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WHAT DOES AN ENERGY TRANSITION LOOK LIKE?

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Energy transitions are no simple flip of a new “switch” following the discovery or adoption of new sources of power. For instance, from 1890 and into the 1910s, America’s roadways were a wild laboratory of various transportation devices. From the horse buggy to the bicycle, from the Stanley Steamer to the Model T, devices serving the same purpose including the first electric cars—derived their energy from different sources. Competition and influence determined that the internal-combustion engine would power autos of the future. However, this choice was reinforced and supported by public will, political decisions and laws such as zoning. Americans determined that the 20th century would be powered by fossil fuels such as petroleum and the marketplace provided them the flexibility to create a landscape of drive-thrus and filling stations. Similarly, humans have cycled through other sources of energy, ranging from coal to nuclear. In the case of illumination, we see transitions from 1850-1900 to light homes and public places, including oils rent from the fat of animals and whales as well as from coal and petroleum that finally led to electricity, which was largely generated from burning fossil fuels. Cheap electricity joined with gasoline to produce excessive amounts of power and flexibility that changed the human condition in the 20th century. Each energy source marked an innovation in scale and scope. Fossil fuels allowed us to do more work to accomplish more than ever before in human history. Now, an energy transition beckons that promises not necessarily more power but a more sustainable, smarter future. In short, this revolution is not just in the sources of power, it is also in how we *think* about energy.

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