PRE-QUALIFICATION DOCUMENT (PQD)

FOR

PRE-QUALIFICATION OF CONSULTING FIRMS / COMPANIES / CONSULTANT HAVING EXPERTISE FOR

HIRING OF FIRM/CONSULTANT FOR FEASIBILITY STUDY FOR ACTUALIZATION & IMPLEMENTATION OF ELECTRIC VEHICLE POLICY IN PUNJAB

Punjab Energy Efficiency & Conservation Agency

Energy Department,

Government of the Punjab

November 11, 2021

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TERMS OF REFERENCES INCLUDING SCOPE OF WORK OF CONSULTANT

INTRODUCTION:

Government of the Punjab has established Punjab Energy Efficiency and Conservation Agency (PEECA) that aims to enforce policies/standards on provincial level to meet the objectives that are in synchrony with the Federal Energy Efficiency & Conservation (EE&C) Objectives.

In Pakistan, transport vehicles are responsible more than 40% of the AQI, registered in metropoles. Research has shown that electric cars are better for the environment. They emit less greenhouse gases and air pollutants over their life than a petrol or diesel car. This is even after the production of the vehicle and the generation of the electricity required to fuel them is considered.

BACKGROUND:

Pakistan is the 5th most vulnerable country of the world due to climate change, according to the Global Climate Risk Index. The growing concern over climate change and global warming has proven that electric cars are inevitably the future of transportation around the world. Automakers around the world have recognized this and have started offering dozens of fully electric models while phasing out the internal combustion engine. Several countries in Europe, China, US and India have announced EV penetration policy, Pakistan has also approved an apprising penetration Policy. EVs can dramatically reduce the emissions that contribute to climate change and smog, improving public health and reducing ecological damage. Charging the EV on renewable energy such as solar or wind minimizes these emissions even more.

JUSTIFICATION:

The transport sector consumes liquid fuel and natural gas, whereas charging stations may consume various kinds of fuels to meet the energy requirement for EVs. As per NEPRA's State of Industry Report 2020, the demand growth rate is projected to be 5.7% by 2030. Pakistan's suppressed energy demand implies that a major portion or all of the idle generation capacity which will be needed to meet the energy demand required by the EVs. In this regard, PEECA intends to study the economic, financial and environmental impacts in detail for the implementation of this policy. This will address PEECA's demand side management scope as under NEVP, total energy cost savings to the country accruing from EVs could range from $790 million to $1.3 billion[1] whereas total automotive fuel savings will lie between 3.8 and 6.1 million tons over 2021-2030 due to reduced ICEV sales. Moreover, total fuel import savings on account of ICEVs displaced by new EVs will range from $1.5 billion to $2.4 billion over 2021-2030.

With the advent of National Electric Vehicles Policy (NEVP) by the Federal government, infrastructure needs to be developed to encourage shifting over to Electric Vehicles (EVs). Furthermore, Federal Minister for Science and Technology has stated that EV buses are being introduced in Pakistan. Pakistan's total load demand in summer peaks around 26,000 MW and during winter peaks around 11,000 MW. The installed generation capacity is more than 30,000 MW. To increase base load, EV stations should be installed.

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[1] Policy Brief – USAID (Modeling the Impact of Pakistan's National Electric Vehicle Policy)

The NEVP has guidelines along with defined mid-term, long-term and ultimate targets for EV penetration. By 2030, 100,000 cars, 500,000 2- and 3-wheelers, 1000 buses and 1000 trucks are targeted for EV penetration in Pakistan. By 2035, the federal government aims to have 30% of its vehicles sales based on EV cars and trucks, whereas 50% constituting of 2-wheelers, 3-wheelers and buses. By 2040, the federal government intends to have 90% of its new vehicles sales based on Electric Vehicles (EVs). In order to effectively implement the federal policy all over Pakistan, the provinces shall have to take the lead for successful EV penetration.

