



## **Request for proposal for Assessing the Potential Benefits of Cross Border Electricity Trade for Affordable Supply of Electricity, Facilitating Grid Balancing of Renewable Energy Integration, and Suggesting a Framework for Ancillary Service Market in the South Asia Region**

**RFP No.: IRADe/SARI/2021-22/03**

28<sup>th</sup> December 2021



**South Asia Regional Initiative for Energy Integration(SARI/EI)**

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## 1. Introduction

<b>RFP No.:</b>	<b>RFP No.: IRADe/SARI/2021-22/03</b>
<b>Issue Date:</b>	<b>28<sup>th</sup> December 2021</b>
<b>Closing date:</b>	<b>18<sup>th</sup> January 2022</b>
<b>Assignment:</b>	<b>Request for proposal for Assessing the Potential Benefits of Cross Border Electricity Trade for Affordable Supply of Electricity, Facilitating Grid Balancing of Renewable Energy Integration, and Suggesting a Framework for Ancillary Service Market in the South Asia Region</b>
<b>Implementing Agency:</b>	Integrated Research and Action for Development (IRADe)
<b>Funding Agency:</b>	United States Agency for International Development (USAID)

IRADe invites bids from prospective organizations through this **RFP No.: IRADe/SARI/2021-22/03 - Request for proposal for Assessing the Potential Benefits of Cross Border Electricity Trade for Affordable Supply of Electricity, Facilitating Grid Balancing of Renewable Energy Integration, and Suggesting a Framework for Ancillary Service Market in the South Asia Region**. This is an activity funded under the United States Agency for International Development (USAID) for South Asian Regional Initiative for Energy Integration through IRADe.

The document includes: instructions for bidders; the Terms of Reference for the assignment; and information on bid, bid particulars, including technical and financial selection criteria, and the copy of the draft contract.

**Bids are due on 18<sup>th</sup> January 2022 by 1800 Hrs.** The last date for submitting pre bid queries is **5<sup>th</sup> January 2022**. Mail should be sent to [pdasgupta@irade.org](mailto:pdasgupta@irade.org).

Due to Covid-19 restrictions the bidders are required to submit the Technical and Financial Proposal through email to the Programme Administrator at [pdasgupta@irade.org](mailto:pdasgupta@irade.org). The Financial Proposal submitted should be password protected and the password to the Financial Proposal **should not be shared** at the time of submission of proposals. At the time of financial bid opening, the bidders will be sent a mail to submit the password for the Financial Proposal submitted on **18<sup>th</sup> January 2022**.

## 2. Instructions for Bidders

SARI/EI is a USAID-funded Program; therefore, the RFP follows USAID Procurement Regulations and Laws. All bidder details will be kept confidential. Bidders are expected to examine carefully and comply with all instructions, forms, and contract provisions contained in these Bidding Documents.

Attached in the Annexure are the following documents to assist in the preparation and submission of a bid:

<a href="#">Annex I:</a>	Bid Submission Declaration
<a href="#">Annex II:</a>	Technical Format for Organizational Experience
<a href="#">Annex IIA</a>	Technical Format Substantiating Organization's Experience
<a href="#">Annex III:</a>	Technical Format for Personnel Details
<a href="#">Annex IV:</a>	Staffing Schedule
<a href="#">Annex V:</a>	Financial Format for Cost of Assignment
<a href="#">Annex VI:</a>	Draft Contract
<a href="#">Annex VII:</a>	General Terms and Conditions of the Consultant Agreement

It shall be assumed for any bid received by IRADe under this RFP, that the bidder has understood and accepted all terms and conditions and guidelines mentioned in this Bid document.

## 3. Terms of Reference/ Scope of Work

### 3.1. Introduction

South Asia Regional Initiative for Energy (SARI/E) is a long-standing program of USAID started in the year 2000. The program covers eight countries of the region i.e., Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan, and Sri Lanka. The program has consistently strived for enhancing energy security of South Asian Countries (SAC). The SARI/E program of USAID entered its fourth phase in 2012, which was titled South Asia Regional Initiative for Energy Integration (SARI/EI) and will continue till 2022. The SARI/EI program aims to promote regional energy integration as well as increase cross border electricity trade in the region. The overall objective of SARI/EI is to create an “enabling” environment to support the establishment of a South Asian electricity market, and gain consensus and support from the key decision makers and stakeholders. The SARI/EI program focuses on three developmental outcomes i.e., coordination of Policy, Legal and Regulatory Framework; advancement of Transmission Systems Interconnection; and establishment of South Asia Regional Electricity Market. The program also works with regional institutions including SAARC, BIMSTEC, and SAFIR, in the form of doing various studies on cross border energy trading (CBET), providing a platform for the South Asian countries for building consensus, knowledge sharing, holding knowledge building Workshops, Conferences, webinars, etc. The current focus areas are institutionalization for sustainable CBET, creation of energy markets, enabling clean energy integration into the grid and to move the regional power trade from bilateral to trilateral and multilateral forms of trade in the South Asian Region. To achieve these outcomes, three dedicated Task Forces (TFs) have been constituted under the program, represented by government nominated members from South Asian Governments (Energy/Power Ministries), Electricity Regulatory Commissions, Planning Authorities, National Power Transmission utilities, Power Market Institutions etc. The program has an oversight body, in the form of a high-level Project Steering Committee, with representation from senior officers from each country. Integrated Research and Action for Development (IRADe) is the implementing partner for the fourth phase (2012-2022) of the SARI/EI program through a cooperative agreement with USAID.

### 3.2. Background

The South Asia Forum for Infrastructure Regulation (SAFIR) was established in May 1999. SAFIR aims to provide high quality capacity building and training on infrastructure regulation and related topics in South Asia, and stimulate research on the subject by building a network of regional and international institutions and individuals that are active in the field. It also aims at facilitating effective and efficient regulation of utility and infrastructure industries, initiate beneficial exchange of knowledge and expertise, and set the trend of rapid implementation of global best practices. SAFIR has a Working Group, constituted with the intent to work towards enhancing regulatory cooperation in energy sector by facilitating knowledge sharing, addressing cross cutting energy/electricity regulatory issues and capacity building. SARI/EI is providing technical and knowledge support /assistance to the SAFIR Working Group.

In the second meeting of the SAFIR Working Group on ‘Regulatory Cooperation to facilitate Knowledge-sharing, addressing Cross-cutting Energy/ Electricity Regulatory Issues and Capacity

Building in South Asia', held in Dhaka on 4th December 2019, a presentation was made on the "Evolution of Cross-Border Electricity Trade in South Asia and the Future Outlook" by SARI/EI. The role of regional hydropower in renewable integration and grid balancing was also discussed in the meeting. In this meeting, it was decided to take up another study on the requirement of balancing generation<sup>1</sup> on a regional basis and develop a report for the same.

