

Bachelor Thesis

Bachelor's degree in Industrial Technology Engineering

Analysis of measures to increment the share of renewable energy in distribution grids

Annexes

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Annex A

Publications

A.1 RESOLvD: ICT services and energy storage for increasing renewable hosting capacity in LV distribution grids

The paper has been accepted for publication. However, due to the actual situation it has not been published yet, and it is difficult to know when it will be published. To avoid possible legal issues it has been decided not to add to the annex the full paper before the official publication. Instead this annex only contains the name, the authors and the abstract of the paper.

RESOLvD: ICT services and energy storage for increasing renewable hosting capacity in LV distribution grids

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Abstract— This paper presents the RESOLvD (Renewable penetration levered by efficient low voltage distribution grids) project, that aims to improve the efficiency and the hosting capacity of distribution networks, in a context of highly distributed renewable generation by introducing flexibility (storage management) and control in the low voltage (LV) grid. The main objective of this paper is to collect the most important insights of the RESOLvD Horizon 2020 project by summarizing the needs and expectations of the involved sectors to understand well the context of the project. Then, the RESOLvD technology solution is presented, both the software as well as the hardware solution. Following, the analysis of the current regulation and the upcoming regulation initiatives are presented and analyzed. Finally, as a specific outcome of the project, recommendations to standardizing and regulatory bodies are provided.

Keywords— Smart Grid, ICT, Clean Energy Package, Regulation and Standardization.