ENERGY AND Y TELECOMUNICATION

Sustainable Energy System in telecommunications sector

DESCRIPTION

Currently the awareness of the environmental impact is increasing and the European regulations on energy consumption and CO_2 are more restrictive than few years ago. Particular mention should be made of the telecommunication sector which uses approximately a 2% of the planet's energy consumption and produces a 4% of the total CO_2 emissions worldwide reducing energy consumption in this sector and facing a growing demand of consumers.

It has been designed a new energy system capable to control the radio base stations (RBS) in telecommunication infrastructures in the same geographic region. These are supplied by renewable and non-renewable energy sources increasing their energy efficiency and achieving a zero CO_2 balance.

ADVANTAGES

- It can be adapted in different environments (rural and urban areas) with special interest for isolated areas of the electricity grid.
- Possibility to combine different renewable energy sources (photovoltaic, wind, batteries, fuel cell, biofuel engines, etc.).
- Increasing of the energy efficiency infrastructure by means of solving the fluctuation problems of electricity generation (according to the time of day, the station, etc.) and predicting the weather conditions.
- The probability of failures of the renewable energy system, without taking into account telecommunication equipment, is about 2.98 years.
- Remote control of the working conditions and the electricity consumption in each Radio Base station. If the renewable energy source does not supply enough energy the system acts accordingly.
- It is possible to accumulate the extra produced electricity being stored in batteries or being sold to the electricity grid.

INTELECTUAL PROPERTY

International PCT patent applied.

OBJETIVES

It is sought technological partners **to develop and commercialize** the technology.

CLASSIFICATION

Sector: Telecommunication, Energy

Keywords: renewable energy, zero emissions, Radio Base Station, Energy management.

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