

EXPRESSION OF INTEREST (EOI)

Project Name: Construction of 132kv single circuit transmission link from Kamakhya Grid sub-station to Railway Traction sub-station of Kamakhya along with GIS bay at Kamakhya with associated equipments

Office Address: The Managing Director,
Assam Electricity Grid Corporation Ltd(AEGCL)
Bijulee Bhawan, Paltanbazar,
Guwahati, PIN : 781001, Assam, India

FUND: “Deposit Works-N.F.Railway”



AEGCL/MD/RVNL/Kamakhya/EOI

Abbreviations

EOI	-	Expression of Interest
ROW	-	Right of Way
GIS	-	Gas Insulated Sub-station
CV	-	Curriculum Vitae
GOI	-	Government of India
GOA	-	Government of Assam
PERT	-	Programme Evaluation and Review Technique
CPM	-	Critical Path Method
CA	-	Chartered Accountant
BoM	-	Bill of Materials
TOR	-	Terms of Reference
JV	-	Joint Venture

Instructions for Submission of Expression of Interest

Instructions for Submission of Expression of Interest

1. Expression of Interest may be submitted by a sole firm or a joint venture or a Consortium of firms with relevant experience in areas as specified.
2. Interested firms or consortiums must provide information indicating that they are qualified to perform the services (descriptions, organization and employee and of the firm or company, description of assignments of similar nature completed in the last 5 years and their location, experience in similar conditions, general qualifications and the key personnel to be involved in the proposed assignment).
3. In case, the applicant is an individual firm, details of similar assignment experience, their location in the previous 5 (five) years and audited balance sheet and bio data shall be considered for evaluation.
4. In case of Joint venture firm/consortium, the said venture must be registered. Notarized joint venture/consortium shall not be accepted. In case of Joint venture firm/consortium, one of the firms shall be designated as the 'Lead Partner' who will be the authorized firm to sign all relevant document on behalf of the joint venture/consortium. Such a clause must be clearly mentioned in the Registered Document.
5. The assignment has been scheduled for a period of 24 Months. Expected date of commencement of the assignment is 15.07.2019
6. Expression of Interest should contain following information:
 - (i) A covering letter addressed to the representative of the client on the official letter head of company duly signed by authorized signatory of the firm/consortium.
 - (ii) Applicants shall provide the following information in the respective formats given in the EOI document:
 - EOI Form: Letter of Application (Form 1)
 - EOI Form: Applicant's Information (Form 2)
 - EOI Form: Work Experience Details (Form 3(A) & 3(B))
 - EOI Form: Capacity Details (Form 4)
 - EOI Form: Key Experts List (form 5).
7. Applicants may submit additional information with their application but short listing will be based on the evaluation of information requested and included in the formats provided in the EOI document. The Expression of Interest (EOI) document must be duly completed and submitted in sealed envelope and should be clearly marked as "EOI Application for Construction of 132kv single circuit transmission link from Kamakhya Grid sub-station to Railway Traction sub-station of Kamakhya along with GIS bay at Kamakhya with associated equipments".

8. All supporting document must be submitted along with the application. AEGCL shall reserve the right to ask for additional document from the participating firms before or during the course of evaluation to verify the credential claimed by a firm.
9. The completed EOI document must be submitted on or before the date and address mentioned at SI No. 1 in the “Request for Expression of Interest”. In case the submission falls on public holiday the submission can be made on the next working day. Any EOI Document received after the closing time for submission of proposals shall not be considered for evaluation.
10. **The bidders are requested to attend the pre bid meeting on the date as specified for any clarification needed from AEGCL’s end.**
11. **The tentative route plan as per AEGCI’s preliminary survey may also be obtained during the pre bid meeting.**

Objective of Services or Brief ToR (Terms of Reference)

Terms of Reference For

Construction of 132kv single circuit transmission link from Kamakhya Grid sub-station to Railway Traction sub-station of Kamakhya along with GIS bay at Kamakhya with associated equipments

