



GOVERNMENT OF INDIA
MINISTRY OF POWER



वित्त मंत्रालय
MINISTRY OF
FINANCE



नवीन एवं
नवीकरणीय ऊर्जा मंत्रालय
MINISTRY OF
**NEW AND
RENEWABLE ENERGY**



Federal Ministry
for Economic Cooperation
and Development



Federal Ministry
for Economic Affairs
and Climate Action

Update IGEF Subgroup IV Green Energy Financing and Grid Integration

18 December 2024



Indo-German
Energy Forum



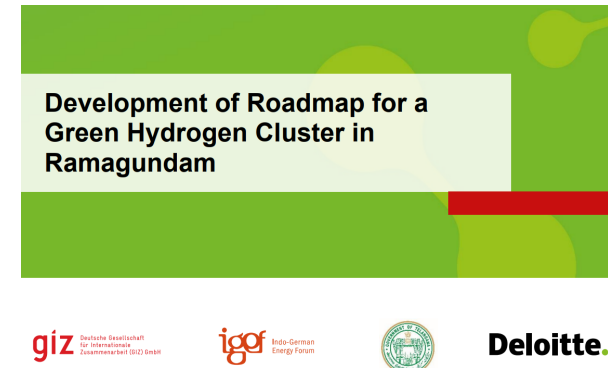
- I. Decisions taken in last Subgroup IV Meeting - Status Update**
- II. Other activities of IGEF SG-IV**
- III. Loan agreements signed since last SG IV meeting**
- IV. Green Energy Corridor**
- V. PtX Development Fund**
- VI. Outlook**

I. Decisions taken in the last Subgroup IV Meeting – Status Update

1. Development of Innovative Areas

1.1 Green Hydrogen

- Identified two Regional Green Hydrogen Valley/Cluster (Kochi and Ramagundam) as potential for future FC.

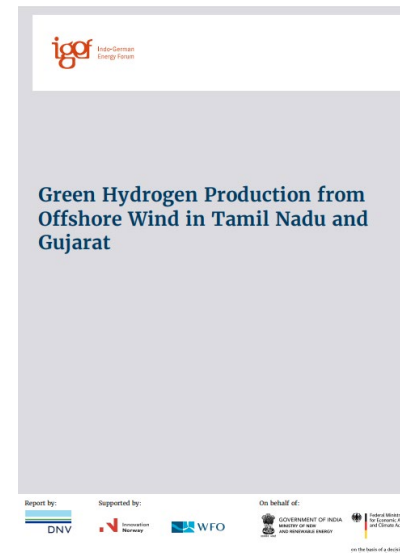


1.2 Offshore Wind

- Offshore wind and connecting them to the transmission grid (e.g. Gujarat and Tamil Nadu).

1.3 Repurposing of coal mines & retired power plants

- Pump storage and solar energy projects in abundant mines.



I. Decisions taken in the last Subgroup IV Meeting – Status Update (contd.)

2. *Development of Innovative Financing*

- **Policy Based Loan (PBL)** to support the power sector reform in India (EUR 200 million to MOP)
- **Credit Guarantee Facility** to enhance solar rooftop for MSMEs with CGTMSE (financial contribution towards the second loss pool)
- Support Distribution Companies participating in the **Revamped Distribution Sector Scheme** of MoP etc. (EUR 200 million to REC)
- **Refinance** energy efficient technologies and solar rooftop installations at MSME level (EUR 140 million to SIDBI)
- PtX Development Fund

3. *Development of Innovative Technologies*

- Innovative RE technologies (EUR 450 million to SBI, BOB, REC)



I. Decisions taken in the last Subgroup IV Meeting – Status Update (contd.)

4. Status of Studies mentioned in last SG IV Meeting

India's Renewable Energy Financing Landscape



[Report](#)



[Report](#)



[Report](#)

II. Other activities of IGEF after last SG-IV

New Studies

Economic Feasibility of Green Ammonia Use in India's Fertiliser Sector

Karan Kothadiya, Hemant Mallya, and Deepak Yadav
Report | September 2024

Final Report
81295151 - Global Best Practices for Repurposing of TPS and potentials in India

Anup Bhargava
Subhendu Podder & Team

DORNIER Group
giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Kochi Green Hydrogen Valley Roadmap

