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Italiadomani
PIANO NAZIONALE
DI RIPRESA E RESILIENZA

MOST
CENTRO NAZIONALE PER LA MOBILITÀ SOSTENIBILE

Allegato 2 – Aree tematiche per la presentazione dei Progetti

Spoke 13 – Politecnico di Milano

Il presente bando emanato dallo Spoke 13, denominato “SISTEMA DI TRAZIONE ELETTRICA E BATTERIA”, di seguito “Spoke”, è finalizzato al raggiungimento dei seguenti obiettivi:

Bando	Università Spoke	Interventi Ammissibili	Oggetto	Destinatari	Importo
n. 2	Politecnico di Milano Spoke 13	<ul style="list-style-type: none"> Development of algorithms for optimizing the operation of innovative power distribution infrastructures (e.g. microgrids, RESs, BESSs, transport systems) Analysis of the role of digital technologies in enabling smart mobility services. Development of models and simulation methods using machine learning techniques: advanced algorithms to study safety and quality of energy in intelligent distribution systems. Organization of workshops for the dissemination of results. 	Model, simulation and control strategies for smart distribution infrastructures for integrating RESs, BESSs and Electrified Transport Systems.	Università, Centri di Ricerca	€ 360.000,00
n. 2	Politecnico di Milano Spoke 13	<ul style="list-style-type: none"> Development of a toolbox of “self-healing” approaches to address both physical and chemical failures in lithium batteries of Generation 3b and Generation 4a Analysis of both “physical” and “chemical” failures in lithium batteries Developing binders and electrolytes with self-repairing properties. Organization of workshops for the dissemination of results. 	Design of smart functionalities for next generation Li-ion batteries	Università, Centri di Ricerca	€ 240.000,00



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n. 2	Politecnico di Milano Spoke 13	<ul style="list-style-type: none"> Definition of DC power quality indices and standardised methodologies for the traceable measurement of power quality levels. Development of measuring equipment for field monitoring of "compatibility levels" or laboratory testing of "immunity levels" related to PQ phenomena in DC networks Enhancing the efficiency and performance of motors through various optimization techniques and integrated electric-thermal-mechanical and electromagnetic coupled motor model. Generating data sets essential for developing data-driven surrogate models to predict motor behavior and performance. Organization of workshops for the dissemination of results 	Analysis of the electric grid-vehicle system: quality of the DC power supply and optimization of engine performance	Università, Centri di Ricerca	€ 360.000,00
n. 2	Politecnico di Milano Spoke 13	<ul style="list-style-type: none"> Development of an advanced optimization model to optimally plan and manage the production of green fuels/carriers from RESs. Development of advanced management systems for energy carriers to handle variability and enhance the efficiency and reliability of integrated systems supporting the EV charging infrastructure. Definition and implementation of embedded IoT hardware modules that detect data (e.g. vehicle, driver, charging, energy). Organization of workshops for the dissemination of results. 	Development of an innovative digital energy model to support a smart, and sustainable mobility	Università, Centri di Ricerca	€ 240.000,00