1. Background:

- 1.0 The electrified traction of Indian Railways in North Eastern Region of India is an ambitious project of Government of India. Out of the five no. of electric traction sub-stations proposed initially by the Railways, Kamakhya traction sub-station is one of the important sub-stations. The proposed traction sub-station of Indian Railways at Kamakhya is proposed to be fed from 132kv Kamakhya GIS of AEGCL.
- 1.1 The well-known Kamakhya temple situated on the Nilachal Hills is near the 132kv Kamakhya GIS of AEGCL. The geographical location (latitude & longitude) of the area is 26.16°N, 91.70°E. The proposed transmission corridor is a part of the Guwahati city area, and home of natural flora and fauna that includes wild cats and leopards.
- 1.2 The execution of the project is under the fund provided by Rail Vikas Nigam Limited.
- 1.3 The aerial distance between the proposed traction sub-station and the GIS of AEGCL is approximately 2.5 km. However, due to hilly terrain with jungle covered area, the route length of the transmission link may increase substantially. The preliminary survey for the transmission corridor was conducted earlier by M/s Northline, West Bengal. The route suggested by the surveyor was a combination of underground cable (around 500 meter from GIS to View point location) and lattice towers from the view point to the traction sub-station. However, on close inspection of the site it was assumed that there might be difficulties in laying UG cable along the slope of the hills, and hence another survey was conducted through M/s Hitech Design and Engineering, Guwahati, to explore other option(s) for the proposed route of the cable. This survey suggested three lattice towers (including the dead end tower and the one at the View Point).
- 1.4 Part of the route of the transmission line (around 700 meter from the proposed traction sub-station) falls within the designated area of Indian Railways (Pandu area). Subsequently, the concerned authority of Indian Railways raised concern as sizable area of their land would be required for construction of lattice towers. They have therefore suggested to explore the possibility for lesser utilization of land through erection of monopoles or other viable options.
- 1.5 Under the above circumstances, it has now become imperative to reassess the transmission link options so as to facilitate early feeding of requisite power to the

Railway traction sub-station from AEGCL's GIS at Kamakhya

- 1.6 This project includes the study and detailed design of the transmission link, procurement of materials, GIS module installation at Kamakhya sub-station, construction of link complete in all respects.
- 1.7 The materials to be procured for the project are to be manufactured in India. Exception maybe allowed only in case of minor items which will however be completely at the discretion of AEGCL
- 1.8 The design of the link may include any or all of the following viable options :
 - (a) Erection of Lattice towers
 - (b) Erection of Monopoles
 - (c) Laying of UG cable through covered trenches
 - (d) Laying of UG cable through trenchless digging
 - (e) Laying of UG cable on Tray
 - (f) All Gantry structures needed for termination of cables
 - (g) All associated protective and hardware equipment for GIS
- 1.9 AEGCL intends to engage experienced and reputed firm/Joint venture or consortium of firms, hereinafter called the firm, having a competent team of specialist for carrying out the detail engineering of the project and construction of the transmission link.

2. SCOPE OF WORK:

- 2.0 The principal activities of the project executing firm shall include but not limited to the following:
- 2.1 Detailed Survey of the corridor for establishment of the transmission link. The survey shall include fixing of route alignment including desk study, walk over survey and field reconnaissance survey using the latest available tools of state of the art technology.
- 2.2 Detailed survey of the transmission line routes including plan and Profiling, tower schedule, tower spotting and optimization of tower locations, verification and demarcation of the tower spots at the site by check survey for actual construction purpose
- 2.3 Conducting topographical survey of the land for the transmission corridor including Documents required for Forest permission (GPS mapping of the route along with Topo sheet).
- 2.4 Identification of land plot & Tree counting for assessment of estimate for land compensation towards obtaining the right of way for the transmission link. Complete RoW details shall form a part of the essence of the work.
- 2.5 Electrical design of transmission line / cable and GIS bay including selection of conductor, shield wires, insulators, cable termination kits, jointing kits and other protective & hardware accessories including preparation of specifications.
- 2.6 The Design Standard of all materials shall conform to the internationally accepted norms (IEC, IEEE etc.). All tests for determining the efficacy of the materials shall be required to be performed at NABL Accredited Laboratories.
- 2.7 Study of soil mechanics of the tower locations and cable laying area :
The firm shall carry out geo-technical investigations as well as soil resistance measurement for the transmission towers and substations. This will require field visits along the transmission line route and to traction substation location to ensure that an adequate level of technical information is available to establish the viability of proposed tower/substation locations, limiting the potential need for future changes to be proposed by Design-Build contractors in response to unknown soil/foundation conditions.
- 2.8 Conduct Safeguard studies including Environmental Impact Studies for collateral damage to the flora and fauna of the area.
- 2.8.1 Investigate all the routes and fix the optimal route alignment showing the angle points in case of towers, and cable termination and jointing points. The route shall be so selected as to avoid or mitigate impacts to protected areas, forest areas, wildlife, biological resources, settlements, cultural heritage etc. The selection of route should consider seismic zone of the state, wind

