



Thessaloniki 15.06.2022

Request for Proposal:

«IoT System Design for SMART Project»

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

[June 2022]

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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

The contractor will assist RENEL to implement the Intelligent Measurement Collection Network, mature open source software will be used in conjunction with custom software modules, allowing maximum reuse of the results and linear scaling of the system. The storage will take place in spatially enabled databases that support the storage and management of both purely GIS data (e.g. peripheral boundaries) and data having location information (sensor locations) as well as utilization of existing data sources. At this level the PostgreSQL protocol will be used with the PostGIS spatial extension. For the acquisition of data from sensors networks, a layer will be implemented in the architecture, which will serve the collection, transformation and migration of data into platform databases. To this scope, an open-source IoT platform will be used which will allow the acquisition of data from different types of sensors. The platform will act as the central dashboard for data viewing and as a data bank for storing data from sensors. Database content will be made available through indexing, accessing, displaying and downloading services. For this purpose, CKAN (Comprehensive Knowledge Archive Network) a powerful open source software will be used for data management that enabling data access. It will be established a DevOps environment to enable

the continuous development and monitoring of the whole data management infrastructure, so that we can easily and reliably improve the whole system during the entire lifecycle.

3.2 Deliverables

- D.1: Design of the IoT infrastructure and the data exchange schema.
- D.2: Design of the database infrastructure and data management.
- D.3: Support in the IoT system implementation.
- D.4: Support in the IoT System Testing.

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 know how in IoT Projects.
- Evaluation of the proposed IoT design – Architecture.
- 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).