Apart from the above-mentioned subject, it was also decided that SARI/EI will conduct a study<sup>2</sup> on 'Benefits of Cross border Electricity Trade - Potential Optimum Utilisation and Reduction in Cost of Supply', at the behest of SAFIR Working Group, as was mandated at the SAFIR 15th Executive Committee Meeting (ECM)<sup>3</sup> and 24<sup>th</sup> Steering committee Meeting (SCM)<sup>4</sup>. This study aims to review and analyse the load and generation patterns in all neighbouring countries and study the season-wise trade/ barter of power between the countries to ensure 24x7 supply to all countries and optimum utilisation of generation assets, including quantification of benefits for all countries as per the approved scope of work. During the 18<sup>th</sup> Executive Committee Meeting of SAFIR held in Dhaka, Bangladesh, on 5<sup>th</sup> December 2019, Chairman of SAFIR and BERC suggested<sup>5</sup> that the Working Group should also consider working on methods to reduce the cost of supply. This could be added as an objective in the Study on Cross Border Trade in Electricity. It was also suggested<sup>6</sup> that the Working Group could assess as to how balancing costs can be reduced due to the flexibilization of thermal power so that there is no economic loss. This scope of work of the study on "Cross Border Trade of Electricity" was also added in the proposed comprehensive ToR. Also, in the deliberations of the 26<sup>th</sup> Steering Committee Meeting<sup>7</sup> and 19<sup>th</sup> Executive Committee meeting<sup>8</sup> of SAFIR held on 28<sup>th</sup> August 2020, it was decided that the revised TOR was to be shared by SARI/EI with SAFIR Secretariat by revising/expanding scope to make the study holistic, comprehensive, more analytical and taking in to account the renewable energy and grid balancing aspects, ancillary service etc. in an integrated manner. This was approved in the 22<sup>nd</sup> SAFIR Executive Committee meeting held on 18<sup>th</sup> November 2021.

It is, therefore, proposed to carry out a combined study aimed at fulfilling all the requirements in letter and spirit. The proposed study is titled "Assessing the Potential Benefits of Cross Border Electricity Trade for Affordable Supply of Electricity, Facilitating Grid Balancing of Renewable Energy Integration and Suggesting a Framework for Ancillary Service Market in the South Asia Region".

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<sup>1</sup>[https://sari-energy.org/wp-content/uploads/2020/01/MOM-Second-Meeting-of-SAFIR-Working-Group\\_04-12-2019\\_Dhaka.pdf](https://sari-energy.org/wp-content/uploads/2020/01/MOM-Second-Meeting-of-SAFIR-Working-Group_04-12-2019_Dhaka.pdf)

<sup>2</sup> Note-Original title of the study was "Cross Border Trade of Electricity Trade" to bring the true aspects of the study is reflected in its title in line with approved scope of work, the title of the study is modified to "Benefits of Cross Border Electricity Trade - Potential Optimum Utilisation and Reduction in Cost of Supply' for better reflection in the title of the study.

<sup>3</sup> <https://www.safirasia.org/sites/default/files/Minutes%20of%2015th%20ECM.pdf>

<sup>4</sup> <https://www.safirasia.org/sites/default/files/Minutes%20of%2024th%20SCM.pdf>

<sup>5</sup> <https://www.safirasia.org/sites/default/files/Minutes%20of%2018th%20ECM%20of%20SAFIR.pdf>

<sup>6</sup> <https://www.safirasia.org/sites/default/files/Minutes%20of%2018th%20ECM%20of%20SAFIR.pdf>

<sup>7</sup> [Minutes of 26th SCM - revised.pdf \(safirasia.org\)](#)

<sup>8</sup> [Minutes of 19th ECM - revised.pdf \(safirasia.org\)](#)

### 3.3. Motivation

Integrating the electricity grids of neighbouring countries in South Asian region leads to more reliable grid operation. This would lead to a more reliable, affordable electricity supply, and optimal utilization of resources in the region, ultimately resulting in lesser cost for each country.

The South Asia region faces significant climate change challenges and each country in the region is stepping up their Renewable Energy (RE) targets to address this issue. India recently stepped up its target of 175 GW of RE by 2022 to 500 GW of RE by 2030. Due to the intermittencies in the generation pattern of renewable energy sources such as solar and wind power, the risk of power grid instability increases. In this context, the role of cross-border power trade in renewable energy grid integration and regional grid balancing becomes extremely important. Cross border trade can play an important role in optimal grid balancing in an economical manner. There exist established global experiences/models in similar regional grid balancing for RE integration, such as in the case of Denmark and Norway, where Norway's hydro power plants are utilized to balance Denmark's wind power capacity. South Asian countries have immense potential for regional grid balancing in the context of large-scale renewable energy growth due to diversity in supply sources. For example, the generation resources in Nepal and Bhutan are predominantly hydro. With the rise of power markets due to recent reforms in power markets in India and development of ancillary service markets, a market-based approach to regional grid balancing will become the preferred choice to manage the intermittency in the most economical manner in the South Asia regional context. Therefore, it is worthwhile to explore these subjects comprehensively.

While there are several studies on the above subjects, and many studies have quantified the economic benefits through various comprehensive modelling exercises, in a transparent and scientific manner, it is felt that, in addition, modelling studies need to be carried out on potential reduction in average cost of supply, taking into account the diversity of generation resources and peak demand. Another important aspect that comes out clearly is that since all countries have made policies to shift to renewable energy sources, the majority of which are intermittent in nature, either produced within the country or purchased from outside, balancing of the such intermittency of variable renewable energy resources would become very important in the future. A study of balancing such intermittency on a South Asia basis has hitherto not been done, including determination of the cost of balancing and role of market in the South Asia regional context.

### 3.4. Objective of Study

The study aims to address the following issues:

1. The extent of potential reduction in average cost of supply of electricity in South Asian countries due to increased cross border trade of electricity for optimal utilization of generation assets in South Asia, as well as due to reduction of reserves, and quantification of the overall economic benefits to the region over the next fifteen and twenty-five years.
2. The role of Cross Border Electricity Trade in the context of accelerating the Renewable energy integration in South Asian Countries presently and in the next 15 and 25 years, considering the rapid expansion in renewable energy in the South Asian region for reduction of carbon

emissions. Calculation of the cost of balancing for each country on standalone basis and that on a combined South Asia basis and therefore quantification of the benefits of regional grid balancing due to net fluctuations of demand and variable renewable energy.

3. For both point nos. 1&2 above, comprehensive and detailed modelling exercise has to be done for likely capacity addition and different scenarios of capacity addition. Propose the optimal capacity addition in each country, considering regional energy cooperation.
4. Analysis of the various market mechanisms in vogue internationally, for grid balancing and ancillary services, and to propose an appropriate fair, transparent market structure suitable for South Asia, and the broad framework for ancillary service market in the Region.