zone of the area, marshy and low lying areas, power/communication line crossings. Route optimization shall be carried out after careful and detail comparison of the alternative routes in regards of environmental impact, number of angle towers, proximity of access roads, magnitude of forest clearance, potential risk of local obstructions, construction difficulties, crossings (LT/HT, communication, road etc.) and other relevant aspects including operation & maintenance.

2.8.2 Based on least collateral harm to the environment, least use of private land and houses, safety of the transmission structures and technical suitability of the option(s), the transmission link comprising of towers and/or monopoles and/or UG cable should be suggested.

2.9.3 **Access of Constructability:** The Consultant shall perform an assessment of the suitability of final proposed route and tower locations, identifying the likely equipment needed, access requirements, and corresponding transportation rates. The Consultant shall perform an assessment of the final proposed route identifying the likely equipment needed, access requirements, and corresponding production rates and labor requirements taking into account a reasonable means and methods anticipated during construction (e.g. availability of labor force, holiday schedules, road conditions, monsoon rains, and other site access issues). This assessment shall feed into all other aspects of this assignment, including the assessment of temporary and permanent impacts, ROW requirements, cost estimates and work packaging and timelines.

2.9.4 The firm shall also provide the following information:

- Currency and Exchange rates and their referenced period
- Level of Contingencies
- Level of inventories of materials, spares etc
- Insurance, Transportation, GST etc

2.9.5 In case of any proposed overhead transmission line segment, the foundation and structural design of the tower shall be for double circuit

2.9.6 The Firm shall prepare Bills of Quantity (“BoQ”) based on the various items of work to be executed in accordance with the drawings and the technical specifications.

2.9.7 The firm shall prepare PERT and CPM for timely and effective completion of the work.

3.0 EOI PROPOSALS

- 3.1** The Firm shall furnish all relevant information in its proposal covering all points under Section 2.0. The proposal must clearly outline the route of transmission link involving lattice towers and/or monopoles and/or UG cable (along with all associated termination gantry complete in all respect), termination structure for AEGCL's GIS (along with GIS module for 132kv bay and all associated protective gear complete in all respect).
- 3.2** Based on the type and length of the suggested transmission links, the firm shall prepare the BoM covering all items to be supplied by the successful bidder, including GIS module and related equipments as required.
- 3.3** Shortlisting of Bidders from EOI participants shall be done based on the Suitability of the technical proposal for the transmission link, Qualification, Experience &, Capacity of the firms. EOI will be assessed based on Suitability of Proposal (20% weightage) , Qualification (25% weightage), Experience (30% weightage), and Capacity (25% weightage) of the firm and key personnel. Based on evaluation of EOI, only shortlisted firms will be invited to participate in the final bidding process. **The minimum qualifying marks to be shortlisted is** as per section ii) of "Evaluation of EOI Application" criteria
- 3.4** The preparation of BID document by AEGCL shall take into account the technically and financially viable options as proposed by the participants of the EOI. The BID is expected to be floated by AEGCL two weeks after the EOI evaluation
- 3.5** The Bid document to be prepared by AEGCL shall incorporate inter alia the salient parts of "the General conditions for Supply and Erection" of AEGCL.
- 3.6** Score/marks obtained in the EOI evaluation shall be carried to the BID evaluation stage where this score shall constitute the marks for "Technical Evaluation Score".
- 3.7** The selection of bidder for award of the contract shall be based on Quality cum Cost Bidding evaluation. While the Technical evaluation score shall carry 60% weightage, the Price bid evaluation score shall carry 40%. Final score will be the sum of these two scores. Firm having the highest score shall be designated as the first choice Bidder for award of the contract.

