



ANM4L

Active Network Management For All

“ Alternatives to traditional network expansion are needed to ensure sustainable development of the power grid

New technologies, methods, and markets are emerging to provide increased flexibility in consumption, generation, and power transfer capacity.

Active Network Management (ANM) is the exploitation of flexible network assets as means to provide secure increase in grid utilisation.

The ANM4L project will develop solutions to enable integration of renewables with the agility required from developments in demand and production

Core Research, Development & Innovation activities of the ANM4L project comprise:

- **Electro Technical solutions:** methods for ANM based control in distribution grids
- **Economic solutions:** methods for decision support and market engagement
- **ICT solutions:** an Integrated Toolbox for planning and operation of distribution grids

ANM4L results will be demonstrated in Sweden and Hungary.

Project Duration

01.12.2019 - 30.11.2022

Project Budget

Total Budget: € 3,100,000.-

Funding: € 2,000,000.-

Project Coordinator

RISE Research Institutes of Sweden (Sweden)

Project Partners

- E.ON Eldistribution (Sweden)
- Lund University (Sweden)
- Borgholm municipality (Sweden)
- E.ON Észak-dunántúli Áramhálózati (Hungary)
- E.ON Solutions (Germany)
- RWTH Aachen University (Germany)
- Lumenaza (Germany)

Project Website

www.anm4l.eu

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Main Objectives

ANM4L aims at demonstrating how innovative active network management solutions can effectively and efficiently increase the integration of renewables in the distribution network, thanks to innovative tools and approaches

ANM4L developments will involve usage of flexible network assets (load, production, and other controllable equipment) to provide secure increase in grid utilisation, considering limitations of the grid to transfer electricity between generation and demand.

Expected Main Results

- **Electro Technical solutions:** advanced control algorithms providing an optimised power system utilisation based on technical adequacy of ANM solutions, considering grid limitations regarding ampacity, voltage and reactive power exchange.
- **Economic solutions:** novel approaches in addressing economic viability of ANM approaches and in considerations for apt financial compensations and market player interaction
- **ICT solutions:** innovative Toolbox including technical and economic methods and models, integrated in DSO planning and operational procedures

Demonstration of toolbox functionalities in distribution networks:

- **Öland, Sweden:** to support increased wind power generation, main challenge related to ampacity of overhead lines transferring wind power to the mainland
- **Gönyü, Hungary:** to support increased distributed solar power generation, main challenge relate to maintaining voltage levels in the low voltage grids in a region with large penetration of PV

Replicability of results possible in local and regional energy systems for DSOs across Europe.

Joint Programming for Flourishing Innovation from Local and Regional Trials towards a Transnational Knowledge Community

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