Feasibility Study for 1000 tons per day Green Ammonia Production Plant in India

Study by: **mec+**
Supported by: **giz** Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, **igof** Indo-German Energy Forum, **H2Upp** International Hydrogen Ramp-up Program

Repurposing options for coal mines in India

GIZ India
December 2023

Study on Possibilities and Implications of Desalination for the production of Green Hydrogen in India

Assessing the Impact of Green Hydrogen Production on India's Power System

Rudhi Pradhan, Sanyogita Satpute, Disha Agarwal, and Karthik Ganesan
Working Paper | September 2024

Green Hydrogen Production from Offshore Wind in Tamil Nadu and Gujarat

II. Other Activities after last SG IV meeting *(Contd.)*

- The PtX Development Fund promotion:
 - webinars, B2B forums, and conferences
 - 17 projects applications from Indian Companies out of total 101 applications
- Supported KfW in scoping mission to Kochi and organized stakeholder consultation
- Generated new opportunities for GIZ and KfW in RE
 - repurposing abandoned coal mines in India, particularly pump storage projects, Agri-PV projects, solar and wind parks
- IGEF-SO supported DeveloPPP (Public-Private Partnership):
 - 2 pilots Agri-PV in India
 - training sessions for 1000 farmers
- IGEF-SO participated in several conferences and workshops. It was also involved in panel discussions and CEO roundtables at RE Invest 2024

III. Loan agreements signed since last SG IV meeting

- **5 loan signings in December 2023:**
 - RIL with Mahagenco (130 million EUR)
 - Credit lines with REC, SBI and SIDBI (in total: 410 million EUR)
 - PBL with MoP (200 million EUR)
- **1 loan signing in October 2024:**
 - Credit line with SBI (150 million EUR)
- **2 loan signings in December 2024:**
 - Credit line with REC (200 million EUR)
 - Credit line with BoB (100 million EUR) – signing still pending



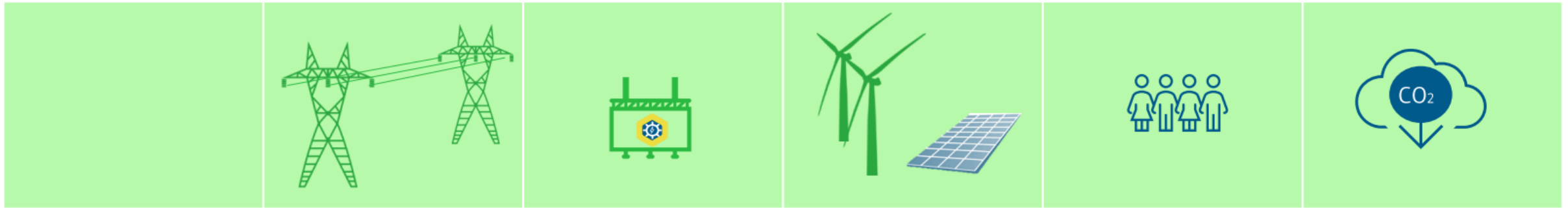
- **Total amount of FC portfolio in energy sector: 5.4 billion EUR**

IV. Green Energy Corridor (GEC) Portfolio

- **Combined project cost of GEC-I and GEC-II:** 3 billion EUR
- KfW on behalf of BMZ co-finances intra- and interstate transmission lines and substations in 9 Indian states with more than 1.4 billion EUR (reduced interest loans)
- **Project partners:** Powergrid, GETCO, HPSEBL, HPPTCL, RVPN, MPPTCL, MSETCL, APTRANSCO, TANTRANSCO, KSEBL & UPPTCL
- **Status quo:**
 - GEC-I almost completed
 - GEC-II is expected to be commissioned gradually in 2026
- **GEC-III** will be implemented under TBCB mode
Question: Is the Indo-German Financial cooperation in the transmission sector still possible in the future?

