Terms of Reference (ToR) for engaging a consultant as a technical advisor to support the team of IGEN ACCESS - II in achieving and monitoring the deliverables	Project number / cost centre: **2017.2166.1**

1. Context 2

2. Tasks to be performed by the contractor 5

3. Scope of Work 6
Key tasks .....
Detailed scope of work .....
Deliverables .....

4. Eligibility Criteria 10
Eligibility criteria .....
Program stearing and reporting .....
Quality assurance and other requirement .....

1. Context

The Indo-German Energy Programme (IGEN Access - II) is a bilateral cooperation project carried out by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) and the Indian Ministry of New and Renewable Energy. IGEN Access - II aims to improve the energy supply in rural areas of selected federal states.

India has emerged as the fastest growing economy in the world with impressive growth rate of 7.3% for the year 2018-19 and is predicted grow at 7.5% in the following two years. India's current economic and social development is the result of systematic policy driven proactive governance. The government has initiated policies and programmes dedicated towards poor, marginalized strata of the society. Some of the activities initiated by the government for social and economic development are Swachh Bharat Mission (Clean India Mission) for improved quality of life, minimum pension for workers, social security for the common man, universalizing the banking system, rejuvenating the Ganga river, providing 24X7 power to all, connecting India through roads and rail, building affordable housing for the poor, and developing smart cities.

Though India has emerged as the world's fastest growing economy, still a quarter of its population lack access to basic electricity. The current government claims providing 24/7 power to all households by 2019 and to electrify all unelectrified villages by 2019. Even though electrification through grid expansion is the main focus, the Government of India has also incorporated renewable energy in its strategy with ambitious targets of 175 GW of renewable energy by 2022 to reduce the fossil fuel dependence and increase the environmental and social benefits.

Large scale centralized grids take a long time to transform, they are expensive, not flexible and inefficient. Decentralized Renewable Energy (DRE) or Off-grids are an appropriate option to resolve some of the issues mentioned above. Unlike the current Indian central grid, DRE's are smart, efficient and a futuristic option. The DRE systems are far more flexible and efficient as supply and demand are in close proximity. They eliminate the inefficiencies associated with long distance transmission. They can work in isolation or compliment the central grid. DRE can be quickly deployed and they carry the environmental and social advantage of reducing emissions, improving air quality, spurring education, providing access to modern communication and facilitating productive uses for economic benefit.

Off-grid renewable energy offers an opportunity for new entrepreneurs to invest in the energy market with creative business models which are tailor-made to the needs of the consumers they serve. Off-grid solar has seen a remarkable growth in recent time. According to the World Bank, there are close to 40 companies in the Indian market focusing on solar lanterns and solar home systems. Besides these, there are other smaller entities involved in the solar products at household level. While Rural Energy Enterprises (REEs) have stepped up to address the supply side gap, the sector is still relatively nascent in comparison to the magnitude of the problem. The sector is struggling with challenges like financing, value beyond product design, supply chain, business models, after sales service, distribution networks and customer relationship.

At the world stage there is significant pressure on developing countries like India to move towards cleaner and sustainable growth.

The Government of India faces the challenge of sustaining economic and industrial growth alongside providing affordable and reliable power to its people, at the same time reducing the countries carbon footprint.

This unmet energy demand and global consensus to move towards clean energy presents a huge business opportunity. Off-grid renewable energy solutions like decentralized renewable energy (DRE) systems and solar home systems (SHS) have a huge potential and an important role to play in providing access to energy to the rural population of India.

1.1. The Areas of Activities for IGEN-Access-II Programme

IGEN Access-II Programme is geared to specialists and managers at state-run and private energy companies, to providers of financial and other services and to private and public training facilities and networks. Acting through these intermediaries, the module will indirectly reach the rural population who will then benefit from a modern, environment-friendly, high-quality energy supply, irrespective of gender, age, income or ethnicity.

It is expected that implementing the below-mentioned measures will increase the share of RE in rural areas of the partner federal states, and thus boost diversification in the Indian energy matrix (results hypothesis). In the long term, expanding RE will reduce the need to operate conventional power plants and thus increase their capacities. The upshot: fuel savings and reduced emissions of climate-noxious gases. In this way, the project will make another important contribution to a sustainable and above all eco-friendly energy supply in India, thus contributing directly to the achievement of the programme objective.

