

# ENERGY IN 2020

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By 2020, humankind needs to be solidly on to the path of a low-carbon society — one dominated by efficient and clean energy technologies. It is essential to put a price on carbon emissions, through either well-managed cap-and-trade schemes or carbon taxes. Creative financing will also be needed so that homes and businesses can buy into energy efficiency and renewable energy services without having to pay up front. An example is the Property-Assessed Clean Energy financing mechanism, which my lab is helping to design and promote (<http://rael.berkeley.edu/financing>).

Government funding of research is crucial. Several renewable technologies are ready for explosive growth. Energy-efficiency targets could help to reduce demand by encouraging innovations such as net-positive-energy buildings and electric vehicles. Research into solar energy — in particular how to store and distribute it efficiently — can address needs in rich and poor communities alike. Deployed widely, these kinds of solutions and the development of a smart grid would mean that by 2020 the world would be on the way to an energy system in which solar, wind, nuclear, geothermal and hydroelectric power will supply more than 80% of electricity.