Illustration:

Assume that out of the three qualifying Bidders, firm 'A' has scored 75 marks in EOI, firm 'B' has scored 60 marks in EOI and firm 'C' has scored 50 marks in EOI

Assume that in the subsequent BID, firm 'A' has quoted Rs. 6 Crore, firm 'B' has quoted Rs. 7 Crore, firm 'C' has quoted Rs. 4 Crore,

Now , Price Evaluation Score for firm 'C' = 100 marks

Price Evaluation Score for firm 'A' = $(4/6) \times 100 = 66.67$ marks

Price Evaluation Score for firm 'B' = $(4/7) \times 100 = 57.14$ marks

Final Score of the firm 'A' = 60% of 75 + 40% of 66.67 = 45+26.67 = 71.67

Final Score of the firm 'B' = 60% of 60 + 40% of 57.14 = 36+22.86 = 58.86

Final Score of the firm 'C' = 60% of 50 + 40% of 100 = 30+40 = 70.00

Therefore firm 'A' shall be selected as the 'First choice Bidder' for award of the contract

3.8 In the event of the 'First Choice Bidder' failing to accept the offer of the contract award as per the terms and condition of AEGCL, the next firm scoring the second highest marks shall be offered the contract award, and so on and so forth.....

4.0 Staffing and Key personnel

4.1 The firm shall maintain an office at Guwahati during the execution of the project

4.2 The firm shall plan its activities and deliverables in such a way that most of the works will be done through their office at Guwahati office so that AEGCL officials may easily coordinate with the firm's experts.

4.3 The firm shall have both Key and Non-key experts.

The Qualification and Experience of the Key Experts shall be as follows:

Role	Qualification
Team Leader/TL expert (or equivalent Title)	He/She shall be an independent professional with strong organizational skills, with a preferably Master degree in electrical engineering. He/she shall have extensive knowledge of international best practices in power system planning and infrastructure design, contract procedures and project follow-up. He/she shall also have a proven track record of successfully managing and coordinating as team leader a diverse group of professionals in accomplishing projects of similar nature and complexity to this assignment. A minimum of 7 years of working experience in implementation of electricity transmission projects is required. The Team Leader shall have in the last five years , specific experience of managing teams working on detail design, procurement and execution of at least one transmission line project of 132kv or above
Lead Civil Engineer-Civil works & structural	He/she shall have at least Bachelor degree in civil Engineering with at least 5 years' experience in transmission line tower designs of 132kv or above voltage class and civil works associated with HV transmission projects, related to the design of civil structures, Gantry structure tower/and equipments, foundations of 132kv or above transmission lines, and substations and buildings

(Table continued from previous page)

Lead Electrical Engineer-TL & S/S	He/She shall have at least Bachelor Degree in electrical engineering or relevant fields, coupled with at least 5 years of relevant experience. Experience in transmission network of 132kv or above design and operations are required. He/She shall have specific experience of working on at least one transmission line design & execution projects of similar nature. Extensive knowledge of best practices in electric transmission system planning in India, line routing processes, and transmission system design is critical.
Lead Survey Engineer	He/She shall have at least Bachelor's Degree in Civil/Mechanical/Electrical Engineering or other relevant discipline and over 5 years of detail surveying experience of 132kv or above transmission lines. Experience shall include route definition, detail survey, profiling, contouring and tower spotting in hilly terrain. The expert shall have an understanding of line clearances and safety considerations. He/she shall also have an extensive knowledge on handling and operation of AutoCAD and other similar software. Experience in geotechnical investigation, test and design of tower foundations of 132kv or above voltage level transmission lines and substation will be an added advantage.
Lead Procurement Expert	He/She shall have at least Bachelor's degree in engineering or management with minimum 7 years of procurement specialization/experience in high voltage transmission systems projects. Knowledge on procurement Guidelines and Standard Bidding Documents is preferable.
Financial Analyst / Expert	He/She should be a CA, or shall have preferably Master's Degree in Business Administration (Finance) or related studies with minimum 7 years of experience. The experience shall be in Financial/Economic analysis of high voltage level transmission lines and substation projects.

