

2023-H2020 Project

**“BC for creating decentralized smart grid system – BC4GRID”**

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**Abstract:**

Smart grids enable new market actors, such as households to adjust their consumption, trade the electricity and reap the benefits of flexibility provided to the grid.

Blockchain (BC) technology has a proven impact and emerging usage in different industry sectors. Bearing in mind that the energy sector is going toward more efficient distribution of energy from renewable sources, there is a justified need to include BC in order to gain trust, reliability and efficiency.

In order to ensure the decentralization of the energy supply system, trustworthiness and tradeability of the electricity, BC technology applications play an important role in achieving optimization of the existing processes (like metering and billing), grid management and creating new platforms like peer-to-peer (P2P) energy trading.

In that context, this project proposes an approach and related BC software elements that provide trustworthy, accurate and efficient management of certain issues of energy production, sales and consumption. The proposed solution is beyond state of the art regarding the architectural issues and the particular techniques employed.