TERM OF REFERENCEs (TORs)
INDIVUDAL CONSULTANT (PCAP-PIU)
AUTOMOTIVE ENGINEER

Background:

Government of the Punjab, in collaboration with World Bank is implementing Punjab Clean Air Program (PCAP). The PCAP Program is a comprehensive initiative aimed at reducing emissions and improving air quality, thereby enhancing public health, and contributing to sustainable transport infrastructure in Lahore Division. The overarching Program Development Objective (PDO) is to strengthen air quality management and reduce population weighted annual average PM 2.5 exposure in Punjab, with a specific focus on Lahore Division. Program Implementation Unit (PIU), headed by a Program Coordinator, will be established within the Transport & Masstransit Department (T&MD) to ensure the smooth execution of its activities. The PCAP-PIU will be staffed with individual consultants, having expertise in selected areas and will be headed by a Program Coordinator. Automotive Engineer will be one of the individual consultants with following credentials and responsibilities;

Key Responsibilities:

- Provide technical support regarding adaptation of e-buses as public transport in the province.
- Lead the implementation of the Transition to Electric Two- and Three-Wheelers project.
- Conduct technical assessments of electric buses, two-wheelers, and three-wheelers to ensure compatibility with local conditions.
- Oversee the development of EV charging infrastructure, including site selection, design, and implementation.
- Provide technical input on the Study on Electric Two- and Three-Wheeler Adoption and the development of the Provincial Electric Vehicle Policy.
- Provide technical input for the development of Punjab's Electric Vehicle Policy, including incentives for EV adoption and regulatory frameworks.
- Advise on the design and implementation of the EV financing facility to support the uptake of electric vehicles.
- Collaborate with EV manufacturers, charging infrastructure providers, and government agencies to promote EV adoption.
- Monitor the adoption of electric vehicles and provide recommendations to address barriers to EV uptake.
- Any other task assigned by the competent authority.
- Provide technical support for the design, development, and deployment of electric buses, two-wheelers, and three-wheelers.
- Conduct feasibility studies and technical assessments for EV adoption, including battery technology, charging infrastructure, and vehicle performance.
- Collaborate with EV manufacturers, suppliers, and stakeholders to ensure the compatibility of EVs with local conditions and requirements.

- Oversee the development and implementation of vehicle inspection systems to ensure compliance with emission standards.
- Provide technical guidance on the maintenance and repair of electric vehicles, including battery management and charging systems.
- Support the design and implementation of EV charging infrastructure, including site selection, technical specifications, and integration with the power grid.
- Collaborate with energy providers and government agencies to ensure the availability of reliable and sustainable energy for EV charging stations.
- Conduct research on emerging automotive technologies, including battery efficiency, regenerative braking, and lightweight materials.
- Provide input on the development of the Provincial Electric Vehicle Policy, including technical standards and incentives for EV adoption.
- Collaborate with academic institutions and research organizations to promote innovation in the automotive sector.
- Monitor project progress, identify technical challenges, and recommend solutions to ensure timely delivery of project objectives.
- Prepare technical reports and presentations for stakeholders, including the World Bank and Punjab Government.
- Work closely with the Punjab Masstransit Authority (PMA), Punjab Transport Company (PTC), and other agencies to ensure the successful rollout of electric buses and other clean transport solutions.
- Any other task assigned by the competent authority.

Qualifications & Experience:

- Bachelor's or Master's degree in Automotive Engineering/ Mechanical Engineering/ Electrical Engineering/ or a related field from HEC recognized university.
- Minimum 8 years of experience in automotive engineering, preferably for electric vehicles and clean transport solutions.
- Proven experience in the design, development, and deployment of buses, two-wheelers, or three-wheelers, experience in electric vehicles will be preferred.
- Experience in conducting technical assessments and feasibility studies for transportation sector.
- Familiarity with vehicle inspection systems and emission standards, particularly in the context of reducing air pollution.
- Experience in managing automotive projects, including coordination with manufacturers, suppliers, and government agencies.
- Knowledge of international standards and best practices in automotive engineering, vehicle engines, vehicle technical specifications and EV technology (e.g., ISO, SAE, or IEC standards).
- Experience in working with international donor-funded projects (e.g., World Bank, ADB, or UN) will be preferred.
- Strong analytical skills and proficiency in automotive design software

Reporting

The Specialist shall report to the Program Coordinator, PIU. He/she will work in close coordination with other members of the PCAP team.

Duration of contract:

The Automotive Engineer will work full-time in this role. Initial duration of contract shall be one (01) year, extendable subject to satisfactory.

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