The 3-wheeler rickshaw/qinqhi is the most popular & most pollutant (noise & environment) vehicle. Survey will be conducted to determine the adoption rate in Punjab and study of the economic and environmental impacts. As a designated agency under NEECA, PEECA shall conduct a study to facilitate the implementation of Electric Vehicles (EVs) in Punjab.

OBJECTIVES:

1. Facilitate the federal government in actualizing Electric Vehicles in Punjab.
2. Mitigate climate change through facilitating the implementation of EVs in Punjab.
3. Determine the adoption rate of Electric Vehicles in Punjab.
4. Determine the infrastructural availability and requirement in Punjab.
5. Facilitate in achieving NEVP goals and objectives

DETAILED SCOPE OF WORK:

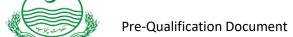The duties and responsibilities of the Consultant shall include but not limited to the following

i. Provide guidelines for standardization for Electric vehicle (EV) and charging stations for various segments of EVs.
ii. Prepare a comprehensive and logical work plan as inception report for approval.
iii. Identify public sector local government bodies and other relevant public departments (e.g. Transport, Environment, Revenue Authority) to analyze their role in actualizing the implementation of electric vehicle policy in major cities of Punjab (Lahore, Rawalpindi and Multan).
iv. Prepare a conducive report analyzing and comparing policies of various governmental departments and ministries in relevance with electric vehicles, so that the policies of one entity are not in conflict with those set by the other, and there is no duplication of work. Also include policy recommendations for each department (Transport, Environment, Revenue Authority).
v. Analyse and define current technical and other relevant capacities and requirements for upgrade to serve both e-vehicles and charging infrastructure.
vi. Identify existing, institutional and legal frameworks in the transport sector to propose measures in these areas to address the barriers for promotion of the EVs.
vii. Define role of Highways Department (Communication & Works) and provide roadmap to determine locations at motorways and highways connecting Lahore, Rawalpindi and Multan for installing charging infrastructure at various locations, efficiently addressing the range-anxiety problem, for each 2-, 3- and 4-wheelers, where applicable,
viii. Provide highway and infrastructure plan for main cities in Punjab (Lahore, Rawalpindi, Multan). Also, do the financial analysis of charging docks requiring a separate network for charging purposes.

ix.   Identify and incorporate relevance of the Environment Protection Department and its rules / regulations / policies with this feasibility study, and identify the department's role for the actualization of EV policy (e.g. GHG emissions, carbon credits for electric vehicle charging stations, EV and equipment related maintenance rules in relation to the environment, etc.).

x.   Provide recommendation for improving the standards and regulation of provincial bodies e.g., Punjab Transport Authority (PTA), City Development Authorities (CDA) and others for easing EV penetration.

xi.   Identify role of Revenue Authority in light of the NEVP and recommend policy interventions for actualization of EVs in Lahore, Rawalpindi and Multan.

xii.   Legal and regulatory framework analysis (acting laws and normative acts, Orders and Resolutions, International Agreements, as applicable)

xiii.   Based on the legal and regulatory analysis, provide a set of recommendations for legislation amendment, including proposal for tax, fiscal, parking, "green numbers" and other types of incentives.

xiv.   Analyse financing models, including e-vehicle leasing.

xv.   Propose other incentives such as exemption of income tax to EV equipment manufacturers and EV infrastructure developers including charging stations in Lahore, Rawalpindi and Multan, and determine its economic impact in terms of import bill, job creation, business expansion, etc.

xvi.   Recommend formulation of a panel of experts from all departments, identifying roles of representatives from each entity / local body / department etc., along with justification for selection.

xvii.   Prepare a Questionnaire for collection of primary data regarding acceptability of EVs in major cities of Punjab i.e. Lahore, Rawalpindi and Multan.

xviii.   Circulation of a questionnaire among the automobile manufacturers, battery manufacturers, vendors, etc. and conduct market as per the consent of PEECA.

