

Productivity, Electricity, Science: Powering a Green Future

Science and technology offer the opportunity for environmental and social improvement, while providing the higher levels of services and goods that people seek. Notwithstanding efficiency gains, markets for electricity will grow because of the multiplication of population and devices and the deeper penetration of the transport sector.

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The struggle for survival drives enterprises to use resources more productively. Managers recognize that this truth, almost too trifling to mention, explains the past and determines the future of the electric power industry. What we have not always appreciated is the contribution productivity growth can make to solving the environmental problem.

In this article I will show the green power of long-run productivity growth. In so doing, I will make evident the most promising strategy for the energy system,

consistent with its historical evolution and with social needs and wants. The necessity and opportunities for electricity pervade the strategy.

The context here is the economic quest, driven by competition. As individuals, firms and nations, and therefore as a global collectivity, we are always striving to squeeze more value from a given unit of land, water, material, and energy—and labor. Sometimes the squeeze tightens on one resource, sometimes another. It depends on relative prices and technical possibilities.