### 3.5. Scope of work

- 3.5.1. Review and Analyze the current and future demand – supply positions of each South Asian country, including growth of renewables, for the next 15 and 25 years - based on the master plans available in each country, or carrying out comprehensive modeling exercise, if projections are not available.
- 3.5.2. Review and analyze the current daily load curve and generation patterns (including those of renewable energy) over different seasons in all South Asian countries and calculate the balancing cost per unit on account of intermittency of renewables and average cost of supply per unit in each country separately over the year, considering the existing cross border trade, and the balancing cost per unit on account of intermittency of renewables and average cost of supply per unit for the South Asia Region as a whole. The study will model the hourly load and generation curve for each country for the full year, i.e., 8760 hours, and will take into account the cost of the existing transmission for cross border trade of electricity. This should be done for the last full year in which data is available, preferably 2019-20. Reduction in balancing cost per unit on account of intermittency of renewables and average cost of supply per unit should be calculated for the South Asia Region as a whole.
- 3.5.3. Based on the analysis of 3.5.1. and 3.5.2., carry out comprehensive energy modelling exercise<sup>9</sup> and develop likely scenarios including a scenario of unconstrained trade of power, utilizing various diversities (demand-supply, generation mix on daily/weekly/monthly/seasonal basis, etc., including for balancing), between the countries of South Asia, through bilateral, trilateral, and multilateral contracts, in order to ensure least cost of supply per unit in South Asia as a whole. It would also calculate the reduction in balancing cost per unit on account of intermittency of renewables and average cost of supply of each country and of South Asia combined, and then the total savings in each country and South Asia combined, due to cross border electricity trade among the SACs. The study should take into account the additional cost of transmission system related to cross border trade in electricity.
- 3.5.4. Conduct the same exercise with the existing integration and power trade vis-a-vis increased integration with unconstrained trade of power but considering nominal reserves for each country separately<sup>10</sup> and nominal reserves in South Asia combined on account of sharing across the SAC, and calculate the savings in reserves, including balancing reserves, and hence the savings in capital expenditure accruing as a result of increased integration and

<sup>9</sup> A very comprehensive, detailed and high-quality modelling exercise is expected to be carried out in this study, it is expected that consultant will use well recognized, industry best and state of the art modeling systems and tools for carrying out this exercise.

<sup>10</sup> According to international norms, a reserve of 15% available capacity is to be kept to take care of outages and unforeseen circumstances.



- unconstrained trade of power. This may be translated to reduction in cost of supply per unit in each country and South Asia as a whole.
- 3.5.5. Calculate the total reduction in average cost of supply as a result of 3.5.3 and 3.5.4.
  - 3.5.6. The study at 3.5.5 should be extended over a period of the next 15 years. A scenario of 25 years may also be considered. This part of the study should be done taking into account 24x7 supply to all consumers in all countries. Modelling should be done, considering different scenarios of capacity addition including capacity addition of renewables (whether set up within the country or bought from outside). The model should consider the respective country's targets, as well as enhanced renewable capacity targets. The balancing costs should be brought out clearly, in addition to reduction in capacity costs due to lower reserves and optimum utilization of resources. The study should calculate the year-wise average reduction of cost of supply per unit including balancing costs, and the year-wise total cost of reduction on a country-wise basis and for South Asia compared to the existing trade for the next 15 years. The same may be calculated for a scenario of 25 years hence. The study should propose the optimal capacity addition in each country for cheapest average cost of supply considering regional energy cooperation.
  - 3.5.7. Based on the analysis and its findings from 3.5.1. to 3.5.6, present the key findings of the study in the SAFIR Working Group meeting and incorporate the comments in the report. In addition to the SAFIR Working Group meeting, stakeholder consultation meetings with the concerned stakeholders in one or more South Asian countries in addition to India, will be required<sup>11</sup>. For all meetings/workshops outside India, SARI/EI, IRADe will bear the logistics cost i.e. international travel and stay charges of the consultant (one member). Monthly meetings are proposed to be held with the consultant at the SARI/EI Project Secretariat. However, any logistic cost for meetings at the SARI/EI Project Secretariat, as well as the meetings of the consultant within India with stakeholders, will be borne by the Consultant.
  - 3.5.8. Review and analyse the existing market mechanism related to grid balancing in each country and the region and its associated policy, regulatory, legal and technical frameworks. This analysis will take into account recent reforms/new initiatives being undertaken in power markets in India towards market-based ancillary services and bringing flexibility in power market. In addition, the consultant will carry out a comprehensive analysis and comparison of different models of ancillary service markets across the globe including but not limited to Europe, North America, South Africa Power Pool, Gulf Cooperation Council.
  - 3.5.9. Based on the findings of 3.5.1. to 3.5.8, and recognising the potential benefits regional grid balancing, suggest a draft broad regional framework and business model for regional ancillary services market, giving reasons for the type of framework suggested. This should cover all ancillary services, including load balancing, reactive power services and black start services, etc. Prepare a comprehensive report covering all analyses from 3.5.1. to 3.5.9.
  - 3.5.10. Based on the findings of 3.5.1. to 3.5.9, suggest a draft roadmap (regional and country wise) as well as an action plan for implementation of the regional framework for ancillary services market in the Region. This will also include a suggested minimum set of changes that may be required in each of the South Asian nation to implement road map and the action plans.
  - 3.5.11. Based on the analyses and its findings from 3.5.1. to 3.5.10, present the key findings of the study in the SAFIR Working Group meeting and note the comments obtained out of the meeting.

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<sup>11</sup> Depending on the travel situation, in person travel will be reviewed. If travel is not possible, the Bidder will have to present on a virtual platform.

3.5.12. Revise and finalise the Report covering all the aspects of 3.5.1. to 3.5.11, based on the comments of the SAFIR Working Group, stakeholders, USAID and SARI/EI, IRADe.

### 3.6. Deliverables

SN	Deliverable	Timeline
1.	Submission of inception report covering detailed methodology, approach, analytical framework, detailed description of the model, of integrated modelling framework, modelling strategy and associated steps in detail and overall steps for the entire assignment and acceptance of the same.	within 20 days from the date of signing of the contract
2.	Submission of detailed draft interim report covering all the analysis and modelling findings from 3.5.1. to 3.5.10. including a detailed presentation on the draft interim report and acceptance of the same.	within 110 days from the date of signing of the contract
3.	Prepare a detailed Draft Report covering all aspects based on the analyses conducted in 3.5.1. to 3.5.10 and incorporating comments of the SARI/EI team. Submission of the Draft Report to SARI/EI including a detailed presentation on the draft report and acceptance of the same and presentation before SAFIR Working Group members and other stakeholders of the same.	within 150 days from the date of signing of the contract
4.	Revise the Report as per the comments received from the SAFIR Working Group and South Asian stakeholders, submit the revised draft report including a detailed presentation on the revised draft report and acceptance of the same.	within 180 days from the date of signing of the contract
5.	Submission of the final report and including a detailed presentation on the final report after incorporating comments of SAFIR working group members, stakeholders, USAID and SARI/EI and acceptance of the same.	within 210 days from the date of signing of the contract

### 3.7. Timeline of the study

Seven months

## 4. Conditions of Bid

### 4.1. Bid Content

The bid document must contain the following:

1. A cover letter to the Bid for the assignment
2. The soft copy of the Technical Proposal should be named as **“Organisation Name\_Technical Proposal\_RFP03-21”** and the Financial Proposal should be named as **“Organisation Name – Financial Proposal\_RFP03-21”**
3. Both Technical and Financial proposal should be submitted through email to the Programme Administrator at [pdasgupta@irade.org](mailto:pdasgupta@irade.org).
4. The Financial Proposal submitted should be password protected and the password to the Financial Proposal **should not be shared** at the time of submission of proposals. At the time of financial bid opening the bidders will be sent a mail to submit the password for the Financial Proposal submitted on 15<sup>th</sup> January 2022.
5. It is mandatory that the bidder’s Bid numbering system corresponds with the numbering system used in the body of this RFP. All references to descriptive material and brochures should be included in the appropriate response paragraph, though material/documents themselves may be provided as annexes to the RFP.

