Renel
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Thessaloniki 15.06.2022

Request for Proposal:

«Forecast Model Calibration for SMART Project»

Estimated Value: 100.000,00 € (not included VAT)

[June 2022]

Contents

1 Company Short Description

RENEL (Renel Energy and Power Engineering) provides innovative, holistic solutions for energy and electromechanical projects and services. Emphasizing on the industrial, energy and building sector, RENEL designs and implements cost-effective proposals for organizations, helping to improve business efficiency, increase resilience and promote their business vision. At the same time, the company provides design, construction and maintenance services for low and medium voltage electrical installations and RES projects.

2 SMART Short Description

The Project "Stimulating Metering Applications based on Renewables Technologies" – SMART, aims to create a new mindset, and offer a bold solution and support the creation of a next-generation transmission infrastructure to keep pace with the growth of Electric Vehicles (EVs) and the other emerging demands of society. Basic objective is to create a completely new product and type of energy services, which will consist of RES Production (PVs), Charge Station and storage system while simultaneously will optimize the collaboration between energy storage systems and stochastic forecasting models that will manage at real time speed the demand and generation of charge stations with PV installations.
The SMART Team has diagnosed a major issue that power grids will face soon, having to cope with energy demand peaks due to charging of EVs.
SMART Project will support energy producers, energy suppliers, owners of charging stations and every owners of EVs (V2G) by providing scientific results on the actions they need to perform in order to decide whether they will store energy or sell/buy energy to/from the Grid and when they will directly charge the EVs from their RES Installation. All the above will be based on a user-friendly web application with explanatory diagrams and clear proposals so that everyone is able to manage their demand and generation without having specific energy management expertise.

3 Description of Requested Services

3.1 Service Description

A model will be developed in order to manage real time the energy demand and consumption. The model is adapted to large-scale modeling applications and allows the construction of large and sustainable models that can be easily adapted to different situations. The model will take input from the database established in Activity A (primarily metering and historical demand data) and forecasts for power load demand. The model will be based on established statistical methodologies but may be augmented with (un-)supervised machine learning and/or reinforcement learning – if appropriate. It will also forecast demand response by applying a load loss estimation methodology that calculates the possibility for not satisfying the demand. The model will support the user by calculating the energy values in different scenarios such as, a) store the energy from the grid, b) consume energy from the grid, c) sell energy from the storage system, d) consume energy from the storage system etc. Results will be presented to the user in a friendly web GUI to help him decide how he will manage real time energy production and demand.
Main responsibility of the contractor will be the use of real case scenarios before the finalization of the implementation and the development on the solar charge station.

3.2 Deliverables

- D.1: Best practices in implementing software that optimizes electricity demand – generation in real time.
- D.2: Testing of the Alpha version of the software.
- D.3: Proposal for improvements and addition of extra functionality.
- D.4: Final evaluation of the Software.

3.3 Time plan and Compensation

- D.1: 3 months after the contract signing (25% of the total budget).
- D.2: 6 months after the contract signing (25% of the total budget).
- D.3: 9 months after the contract signing (25% of the total budget).
- D.4: 12 months after the contract signing (25% of the total budget).

4 Project Budget

The submitted quote cannot exceed 100,000 euro (VAT not included).

5 Selection Criteria

The selection criteria are the following:

- Company experience in similar Projects.
- Company expertise in decision support Projects.
- Evaluation of the proposed solution.
- Cost

The received quotes/proposals will be evaluated within 1 week of the closing date.

Non-selected proposals can submit an appeal within 3 days from the time of notification of the evaluation result

All quotes should be submitted electronically to: info@renel.gr until 30/06/2022.

All questions or other inquiries concerning this quote should be addressed to the point of contact for this procurement who is Vicky Kotoula (v.kotoula@renel.gr, 2310528239).