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ENEL CUTS RIBBON ON FLEXIBILITY LAB, PROMOTING INNOVATION TOWARDS FLEXIBLE DISTRIBUTION NETWORKS

- *The Flexibility Lab, located in Milan and Bari in Italy, and in Malaga and Barcelona in Spain, will allow the testing of flexibility solutions in a real-world operating environment and ensuring technological neutrality*

Rome, May 26th, 2021 – The Enel Group inaugurates today the Flexibility Lab initiative, which consists in four decentralized test centers featuring highly qualified personnel, advanced systems and state-of-the-art instrumentation that can replicate the real and complex operating conditions of electrical networks, to experiment innovative flexibility solutions.

"*The widespread availability of energy from renewable sources, the development of electric mobility and the increased electrification on the consumption side all call for enhanced grid robustness, in order to respond to the needs of an energy world that is quickly embracing a complete energy transition,*" said **Antonio Cammisecra**, Head of Enel's Global Infrastructure and Networks. "*Through its Flexibility Lab, Enel opens up four centers of excellence that will allow, in the future, all the stakeholders of the emerging flexibility market to collaborate, test, and verify their solutions within a real Distribution Network Operation framework ensuring technological neutrality. By fostering multi-stakeholder collaboration, the Flexibility Lab aims at enhancing the contribution and diffusion of grid connected distributed energy resources, thus supporting the ambitious decarbonization targets on the roadmap to a net-zero future.*"

The Flexibility Lab is a concrete initiative following the call for action made by the European Clean Energy Package (CEP) legislation for Distribution System Operators to foster flexibility services in a transparent and fair market structure, in order to increase the efficiency of the electricity system's management. The experimental locations allow the advanced testing of flexibility solutions within a simulated, emulated or even real interconnected electricity network.

The four Flexibility Lab locations, located in Milan and Bari, in Italy, and in Malaga and Barcelona, in Spain, will focus on different grid flexibility needs: the Italian sites, in Milan and Bari, will respectively specialize on medium and low-voltage energy grid solutions, offering real-time digital simulation and emulation possibilities, stress-testing and system integration of the various flexibility resources (such as distributed generation, electric mobility, storage systems and reactive power compensation systems), network observability and regulation systems.

The Spanish sites in Barcelona and Malaga have the necessary infrastructure to develop pilot projects related to flexibility within a simulated, emulated and even real interconnected power grid. The Barcelona site has the proper conditions to act as a laboratory and to host the Flexibility Control Center, which will supervise the different flexibility pilot projects that will be implemented. This site will also have a fully equipped facility to carry out technological tests related to electric mobility and vehicle-grid integration, as well as demand and generation emulators and storage devices for different technologies.

The Malaga site, which is a member of the European Network of Living Labs (ENoLL), offers an intelligent network infrastructure suitable for carrying out tests under different scenarios, in conditions that are as close as possible to reality. The Malaga living lab is currently hosting the development of the European COORDINET project on flexible grid operation, with the main focus on technical tests on medium and low voltage congestion management with demand-side participation.

Through Global Infrastructure and Networks, Enel positions itself as one of the main Smart Grid operators at global level, distributing electricity through a network of over 2 million kilometers in eight countries and over 74 million business and household end users. The Group is a global leader in smart metering, having installed around 45 million smart meters, with 49 million expected to be installed by 2023, making it a front runner in network digitalization.