#### 4.1.1. Cover Letter format

The Cover letter to the bid should be on the letterhead of the Organization and should include the following information:

1. Name of the Contact Person (**Person authorized to represent the Bidder**), Designation, telephone/Mobile Number, and email address
2. DUNS<sup>12</sup> number of the organization submitting the Proposal.
3. Declaration that the bidder accepts the terms described in the RFP Document and assumes responsibility for any pre-contract costs incurred during the bid and discussion phases.
4. The letter should be signed by a duly authorized representative of the company.
5. A format of the cover letter is placed in [Annex I](#).

#### 4.1.2. Technical Bid form

The bidder shall structure the technical part of its bids as follows:

##### 4.1.2.1. Management/Organization Experience

1. This section should provide bidder organizational details to include the year and state/country of incorporation and a brief description of the bidder’s present activities. It should focus on services related to the Bid.

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<sup>12</sup> Data Universal Numbering System (DUNS) number, which is a nine-digit number assigned by Dun and Bradstreet Information Services to an establishment, is the Contractor Identification Number for Federal contractors. Please refer to: <https://2012-2017.usaid.gov/sites/default/files/documents/1868/302sao.pdf>

2. The bidder should provide its relevant experience in similar projects in detailed manner. To this effect, the bidder should give details of various projects that are successfully completed/being executed by the organization. Please see [Annex II](#) for the format.
3. Detailed project data sheets are required to be provided of the projects mentioned in the relevant experience section as stated above. It should cover the objective of the assignment and the details of activities undertaken by the organization to achieve the objectives of the project in a comprehensive manner.
4. While providing the details of the relevant experience of the organization in the similar projects, the experience based on the organization's involvement, particularly in the following key areas may be highlighted. It is desired from the Organization to mention their experience as per the format placed in [Annex II A](#)
  1. Economic modelling studies for optimization of power system costs.
  2. Conducting technical and economic studies on the power sector – generation, transmission. Studies on different types of generating stations – thermal (with fuel as coal, gas, nuclear), hydro power projects, and their operation.
  3. Studies in tariff setting for generation and transmission assets.
  4. Studies in power system operation, including methods of handling diversities in demand and generation of diverse generation sources.
  5. Studies on renewable energy sources, and their integration into the grid.
  6. Studies on ancillary services.
  7. Studies/Knowledge of cross border electricity trade in South Asia, i.e. Bangladesh, Bhutan, India, Nepal.

#### **4.1.2.2. Resource Plan**

- 1 This should fully explain the bidder's resources necessary for the performance of this requirement, particularly the key personnel identified. The key team preferably should include a combination of four key persons comprising of a) Power System Operation Specialist b) Economist (Relevant Experience in Power Sector) and c) Finance Specialist (Relevant Experience in Power Tariffs) d) Power Sector Policy and Regulatory expert. The bidder should submit the curriculum vitae of the key personnel who will actually work on this assignment in the format in [Annex III](#). In case of personnel's involvement in the past in any of the key areas as listed under Section 4.1.2.1, Point No. 4 of this bid document, the same may also be substantiated suitably. Please try to limit the curriculum vitae to a maximum of four pages.
2. A staffing schedule should be part of the resource plan section where in the number of days' the personnel will be working on the project should be mentioned. A format of the staffing schedule is placed in [Annex IV](#)
3. If an external advisor/consultant is hired, scanned **Letter of the association** clearly substantiating that the advisor/consultant has agreed to devote the given number of

man-days in this particular assignment should be attached.

4. The Qualifications with **specialization** should be mentioned for all personnel working on the project.

#### **4.1.2.3. Proposed Methodology**

- a. This section should demonstrate the bidder's responsiveness to the scope of work by identifying the specific components proposed, addressing the specified requirements, point by point; providing a detailed description of the essential performance characteristics; and demonstrating how the proposed methodology meets or exceeds the deliverables mentioned in the ToR.
- b. A detailed list of the activities planned should form a part of the timeline of the proposal.

#### **4.1.2.4. Presentation**

In order to explain the overall philosophy to be adopted by the bidder during the process of development of the Strategy Paper and rendering of given deliverables, a presentation shall be made by the bidder to the SARI/EI team after the submission of the bid.

#### **4.1.3. Financial Bid**

The Financial Bid should be submitted as per the attached format ([Annex V](#)):

1. It should be a Lump sum fixed cost (quote) of the assignment.
2. Any amount of the nature of taxes, duty, levy, etc. should be mentioned separately and will be paid as per applicable rates as and when due.
3. Confirmation of the payment schedule included as mentioned in Section 4.4.

## **4.2. Bid Assessment**

### **4.2.1. Bid Assessment Process**

1. The bid must comply with the requirements of the Scope of Work (SoW) as mentioned in Section 3.
2. The bidder may be requested to attend a pre bid meeting at his own cost. Only such bidders who have expressed interest or are deemed as prospective bidders shall be invited to the meeting.
3. IRADe will evaluate the technical bids based on various parameters, the most important ones being the following:
  - A. Organizational experience of the firm as detailed under Para 4.1.2.1
  - B. Qualification and experience of key personnel proposed to work in this assignment and staffing schedule as detailed under Para 4.1.2.2 of this document;

- C. Methodology/approach and timeline as detailed under Para 4.1.2.3 of this document;
- D. Presentation made by the bidder as detailed under Para 4.1.2.4 of this document;
4. The technical proposal will be evaluated based on the below mentioned parameters:

a. The Organization's relevant experience for the assignment This experience of the Firm shall be marked based on the parameters provided and prioritized in Para 4.1.2.1 Point No.4.		20%
b. The qualifications and experience of the key staff (who would actually be working on the project) proposed		30%
a) Power System Operation Specialist	12%	
b) Economist (Relevant Experience in Power Sector) and	10%	
c) Finance Specialist (Relevant Experience in Power Tariffs)	8%	
c. Proposed Methodology		25%
i. Understanding of the Assignment	10%	
ii. Approach to be followed	7%	
iii. Methodology Proposed.	8%	
d. Presentation made before Technical Evaluation Committee		25%

5. The technical and financial scores shall be evaluated as per the following formula to ascertain the ranking of the firm:

$$\{\text{Technical Score} \times 0.80 + (\text{LP/FP} \times 100) \times 0.20\}$$

LP is the lowest quoted price from among the technically qualified bidders.

FP is the quoted price of the bidder whose bid is being evaluated

6. The firms who secure minimum **70%** marks in the technical assessment shall be considered to have qualified technically, and the financial bid of only such firms shall be opened.