xix.   Understand the current market scenario in Punjab.

xx.   Provision of 2-3 investment models for the private investors in order to boost investment in Electric Vehicle sector in Punjab, and recommend the best one.

xxi.   Charging station requirements for different segments of the electric vehicles (3-wheeler, 4-wheeler, buses, trucks, etc.). For example, fast charging does not exist for 3-wheelers, therefore similar aspects should be considered for requirements for each segment.

xxii.   Analyse and project the expected EV adoption by 2025, 2030 and 2040 in major cities of Punjab (Lahore, Rawalpindi and Multan), in relation to the National Electric Vehicle Policy approved by the Federal Government.

xxiii.   The consultant shall suggest the human resource requirement

xxiv.   The consultant shall develop modules (material for trainings, course and curriculum) to be taught at technical colleges, universities and / or through any other media (to be specified by the consultant) for capacity building of individuals in order to improve their knowledge, skills, understanding, capability and motivation in regards to the implementation of Electric Vehicle sector in Punjab.

xxv.   The consultant shall develop modules in light of the developed standards and international practices.

xxvi.   Provide methodology for calculation of Greenhouse Gas (GHG) emissions and preparation of Carbon Footprint reduction strategy.
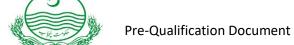
xxvii.   Explore and suggest the new market mechanisms of Carbon trade and establishment of Carbon fund, which involves sale & purchase of Carbon Credits, keeping in mind the importance of sale of credit surpluses that may be used to subsidize the future projects planned for further reduction of carbon emissions.

xxviii.   Labs specification for each segment of Electric vehicles shall be developed. Based on these finding, cost of labs shall be recommended.

xxix.   Provide the best roadmap for development of local industry in Punjab. The transition from assembling fossil fuel vehicles (FFV) to making export ready products is important, as the standards are strictly followed in countries abroad.

2. QUALIFICATION OF KEY-STAFF

The key personnel required for the consultancy services are:

S#	Staff Required	Qualification	Experience
1	Project Manager /Team Leader	Minimum Sixteen Years of Education in Engineering or Transport related discipline.	Minimum 12 years' professional experience in Electric Vehicles and / or research experience in the field of Electric Vehicles.
2	Economist/ Financial Analyst	Minimum sixteen years of Education in Economics/ Finance having in depth knowledge of economics	Minimum 10 years' experience in a similar role as advisor to businesses and/or governments on economic decisions, developing economic models and building accurate economic and financial forecasts.
3	Transport Expert	Minimum sixteen years of Education Transportation Engineering	Minimum 8 years' professional experience in Transport sector and / or researchexperience in the field of Electric Vehicles
4	Electrical Engineer (01)	Minimum sixteen years of education in Electrical Engineering	Minimum 5 years' experience in Electric Vehicles and/or automobile industry
5	Mechanical Engineer (01)	Minimum sixteen years of education in Mechanical Engineering	Minimum 5 years' experience in Electric Vehicles and / or automobile industry
6	Environment Expert	Minimum Sixteen years of Education in Environmental Engineering/Sciences	Minimum 5 years' experience in a similar role with in-depth knowledge of regulatory requirements, interpretations, andhealth and safety programs.

7	Tax Expert	Minimum Sixteen years of Education in Accountancy & Finance, orrelevant field.	Minimum 5 years' experience in a similar role as a Financial modeling analyst andadvisor on implementing effective tax strategies.

3. OUTCOME OF THE STUDY:

The NEVP is an ambitious road map towards tackling the challenges posed by climate change and pollution. It has the following salient features:

- Turning 30 percent of the total number of vehicles in the country into electric cars.
- Reducing emissions of greenhouse gases.
- Bringing down the rate of pollution and smog by introducing electric cars, trucks, vans and tri-wheeler rickshaws.
- Boosting the local car industry.
- Affordable transportation as cost of traveling will be significantly reduced.
- Cutting the import bill of oil, which currently is about $2 billion annually.