The module aims to improve rural energy supply in selected Indian federal states. Therefore, one of its key elements centers on strategic advice for political decision-makers (e.g. State Nodal Agencies, SNAs) regarding the initiation of a cross-sector energy planning process for rural areas. Studies and analyses, along with the organization of interdisciplinary working meetings and workshops, will empower partner experts to remedy their information deficits and enable advisory services to be customized more accurately. This will lead to specific recommendations for action with respect to the targeted design and implementation of federal state energy plans, which should result in an improved energy supply involving an ever-greater share of renewable energy.

1.2. Indicators of the IGEN-Access -II Programme

Module objective: The energy supply is improved in rural areas of selected federal states.

Module objective indicator 1:

Implementation of one component from the energy plans (e.g. remuneration system for integrated decentralised energy systems, subsidy programme for promoting electric mobility) is funded in 2 federal states respectively.

Module objective indicator 2:

The number of RE systems sold to rural users by module-backed providers has quadrupled.

Module objective indicator 3:

4 recommendations elaborated by the module for improving the quality of the energy supply under certain specific conditions are implemented.

Module objective indicator 4:

40% of women-led Village Level Enterprises (VLEs) that disseminate RE confirm that their standard of living has improved by two points on a scale from 1 to 5.

Outputs	Output Indicators
Output 1: Strategic energy planning is improved in selected federal states.	**Indicator 1.1:** Energy plans have been submitted to the political decision-makers for approval in 2 additional federal states **Indicator 1.2:** In 4 federal states, intersectoral Project Management Units (PMUs) / Innovation Hub is able to prepare and update necessary plans and policies
Output 2: Proven models and instruments for improving basic energy supply are disseminated in selected federal states.	**Indicator 2.1:** 100,000 loan agreements with rural energy users have been concluded by the financial service providers supported by the module (e.g. banks, microfinance institutions, incubators and non-governmental organisations), 10,000 of them loan agreements from 7 additional new providers **Indicator 2.2:** The number of RE system providers supported by the module (e.g. VLEs) has risen to 10,000; 50% of them managed by women
Output 3: Conceptual basis is in place for improving the quality of energy supply under certain specific	**Indicator 3.1:** 4 concepts for improving the quality of energy supply under certain specific conditions are prepared (including government programme for liquefied natural gas/network expansion, climate change) **Indicator 3.2:** Experience from supporting 2 pilot projects designed to improve energy supply quality (e.g. rehabilitation of stand-alone networks, adaptation of operator models, and increasing the climate resilience of energy systems) has been presented at a total of 4 specialist events

2. Tasks to Be Performed By The Contractor

The IGEN Access - II programme started in April 2019 and is ending in March 2022. However, at this point of time, the programme is developing and preparing many important projects which would directly influence its defined outcomes and impacts. The programme also has active projects with state governments partners like Assam and West Bengal which needs to be maintained and continued with the desired outputs.

Under this context, the IGEN Access - II programme intends to engage a technical advisor (individual consultant) who is expected to support project managers of the IGEN-Access-II programme to design, set up and achieve respective deliverables, combined with effective monitoring and evaluation.

The contractor is responsible for providing the following services:

- To assist the IGEN-Access - II team in setting up the projects in time with expected quality deliverables by acting as a technical back stopper
- To assist the IGEN-Access - II team in achieving the project objectives by reviewing and revising the expected deliverables
- To periodically monitor and evaluate progress of the projects which have to be in line with existing RBM of the programme

Period of assignment: From **Aug 2019** until **February 2022**

3. Scope of Work

The concept behind having a technical advisor (individual consultant), as a technical back-stopper, who is well versed with the trends of emerging market of rural energy access and who can support the project manager(s) of the IGEN-Access-II programme to design, set up and achieve respective deliverables, combined with effective monitoring and evaluation while ensuring objective of the IGEN Access-II program.

