

CLARIFICATIONS FOR THE CHALLENGE “AN INNOVATIVE PORTABLE DEVICE THAT CAN COMMUNICATE VIA POWER LINE COMMUNICATION WITH ENEL’S SMART METERS”

Hardware:

- Q1. We need to have more information about the “Meters and More” protocol, as it can affect our design for PLC module. What kind of international standard do we have to follow in this protocol? How it works? Data Structure, etc. Is this information available for us in this stage, or you will send it to us after? (in the case that we win the competition)
 - A1 All information regarding the Meters and More protocol can be found in: <https://metersandmore.com/>
- Q2. The same issue with the Smart Meter data. We don't have any information about the registers map, data structure, etc. to request the data from it. I believe that we will receive all the details and information regarding the smart meter and its protocol after winning the competition, and you may teach us how they work, right?
 - A2. You can enquire more about how the protocol works at <https://metersandmore.com/>. As part of the solution that you upload for the challenge, you should be able to prove that you know this protocol, have studied it and/or worked with it and have the capabilities to develop a device that acts as a “portable concentrator” and is able to communicate with the meter via the protocol Meters and More. We will then work together during the construction of the prototype in the details.

Software:

- Q3. What kind of interaction the user will have with the screen? In addition to displaying measurement information, what other functions will the device screen have to implement? Application settings, management of smart phone with Bluetooth, calculations or operations...?
 - A3. As part of the solution for this challenge, you should be able to provide a design of the software that will go in the device and the software that will be on the smartphone and how both will interact. For the device, it should be very simple: Bluetooth setting to connect to the smartphone, display diagnostics to connect to the meter using Meters and More and display the main magnitudes (label + value) read from the meter in real time. For the smartphone: username/password authentication for the user, Bluetooth connection, connection diagnostics to the meter including authentication parameters with the meter, displaying the catalog of magnitudes that can be obtained from the meter and querying the meter and show also in the smartphone the label + value.
- Q4. The user will have to log-in in the application. Do we have to connect to your server to validate his/her username and password? or do we have to manage this ourselves?

- A4: For the prototype, the app on the smartphone will authenticate locally usernames and password for specific users. No external access will be required.
- Q5. The Cyber security is a very vast topic, and what we have seen in the technical requirements document is not completed. What kind of international standards do we have to follow for data encryption? It should be respected just for the Android APP, where there is internet connection? We would appreciate if you give us more detail about it.
 - A5. For the prototype, basic username/password authentication and encryption should be provided and general cyber security considerations. No additional requirements are expected.

IP Rights/Market:

- Q6. Who would own the IP after the POC?
 - A6. In the case that you get awarded the price for the OpenInnovability challenge, you would win 10 k€ automatically for the proposal of design of the solution that you have presented. No IP transfer is necessary here. After that, a collaboration contract would be signed with the real cost estimated of building a prototype (MVP) as a proof of concept (POC) to test on the field. **The IPR of this solution for the POC would be owned by ENEL 100%**. Once the prototype has been tested successfully and any improvements documented, a public tender will be launched sharing the IPRs generated during the POC and anyone interested, including any participants in the POC, will be able to participate in the tender.
- Q7. What is the number of devices that would be demanded after the POC?
 - A7. There are more than 2 million smart meters not physically accessible in Spain alone. Most of them are in the older and historical areas of the cities. This device would be used for inspecting mainly those meters in residential and commercial PODs. It is difficult at this point to define the real demand since it also depends on the outcome of the POC. Initial estimations would require a reasonable amount of devices to cover the whole territory of Spain with not physically accessible smart meters. Also, there is a high probability that this device would also be demanded in Italy, Brazil or other countries in Latin America.