MADHYA PRADESH ELECTRICITY REGULATORY

COMMISSION

5th Floor Metro Plaza, Bittan Market, Bhopal - 462 016

"INVITATION OF EXPRESSION OF INTEREST (EoI) FOR DEVELOPMENT/DEPLOYMENT OF REGULATORY ANALYTICS TOOL FOR MPERC, BHOPAL"

Disclaimer: This EOI is not an offer by MPERC or a tender document but it is an invitation to receive responses from eligible interested parties. The purpose of this EOI document is to provide such necessary information to interested analytics service providers that may be useful to them in formulating their proposals in response to this EOI.

1. INTRODUCTION:

Madhya Pradesh Electricity Regulatory Commission (hereinafter referred to as "Commission" or "MPERC") has been functioning under provisions of the Electricity Act, 2003. Under the provisions of Section 86 of the Electricity Act 2003, the Commission has been entrusted with various functions to be discharged including determination of tariff for generation, transmission, wheeling and retail supply of electricity, regulate electricity purchase and procurement process of Distribution Licensee, promotion of cogeneration and generation of electricity from renewable sources of energy, specify and enforce standards with respect to quality, continuity and reliability of services etc.

While discharging various functions under the aforesaid legal framework, the Commission deals with vast quantities of data and utilises this data for decision making, regulation framing and other important activities. Collection, segregation and analysis of regulatory data requires a lot of manual effort, hence the Commission has decided to explore the option of using a regulatory analytics tool for integrated analysis (advanced predictive and prescriptive analysis) of various important data it receives as per the detailed in desirable Scope of Work section of EoI.

2. Expression of Interest (EoI)

The Expression of Interest (EOI) is invited from the eligible entities, as per the eligibility criteria, who are solution providers in the specific area of Data Analytics, Indian Power Sector Analytics Solution, Data Warehouse, DA and ML, development and implementation. The job includes design, development, implementation of analytics best practices in data cleaning, transforming, modelling, extracting relevant insights. In the longer term, MPERC might on-board an entity or multiple entities to design/develop regulatory analytics platforms by floating Request for Proposals (RFP). Details requirements and eligibility criteria for the RFP are not part of this EoI and shall be shared separately. MPERC does not guarantee that any entity expressing their interest shall be eligible to respond to the RFP.

3. ELIGIBILITY CRITERIA

Following criteria shall have to be fulfilled by the interested entity:
I.   The entity must be an IT (Information Technology) / ITES (Information Technology Enabled Services) Software Development Firm. Supporting Documents e.g. Certification, Registration etc are required to be submitted.
II.   The entity must have experience in delivering the same/similar regulatory analytics/ big data analytics software solution/services/support to other State Electricity Regulatory Commissions/Other judicial/quasi judicial/Appellate tribunal/statutory bodies during the last 5 years. The documentary evidence i.e.

Proof of execution certificate and Experience certificate is to be submitted. The date of execution/ work completion should be within the limits of the past five years from the date of issue of EoI.

3. COMMERCIAL TERMS This EoI is **non-commercial** and no remuneration in any way whatsoever shall be paid to the entities submitting their response.

4. DOCUMENTS TO BE SUBMITTED:

    (a) Documents supporting Eligibility Criteria at S.No. 3(I)
    (b) Documents supporting Eligibility Criteria at S.No. 3(II)
    (c) Technical Proposal : Demonstrating understanding of desirable scope of work and details of proposed solution by the interested entity **[Max 05 Page]**
    (d) Estimated Financial Commitment : With Justification of estimated cost, in order to assess the estimated cost of the project. **[Max 01 Page]**

5. SUBMISSION OF PROPOSALS :

MPERC reserves the right to select or reject any of the proposals received against this EoI. Eligible entities who have competence and experience to carry out such work are requested to submit the EOI along with supporting documents through e-mail to **secretary@mperc.nic.in** with a copy to **mpercsecretary@gmail.com** to reach on or before **18:00 Hrs on 22/07/2024**. **No hardcopy of the documents is required to be submitted.**

6. IMPORTANT TIMELINES:

Event	Timeline
Last date of submission of responses	18:00 Hrs on 22/07/2024

7. DESIRABLE SCOPE OF WORK

The Scope of Works of Regulatory Analytics tool for MP Electricity Regulatory Commission is as follows:-

7.1 About Regulatory analytics : Big Data analytics is transforming the way we understand and govern the power sector, by bringing in quantitative decision making. As we progress further into the age of digitalization, data will play an increasingly prominent role. It is, therefore, imperative for regulators to embrace this trend, invest in the necessary technologies and skills, and leverage the power of regulatory analytics to its fullest potential.

7.2 Likely Benefits of Regulatory Analytics

1. <u>Improved regulatory efficiency and effectiveness</u>: to identify and address regulatory issues more quickly and effectively. For example, Regulatory Analytics can be used to monitor power prices, identify potential market power abuses, assess the impact of new regulations, and make proactive regulatory decisions.
2. <u>Support for the clean energy transition</u>: To support the state's clean energy transition by providing insights into the potential impacts of different policies and regulations. For example, Regulatory Analytics can aid in assessment of cost-effectiveness of renewable energy projects, and to identify the best resource mix for generation capacity.
3. <u>Improved customer service</u>: to improve customer service by providing insights into customer needs and preferences. For example, Regulatory Analytics can be used to identify the most common customer complaints, and to track the performance of different customer service initiatives and KPIs (SoP) of Discoms.

