

# Press Release

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## Research towards the Energy Changeover

### Fraunhofer ISE at the Hanover Trade Fair

The new energy changeover is in the making. In Germany political boundary conditions have been established to protect the climate and to move our energy system away from fossil and nuclear fuels and towards more efficiency and renewable energy sources. Worldwide Germany holds a leading position in developing the technology required for such an energy transition. At the Hanover Trade Fair 2012, the Fraunhofer Institute for Solar Energy Systems ISE will demonstrate its wide breadth of R&D in the areas of energy supply, energy storage and energy management as well as efficiency technologies for the building sector:

#### **“Sustainability” – Joint booth of the Fraunhofer-Gesellschaft, Hall 2**

- Paraffin capsules as heat/cold storage – intelligent building materials with phase change material
- Dye solar modules for the aesthetic design in power-producing façades
- PTedge Module – new technologies for silicon solar modules reduces production costs
- Smart Metering – intelligent energy management systems
- Highest efficiency inverters for PV systems
- Bi-directional fast charging device for electric vehicles

#### **“Metropolitan Solutions” Joint booth of the Fraunhofer-Gesellschaft, Hall 26**

- First high-rise worldwide renovated to meet passive house standards

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- Building-integrated PV – innovative semi-transparent façade element. Combines solar energy production with solar and glare protection
- Electric Mobility – charging station supplied by solar power

## **Fraunhofer Alliance Energy, Hall 13**

- Efficient and safe storage for renewable power – Li-ion batteries
- Hydrogen as storage – PEM electrolyser
- Elink – Energy management for Smart Homes
- Feed solar power more efficiently into the grid – compact PV inverter with SiC components

## **Joint Booth Hydrogen and Fuel Cells, Hall 27**

- Hydrogen Generation – Electrolyser technology
- PEM Fuel Cells
- Test Lab Fuel Cells
- Energy Storage – Redox Flow Batteries

## **Information material:**

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## **About Fraunhofer ISE**

With a staff of 1100, the Fraunhofer Institute for Solar Energy Systems ISE in Freiburg, is the largest solar energy research institute in Europe. It creates the technological foundation for supplying energy efficiently and on an environmentally sound basis in industrialized, threshold and developing countries. With its eight different business areas, the Institute develops a wide-range of materials, components, systems and processes. Fraunhofer ISE also has several accredited test facilities which provide services.

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