**Use Case**

**From Smart Grid to Future Marketplace**

**2.2 Targeted Impact**

**Impact for the Grid companies**:

Smart grid technologies have proven to reduce costs concerning generation, outages, operational costs of the transmission and distribution and as well as mitigate carbon dioxide (CO2) emissions. The system analyses power quality on the low voltage lines and can instantly detect faults, protect the main grid from short circuiting, report, locate and solve the faults.

The Block Chain will help these companies to interact more efficiently with their consumers. For instance, the grid operator has new possibilities to manage the grid by providing incentive to individual customers that benefit the network as a whole during heavy use of the network infrastructure.

The Block Chain will improve the security of Smart Grid. Block Chain is decentralized, encrypted and can restrict access to specific users.

**Impact for Electricity users**

An end-user platform creates transparency. The software provides the customer with transparent information on the origin of each kWh of electricity. Every unit of electricity can be traced down to where it is produced whether it is renewable energy or whether it originates from a nuclear power plant for instance. Consumers increasingly want to know that the ethical claims companies make about their services are real. The platform will build trust and interest among customers in managing energy consumption in a more inclusive and resilient manner.

At the same time, customers are requesting more flexibility and access to a wider range of services on offer at anytime. The “electricity wallet” software will give the customer the possibility to choose from which generation plant he/she wants to be supplied. Customer preferences are noted in a Smart Contract and thereafter executed on automatically to guarantee supply with electrical energy from the preferred energy generation plant.

**Impact for Electricity producers**

Producers can choose whether the electricity they generate is to be sold to electricity traders or users, sold via the electricity market or used for their own purposes.

**2.2.2 Consortium Market Access**

LuminGo AB is closely associated with Pamoja Cleantech AB, who manages power generation and sustainable energy projects. Founders have been working together since 2011 in the renewable energy industry and in the emerging markets India & Africa. The founders have raised capital and executed micro-grid and renewable energy projects in several countries globally.

We estimate that there are 1500 utilities worldwide that could benefit from using Smart Grid and Block Chain technologies. From its previous projects, LuminGo has established sales leads in Uganda, India, Pakistan and the Philippines, but also in Europe the solution has attracted interest in Germany and UK. Another segment that our solution can be part of enabling is the peak shaving applications. This market globally is estimated to be around 500 MW, but is expected to grow to 32 GWh and be worth of $19 billion in the next ten years. The analytics market for Energy & Utilities is expected to grow from USD 1.81 Billion in 2016 to USD 3.41 Billion by 2021. The Self-Healing Network Market is roughly USD 1,7 Billion at the moment and is expected to grow to nearly 2,8 Billion by 2022.