Smart Grid
Power to the People!

Argonne NATIONAL LABORATORY
Transportation Technology R&D Center

Did you know...

Electricity produced for the U.S. power grid is responsible for 38 percent of our country's carbon dioxide (CO_2) emissions. That's almost double the amount of CO_2 emissions from all the cars in the U.S. (20 percent).

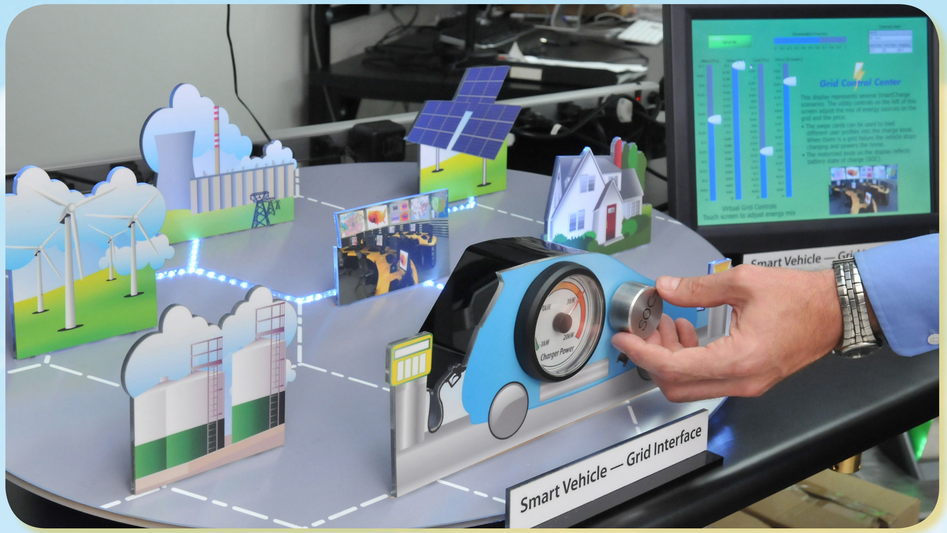
Opportunity

The smart grid concept will allow you to choose where your electricity comes from and when you want it delivered.
By incorporating communication into the grid, consumers will be able choose and buy energy based on price and energy source.

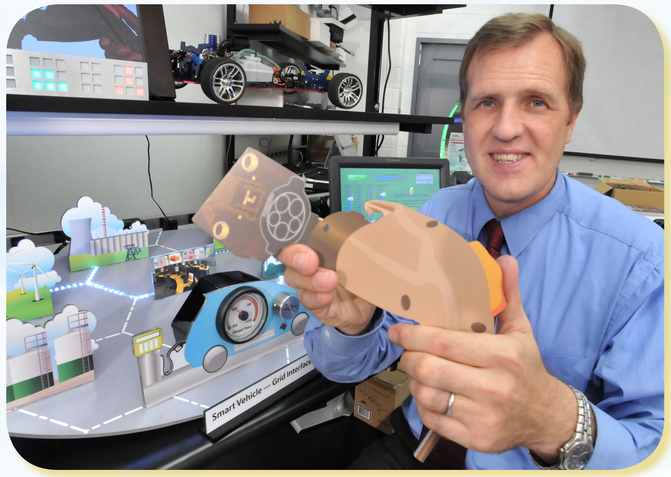
A smart electrical grid is a key part of President Obama's plan to lower energy costs for consumers, achieve energy independence, and reduce emissions. This will become increasingly important with the emergence of plug-in hybrid electric vehicles (PHEVs), creating an added strain on the U.S. electricity system.

Argonne's Solution

An important component of integrating PHEVs into the grid will be the vehicle's plug. Argonne is part of an international committee working to develop the Society of Automotive Engineers' (SAE) new connection standard called J-1772. The group is defining this standard so manufacturers can build compatible connectors and vehicle sockets that will support both charging and two-way communication.



Argonne created this interactive model to demonstrate how the smart grid could work with different kinds of consumers.



Argonne engineer Ted Bohn holds a mock-up of a PHEV plug based on the J-1772 connection standard.

Potential Benefits

The smart grid gives consumers the opportunity to save money and reduce their environmental impact. It could also help utilities operate their power systems more efficiently and prevent blackouts. Additionally, the development of the grid is expected to create an abundance of new jobs.

Visit www.transportation.anl.gov to learn more!

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U.S. DEPARTMENT OF ENERGY

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