EFFICIENCY ASSESSMENT REPORT

WATTPARK

Wattpark is a a smart-grid ready and collaborative solution to charge all electric vehicles.

Solution ID: 10840
Company: Wattpark
Country: France
Export Date: 15.05.2020

ASSESSMENT RESULTS

APPROVED

FEASIBILITY

- Credibility of concept	YES
- Scalability	YES

ENVIRONMENT

- Environmental benefits	YES

PROFITABILITY

- Client's economic incentive	YES
- Seller's profitability	YES

GENERAL COMMENTS FROM THE SOLAR IMPULSE FOUNDATION

The Solution is awarded the Solar Impulse Efficient Solution as:

- **It is fully satisfying the Eligibility Criteria** in terms of: (1) Nature of the Solution namely, physical/financial product, technology, industrial process, or service; (2) Ownership by a Member of the World Alliance for Efficient Solutions; (3) Contribution to at least one of the Sustainable Development Goals (SDGs), namely SDG 6, SDG 7, SDG 9, SDG 11, SDG 12; (4) Minimum maturity level, namely "prototype testing 1:1 in lab" (TRL 6 -7);
- **It is operating in accordance with the Solar Impulse Foundation's ethical position** as expressed by the Membership Agreement;
- **It is compliant with the conditions expressed in the "Liability Waiver Declaration"** signed by the Member in the framework of the labeling process and external reputational check;
- **It has been reviewed and pre-validated** by the Solar Impulse Foundation's team during the pre-screening stage, to ensure minimum standard of quality, in terms of relevance and completeness of the information provided in the application form;
- **It has been assigned and evaluated** according to the official "Label Standards" by three independent Experts with at least five years of Experience in one of the sectors of application of the Solution;
- **It has been assessed and formally validated (accepted)** by three External independent Experts based on the five criteria (credibility of concept, scalability, environmental benefits, client's economic incentive, seller's profitability). In particular, the three independent Experts performed valid assessments, thus provided complete and coherent answers in accordance to the official "Label Standards" and "Assessment Guidelines".
- **It received a minimum of two "YES" answers** from two different Experts on all five criteria, meaning that all the five criteria were satisfied and obtained a majority of "YES". As a result, the Solution does meet the requirements for being awarded the Solar Impulse Efficient Solution Label.

It is important to notice that, the outcome is attributed to the Solution itself and NOT to the entity submitting the Solution (the company).

FEASIBILITY

The Feasibility section is aimed at determining the technical viability of the idea behind the Solution, such as ensuring a Solution is feasible in the real world.
This section is composed of two criteria and it considers: the technical requirements of the proposed Solution and captures its ability to be credible based on a resilient technology or concept (**Criterion 1**) and its potential to be technically scaled up and deployed in the real world (vs. in a laboratory environment) without additional constraints (**Criterion 2**).

EXPERTS REVIEWS

CRITERION 1 - CREDIBILITY OF CONCEPT

Can the technology behind the Solution be constructed and operated as designed?

> **YES**
>
> **First Expert justification -** This solution is based on two main parts: i) the charging system and ii) the application and "servers" behind it. The charging system has a design in line with the relevant standard (IEC61851) for charging electrical vehicles. It will be set-up by qualified electricians who will be responsible for correct installation in their relevant country. The application is similar to many booking apps, with the particularity that it will also manage the access to charging point (by Bluetooth). All this is technically feasible.

> **YES**
>
> **Second Expert justification -** The solution is credible and can be constructed and operated as designed. The solution consists of a hardware device to be installed at the client (parking space owner) premises, and back end/front end software solutions that operate the infrastructure and manage the interactions with the clients and the users (EV owners). All the technology building blocks are well known and mature in the market.

> **YES**
>
> **Third Expert justification -** WattPark is a collaborative slow-charging solution for any electric vehicles. It is composed of a bookable slow charging point (3.5kW, 16A) and a charging service. The charging service is ensured by a mobile application and enables to book any charging point from the WattPark community (WattPark charging points installed in private-parking spaces and open to booking).

CRITERION 2 – SCALABILITY

Is the manufacturing (if a product) or distribution (if a service) of the Solution at scale technically feasible?

> **YES**
>
> **First Expert justification -** The manufacturing of the electrical charging system (the "eye") including all necessary features required to operate it is feasible at scale with the right industrial organization. Target figures of 5000 units per year seem reasonable for a start. The application and software distribution can be easily done through App store / Play store.

> **YES**
>
> **Second Expert justification -** The solution is technically scalable. Both the manufacturing of the charger (product) and the distribution of the WattPark app (service), can be deployed at scale. The charger is built with standard components available in the market (Protection, microcontrollers cable) and therefore, does not rely on a single supplier. The same for the service building blocks, that rely on proven and scalable suppliers in the market (i.e. google cloud)

> **YES**
>
> **Third Expert justification -** WattPark is developing, manufacturing and managing the complete solution. Regarding the development: 1) the charging points are patented and

> 7.2kW charging points are under development, and 2) the mobile application development (first version) is completed and the BETA test phase will be started. The production center is ready to assemble the first batch of production (1,000 units), in spite of limitations. The production capacity will be extended to 5,000 units per year. WattPark sells the charging points through distributors and installers. All servers and digital partners have been selected in order to scale fast to a massive demand.

