

## Smart grid research project launched in Netherlands



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Amsterdam, The Netherlands --- (METERING.COM) --- April 7, 2011 - The Centrum Wiskunde & Informatica (CWI) in Amsterdam and Eindhoven University of Technology (TU/e), in collaboration with KEMA, are to launch a research project on the automatic optimization of capacity planning of electricity networks.

The results will be relevant to policy makers, energy suppliers and network providers.

With the move to smart grids, energy supply will get more complex. Decentralized generation will lead to two-way flows on the grid, with peaks and drops in the load. In addition, private parties undertaking energy storage will join the energy market. These developments require a new approach to capacity planning and a redesign of the network, and intelligent software will need to optimize automatically the capacity planning between all the components in the network – cables, transformers, batteries, etc. – and make decisions on the availability, location and cost of the components.

The research takes into account environmental objectives and geographical and economical aspects.

“Traditional energy supply takes place by means of a top-down approach,” said Han La Poutré, head of the Multi-Agent and Adaptive Computation research group at CWI. “The future energy supply is much more complex and with many players and systems it is multi-objective, and advanced software is essential in this process.”

TU/e will study the modeling of components and the future energy supply and demand, and CWI and KEMA will focus on programming the optimization software. As part of this, CWI is to develop advanced evolutionary algorithms, and will design a simulation system in which economic issues, such as mechanisms to control supply and demand, are included.

The research is being supported by the Smart Energy Systems program (SES) from NWO, and is aimed at advancing the role of ICT in contributing to increased sustainability of energy.