Evaluation of EOI Application

Evaluation of EOI Application :

Firm's EOI application which meets the eligibility criteria will be ranked on the basis of the Ranking Criteria.

i) Eligibility & Completeness Test

Sl. No.	Criteria Title	Compliance
1	Corporate Registration	
2	Tax Clearance/Tax Return Submission	
3	GST Registration	
4	EOI Form 1: Letter of Application	
5	EOI Form 2: Applicant's Information Form	
6	EOI Form 3: Experience	
7	EOI Form 4: Capacity	
8	EOI Form 5: Qualification of Key Experts	

ii) EOI Evaluation Criteria

A. Suitability of the Proposal :

Full Score : 20.0

Pass Score : 10.0

B. Qualification :

Sl. No.	Criteria	Minimum Requirement	Full Score
1	Qualification of Team Leader	As mentioned in Terms of Reference	5
2	Experience of Team Leader	As mentioned in Terms of Reference	5
3	Qualification of Key Experts	As mentioned in Terms of Reference	5
4	Experience of Key Experts	As mentioned in Terms of Reference	10

Full Score: 25.0

Pass Score: 25.0

C. Experience :

Sl. No	Criteria	Minimum Requirement	Full Score
1	General Experience of the firm	The firm must have at least 5 (five) years of experience in the power transmission line execution. In case of a joint venture/consortium, any one of the partners should meet this requirement	10 (Meeting the minimum shall carry 5 marks , for each additional year, 01 mark will be added.)
2	Specific experience of the firm within last 8 years. (In case of person, specific experience of the person within last 4 years).	The firm must have completed, as minimum, the contracts of detailed engineering and design of at least two 132kv (and/or above) Transmission line for a minimum total length of 10 km including the tower and foundation design of the transmission lines. In case of a joint venture/consortium, any one of the partners should meet this requirement	10 (Meeting the minimum shall carry 5 marks , for each additional completed contract, 01 mark will be added)
3	Experience of the firm in Hilly terrain	The firm must have completed the contracts of detailed engineering and design, procurement and construction of at least one 132kv (and/or above) Transmission line for a minimum length of 3km. In case of a joint venture/consortium, any one of the partners should meet this requirement	10 (Meeting the minimum shall carry 5 marks , for each additional completed contract, 01 mark will be added)

Full Score: 30.0**Pass Score: 15.0**

D. Capacity

Sl. No.	Criteria	Minimum Requirement	Full Score
1	Financial Capacity (Turnover)	<p>Average Annual Turnover (audited), in case of a firm participating in single, must be not less than Rs.16 Crore calculated on the basis of three best annual turnovers during the last five years.</p> <p>In case of a joint venture/consortium, the total of the Average Annual Turnovers of the partners must not be less than Rs.20 Crore calculated on the basis of three best annual turnovers during the last five years.</p>	12.5 (Meeting the minimum shall carry 6 marks and this shall be considered as the pass score for Turnover requirement , for each 5 crore of additional turnover, 01 mark will be added)
2	Financial Capacity (Cashflow)	<p>Cashflow, in case of a firm participating in single, must be not less than Rs.3 Crore calculated on the basis of average of the last three annual financial statements.</p> <p>In case of a joint venture/consortium, the total of the Cashflow of the partners must not be less than Rs.5 Crore calculated on the basis of average of the last three annual financial statements of the firms.</p>	12.5 (Meeting the minimum shall carry 6 marks and this shall be considered as the pass score for cashflow requirement , for each 3 crore of additional cash flow, 01 mark will be added)

Full Score: 25.0

Pass Score: 12

EOI Forms & Formats

EOI Forms & Formats

Form 1. Letter of Application

Form 2. Applicant's information

Form 3. Experience (*General & Specific*)

Form 4. Capacity

Form 5. Qualification of Key Experts

1. Letter of Application

(Letterhead paper of the Applicant or partner responsible for a joint venture, including full postal address, telephone no., fax and email address)

Date:

To,

The Managing Director
Assam Electricity Grid Corporation Ltd
Bijulee Bhawan (First Floor), Paltanbazar
Guwahati, PIN: 781001, Assam, India

