

# the third industrial revolution

Jeremy Rifkin explores how Internet technology and renewable energy are merging to create a powerful "Third Industrial Revolution."

The price of energy and food is climbing, unemployment remains high, the housing market has tanked, consumer and government debt is soaring, and the recovery is slowing. Facing the prospect of a second collapse of the global economy, humanity is desperate for a sustainable economic game plan to take us into the future. Here, Jeremy Rifkin explores how Internet technology and renewable energy are merging to create a powerful "Third Industrial Revolution." He asks us to imagine hundreds of millions of people producing their own green energy in their homes, offices, and factories, and sharing it with each other in an "energy internet," just like we now create and share information online.

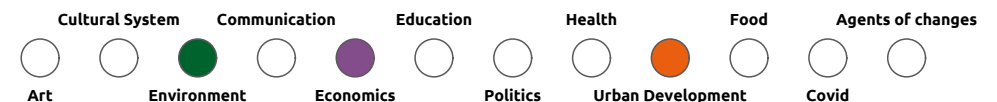
## The Five Pillars of the Third Industrial Revolution

Rifkin describes how the five pillars of the Third Industrial Revolution will create thousands of businesses and millions of jobs, and usher in a fundamental reordering of human relationships, from hierarchical to lateral power, that will impact the way we conduct business, govern society, educate our children, and engage in civic life. The five pillars of the Third Industrial Revolution are (1) shifting to renewable energy; (2) transforming the building stock of every continent into green micro—"power plants to collect renewable energies on-site; (3) deploying hydrogen and other storage technologies in every building and throughout the infrastructure to store intermittent energies; (4) using Internet technology to transform the power grid of every continent into an energy internet that acts just like the Internet (when millions of buildings are generating a small amount of renewable energy locally, on-site, they can sell surplus green electricity back to the grid and share it with their continental neighbors); and (5) transitioning the transport fleet to electric plug-in and fuel cell vehicles that can buy and sell green electricity on a smart, continental, interactive power grid.

The creation of a renewable energy regime, loaded by buildings, partially stored in the form of hydrogen, distributed via a green electricity Internet, and connected to plug-in, zero-emission transport, opens the door to a Third Industrial Revolution. The entire system is interactive, integrated, and seamless. When these five pillars come together, they make up an indivisible technological platform—"an emergent system whose properties and functions are qualitatively different from the sum of its parts. In other words, the synergies between the pillars create a new economic paradigm that can transform the world.

## Big Data and the Third Industrial Revolution

The intelligent TIR infrastructure—"the first smart infrastructure in history"—will connect everyone and everything in a seamless network. People, machines, natural resources, production lines, logistics networks, consumption habits, recycling flows, and virtually every other aspect of economic and social life will be connected via sensors and software to the TIR platform, continually feeding Big Data to every node—"businesses, homes, vehicles, etc."—moment to moment in real time. The Big Data, in turn, will be analyzed with advanced analytics, transformed into predictive algorithms, and programmed into automated systems, to improve thermodynamic efficiencies, dramatically increase productivity, and reduce the marginal cost of producing and delivering a full range of goods and



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