#### 4.2.2. General Guidelines/Instructions

1. The technical part of the Bid should not contain any pricing information whatsoever on the services offered. **Financial bid is to be submitted in a separate password protected file.**
2. IRADe reserves the right to:
  - i. Accept or reject any bid, and to annul the bid process thereby rejecting all bid, at any time prior to the award of contract
  - ii. Cancel or vary the Request for Bid process.
  - iii. Reject any bid that does not adhere to the structure and content requirements as outlined in this Request for Bid.
  - iv. Accept bids for the whole or part of the requirement/assignment
  - v. Initiate negotiations with the bidders to ensure value for money. Request for any additional certifications or clarification on the information submitted in the bids

3. IRADe shall not be bound by any verbal advice given or information furnished but shall be bound only by written advice or information.
4. The conduct of this Request for Bid shall not be construed in any way as a legally binding agreement between IRADe and another Party or the acceptance of any liability by IRADe.
5. A bid will not be considered in a case where the bidder or a representative of the bidder gives or offers anything to an employee or agent of IRADe as an inducement or reward, which could in anyway tend to influence the actions of that employee or agent.

#### **4.2.3. Selection of the Final Bidder**

1. IRADe is not bound or required to select the lowest priced bid or any bid.
2. The selection of the bid will not be deemed to be final/binding unless and until such time as a formal contract is negotiated and executed by both IRADe and the successful bidder.
3. IRADe reserves the right to enter into negotiation with any other bidder if contract negotiations cannot be concluded with the preferred/shortlisted bidder.

#### **4.2.4. Lodgment of Bids**

1. It is the responsibility of the bidder to ensure that the bid is received at IRADe by the closing date and time prescribed in this Request for Bid. A bid lodged after the closing date and time is a late bid and may be excluded from consideration at IRADe's sole discretion.
2. IRADe will not consider or entertain any queries about a decision to assess or reject a late Bid.
3. Bids are to be in English and all financial bids and costs are to be in Indian Rupees.

#### **4.2.5. Bidder Costs**

Bidders are responsible at their own cost for:

1. Making all arrangements and obtaining and considering all information relating to the Terms of Reference.
2. The preparation, delivery and lodgment of their bids
3. Costs associated with any issues that may arise, including disputes, related to the bid process
4. Cost associated with attending a pre bid meeting in case such a meeting is held.

#### **4.2.6. Confidentiality**

Bidders must keep any discussions or contact with IRADe in connection with the Invitation to bid and any Contract negotiations, strictly confidential and shall not disclose such information to any third party.

#### **4.2.7. Request for Information**

Any prospective bidder may within a reasonable time, before the closing date request for clarification on any point of clarification in this Request for Bid. The information requested shall be given in writing by IRADe as soon as practicable, and where in the opinion of IRADe the information could have an effect on other bidders, that information shall be given in writing to all the other bidders. **All pre-bid queries should be submitted within 5<sup>th</sup> January 2022.** No queries post this shall be answered to.

#### 4.3. Bid Delivery Instructions

<b>Closing Time:</b>	<b>1800 Hrs, 18<sup>th</sup> January 2022</b>
<b>Contact Person:</b>	Phalguni Dasgupta
<b>Bid Validity Period:</b>	90 days
<b>Email ID for submission of bids:</b>	<a href="mailto:pdasgupta@irade.org">pdasgupta@irade.org</a>
<b>Pre-Bid queries to be submitted by</b>	<b>5<sup>th</sup> January 2022</b>

#### 4.4. Payment Schedule

IRADe shall effect the payment to the bidder on successful completion and acceptance of deliverables to IRADe as per the following payment schedule:

SN	Deliverable	Timeline
1.	Submission of inception report covering detailed methodology, approach, analytical framework, detailed description of the model, of integrated modelling framework, modelling strategy and associated steps in detail and overall steps for the entire assignment and acceptance of the same.	within 20 days from the date of signing of the contract
2.	Submission of detailed draft interim report covering all the analysis and modelling findings from 3.5.1. to 3.5.10. including a detailed presentation on the draft interim report and acceptance of the same.	within 110 days from the date of signing of the contract
3.	Prepare a detailed Draft Report covering all aspects based on the analyses conducted in 3.5.1. to 3.5.10 and incorporating comments of the SARI/EI team. Submission of the Draft Report to SARI/EI including a detailed presentation on the draft report and acceptance of the same and presentation before SAFIR Working Group members and other stakeholders of the same.	within 150 days from the date of signing of the contract
4.	Revise the Report as per the comments received from the SAFIR Working Group and South Asian stakeholders, submit the revised draft report including a detailed presentation on the revised draft report and acceptance of the same.	within 180 days from the date of signing of the contract
5.	Submission of the final report and including a detailed presentation on the final report after incorporating comments of SAFIR working group members, stakeholders, USAID and SARI/EI and acceptance of the same.	within 210 days from the date of signing of the contract



## 5. Annexures

### 5.1. Annex I: Bid Submission Declaration

Dear Sir/Madam,

Having examined the Solicitation Documents, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to provide Professional Consulting Services for **“RFP No.: IRADe/SARI/2021-22/03 - Request for proposal for Assessing the Potential Benefits of Cross Border Electricity Trade for Affordable Supply of Electricity, Facilitating Grid Balancing of Renewable Energy Integration, and Suggesting a Framework for Ancillary Service Market in the South Asia Region”** for the sum as may be ascertained in accordance with the financial bid attached here with and made part of this Bid.

We undertake, if our Bid is accepted, to commence and complete delivery of all services specified in the contract within the time frame stipulated.

We agree to abide by this Bid for a period of 90 days from the date fixed for opening of Bids in the Invitation for Bid, and it shall remain binding upon us and may be accepted any time before the expiration of that period.

We understand that you are not bound to accept any Bid you may receive.

Dated this day /month of year

Signature

(In the capacity of)

Duly authorized to sign Bid for and on behalf of the Organisation

Name of the Organization:	
Address of the Organization:	
Date of Incorporation of the Organization:	
DUNS Number	
Contact Person details:	
Name:	
Designation:	
Mobile No.:	
Email ID:	

## 5.2. Annex II: Technical Format for Organizational Experience

S.N	Name of the assignment	Client name	Date of start and end of assignment	Value(INR)	Status Ongoing/ Completed
1					
2					
3					
4					
5					
6					
7					
8					
9					
10.					

**Detailed Description of the Projects covering its various aspects is required to be attached separately as project data sheets.**

## 5.2.A Annex II A: Technical Format to substantiate organization's involvement in the key areas

(as listed under Para 4.1.2.1.4 (Page 10))

Based on the Organization's experience as stated under Para 4.1.2.1, please substantiate the organization's involvement in the past in each of the key areas as listed below. Please also elaborate that with specific reference to the given scope of work, under the present conditions how such an experience can be of relevance. The below mentioned parameters have been arranged on the basis of priority for the purpose of evaluation for the Assignment.

