

AT DOE, SEGIS IS

PUTTING THE SUN TO WORK.



Driven by climate change and rising energy prices, a DOE effort known as SEGIS (Solar Energy Grid Integration Systems) is working toward an ultimate goal of making solar energy available to homes and businesses at scale.



U.S. Department of Energy Energy Efficiency and Renewable Energy

Bringing you a prosperous future where energy is clean, abundant, reliable, and affordable

For more information contact:

EERE Information Center
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A Strong Energy Portfolio for a Strong America.

Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.

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THE PROMISE OF SOLAR ENERGY

IS BOUNDLESS.



A SMARTER ELECTRIC GRID

DELIVERS ON THAT PROMISE.



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A SMARTER GRID CAN **MAKE IT ALL POSSIBLE.**

The SEGIS effort involves development of intelligent devices that are designed to connect and operate a significantly high number of photovoltaic (PV) systems with the utility grid. Advanced, integrated inverter/controllers will be the enabling technology to maximize the benefits of residential and commercial solar energy systems, both to the systems' owners and to the utility distribution network as a whole. The value of the energy provided by these "solar systems" will increase through advanced communication interfaces and controls. The reliability of electrical service, both for solar and non-solar customers, will increase correspondingly.

SEGIS products will be developed for the utility grid of today which was designed for one-way power flow, and for the grid of tomorrow – the Smart Grid – which will seamlessly accommodate two-way power flows as required by wide-scale deployment of solar and other distributed resources.



WHAT IS **THE SMART GRID?**

Very often, it depends upon whom you ask. To put it simply, the Smart Grid applies technologies similar to those that have enabled the internet to the utility and the electric grid. As such, it provides the interface through which solar energy – and all renewables – can be fully rationalized and used by the grid.

Currently, many visions are being developed by different entities as to what a Smart Grid is and isn't. DOE, with its explicit charge to modernize our nation's electric grid and its leadership role in the Federal Smart Grid Task Force, is well positioned to facilitate convergence of all of these valuable visions.



GET DOE'S BOOK ON **THE SMART GRID.**



The Department has just released "The Smart Grid: An Introduction," a 48-page book that outlines the promise and power of a smarter grid, defining it as an enabling engine that positively addresses every relevant issue – from reliability to renewables, from consumer choice to climate change. Written in layman's terms, it promises to be a valuable tool for building awareness of the Smart Grid as the single best option for addressing our nation's myriad energy challenges. (SEGIS can be found on page 16.)

DEMAND YOUR COPY OF THE SMART GRID: AN INTRODUCTION.

To learn more about the effort to advance the Smart Grid, contact DOE's Director of the Federal Smart Grid Task Force, Eric Lightner, at Eric.Lightner@hq.doe.gov.