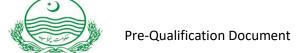In light of the NEVP, PEECA in Punjab intends to achieve the following outcomes by conducting this feasibility study:

1. Provision of the best out of 2-3 investment models for private investors in Punjab in order to boost investment in Electric Vehicle sector.
2. Expected vehicle adoption by 2025, 2030 and 2040 in major cities of Punjab (Lahore, Rawalpindi and Multan), in relation to the National Electric Vehicle Policy approved by the Federal Government shall be known.
3. The human resource requirement and development of modules in light of the developed standards and international practices.
4. Provision of best practices with their outcomes as well as the success rate of adoption / production of EVs in countries around the world, especially neighboring countries.
5. Labs specification for each segment (3-wheeler, 4-wheeler, buses, trucks, etc.) of Electric vehicles will be prepared. Based on these finding, cost of labs will be known.
6. Following the study, an EV (equipment) testing lab will be established in Punjab for ensuring the compliance of the EV standards.
7. Suitable locations of charging stations in major cities of Punjab i.e. Lahore, Rawalpindi and Multan will be identified.
8. Preparation of 5-10 modules related to EV in light of the developed standards and international practices.

4. ELIGIBILITY CRITERIA

Following are the details on the basis of which Firm / Company will be shortlisted:

(i) PRE-REQUISITE/ MANDATORY

a) Registration with the professional body (if any).

b) Registration with PEC in an appropriate category.

c) Registration with SECP / Registrar of Firms, e.t.c

d) National Tax Number (NTN) & PRA Certificate.

e) Undertaking by the Firm / Company / Institution on a legal format, that it has not been blacklisted by any Government Agency/ Authority nor is any under litigation.
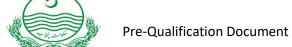
(ii) FIRM / COMPANY EXPERIENCE

Firms / Company should provide information regarding;

a) Relevant experience in related field by submitting the detail of relevant projects undertaken in the past as per **Annex-A**.

(iii) HUMAN RESOURCE CAPACITY

a) List of Key personnel proposed having expertise in **Relevant Field** as per **Annex-B.**

b) CVs of key personnel proposed as per **Annex-C.**

However, the required qualification and experience of the core team of experts to be evaluated in pre-qualification process is as follows;

S#	Staff Required	Qualification	Experience
1	Project Manager /Team Leader	Minimum Sixteen Years of Education in Engineering or Transport related discipline.	Minimum 12 years' professional experience in Electric Vehicles and / or research experience in the field of Electric Vehicles.
2	Economist/ Financial Analyst	Minimum sixteen years of Education in Economics/ Finance having in depth knowledge of economics	Minimum 10 years' experience in a similar role as advisor to businesses and/or governments on economic decisions, developing economic models and building accurate economic and financial forecasts.
3	Transport Expert	Minimum sixteen years of Education Transportation Engineering	Minimum 8 years' professional experience in Transport sector and / or researchexperience in the field of Electric Vehicles
4	Electrical Engineer (01)	Minimum sixteen years of education in Electrical Engineering	Minimum 5 years' experience in Electric Vehicles and/or automobile industry
5	Mechanical Engineer (01)	Minimum sixteen years of education in Mechanical Engineering	Minimum 5 years' experience in Electric Vehicles and / or automobile industry

| 6 | Environment Expert | Minimum Sixteen years of Education in Environmental Engineering/Sciences | Minimum 5 years' experience in a similar role with in-depth knowledge of regulatory requirements, interpretations, and health and safety programs. |
| 7 | Tax Expert | Minimum Sixteen years of Education in Accountancy & Finance, or relevant field. | Minimum 5 years' experience in a similar role as a Financial modeling analyst and advisor on implementing effective tax strategies. |

(iv) **FINANCIAL CAPABILITIES**

Details of Financial Capability to be provided as per **Annex-D and Audited Statements of last 3 years must be provided.**

