

NETWORKS, MARKETS & PEOPLE - NMP2024

THEMATIC SESSIONS - TS

TS-33

SUSTAINABLE ENERGY SOLUTIONS FOR SMART CITIES AND COMMUNITIES

Keywords: Smart Cities; Sustainable Cities; Sustainable Energy Solution; Renewable Energy; Urban Ecosystem.

Urbanization and population density have made it more challenging for cities to control their energy use and environmental impact. Smart cities are an innovative concept for managing metropolitan areas to increase sustainability and quality of life. Smart cities are urban ecosystems characterized by the widespread use of technology in the management of their resources and from which urban efficiency is promoted in all dimensions.

The transformation of a city that seeks to be smarter must start from the premise of integration with the wishes, interests, and needs - current and potential - of its citizens. Among the main components of a smart city, the energy system plays a vital and core role in the transition towards a sustainable urban life. Furthermore, the utilization of renewable energy sources has been demonstrated as a significant contribution to reducing pollutant emissions and enhancing the quality of the living environment. Therefore, designing the energy systems based on clean and renewable criteria is considered a sustainable solution for smart cities.

Smart cities of the next generation must have an energy source that is both carbon-efficient and energy-efficient. This enables greater flexibility in the usage of renewable energy, as well as substantial gains in energy use efficiency and cost savings. Cities are human and smart when the whole community participates in urban transformation in an ecosystem of innovation, through interaction, collaboration and co-design.

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