

# NEMO

## NOVEL E-MOBILITY GRID MODEL

[www.nemo-project.eu](http://www.nemo-project.eu)

The „Novel E-MObility Grid Model NEMO“ project aims on managing the power grid within the key dimension „strategic research on technical dimensions of the recharging, storage and distribution systems“. The project lasts from May 2012 to April 2015.

**NEMO challenge** - The rapidly rising number of electric vehicles (EVs) will lead to a strong growth in electricity demand. As charging spots and stations will be connected to the existing grid the electricity for the EVs has to be transported by the existing or moderately adapted electricity infrastructure. If charging demand exceeds capacity high investments are needed. Therefore it is important to support grid operators and service providers in assessing the impact of EVs on the power grid and to evaluate possible solutions such as grid extension or load management.

**NEMO key idea** - The project team's goal is to develop the NEMO simulation and optimisation tool suite to assess the impact of a large number of EVs on the power grid. The tool suite will be based on the existing complementary simulation tools PLATOS, SimTOOL and energyPRO from the project's core partners DNV KEMA, Fraunhofer ISE and EMD. These tools will be further extended for grid impact of EVs, and a framework will be developed to integrate these tools in a cooperative suite for impact studies on all grid voltage levels.

**NEMO objectives** • Extension of the complementary grid simulation tools PLATOS, SimTOOL and energyPRO • Design of the NEMO tool suite to show and optimise EV network and market aspects • Validation of the NEMO software framework with representative case studies • Derivation of EV benefits for distributed generation (DG) • Description of the grid impact of fast charging spots and mitigation thereof • Solutions for miscellaneous abnormal charging situations • Market maturity of the cooperative tool suite. The project team will ensure the best level of applicability by collaborating with stakeholders taking their needs and requirements into account. Finally, the project team will be able to offer cooperative services together which none of the partners could offer individually.

>>EV GRID  
IMPACT<<

## PROJECT DATA

Funding/€	Total cost/€	Duration
905.891	1.166.839	36 months

Partners	
	KEMA Nederland B.V., NL
	Fraunhofer Institute for Solar Energy Systems ISE , DE
	EMD International A/S, DK
	Ringkøbing Amts Højspændingsforsyning, DK
	Ringkøbing Fjernvarmeværk A.m.b.a., DK