The key tasks for the technical advisor are as follows:

Key Task 1: Support preparation and implementation of Energy Plans for the identified federal states

Key Task 2: Provide support on financial models or other instruments to enhance dissemination of renewable energy products for secured energy supply

Key Task 3: Provide inputs on having conceptual basis in place for improving energy supply in special conditions

Detailed Scope of Work

The detailed scope of work under the key tasks are as follows:

Key task 1: Support preparation and implementation of Energy Plans for the identified federal states

1.1. Development of Energy Plans in two additional states in India: IGEN Access Phase 2 aims to develop at least two more (in addition to Assam and West Bengal) Energy Plans in identified federal states. After the selection of states, the process of selecting a firm of consultants for the development of the energy plan needs to be initiated. The technical advisor will be responsible for

- Assisting the project manager to identify the potential states and initial engagements at state level
- Providing inputs to the draft terms of reference for hiring the firm of consultants, specifically on designing the assignment and deliverables
- Participate in the meetings together with the IGEN-Access - II project managers as and when required;
- Represent the IGEN-Access -II programme in the absence of the project manager especially in meetings called by the respective state partner;
- Provide technical inputs and feedbacks on the deliverables of the assignment;
- Support the project manager in managing the project, as/when requested

1.2. Assistance in the implementation of state tailored Energy Action items for the four states supported: During previous phase IGEN Access II, two Energy Plans with Energy Action Items and concrete implementation recommendations have been developed for the state of Assam and West Bengal. Similar actionable items will be prepared for the additional two states which are to be supported in this phase of the programme. These Action items need to be carefully selected to be directly aligned with respective state governments for implementation. The Project Management Unit (PMU) within the state government will be the nodal entity for coordination. Strengthening the PMU through GIZ will create ownership of the Energy Plan and the sustainable transfer of responsibility to the state. GIZ will support the state in selection key activities and provide technical assistance. The scope of work for the technical advisor would be as following:

- provide inputs for selecting key activities for implementation from the Energy Plan in sync with larger programme objective
- In case a firm of consultants is required to be hired for implementing these activities, provide inputs to the terms of consultants for engagement
- Participate in the meetings together with the IGEN-Access-II project managers as and when required
- Support the project manager in monitoring and evaluation of the deliverables of the assignment (especially with respect to quality, feasibility and standards);

1.3. Provide support to selected states for specific elements on capacity building or handholding on decentralized renewables (for example providing advice to IGEN Access -II project managers; through organizing trainings; identification of relevant service providers; or through other modes as relevant). The advisor might also have to provide strategic feedback on the capacity building materials developed for Financial institutions and agricultural extension workers for promotion of solar water pumps.

Key Task 2: Provide support on financial models or other instruments to enhance dissemination of renewable energy products for secured energy supply

2.1. New financial service providers: IGEN Access - II plans to reach out to a substantial number of households by overcoming the financial barriers for having access to decentralized RE systems. As one of the outputs, new financial service providers will need to be identified and brought on board for decentralized RE financing. The scope of work for the technical advisor would be to provide:

- Inputs to the project manager to engage potential financial service providers and to assess impact of enterprise financing and end-users/household financing

2.2. Entrepreneur support programme: GIZ is planning to support and upscale proven models to support entrepreneurs, including at the village level. The objective is to support selected Village Level Entrepreneurs (VLEs) to disseminate renewable energy services and products in rural areas. The scope of work for the technical advisor would be as following:

- Provide suggestions on possible opportunities and provide inputs to the project leads by providing advice on developing engagements, specifically with the state livelihood missions
- Provide technical inputs and feedbacks on the deliverables of the assignment;
- Participate in the meetings together with the IGEN Access- II project managers as and when required;
- Provide feedback to the project managers on monitoring and evaluation of the deliverables of the assignment (especially with respect to quality, feasibility and standards);

Key Task 3: Provide inputs on having conceptual basis in place for improving energy supply in special conditions

3.2. New concepts developed: The project plans to have conceptual basis in place for ensuring quality energy supplied including under special conditions like disasters. The advisor shall

- Provide suggestions to the project managers on potential opportunities, which can be implemented on ground with potential partners

- Analyse the pilot ecosystem and key stakeholders to provide design inputs on role of key stakeholders and components for further replication
- Support in identification of potential service and technology providers who can deliver the concept on ground
- Provide specific insights and recommendations by reviewing of the project documents, deliverables, communication products developed by the IGEN Access - II and Solar water pump project
- May be requested to be part of advisory group meetings to provide strategic guidance to IGEN Access -II and solar water pump project

