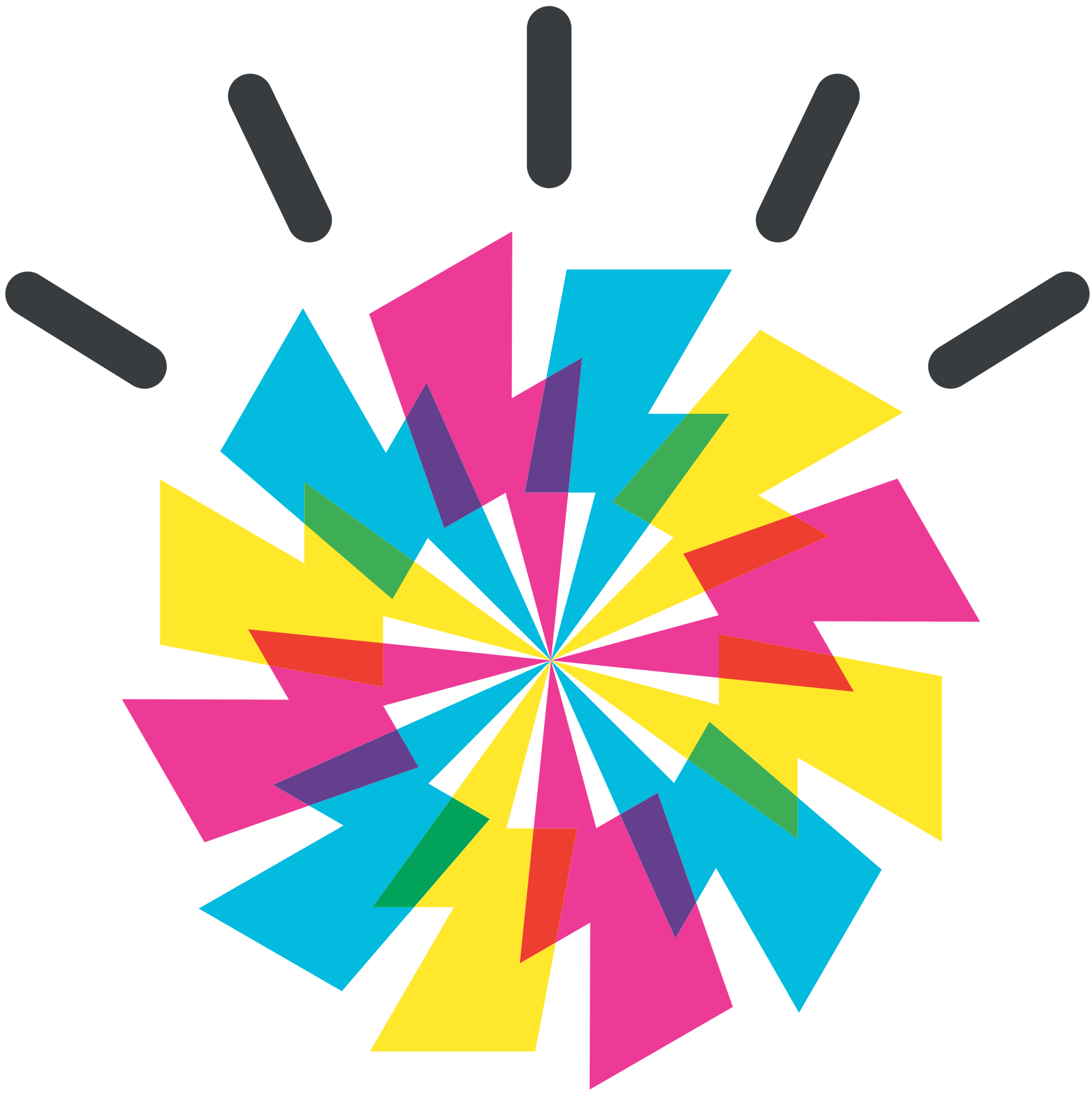

Smarter power for a smarter planet.

For most of the last century, our electrical grids were a symbol of progress. The inexpensive, abundant power they brought changed the way the world worked–filling homes, streets, businesses, towns and cities with energy.

But today's electrical grids reflect a time when energy was cheap, their impact on the natural environment wasn't a priority and consumers weren't even part of the equation. Back then, the power system could be centralized, closely managed and supplied by a relatively small number of large power plants. It was designed to distribute power in one direction only–not to manage a dynamic global network of energy supply and demand.

As a result of inefficiencies in this system, the world's creation and distribution of electric power is now incredibly wasteful. With little or no intelligence to balance loads or monitor power flows, enough electricity is lost annually to power India, Germany and Canada for an entire year. If the U.S. grid alone were just 5% more efficient, it would be like permanently eliminating the fuel and greenhouse gas emissions from 53 million cars. Billions of dollars are wasted generating energy that never reaches a single lightbulb.

Fortunately, our energy can be made smart. It can be managed like the complex global system it is.

We can now instrument everything from the meter in the home to the turbines in the plants to the network itself. In fact, the intelligent utility system actually looks a lot more like the Internet than like a traditional grid. It can be linked to thousands of power sources–including climate-friendly ones, such as wind and solar. All of this instrumentation then generates new data, which advanced analytics can turn into insight, so that better decisions can be made in real time. Decisions by individuals and businesses on how they can consume more efficiently. Decisions by utility companies on how they can better manage delivery and balance loads. Decisions by governments and societies on how to preserve our environment. The whole system can become more efficient, reliable, adaptive...smart.

Smart grid projects are already helping consumers save 10% on their bills and are reducing peak demand by 15%. Imagine the potential savings when this is scaled to include companies, government agencies and universities. And imagine the economic stimulus that an investment in smarter grids could provide in America's current crisis.

Actually, there's no need for imagination. The investment now being shaped in Washington could yield almost a quarter of a million jobs in digitizing the grid and in related industries such as alternative energy and automotive. It could enable new forms of industrial innovation by creating exportable skills, resources and technology.

IBM scientists and industry experts are working on smart energy solutions around the world. We're working with utility companies globally to accelerate the adoption of smart grids to help make them more reliable and give customers better usage information. We're working on seven of the world's ten largest automated meter management projects. We're even exploring how to turn millions of future electric vehicles into a distributed storage system, so excess power can be harnessed and returned to the system.

Our electrical grids can be a symbol of progress again–if we imbue the entire system with intelligence. And we can. Let's build a smarter planet. Join us and see what others are thinking, at **ibm.com**/think

THINK