



**NEA Engineering Company Limited (NEC) Call for: Application for Roster/Register of Panel Expert IST (International Support Team)**

**First publication date: 15 May 2019**

NEA Engineering Company Limited (NEAEC), Nepal is working on Detailed Engineering Study of few large hydro power projects including Phukot Karnali (480MW) PROR, Betan Karnali (442MW) PROR, Kimathanka Arun (464 MW) PROR and other similar projects for different developer Clients. The NEAEC wishes to receive the services of under mentioned Experts/Specialists, experienced in the design of large hydro power projects to review the Interim Design Report (IDR) and Engineering Design. The NEAEC also plans to employ the above services as a part of Panel of Experts to review the Design Documents on behalf of its Clients to bring these Detail Engineering Studies to International standards and satisfaction of Project Financiers.

**International Experts : (IST)**

1. Dam Engineer/Designer	2. Tunnel and underground Structure Specialist
3. Structural Engineer	4. Headwork's & Sediment Engineering Specialist
5. Hydropower Engineers/Planner	6. Hydraulic Engineer
7. Hydro-mechanical Engineer	8. Electro-mechanical Engineer
9. Contract Specialist	10. Construction Planner
11. Powerhouse Planner	12. Transmission line Engineer/Expert

For Further details of scope and requirement are obtained from NEC website: [www.neaec.com.np](http://www.neaec.com.np). Interested individuals, consulting firms or companies are requested to send their application (either e-mail or in hard copy) with Curriculum Vitae of experts and expected remuneration and other conditions of engagement to perform the services within 15 days from the publication of this notice. The deadline may be rolled over automatically as per company requirement by giving notice in the company website.

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Expert IST (International Support Team)**

**First publication date: 15th May 2019**

**NEA ENGINEERING COMPANY LIMITED (NEAEC)**

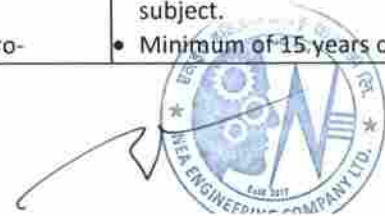
NEA Engineering Company Limited (NEAEC), Nepal is working on Detailed Engineering Study of few large hydro power projects including Phukot Karnali (480MW) PROR, Betan Karnali (442MW) PROR, Kimathanka Arun (464 MW) PROR and other similar projects for different developer Clients. The NEAEC wishes to receive the services of under mentioned Experts/Specialists, experienced in the design of large hydro power projects to review the Interim Design Report (IDR) Engineering Design. The NEAEC also plans to employ the above services as a part of Panel of Experts to review the Design Documents on behalf of its Clients to bring these Detail Engineering Studies to International standards and satisfaction of Project Financiers.

**Panel of International Experts (Foreign National or Non-resident Nepalese)**

SN	Job Title	Scope of duties	Qualification
1.	Dam Engineer/Designer	<ul style="list-style-type: none"> <li>Review on type of dam selected, disposition of associated structures (spillways, intake, toe powerhouse, cofferdams, gates.)Based on ground conditions</li> <li>Review on design criteria &amp; loadings</li> <li>Review on stability analysis, method, approach</li> <li>Review on Dam Design</li> <li>Comments/suggestions on construction method, flood handling during construction</li> <li>Review/suggest measures(if any) to minimize cost of the specific components</li> </ul>	<ul style="list-style-type: none"> <li>Master's in Civil/Structural Engineering or Equivalent.</li> <li>Extensive experience with Dam design and construction in all aspects</li> <li>Minimum of 15 years of relevant experience working in Engineering projects, especially hydropower of capacity more than 200 MWduring Detailed Engineering Design.</li> <li>Must have experience in design &amp; construction of hydropower/multipurpose Dam height 150 m or more</li> <li>Bachelor Degree with more than 25 years specific experience.</li> </ul>
2.	Tunnel and underground Structure Specialist	<ul style="list-style-type: none"> <li>Review investigation report pertinent to underground structures</li> <li>Review/comment on planning of underground structures</li> <li>Review design approach, methods and analysis</li> <li>Apply quick analysis and check the support systems adopted for underground structure</li> <li>Review specifications and construction plans</li> <li>Review/suggest measures(if any) to minimize cost of the specific components</li> </ul>	<ul style="list-style-type: none"> <li>Minimum of an M.Sc. in Tunnel/Geotechnical Engineering or equivalent</li> <li>Minimum of 15 years of working experience in design of tunnel and underground structures during Detailed Engineering Design and construction supervision preferably in hydropower projects of capacity exceeding 300 MW</li> </ul>
3.	Structural Engineer	<ul style="list-style-type: none"> <li>Review the design approach and methods, loadings and their combinations applied based on the ground conditions</li> <li>Review the structural analysis and design of super structure and foundation of project components such as intake, surge tank, Powerhouse Comments on gaps if any on analysis/design and suggest measures for improvement</li> <li>Review comments on detailing, phasing of construction</li> <li>Review and guide in the structural and foundation requirements and coordinate with all other design disciplines to provide a comprehensive design product conferring the</li> </ul>	<ul style="list-style-type: none"> <li>Minimum Master's Degree in Civil/Structural Engineering or equivalent.</li> <li>Minimum of 15 years of working experience in structural design of components of hydropower projects during DetailedEngineeringDesignand construction supervision</li> </ul>