Person days Required (till 28 February 2022)

Task No	Activities	No of person days
1.1	Development of Energy Plans in two additional states in India	35
1.2	Assistance in the implementation of state tailored Energy Action items for the four states supported	35
1.3	Provide support to selected states for specific elements on capacity building or handholding on decentralized renewables	15
2.1	Advise on new financial service providers	5
2.1	Support on Entrepreneur support programme	15
3.1	Advise on new concepts (including Review of project documents, reports, capacity building materials prepared by Solar Water Pump programme)	15
	Expected travel days (prior approval is required)	35
	Total number of days*	**155**

***The no of days allotted under each activity are indicative and GIZ reserves the rights to shuffle the days depending upon requirement of each activity. Considering project requirement and skill sets of the consultant, GIZ might also request the ad-hoc assistance from the consultant. However, total number of days will remain same.

Deliverables

Besides providing technical suggestion and inputs on specific topic (as mentioned above) the Technical Advisor is expected to provide the following deliverables

- Monthly timesheets;
- Quarterly activity reports;
- Training material (if developed under this assignment)

4. Eligibility Criteria

The consultant needs to demonstrate following ability through adequate references and documents.

- The consultant must have a degree in Engineering and post graduate degree in energy related field or management from premier institutes
- Proven experience of at least 15 years of working in energy sector; preferably on DRE and Energy Access domain / issues, Policy and strategic planning
- Proven experience of managing large scale projects; managing RE network(s), liasoning with Ministries/departments/Agencies
- Past experience of understanding GIZ's rules and regulations and should also be familiar with the GIZ's access to energy programme activities. Sound exposure / understanding of German Technical Cooperation (TC)
- Inter-personal communication skills and report writing skill (including presentation skills), well versed with both Hindi and English
- Experience of managing financial inclusion projects in RE sector; enterprise incubation projects and energy action planning exercise

Programme Steering and Reporting

- The consultant will report to the IGEN Access II project managers of the respective work packages;
- The consultant will submit filled work timesheets and activity reports on a quarterly basis to the Programme head of the IGEN Access-II programme.

Quality assurance and other requirements

To ensure the quality of the outputs the firm of consultants has to meet the following requirements:

- GIZ honors intellectual copyrights and strictly prohibits any copyright violations and plagiarism;

- The consultant ensures that GIZ staff is briefed continuously on the progress of the project and informed immediately on any changes whatsoever (e.g. delays, availability of information etc);

- The consultant has to maintain the confidentiality of the data. The data/information/findings/outputs and any other classified information collected under this assignment shall not be used by the consultant anywhere and in any manner without GIZ permissions. It is not encouraged that based on the information collected through the assignment any research work is conducted with an intention to publish research papers and/or conduct thesis work in individual capacity;

- All communication with media (TV, radio, print and other media) has to be approved by the responsible person of GIZ;

- Timelines shall be strictly adhered and delay in any of the deliverable shall be reported and aligned with GIZ in advance.

Note

It may also be foreseen that GIZ may consider termination of the contract prematurely in case of unforeseen events.

5. Technical Assessment Grid

Selection Criteria - Technical Advisor			
Firm Name: **Factors (1 through 10)**	**Weight**	**Score 1-10**	**Applied Score (Col B x Col C)**
The consultant must have a degree in Engineering and post graduate degree in energy related field or management from premier institutes. Doctoral degree or equivalent is desirable	10.00		0
Must be well versant with development agenda with experience of working with private sector, and on strategy consulting particularly catering to government agencies and private players	10.00		
Proven experience of more than 15 years of working in energy sector; preferably on DRE and Energy Access domain / issues, Policy and strategic planning	20.00		0
Proven experience of managing large scale projects; managing RE network(s), liasoning with Ministries/departments/Agencies	20.00		0
Past experience of understanding GIZ's rules and regulations and should also be familiar with GIZ's access to energy programme activities. Sound exposure / understanding of German Technical Cooperation (TC)	20.00		0
Inter-personal communication skills and report writing skill (including presentation skills), well versed with both Hindi and English	10.00		0
Experience of managing financial inclusion projects in RE sector; enterprise incubation projects and energy action planning exercise	10.00		0
Total	**100.00**	**0.00**	**0**