Sir,

1. Being duly authorized to represent and act on behalf of (hereinafter "the Applicant"), and having reviewed and fully understood all the short-listing information provided, the undersigned hereby apply to be short-listed by **AEGL** for "Construction of 132kv single circuit transmission link from Kamakhya Grid sub-station to Railway Traction sub-station of Kamakhya along with GIS bay at Kamakhya with associated equipments"
2. Attached to this letter are photocopies of original documents defining:
 - a. the Applicant's legal status;
 - b. the principal place of business;
3. **AEGL** and its authorized representatives are hereby authorized to verify the statements, documents, and information submitted in connection with this application. This Letter of Application will also serve as authorization to any individual or authorized representative of any institution referred to in the supporting information, to provide such information deemed necessary and requested by yourselves to verify statements and information provided in this application, or with regard to the resources, experience, and competence of the Applicant.
4. **AEGL** and its authorized representatives are authorized to contact any of the signatories to this letter for any further information.
5. All further communication concerning this Application should be addressed to the following person,

[Person]

[Company]

[Address]

[Phone, , Email]

6. We declare that, we have no conflict of interest in the proposed proceedings and we have not been punished for an offense relating to the concerned profession or business and our Company/firm has not been declared ineligible.
7. We further confirm that, if any of our experts is engaged to prepare the TOR for any ensuing assignment resulting from our work product under this assignment, our firm, JV member or sub-consultant, and the expert(s) will be disqualified from short-listing and participation in the assignment.
8. The undersigned declares that the statements made and the information provided in the duly completed application are complete, true and correct in every detail.

Signed :

Name :

For and on behalf of (name of Applicant or partner of a joint venture):

2. Applicant's Information Form

(In case of joint venture of two or more firms to be filled separately for each constituent member)

1. Name of Firm/Company:
2. Type of Constitution (Individual firm/Partnership/ Pvt. Ltd/Public Ltd/ Public Sector)
3. Date of Registration / Commencement of Business *(Please specify)*:
4. Registered Office/Place of Business:
5. Telephone No & E-Mail/Address
6. Name of Authorized Contact Person / Designation/Address/Telephone:
7. Name of Authorized Local Agent/Address/Telephone:
8. Total number of staff:
9. Number of regular professional staff:

(Provide Company Profile with description of the background and organization of the Firm and, if applicable, for each joint venture partner for this assignment.)

3. Experience

3(A). General Work Experience

(Details of assignments undertaken. Each member of a JV/Consortium must fill in this form.)

S. N.	Name of assignment	Location	Value of Contract	Year Completed	Client	Description of work carried <i>out</i>
1.						
2.						
3.						
4.						
5.						
6.						
7.						

3(B). Specific Experience

Details of similar assignments undertaken in the previous seven years

(In case of joint venture of two or more firms to be filled separately for each constituent member)

Assignment name:	Approx. value of the contract (in Rs):
Location:	Duration of assignment (months):
Name of Client:	Total No. of person-months of the assignment:
Address:	Approx. value of the Contract:
Start date (month/year): Completion date (month/year):	No. of professional person-months provided by the joint venture partners
Name of joint venture partner, if any:	Narrative description of Project:
Description of actual services provided in the assignment: Note: Provide highlight on similar services provided by the Firm as required by the EOI assignment.	

4. Capacity

4(A). Financial Capacity

(In case of joint venture of two or more firms to be filled separately for each constituent member)

Annual Turnover	
Year	Amount Currency

- Average Annual Turnover

--

(Note: Supporting documents for Average Turnover should be submitted for the above.)

4(B). Infrastructure/equipment related to the proposed assignment

No	Material/equipment Required	Requirements Description
<i>1.</i>		
<i>2.</i>		
<i>3.</i>		
<i>4.</i>		
<i>5.</i>		

5. Key Experts *(Include details of Key Experts only)*

(In case of joint venture of two or more firms to be filled separately for each constituent member)

SN	Name	Position	Highest Qualification	Work Experience (in year)	Specific Work Experience (in year)
1					
2					
3					
4					

(Please insert more rows as necessary)