**Key Parameter 1: Economic Modelling Studies for optimization of power system costs.**

**Key Parameter 2: Studies on the power sector – generation, transmission. Studies on different types of generating stations – thermal (with fuel as coal, gas, nuclear), hydro power projects, and their operation.**

**Key Parameter 3: Studies in tariff setting for generation and transmission assets.**

**Key Parameter 4: Studies in power system operation, including methods of handling diversities in demand and generation of diverse generation sources.**

**Key Parameter 5: Studies on renewable energy sources, and their integration into the grid.**

**Key Parameter 6: Studies on ancillary services**

**Key Parameter 7: Studies/Knowledge of cross border electricity trade in South Asia, i.e. Bangladesh, Bhutan, India, Nepal.**

### 5.3. Annex III: Technical Format for Curriculum Vitae

Please provide resume of individuals/consultant details as per the following format

- 1) Name of the Personnel
- 2) Nationality
- 3) Professional Area of expertise:
- 4) Academic Qualification (summarize college, university, specialized education etc. with **degree and Specialization and year**)
- 5) Key qualification (training or other qualifications obtained pertinent to this project)
- 6) Details of experience in similar assignments (This should include the Project Name, Project Duration, Project Description, Description of actual services being provided by the personnel)
- 7) In case of personnel's involvement in the past in any of the key areas as listed under Para 4.1.2.1, Point No.4 of this bid document, the same may please be substantiated.
- 8) Position held in the firm
- 9) Number of Years with the firm
- 10) Proposed position in team for this project
- 11) Experience Record (list positions with organizations and nature of duty).
- 12) Language proficiency
- 13) If an external advisor/consultant is hired, scanned Letter of the association clearly substantiating that the advisor/consultant has agreed to devote the given number of man-days in this particular assignment should be attached.

#### 5.4. Annex IV: Staffing Schedule

SN	Name of the Resource Person	Designation	Activities to be undertaken	No. of Man-days							Total man-days in the assignment
				M1	M2	M3	M4	M5	M6	M7	

## 5.5. Annex V: Financial Bid Format

Dear Sir/Madam,

We hereby declare that the following costs outlined in the Terms of Reference for “**RFP No.: IRADe/SARI/2021-22/03 - Request for proposal for Assessing the Potential Benefits of Cross Border Electricity Trade for Affordable Supply of Electricity, Facilitating Grid Balancing of Renewable Energy Integration, and Suggesting a Framework for Ancillary Service Market in the South Asia Region**”. We further declare that these are FIRM (fixed) prices and shall remain unchanged for the entire period of consultancy/assignment.

Item	Lump sum Fixed cost(INR)	Taxes/duties if any	Total Amount(INR)
Scope of Work			

We also confirm that the payment schedule as provided in the RFP is acceptable to us.

Signature:

Name:

Designation

Seal:

## 5.6. Annex VI: Draft Contract

(Appendices mentioned below are indicative. It does not form a part of this RFP Document)

This consultancy contract is made on this ---- day of ....., 2022 by and between:

The **Integrated Research and Action for Development**, a fully autonomous advanced research institute, a non-governmental, non-profit organisation having principal place of operation at C-80, Shivalik, Malviya Nagar, New Delhi – 110017, India (hereinafter referred to as the “**IRADE**”);

And

Name of the organization) .....having its principal place of operation at ..... (herein after referred to as “Consultant”). Here in after referred to as the 'parties'.

Whereas:

1. The consultant, \_\_\_\_\_ has submitted its proposal dated \_\_\_\_\_ against **RFP No.: IRADe/SARI/2021-22/03 - Request for proposal for Assessing the Potential Benefits of Cross Border Electricity Trade for Affordable Supply of Electricity, Facilitating Grid Balancing of Renewable Energy Integration, and Suggesting a Framework for Ancillary Service Market in the South Asia Region.** dated \_\_\_\_\_. The proposal shall form part of the contract.
2. The Consultant having the requisite expertise, in relation to the tasks referred in Terms of Reference (TOR) as provided in **Appendix 1**, agrees to provide professional services and would work in accordance with IRADe's quality assurance procedures.
3. The contract will be effective from the date of signing of the contract and shall be executed within the timeframe as mentioned in the deliverables of **Appendix- 1**, unless terminated earlier in accordance with the provisions of the contract
4. This contract will be governed by IRADe General Terms & Condition for Consultancy Contract as laid down in **Appendix 2** and by Standard Provisions of USAID for Non US Non-Governmental organizations.

### 5. Consultancy cost

The all-inclusive lump sum consultancy cost for the assignment as per the scope of work shall be INR \_\_\_\_\_ (Amount in words: \_\_\_\_\_) as detailed in the table below:

Particulars	Amount (in Rs.)
Consultancy Cost for the scope of work mentioned in the <b>RFP No.: IRADe/SARI/2021-22/03 - Request for proposal for Assessing the Potential Benefits of Cross Border Electricity Trade for Affordable</b>	

<b>Supply of Electricity, Facilitating Grid Balancing of Renewable Energy Integration, and Suggesting a Framework for Ancillary Service Market in the South Asia Region.</b>	
Taxes and duties	
<b>Total Cost</b>	

#### 6. Terms of payments

The payment will be made against production of invoice in favour of:

**USAID New Delhi-UIN No. 0717USA00138UNS**

**USAID-SARI/EI-AID-386-A-12-00006**

**C/o Integrated Research and Action for Development (IRADe)**

**C-80/B44, Shivalik, Malviya Nagar, New Delhi-110017, INDIA**

Subject to satisfactorily completion of the deliverables as indicated in the following payment schedule and will be subject deduction of TDS at applicable rate.

#### 7. Payment Schedule:

SN	Deliverable	Timeline
1.	Submission of inception report covering detailed methodology, approach, analytical framework, detailed description of the model, of integrated modelling framework, modelling strategy and associated steps in detail and overall steps for the entire assignment and acceptance of the same.	within 20 days from the date of signing of the contract
2.	Submission of detailed draft interim report covering all the analysis and modelling findings from 3.5.1. to 3.5.10. including a detailed presentation on the draft interim report and acceptance of the same.	within 110 days from the date of signing of the contract
3.	Prepare a detailed Draft Report covering all aspects based on the analyses conducted in 3.5.1. to 3.5.10 and incorporating comments of the SARI/EI team. Submission of the Draft Report to SARI/EI including a detailed presentation on the draft report and acceptance of the same and presentation before SAFIR Working Group members and other stakeholders of the same.	within 150 days from the date of signing of the contract
4.	Revise the Report as per the comments received from the SAFIR Working Group and South Asian stakeholders, submit the revised draft report including a detailed presentation on the revised draft report and acceptance of the same.	within 180 days from the date of signing of the contract
5.	Submission of the final report and including a detailed presentation on the final report after incorporating comments of SAFIR working group members, stakeholders, USAID and SARI/EI and acceptance of the same.	within 210 days from the date of signing of the contract

8. **Duration of Contract:** The estimated time for completion of the activities is **8 months** from the date of signing of this contract and shall be the essence of the contract.

9. At each stage of the work as desired by IRADe, the consultant would be required for interaction and to attend review meetings/make presentations in IRADe/USAID or any other Task Force/Project Steering Committee meetings at a time and place intimated by IRADe.