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		site condition, and phasing of construction, etc. <ul style="list-style-type: none"> <li>Review/suggest measures(if any) to minimize cost of the specific components</li> </ul>	
4.	Headwork's & Sediment Engineering Specialist	<ul style="list-style-type: none"> <li>Review planning of headwork's and disposition of component structures</li> <li>Review the sediment data and sediment load assessed</li> <li>Review the compliance of performance standard of headwork's, particularly on safety, sediment handling and sustainability of peaking reservoir</li> <li>Review/suggest measures (if any) to minimize cost of the specific components</li> </ul>	<ul style="list-style-type: none"> <li>Minimum of an MSc in Water Resource/ Hydropower with specialization in Sediment Engineering/Handling</li> <li>Minimum of 15 years of relevant working experience as Sediment management/Handling Expert in P/RoR projects during Detailed Engineering Design preferably in hydropower projects.</li> <li>Bachelor Degree with more than 25 years specific experience</li> </ul>
5.	Hydropower Engineers/Planner	<ul style="list-style-type: none"> <li>Review on conceptual layout of the given project</li> <li>Location of Headworks, conveyance and powerhouse wrt topography, geology &amp; hydrology</li> <li>Review/comments on planning &amp; optimization of components and suggest measures to optimize project cost</li> <li>Review and comments on civil drawings and specifications, feasibility studies, alternative analysis, design criteria and other overall Engineering aspects in accordance with international best practices</li> <li>Reflect the optimal design in the cost estimates and tender documents.</li> <li>Review/suggest measures(if any) to minimize cost of the specific components</li> </ul>	<ul style="list-style-type: none"> <li>Minimum of an MSc in Water Resources/ Hydropower Engineering or equivalent.</li> <li>Minimum of 15 years of relevant working experience in design of hydropower projects of capacity more than 300MW during DetailedEngineering Design and construction supervision</li> <li>Bachelor Degree with more than 25 years specific experience.</li> </ul>
6.	Hydraulic Engineer	<ul style="list-style-type: none"> <li>Review the layout of structures wrt to hydraulics</li> <li>Review the hydraulics of headworks, such as spillways, intake and energy dissipaters</li> <li>Review/comments on hydraulics of conveyance including hydraulic transients and surge analysis</li> <li>Review/suggest measures(if any) to minimize cost of the specific components</li> </ul>	<ul style="list-style-type: none"> <li>M.Sc. or higher Degree in Hydraulic Engineering/ Hydropower Engineeringor equivalent.</li> <li>Minimum of 15 years of relevant working experience in design of hydropower projects of capacity more than 300MW during DetailedEngineering Design and construction supervision</li> <li>Bachelor Degree with more than 25 years and specific experience.</li> </ul>
7.	Hydro-mechanical Engineer	<ul style="list-style-type: none"> <li>Review design and quality assurance of hydro-mechanical components in Interim Design Report</li> <li>Review and prepare guidelines for design development and assist in providing technical aspects</li> <li>Review design of Penstock, Gate and valve</li> <li>Review of steel liner and similar components</li> <li>Review/suggest measures(if any) to minimize cost of the specific components</li> </ul>	<ul style="list-style-type: none"> <li>Minimum Master's Degree in Mechanical Engineering or equivalent.</li> <li>Minimum of 15 years of working experience in Engineering project as hydro-mechanical Engineering/expert in design and supervision of projects of capacity <math>\geq 100\text{MW}</math> and <math>\geq 200\text{-meter}</math> head.</li> <li>Bachelor Degree with more than 25 years specific experience.</li> </ul>
8.	Electro-mechanical Engineer	<ul style="list-style-type: none"> <li>Review the sizes and dimensions assumed for the EM equipment in view of the physical restrictions of project site</li> <li>Review of methods of electrical/electro-</li> </ul>	<ul style="list-style-type: none"> <li>Master Degree in Electrical Engineering, or other relevant subject.</li> <li>Minimum of 15 years of experience</li> </ul>