IV. Green Energy Corridor (GEC) Portfolio *(Contd.)*

- GEC-I and GEC-II: Results and Impact**

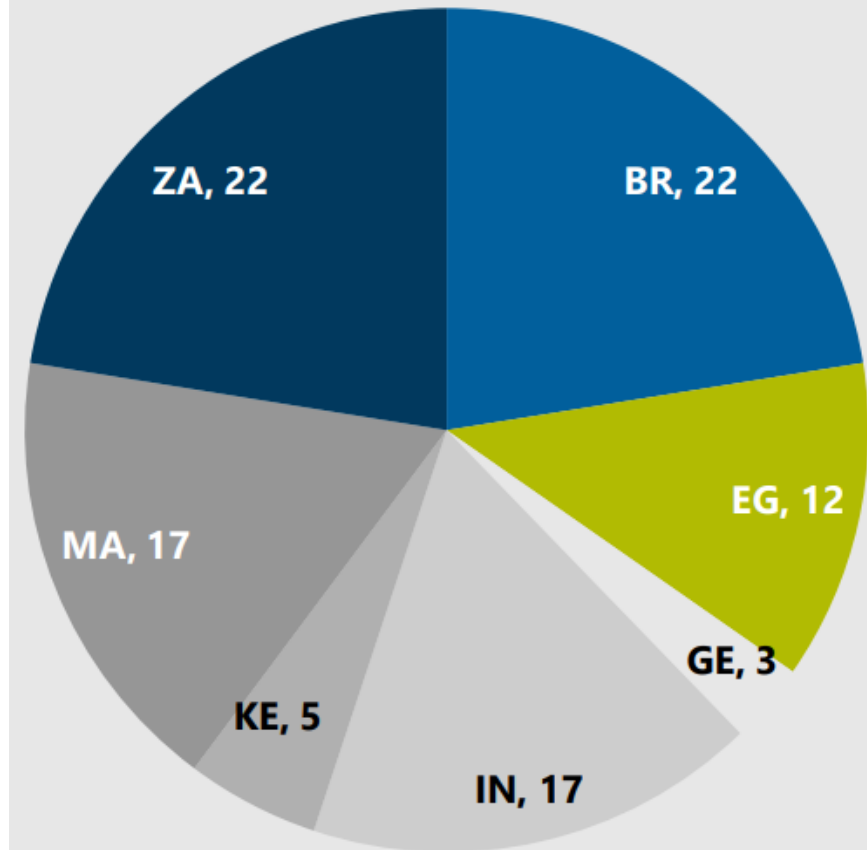


	Transmission length	Substations	RE Evacuation	beneficiaries	CO2 savings p.a.
GEC I	7.800 km	97	28 GW RE	41 million	0,6 million t CO ₂
GEC II	2.800 km	35	12 GW RE	19 million	0,3 million t CO ₂
Total	10.600 km	132	40 GW RE	60 million	0,9 million t CO ₂

V. PtX Development Fund

- **Aim of PtX Development Fund:** Supporting global market ramp-up of GH2 and its derivatives through VGF in seven partner countries
- **Total Funding:** 270 million EUR; 15 – 30 million EUR per project
- **First call of Expressions of Interest (Eoi):** December 2023 – March 2024
 - 98 Eoi received
 - Brazil, Egypt, Morocco, South Africa and India were the “top project providers”
 - 17 projects from India, 10 projects were evaluated as “promising”
 - Only one project in Egypt selected for VGF

Number of Eois in each Country



V. PtX Development Fund (Contd.)



- **Start of 2nd Call for EoI: 8th January 2025**
- **Minimum criteria** for a successful participation will be available on PtX Dev.
Fund website soon: <https://www.ptx-fund.com>

- **Relevant success factors:**
 - Source of electricity is renewable
 - Ready-to-build status (land and permits available, grid access)
 - Technical maturity and feasibility
 - ESIA (as of World Bank standards) initiated
- **3rd Call for EoI** envisaged for 1st quarter of 2026

VI. Outlook

- Expansion of the grid infrastructure
 - transmission lines and distribution systems, promotion of DISCOMs (e.g. Leh-Haryana Transmission Project)
- Off-shore wind and connecting it to transmission grid
- Innovative and land-saving solar projects
 - e.g. agrivoltaics, floating solar, solar rooftop
- Round-the-clock renewables
 - hybrid wind-solar, battery energy storage systems, pump storage
- Repurposing of abandoned coal mines in India
- Green Hydrogen
 - PtX Development Fund, hard to abate sectors, green hydrogen hubs, etc.

Thank you!

Vielen Dank!

धन्यवाद

IGEF Website: www.energyforum.in