10. This contract will be governed by IRADe General Terms & Condition for Consultancy Contract as laid down in **Appendix 1** and by Standard Provisions of



- USAID for Non-US Non-Governmental organizations.
11. The bid submitted by the consultant and all the communication with respect to the RFP No.: IRADe/SARI/2021-22/02 between the two parties will be part of this contract.
  12. For all correspondence and materials developed under this RFP No. IRADe/SARI/2021-22/03, the Consulting Firm/Organization agrees to prepare them in compliance with the South Asia Regional Initiative for Energy Integration (SARI/EI) - Branding Strategy and Marking Plan. (to be shared at the time of contract)
  13. The Consultant shall respect Intellectual Property rights and shall ensure that its employees and its Subcontractors, and its party respect Intellectual Property rights
  14. Warranties: The Consultant confirms and warrants to the best of its knowledge that:
    - i. It has full legal and financial capacity to enter into contract and be part of the consultancy services
    - ii. The outputs will not violate or infringe any existing intellectual property rights or any other third party rights, nor will the publication of the assignment.
    - iii. It will be either the sole owner of the outputs or has obtained or will obtain the necessary consents to allow IRADe and other publishers to disseminate the outputs as outlined in this contract;
    - iv. There are no claims or legal proceedings pending or threatened, the outcome of which could adversely affect the rights of IRADe on the research work or output of this assignment;
    - v. There are no agreements of any nature in favour of anyone that could interfere with the rights generated out of this assignment and
    - vi. The Project outputs contain nothing that is unlawful, libelous, and defamatory or which would, if published, constitute a breach of contract, privacy or of confidence.
  15. The Consultants will recognize the support of IRADe by including in all publications the following acknowledgement: *This work was carried out on behalf of IRADe for its SARI/EI Project, funded by USAID India, New Delhi*
  16. Survival: All representations, warranties, disclaimers, indemnifications and reporting obligations contained in this Agreement shall survive the Contract Completion Date.
  17. All communication regarding this contract should be addressed to:

- a. **Technical Queries:** Ms. Maitreyi Karthik, Research Analyst, SARI/EI.  
Email - [mkarthik@irade.org](mailto:mkarthik@irade.org)  
With a copy to Mr. Pankaj Batra, Project Director, SARI/EI. Email-  
[pbatra@irade.org](mailto:pbatra@irade.org)
- b. **Non-Technical Queries (Contract and invoice related):** Ms. Phalguni Dasgupta,  
Programme Administrator – SARI-EI.  
Email: [pdasgupta@irade.org](mailto:pdasgupta@irade.org)  
With a copy to Mr.Pankaj Batra, Project Director SARI/EI.  
Email- [pbatra@irade.org](mailto:pbatra@irade.org)
18. In witness thereof, this contract is signed on \_\_\_\_\_

For and on behalf of **Integrated  
Research and Action for  
Development (IRADe)**

For and on behalf of  
\_\_\_\_\_

Signature:

Signature:

Designation:

Designation:

Name:

Name:

Date:

Date:

## 5.7. Annex VII: General Terms and Conditions of the Consultancy Agreement

This contract consists of the following **THIRTEEN ARTICLES**:

ARTICLE I:	Definitions and Interpretations
ARTICLE II:	General Conditions of Agreement
ARTICLE III:	Payment
ARTICLE IV:	Duration of Contract
ARTICLE V:	Taxes/Duties/Service Tax
ARTICLE VI:	Penalty for Late Submission of Deliverables
ARTICLE VII:	Termination
ARTICLE VIII:	Subcontracting
ARTICLE IX:	Indemnification
ARTICLE X:	Law and Jurisdiction
ARTICLE XI:	Disputes
ARTICLE XII:	Funders Terms and Conditions
ARTICLE XIII:	Miscellaneous

### ARTICLE I: Definitions and Interpretations

#### Definitions

The following words and expressions shall have the meaning assigned to them except where the context otherwise requires:

AGREEMENT means the Agreement between IRADe and \_\_\_\_\_; CONSULTANT means the party named in the Agreement.

SERVICES mean the professional services to be performed by the consultant in accordance with the Terms of Reference of the assignment.

*Force Majeure* shall mean war, civil commotion, fire, flood, riots, all natural calamities, action by any government or any event beyond the reasonable control of the party affected.

### ARTICLE II: General Conditions of Agreement

1. Both parties hereby declare that they are fully empowered, authorized and competent to execute this agreement.
2. The consultant shall ensure that the services rendered are strictly in accordance with the standard prescribed in terms of the agreement entered in to between IRADe and the consultant.
3. The consultant shall regularly apprise IRADe with respect to the progress of the services rendered and shall carry out such modifications as may be instructed by IRADe from time to time.
4. The consultant shall not be entitled to substitute personnel unless IRADe gives written consent to such substitution. IRADe shall not be liable to meet any costs arising from the replacement of such personnel.
5. Not with standing anything contained in this agreement, the relationship of IRADe and

- the consultant shall not be construed, as that of employer and employee and staff of the consultant shall at no time be considered as employee/s of IRADe.
6. The consultant shall be responsible for all acts of omission and commission of persons engaged by the Consultant whether or not in the course of performing the services and for the health safety and security of such persons and their property.
  7. The terms/conditions/scope of this contract shall not be varied/altered/modified until and unless mutually agreed by and between IRADe and the consultant and such modification shall be reduced to writing in the form of an amended contract.
  8. IRADe shall retain copyright of all documents prepared by the Consultant in relation to the services rendered.
  9. The Consultant shall not engage in any activity which might conflict with the interest of IRADe under this agreement or the agreement of IRADe with Client.
  10. The consultant shall not, during or after the termination of the contract, disclose to any third party any information arising from the contract, other than in the proper performance of their duties, except with the prior written permission of IRADe.
  11. The consultant shall exercise reasonable skill, care and diligence in the performance of his obligations under the agreement and shall act in accordance with the services as provided in Terms of Reference
  12. The consultant shall not without the written consent of IRADe, in anyway assign or transfer his/her obligations under this agreement or any part thereof to anyone, failing which, the contract may be rescinded by IRADe.
  13. The consultant shall keep IRADe indemnified in respect of any loss or damage or claim howsoever arising out of negligence on the part of the consultant in relation to the performance or otherwise of the services to be provided under this contract.
  14. Each party agrees that the existence of and the terms and conditions of this Agreement shall be treated as confidential, however, each party may disclose the terms and conditions of this Agreement: (i) as required by any court or other governmental body; (ii) body or as otherwise required by law.

#### **ARTICLE III: Payment**

1. IRADe shall pay to the consultant a fixed price for the services to be provided as per this agreement.
2. Payment will be authorized after completion, delivery, and acceptance by IRADe Technical Representative of all services, and scheduled deliverables stipulated herein. Payment will be made as soon thereafter as the regular course of business will allow based on the submission of the correct invoice. The invoice should be raised to the Programme Administrator (email: [pdasgupta@irade.org](mailto:pdasgupta@irade.org)) along with the approval and acceptance by the SARI-EI Technical Representative.
3. The Consultant shall be paid according to the payment schedule as per this agreement.

#### **ARTICLE IV: Duration of the Contract**

1. The agreement is deemed to commence on the date specified earlier. Any delay in the

completion of the obligation on the part of the consultant shall entitle IRADe to terminate the agreement and deduct the amount of the consultant proportionate to the work remaining incomplete. The decision of IRADe in quantifying the amount of such deduction shall be final and binding.

2. Notwithstanding the above, the period of due performance of the obligation of the consultant may be extended by IRADe without deduction of any amount for the Consultant, if the delay is caused due to the lack of finances, delay in instructions, act of God or *Force Majeure*.

#### **ARTICLE V: Taxes/Duties/Service Tax**

Consultant is responsible to pay all taxes due to the local tax authority as a result of Services provided to IRADe.