7.3 Deliverables

I. Identification of potential data points & their sources which can be utilised for improvised decision making and predictive analysis.
II. Designing a holistic analytical framework for the Commission, which will integrate data from various central/state level power sector entities, covering historical and near real-time data.
III. Sourcing publicly available data from all regulated entities / RLDCs / SLDCs. MPERC may coordinate with entities where access to gated sources of data is required.
IV. Development of a highly automated & interactive big-data analytics web-platform, which will allow the Commission to access and analyse data quickly and easily.
V. Integration of Big-data analytics capability and customisation of analytics platform for the needs of the Commission, which will allow the Commission to identify trends and patterns in data that would otherwise be difficult to see.
VI. Providing a dedicated team of analytics professionals to manage the platform and provide day-to-day (offline) support to the Commission Staff on analytics aspects and in-person meetings as & when required during the contract period.
VII. Providing at least one IT support person at MPERC office for day-to-day technical support.

VIII. Providing on demand analysts/experts as and when required by the Commission.Man-month cost of consultants/experts (pertaining to the proposed areas of intervention) to be specified by the Vendor, which the Commission may avail from time-to-time on need basis.

IX. Designing the platform keeping scalability and flexibility in mind, so that the analytics platform can be adapted to the changing needs of the Commission. In future, the platform should be capable of scale to help leverage Smart meter and AMI data analytics. The platform should also be user-friendly, so that it can be easily used by Commission Staff.

X. Designing the system to have predictive & perspective analytics in the area of electricity regulation. The system should be able to provide the Commission with insights that would otherwise be difficult to obtain.

XI. Suggesting other important measures to help the Commission to use the platform to its full potential.

XII. Suggesting hosting solution.

XIII. Providing all necessary support for deploying the regulatory analytics application on hosting provided by MPERC ensuring strict compliance to security guidelines issued by CERT-in.

XIV. Handing over the source code , data collected to MPERC upon completion of assignment.

XV. Training and orientation session for the concerned Commission's officers. Organising Capacity building within the Commission's officers.

XVI. <u>Support during warranty period</u> : Upon Successful go-live of Regulatory analytics solution , the solution provider must provide support for next one year starting from the date of go-live of the project. During the warranty period, the solution provider will continue to work on change requests, improvement requests without any additional cost. The IT technical support person will continue to provide day to day support at the Commission's office at Bhopal available during the warranty period.

7.4 Areas of Intervention of Regulatory Analytics

I. <u>Power Purchase & Trade/Market Monitoring</u>: To monitor power prices & trades of regulated entities , identify potential market power abuses, benchmark the State Utilities with others across the country and assess the impact of new regulations on trading.

II. <u>Annual Revenue Requirement</u>: to readily provide necessary data & analytics for estimating the annual revenue requirement of power distribution companies (Discoms), and to assess the impact of different pricing structures.

III. <u>Capital Investment Plan & Approval</u>: to aid in assessing the financial viability of capital investment projects, and to identify the best projects to support the state's clean energy transition (data and Resource Adequacy Plan validation).

IV. <u>Framing New Regulations or modifying existing regulations</u>: analytical support to assess the potential impacts of different policies and regulations, and to identify the best way to achieve the state's policy goals.

V. <u>Operational Performance by Discoms/Utilities</u>: to track the operational performance of licensees in respect of employee expenses and capex R&M etc in comparison to consumers and assets.

VI. <u>Customer Service Performance by Discoms/Utilities</u>: to track the performance of Discoms/Utilities in terms of customer service SoPs, and help identify areas where improvements can be made.

VII. Support for Resource Adequacy Planning to assess the state's long-term resource needs,and to identify the best way to meet those needs by way of data analysis.

VIII. <u>To monitor power prices and identify potential market manipulations</u>: Regulatory Analytics can be used to track power prices & trades over time and identify any unusual or unexpected changes. This information can be used to identify potential market power abuses, such as collusion between market participants.

IX. <u>To assess the cost-effectiveness of renewable energy projects</u>: to aid in analysing the costs and benefits of renewable energy projects. This information can be used to identify the most cost-effective renewable energy projects and to assess the impact of these projects on the state's power sector.

X. <u>To track the performance of different customer service initiatives</u>: to track the performance of different customer service initiatives, subject to data sharing by Discoms. This information can be used to identify which initiatives are most effective and to identify areas where improvements can be made.

XI. <u>Identify and address market power abuses</u>: to analyse market data and identify any unusual or unexpected patterns of State regulated entities. This information can be used to identify potential market power abuses, such as collusion between market participants.

XII. <u>Assess the impact of new regulations</u>: to analyse the impact of new regulations on the power sector. This information can be used to identify any unintended consequences of the regulations and to plan as needed.

XIII. <u>Improve customer service</u>: to monitor customer satisfaction and identify areas where customer service can be improved. This information can be used to develop and implement new customer service initiatives.

XIV. <u>Facilitate Planning for the future</u>: To analyse historical data and forecast future demand & generation for electricity. This information can be used to plan for the future and to ensure that the state has the necessary resources to meet its energy needs.