



Showcase Hamburg, Germany

What makes a Smart Grid profitable?

The Hamburg showcase aims to explore how harbor-specific facilities and infrastructure may be included as active elements in a smart electricity grid. Facilities and typical properties located in the harbor area are examined in a property analysis in order to identify relevant load-shift potentials. Different options for commercially exploiting these potentials are then assessed – for example, electricity trading markets like the European Energy Exchange and markets for balancing energy. In addition, legal and organizational barriers to their implementation are analyzed. To demonstrate feasibility and calculate possible revenues, simulation-backed case studies are carried out. They cover cold storage facilities, industrial production plants and pools of harbor infrastructure. Simulation results are then reviewed together with property ow-



Photo: Jo Schmalitz

ners, electricity providers and retailers of balancing energy in order to develop viable business cases. As a synthesis, technical and economic benefits of a possible virtual power plant within the harbor area will be assessed and communicated to decision-makers and other stakeholders. National and transnational policy recommendations are derived in order to speed up smart grid development in Hamburg and elsewhere.

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