➤ ***The aforementioned documents must be submitted with;**

a) Covering Letter which should contain the detail of power of attorney for signing the PQD.

b) Name, address and firm registration details (including the year of incorporation and the number of years of relevant experience). Please also attach copy of certificates of registration / incorporation / commencement.

c) Copy of registration certificate being issued from professional body (if any)

d) Copy of National Tax Number (NTN)

e) Copy of PRA certificate

f) Affidavit on the stamp paper that the Firm has neither been Blacklisted from any Government (Federal, Provincial, Districts and / or any other Government owned Authority) nor is under any litigation pertaining to conduct of test for Public Sector Organizations.

g) All documents should be in English.

- **Any misinformation, false and forged statement will lead to disqualification from being shortlisted / pre-qualified and any other action as per applicable laws.**

- **Firms / Companies applying under a joint venture/consortium should submit their documents as a single EOI by clearly indicating the lead firm.**

Criteria, sub-criteria, and point system for the evaluation of Pre-Qualification Document (PQD) are as follows:

Sr No	Sub-Criteria for Evaluation	Marks
1	**FIRM EXPERIENCE**	**30**
	Relevant Assignments (02 projects of similar nature executed by consultant firm/company/JV) Note: Projects/ assignments to be submitted by the Firm must be supported with the copies of completion certificates issued by the procuring / executing agency.	30 (Each Project carry 15 Marks) Note: Experience will be established on the basis of supporting certificate from employer/ owner of project.
2	**HUMAN RESOURCE CAPACITY**	**60**
a)	Project Manager /Team Leader (01)	20
b)	Economist/ Financial Analyst (01)	10
c)	Transport Expert (01)	10
d)	Environment Expert (01)	10
e)	Tax Expert (01)	10
Note: CV of the proposed professional staff / key personnel must be signed by him/her and counter signed by the authorized signatory as proposed in the covering letter. **Note:** Each individual from core team of expert should be evaluated on the basis of criteria Educational qualification 20% Number of Years working on similar assignment 50% 02 Number of projects on which similar tasks have been undertaken 30%	
3	**FINANCIAL CAPACITY**	**10**
a)	Annual Turnover (Must be supported with audited statements)	10 Upto 10 Million (3 Marks) Above 10 Million Upto 25 Million (7 Marks) Over PKR 25 Million (10 Marks)
Total		**100**

Note: All documents should be signed by the authorized signatory as proposed in the covering letter.

The minimum score required to be prequalified is: **65 Marks.**

5. JOINT VENTURE (JV)

An Applicant shall be an entity or any combination of entities in the form of a JV/consortium with a formal intent to enter into an agreement or under an existing agreement in the form of a JV/consortium who submits the Application for the Project.

In the case of a JV/consortium;

(a) all partners to the JV/consortium shall be jointly and severally liable; and

(b) a JV/consortium shall nominate a representative to act as the lead partner who shall have the authority to conduct all business for and on behalf of any and all the partners of the JV/consortium during the pre-qualification process and, in the event the JV/consortium is prequalified, during the bidding process, and in the event the JV/consortium is awarded the Project, during Project execution.

An Applicant, and all partners constituting the Applicant, shall have the nationality of an eligible country. An Applicant shall be deemed to have the nationality of a country if the Applicant is a national of that country; or is constituted, incorporated, or registered and operates in conformity with the provisions of the laws of that country.

The above requirement shall apply to the determination of the nationality of Applicant as a single entity as well as all JV/consortium partners.

A firm that is under a declaration of ineligibility/blacklisting by any of its previous employers shall not be considered.

Eligible countries shall be all the countries of the world with whom Islamic Republic of Pakistan has commercial/trade relations and those who are not subject to sanctions imposed by the United Nations Security Council.