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		<p>mechanical equipment installation works, considering the site conditions.</p> <ul style="list-style-type: none"> <li>Review cost estimates for electrical/electro-mechanical equipment based on the construction schedule.</li> <li>Review study report and give suggestions in all design criteria, parameters and standards, all major calculations and analysis including all the drawings prepared.</li> <li>Review the implementation schedule for installation works of electric equipment.</li> <li>Review the technical section for the electrical equipment and transmission lines in the tender documents.</li> <li>Review the interfacing modality between EM and other Contractors in case of multi-contract construction model.</li> <li>Review/suggest measures(if any) to minimize cost of the specific components</li> </ul>	<p>in hydropower project out of which 5 years Int'l experience as electro-mechanical Engineering/expert in projects of minimum capacity <math>\geq 100\text{MW}</math> and unit size, more than 50 MW.</p> <ul style="list-style-type: none"> <li>Bachelor Degree with more than 25 years specific experience</li> </ul>
9.	Contract Specialist	<ul style="list-style-type: none"> <li>Review all the contractual analysis required in the light of FIDIC clauses and technical specification.</li> <li>Review and comments on progress and performance to ensure goods and services conforming to the Contractual requirements.</li> <li>Review and guide the study reports as EPC level design documents with respect to FIDIC clauses and technical specification.</li> <li>Fluent in PPA 2063 with latest amendments and the PPR 2064.</li> <li>Review/suggest measures (if any) to minimize cost of the specific components</li> </ul>	<ul style="list-style-type: none"> <li>Minimum Master's Degree in Engineering/contract management or equivalent</li> <li>Experienced as contract expert in large scale hydropower projects managed by the FIDIC system of contract regulation.</li> <li>Minimum 15 years of experience in mediation, claim settlement, arbitration of claims.</li> <li>Bachelor Degree with more than 25 years specific experience</li> </ul>
10.	Construction Planner	<ul style="list-style-type: none"> <li>Review overall planning of project components</li> <li>Assess and recommend construction methodology</li> <li>Assess the rate of progress of construction works</li> <li>Review and guide to optimize the overall Construction Schedule/time and optimize the overall cost</li> <li>Review/suggest measures(if any) to minimize cost of the specific components</li> </ul>	<ul style="list-style-type: none"> <li>Minimum Master's Degree in Engineering/contract management/Construction Planning or equivalent</li> <li>Experience as contract expert in large scale projects managed by the FIDIC system of contract regulation.</li> <li>Minimum 15 years of experience in planning and supervision of hydropower projects</li> <li>Bachelor Degree with more than 25 years specific experience</li> </ul>
11.	Powerhouse Planner	<ul style="list-style-type: none"> <li>Review the layout of powerhouse for given topography and geological settings</li> <li>Review/suggest layout/disposition of powerhouse components and associated accessories minimizing powerhouse size/cost</li> <li>Review/ suggest construction planning</li> <li>Review/suggest measures to minimize cost of the specific components</li> <li>Review/suggest measures(if any) to minimize cost of the specific components</li> </ul>	<ul style="list-style-type: none"> <li>Master's in Civil/Mechanical/Electrical Engineering or Equivalent</li> <li>Extensive experience with underground and surface Powerhouse planning/design in all aspects.</li> <li>Minimum of 15 years of working experience in hydropower projects of capacity more than 300 MW with involvement during Detailed Engineering Design and construction supervision</li> </ul>



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			<ul style="list-style-type: none"> <li>• Bachelor Degree with more than 25 years specific experience.</li> </ul>
12.	Transmission line Engineer/Expert	<ul style="list-style-type: none"> <li>• Review the selection of tower, conductor</li> <li>• insulators, hardware, earthing materials and accessories for transmission line up to 400 kV.</li> <li>• Review the sub-station location and the switchyard design for up to 400 kV</li> </ul>	<ul style="list-style-type: none"> <li>• Master's degree in Electrical Engineering, or other relevant subject.</li> <li>• Minimum of 15 years of experience in transmission line and substations and at least 5 years of experience as transmission engineer/ expert. The expert must have experience in up to 400KV transmission line and substation projects.</li> </ul>

Interested eligible and competent experts/specialists may obtain further information NEAEC Website; [www.neaec.com.np](http://www.neaec.com.np)

Interested experts/specialists must submit their Curriculum Vitae along with the expected remuneration (hourly/daily/weekly/monthly) and other conditions of engagement to perform the services within 15 days from the published date by E-mail or hard copy. The notice deadline may be rolled over automatically as per company need.

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