

## eMIND

### Electric Mobility Integration Düren

The city of Düren has the second highest nitrogen dioxide concentration in NRW with  $58 \mu\text{g}/\text{m}^3$  in 2017 at the measuring location Euskirchener Straße and thus exceeds the limit value of  $40 \mu\text{g}/\text{m}^3$ . Not only to prevent impending bans on diesel driving, the city of Düren is taking various measures to counteract the exceedance of the limit values. The project eMIND - Electric Mobility INtegration Düren - will contribute towards achieving this goal. The project, funded as part of the "Sofortprogramm Saubere Luft" by the Ministry for Economic Affairs and Energy, aims to support the market acceleration of electric mobility in order to replace combustion vehicles and thereby to reduce  $\text{NO}_x$  pollution. The main focus of the project is the electrification of commercial vehicle fleets and private cars through the deployment of commercial and semi-public charging infrastructure. As part of the consortium in this project, RWTH Aachen University is represented by three institutes. Together with other partners, it supports the city of Düren in the development of sustainable concepts for the deployment of charging infrastructure and the acceleration of the municipal mobility transition.

The IFHT works closely with the municipal distribution grid operator Leitungspartner GmbH and the IT start-ups DigiKoo GmbH and envelio GmbH. The common goal is the development of a municipal energy portal. This platform allows the grid operator to conduct scenario-based grid utilization calculations and automated grid connection checks for charging infrastructure by analyzing potential bottlenecks and identifying cost-effective locations for the grid integration. To this end, the IFHT develops methods for the load management of charging infrastructures as well as scenarios of current and future supply tasks and integrates them into the intelligent grid platform together with DigiKoo and envelio.

The Human-Computer Interaction Center (HCIC) will assess charging infrastructure-related hindrances with regard to different user groups and the benefit of different charging and service offerings. The Institute for Urban and Transport Planning (ISB) supports the city of Düren in choosing the location for the charging infrastructure with the help of the site selection model for electric charging infrastructure (STELLA) and determines the substitution potential of conventional vehicles by electric vehicles as well as the resulting reduction potential for  $\text{NO}_x$  emissions in the city of Düren.

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### Project information



#### Partners

- City of Düren
- RWTH Aachen University



#### Facts

- Acronym: eMIND
- Runtime: Aug. 2018 – Sept. 2020

Supported by:



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