception.

Berlin Energy Transition Dialogue

18-19 March 2025 | Berlin, Germany

BERLIN ENERGY TRANSITION DIALOGUE.25

Since its inception in 2015, the Berlin Energy Transition Dialogue (BETD) has become one of the world's most important forums on the global energy transition. In a high-caliber conference program held over the course of two days at the Federal Foreign Office, the BETD facilitates personal exchange between high-ranking government representatives, global business leaders, scientists, leaders of international organisations and NGOs. IGEF will be attending the conference and will present India's progress in energy transition as well as opportunities for cooperation between Indian and German companies.

2nd Green Hydrogen India Symposium (GHIS)

4 April 2025 | Oberoi Hotel, New Delhi

Building on the success of our inaugural event, the 2nd Green Hydrogen India Symposium (GHIS 2.0) will unite key stakeholders from government, industry, finance, and the global hydrogen ecosystem. This follow-up symposium aims to foster actionable collaborations, share the latest insights, and accelerate India's transition toward a robust green hydrogen economy. GH2 India invites stakeholders across the green hydrogen value chain—developers, financiers, policymakers, and technology experts—to join us at GHIS 2.0.

Grab your passes here.

German Chancellor Fellowship for tomorrow's leaders at German Solar Association BSW in Berlin

The Alexander von Humboldt Foundation is searching for the leaders of tomorrow from India. The German Chancellor Fellowship offers you an opportunity to take the next career step in Germany – irrespective of your field of work. In order to apply, develop your own project idea and find a host of your choice to mentor you. Once your host has confirmed, you can apply for a fellowship. German Solar Association BSW in Berlin has already offered to be a host for you. The Chancellor of the Federal Republic of Germany is the patron of this fellowship programme. The Foundation grants up to 50 German Chancellor Fellowships annually – up to ten for each country.

If you are interested in a fellowship with the German Solar Association BSW you should get in touch with Mr. Knaack via knaack@bsw-solar.de.

Retired German energy experts offering their support to Indian institutions

You are a freshly retired German engineer with experience in Energy Efficiency and already familiar with India's rich culture? Become part of the largest retired expert's database of the world, a group of more than 10 000 experts offering their German know-how free of cost to the world.

You are an Indian based company or institution and looking for a German expert to lower your expenditures for Energy?

Senior Experten Service (SES) India is constantly matchmaking German experts and Indian institutions in several fields of potential support and is also able to finance such expert visits. SES is the worldwide leading organisation for voluntary assignments carried out by retired specialists and executives.

For further information please click here or contact Mrs. Sharon Mogose via sharon.mogose@indo-german.com.

Information about DeveloPPP

DeveloPPP.de is a mechanism by the German Federal Ministry for Economic Cooperation and Development (BMZ) to promote the involvement of the private sector in its development work. The BMZ provides financial and technical support to companies that want to become active in developing and emerging countries or already are, and whose investment has long-term benefits for the local population. The company bears at least half of the total project costs.

Interested companies cooperate with one of the two public partners that implement the program on behalf of the BMZ: DEG – Deutsche Investitions- und Entwicklungsgesellschaft GmbH or Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. The companies receive individual advice, benefit from regional market knowledge of the locations worldwide and gain access to local networks and political decision-makers.

Projects cover a wide range of sectors, such as training local skilled workers, piloting innovative technologies and demonstration plants, to securing value chains and improving ecological and social standards in production plants.

Four times a year, companies can submit their project ideas to DEG or GIZ. The project should be developmentally effective and go beyond investments in the company's core business. To be eligible for funding, companies must have an annual turnover of at least 800,000 EUR, employ no less than 8 people and have a minimum of 2 audited annual financial statements. The duration is up to 3 years.

For further information please click here.

Information about H2Uppp

H2Uppp
International Hydrogen Ramp-up Program

The H2Uppp programme accompanies and supports efforts to ramp up the market for green hydrogen (H2) and power to X (PtX) applications in India and other selected developing countries and emerging economies in cooperation with the private sector. Unlike other hydrogen support initiatives, H2- Uppp focuses on the early stages of green hydrogen project development.

H2Uppp aims to identify, prepare and accompany the implementation of projects for the production and use of green hydrogen and power-to-X application, and to raise awareness and promote knowledge transfer for the development of projects relating to green hydrogen. Together with the partner countries, this approach enables GIZ to identify cost-effective production paths and uses, pinpoint project opportunities along the value chain and develop business models.

To achieve the programme objectives, H2Uppp focuses on three fields of action: In field of action 1 (Networking & Project Scouting), H2Uppp supports companies in identifying project ideas and building networks, for example with project partners or potential off-takers. Partners from the private and financial sectors are also offered training on green hydrogen, and public-private dialogue is strengthened through conferences and trade fairs. In field of action 2 (PPP – Public-Private Partnerships), H2Uppp works with private companies to jointly implement pilot projects in the field of green hydrogen and power-to-X. Formal public-private-partnerships (PPPs) are set up for this purpose (see following section). In field of action 3 (Know-How and Capacity Development), H2Uppp accompanies the various project ideas with in-depth studies and technical trainings. Through specialist conferences, the activities of local institutions are further strengthened and joint measures are developed to ensure a successful market launch.

The programme has been commissioned by the German Federal Ministry for Economic Affairs and Climate Action (BMWK). Support is provided for PPPs along the entire hydrogen value chain (production, storage, conversion, transportation and usage). It is important that the PPP project focuses on public-benefit activities and contributes to the promotion of sustainable development in the project country. To be eligible for funding, companies must contribute at least 50% of the volume of the PPP project and comply with sustainability standards during the project.

For further information on H2Uppp, please contact H2Uppp(at)giz.de.

All Upcoming Events in the Next Six Months – Save the Date!

2nd Green Hydrogen India Symposium (GHIS)

04 April 2025 | India

More information here.

The smarter E Europe (incl. Intersolar)

07-09 May 2025 | Munich, Germany

More information here.

World Hydrogen Summit and Exhibition

20-22 May 2025 | Rotterdam, The Netherlands

More information here.

Hamburg Sustainability Conference

02-03 June 2025 | Hamburg, Germany

More information here.

India Energy Storage Week (IESW)

8 - 10 July 2025

More information here.

Windergy India 2025

29 - 31 October 2025 | Chennai, India

More information here.

8 DISCLAIMER

The views expressed in this newsletter are solely those of the Indo-German Energy Forum (IGEF) Support Office team. The IGEF Support Office cannot assume any responsibility for the contents of other websites linked in this newsletter.

The Support Office of the Indo-German Energy Forum provides liaison services for all stakeholders. It serves as a first point of contact both to the Indian and German governments as well as companies seeking to get involved in the process. The Support Office answers queries regarding proposals for the IGEF dialogue or IGEF projects and any other subject relevant to the private sector.

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