Joint Venture must comply with the following requirements:

a. The JV/Consortium must collectively satisfy the eligibility criteria.

b. At the Bidding Stage, the Bid shall be signed by all members in the JV/Consortium so as to legally bind all partners, jointly and severally, and any bid shall be submitted with a copy of the JV/Consortium agreement providing the joint and several liability with respect to the contract.

6. CONFLICT OF INTEREST

The applicant (including all the members of the JV) must not be associated, nor have been associated in the past, with the consultant or any other entity that has prepared the design, specifications and other pre-qualification and bidding documents for the project in the past. Any such association my result in disqualification of the applicant.

7. FIRM DETAIL

Firm should provide its details as per **Annex-E**. In this PQD the word Firm has been used for

Firm & Company.

8. CLIENT DETAIL

The Prequalification (PQD) may be submitted at the following address by post.

Program Manager
Punjab Energy Efficiency & Conservation Agency
Energy Department, Government of the Punjab
48-A, C-II, Ghalib Road, Gulberg-III
Lahore.
PEECA reserves the right to cancel any or all bids at any time. The employer shall neither be liable for any actions nor be under any obligation to inform the applicant of the grounds for rejection, however, may be debriefed if solicited.

9. EOI DEADLINE

Deadline for submission of the EOIs is **November 29, 2021 till 11:00 AM** and the prequalification proposals will be opened at **11:30 AM** on the same day.

ANNEX-A Firm Experience (Relevant)

Relevant[1]									
S. No.	**Name of Project**	**Location (Country/Province/Division)**	**Client**	**Project Description**	**Implementation**		**Total Cost of Project**	**Cost of Services Provided by the Firm**	**Actual Services Provided**
					Start	**Completion**			
1.									
2.									
3.									
4.									
5.									
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1. Provide List of Two (02) no of Projects / Assignment performed in past which should include projects of similar nature.

2. Project/ Assignment provided must be supported with the completion certificate issued by the procuring agency/ executing agency of that particular project.

ANNEX-B (List of Key Personnel)

S. No.	Name	Qualification	Total Experience in Years	Position	Current Responsibilities

ANNEX-C (CVs of Key Personnel)

CURRICULUM VITAE (CV)

1. **Name of personnel** _____
2. **Current Position in the Firm** _____
3. **Date of Birth** _____
4. **Nationality** _____
5. **CNIC** (if Pakistani)**: _____ or Passport No.: _____**
6. **Education:**

Degree	Major/Minor	Institute	Date(MM/YYYY

7. **Membership of Professional Associations**: _____
8. **Other Training** [*Indicate significant training since degrees under 6 - Education were obtained*]
9. **Languages** [*For each language indicate proficiency: good, fair, or poor in speaking, reading, and writing*]:
10. **Employment Record** [*Starting with present position, list in reverse order every employment held by staff member since graduation, giving for each employment (see format here below)*]:

Employer	Position	From (MM/YYYY)	To (MM/YYYY)

11. **Detail of Work Undertaken**

Name of assignment or project: _____

Cost of Project: _____   Location: _____

Date of Start: _____ Date of Completion: _____   Client: _____   Main project features: _____   Positions held: _____ Activities performed: _____   Actual time spent on the project: _____in months.

[Unroll the project details group and continue numbering (2, 3 …) as many times as is required]

12. **Certification**

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications and my experience. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.

_____ Date: _____

[Signature of the proposed s   Day/Month/Year

_____ Date: _____

[Counter Signature of authorized signatory]   Day/Month/Year

ANNEX-D (Financial Capabilities)

Year[1]	Annual Turnover	Current Ratio	Net Worth
2017-2018			
2018-2019			
2019-2020			

1. Data provided under the head of financial capabilities must be supported by the Audited Annual Financial Statements of last 3 years.

ANNEX-E (Firm Detail)

Name of firm	Address	Contact no.	Authorized personnel name	Authorized contact no.
Lead Firm				
Joint Venture Firm (s)				
Associate Firm (s)				

In order to assess the annual turnover equal weightage will be given to both lead & partner firm (s) in case of joint venture.