#### **ARTICLE VI: Penalty for Late Submission of Deliverables**

Deliverables must be submitted to IRADe his/her designee on the date agreed upon. Payments are subject to satisfactory submission of all deliverables. For non-excusable delayed deliverables without prior written agreement of IRADe representative, payment of any outstanding invoices will be withheld until satisfactory submission. Should the Consultant fail to submit deliverables as required under this agreement for more than 5 (five) business days past the deadline, IRADe shall withhold all payments associated with the outstanding deliverables and may exercise the termination clause as outlined in **Article VII - Termination of this contract**.

#### **ARTICLE VII: Termination**

IRADe shall have the option to terminate the contract in the event of termination of the **(Cooperative Agreement by the USAID)** for whatever reasons. In the event of such termination, the Consultant shall be entitled to receive all supporting funds as described herein for those expenditures justifiably incurred to the time of termination of this purchase order, including commitments which cannot be reversed or mitigated, to the extent that said funds are available to IRADe under its **Cooperative Agreement**.

IRADe shall have the option to terminate this agreement in the event Consultant materially breaches any of the terms and conditions set forth herein. Consultant shall receive advance written notification of termination, a description of the nature of the breach and, if applicable, the opportunity to remedy or cure any such breach of terms as described below in **Article XI - DISPUTES**. In the event of termination, such right to terminate shall be IRADe sole remedy at law and equity. IRADe may require reimbursement of any expenses improperly incurred prior to termination in a sum not to exceed the total contracted amount.

The Consultant's entitlement to notice as set out above is without prejudice to IRADe's right to dismiss the Consultant summarily in the event of gross or serious misconduct by the Consultant. Examples of such misconduct include (but are not limited to) the commission by the Consultant of any fraudulent act or act of dishonesty, material breach

by the Consultant of any of the terms of the purchase order, or conduct ending to bring the IRADe into disrepute.

Either party shall have the option to terminate the contract if either party fails to perform its obligations under this, and fails to cure any such material breach in performance within thirty (30) days after written notification by the other party thereof.

In the event of termination of this contract the consultant shall, upon receipt of notification of termination, immediately stop work, minimize additional costs and shall not incur any further cost during the termination of performance here under.

#### **ARTICLE VIII: Subcontracting**

Consultant should not sub contract any part of its activities described herein without the prior written consent of IRADe.

#### **ARTICLE IX: Indemnification**

Each party shall mutually indemnify and hold one another harmless against losses, claims, liabilities, or damages (including costs, reasonable attorney's fees, and amounts actually paid in reasonable settlement thereof) that are sustained as a result of the negligent acts, errors, or omissions of the other party, its employees and agents, or for the improper performance or non-performance relating to activities hereunder.

Indemnification under this paragraph shall be limited to the maximum amount payable under this agreement and any other cost incurred by IRADe on behalf of the consultant under the project for travel, hotel and logistics support except for losses, claims, liabilities or damages sustained in connection with an actual or alleged violation of law applicable to this agreement.

Consultant's liability in aggregate under this Agreement and for all claims connected to it shall be limited the amount of fee paid to consultant for Services. Nothing in this Agreement Limits Consultant's liability for direct losses or damages arising from consultant's fraud, gross negligence, deliberate breach of duty, breach/violation of applicable law or any other liability which cannot be limited by law.

#### **ARTICLE X: Law and Jurisdiction**

1. This Agreement shall be governed by and construed in accordance with Indian Law.
2. This Agreement shall be subject to the jurisdiction of courts at New Delhi only.

#### **ARTICLE XI: Dispute Resolution**

1. Either Party is entitled to raise any Dispute including the existence or validity or termination of the Agreement by giving a written notice to the other Party, which shall contain:
  - i. a description of the Dispute;
  - ii. the grounds for such Dispute; **and**
  - iii. all written material in support of its claim.

2. The other Party shall, within 15 days of the issuance of the Dispute notice issued under, furnish:
  - i. counter-claim and defenses, if any, regarding the Dispute; and
  - ii. all written material in support of its defenses and counter-claim.

3. Within one month of issuance of notice by any Party pursuant to Article XI.1, the Parties to the Dispute shall meet to settle such Dispute amicably. In the event the Parties fail to resolve the Dispute amicably within the said one-month period, the Dispute shall be sent for arbitration.

#### **4. Arbitration**

The Dispute shall be resolved by arbitration under the Indian Arbitration and Conciliation Act, 1996 and the Rules made thereunder, in accordance with the process specified below:

- (i) In the event of a Dispute remaining unresolved as referred to in Article XI.1, any party to such Dispute may initiate arbitration by notifying the other Party.
- (ii) The Arbitration tribunal shall consist of 3 (three) arbitrators of whom each Party shall select one, and the third arbitrator shall be appointed by the two arbitrators so selected. In the event of any disagreement between the two arbitrators, the third arbitrator shall be appointed in accordance with the Indian Arbitration and Conciliation Act, 1996 and the Rules made thereunder.
- (iii) The place of arbitration shall be New Delhi, India. The language of the arbitration shall be English.
- (iv) The arbitration tribunal's award shall be substantiated in writing. The arbitration tribunal shall also decide on the costs of the arbitration proceedings and the allocation thereof.
- (v) The award shall be enforceable in any court having jurisdiction, subject to the applicable Laws.

#### **5. Parties to Perform Obligations**

Notwithstanding the existence of any Dispute referred to the arbitral tribunal as provided in Article XI.4, and save as the arbitral tribunal may otherwise direct by a final or interim order, the Parties hereto shall continue to perform their respective obligations (which are not in Dispute) under this Agreement.

#### **ARTICLE XII: Funders Terms and Conditions**

1. **Books, Records, and Accounts:** The consultant shall maintain books, records and accounts sufficient to demonstrate the incurrence, expenditure, and allowability of all costs charged to the agreement. USAID, or any of their duly authorized representatives shall have access to such books, records and accounts as are directly

pertinent to the activities funded by the agreement. Consultant agrees that IRADe or USAID, shall have access to any books, documents, papers, and records of the Consultant that are directly pertinent to the services provided hereunder, for the purpose of making audits, examinations, excerpts, and transcriptions. These records shall be maintained for 3(three) years unless written approval is requested by the consultant and approval by IRADe is given in writing.

2. **Terrorist Financing:** U. S. Executive Orders and U.S. law prohibit transactions with, and the provision of resources and support to, individuals and organizations associated with terrorism. It is the legal responsibility of the consultant to ensure compliance with the Executive Orders and laws.
3. **USAID Standard Provisions:** As the Program of SARI/EI is being funded by USAID, the Standard Provisions of USAID (<https://www.usaid.gov/sites/default/files/documents/1868/305maa.pdf>) will be applicable and binding for this contract.

#### **ARTICLE XIII: Miscellaneous**

1. This agreement shall not be modified or varied nor its provisions waived otherwise than in writing duly signed by both the parties hereto.
2. This agreement represents an integrated agreement between the parties hereto and supersedes all prior negotiations representations or agreements either oral or written.
3. The privacy of the contracts in terms of this agreement shall be between IRADe and the consultant. The researchers/specialists/workers or any agency employed by the consultant shall have no privacy of contract whatsoever with the IRADe.
4. The consultant will adhere to IRADe quality process and standards, and management systems while working on this contract, as guided by the Project Director, SARI/EI or person designated by him.

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