ENVIRONMENTAL IMPACT

The Environmental Impact section is aimed at determining the impact of the Solution at the different phases of its lifetime: production, transportation and distribution, as well as use and disposal phase.
This section is composed of one criterion and it considers: the potential to enable a direct positive impact (**Criterion 3**) on the environment compared to the mainstream alternative identified – referring to the scope of the following elements: Energy use, CO2 emissions, Water use/materials use, Air quality, Ecosystem preservation.

EXPERTS REVIEWS

CRITERION 3 - ENVIRONMENTAL BENEFITS

Can the Solution deliver an incremental environmental benefit versus a mainstream alternative, considering the lifecycle (production, use and disposal stages) of its value chain?

> **YES**
>
> **First Expert justification -** Mainstream alternative for this solution can be argued: between using thermic transportation, or simply using electric vehicle but a charging station that cannot be shared. In any case, the increase of charging points and parking solution is an enabler for electric. And in comparison with private charging points, the shareable charging point will get used more, putting to better use the resources required to build it.

> **YES**
>
> **Second Expert justification -** Considering that the mainstream alternative is refueling ICE based mobility. WattPark solution delivers an incremental benefit both by implementing a circular lifecycle for the hardware and by enabling the adoption of an electric vehicle. It is expected that the majority of the vehicle charge will happen either at home or in the workplace (with superfast chargers limited to corridors). the solutions allow both the infrastructure availability and the possibility to share with 3rd party users.

> **YES**
>
> **Third Expert justification -** In countries were the electricity mix has a low carbon content (such as France), electromobility has a lower impact on the environment in terms of CO2 emissions compared to conventional cars. Thus charging solutions such as WattPark contribute to reducing the environmental footprint versus a mainstream alternative; to a greater extent when charging points are fed with renewable power.

Additional feedback / advice for the member

First Expert - It may be a good idea to make a full product environmental profile in order to be at the same level of maturity on this as other big manufacturers.

PROFITABILITY

The Profitability section is aimed at determining the capacity of a Solution to deliver an economic incentive for the client, as well as to generate profits for the seller in a short term. This section is composed of two criteria and it considers: The capacity of a Solution to deliver an economic incentive (direct, indirect, or hidden economic savings) for the client (**Criterion 4**) compared to the mainstream alternative and the capacity of the Solution to generate profits for the seller (**Criterion 5**) in the short term, regardless of the marketing strategy and the novelty of the product.

EXPERTS REVIEWS

CRITERION 4 - CLIENT'S ECONOMIC INCENTIVE

Is the total cost of ownership of the Solution lower (or same) compared to the mainstream alternative? Please evaluate this considering potential hidden benefits for society, and foreseeable regulatory changes within 5 years.

> **YES**
>
> **First Expert justification -** Total cost of ownership is lower because the selling price of the charging point is lower than competition. Installation cost would be similar to others (the price paid to the electrician). And the exploitation can bring revenue if there are people who pay to use your charging point.

> **YES**
>
> **Second Expert justification -** The current business model has the potential to deliver economic benefits to the client in the form of a lower total cost of ownership (TCO). Specifically, the solution allows to make available and rent a parking place fitted with an AC charger for electromobility, and therefore monetize the investment in the charging equipment. Actual TCO calculation is very dependent on the local cost of electricity and the location since this will determine the value of the parking place for EV drivers.

> **YES**
>
> **Third Expert justification -** The slow charging point costs 599 EUR (VAT included, without installation) and is rent at an hourly price set by the client (e.g. 5 EUR per hour) with 10% fee on every transaction. If the traffic is high enough (e.g. 10 hours per week), the investment can become profitable quickly.

CRITERION 5 - SELLER'S PROFITABILITY

Could the Solution itself be profitable for the seller within 5 years, with a sale's price at which clients would buy it? Please evaluate this regardless of the marketing strategy and the novelty of the product.

> **YES**
>
> **First Expert justification -** The profitability coming from direct sales of the charging station will exist but fairly low compared to the competition, because of the low selling price. However the profitability coming from the 10% commission on the paying use can bring revenue if the charging stations are really used the way they are designed to be: in a network of paying parking/charging points.

> **YES**
>
> **Second Expert justification -** The target of 5000 units/year installed to reach breakeven and to generate a profit seems reasonable, considering the innovator is aiming to achieve a cost per unit of 250 eur and selling price of 599. The Innovator identified clients willing to buy at that price and I think the company has the potential to be profitable in the next 5 years.

> **YES**

> **Third Expert justification -** Profitability is based on two types of income: 1) selling of charging points (selling price: 499 EUR VAT excl., production cost: 250 EUR VAT excl.), and 2) commission of 10% on every booking placed through the app (like Airbnb). The breakeven point is reached at 5,000 units per year considering revenues of 2.5 MEUR for the selling of charging points, and expenses of 2.5 MEUR including production materials of 0.4 MEUR and operation costs of 2.1 MEUR.

Additional feedback / advice for the member

Second Expert - While the product has different value propositions, please look into your brand, is very similar to the Finnish company parking energy https://www.parkingenergy.com