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Finding Future Energy Today

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We live in a world filled with energy. Our cars use energy; our homes use energy; even our minds use energy. We are constantly looking for new ways to extract energy from our surroundings. At some point we have to ask ourselves, how can we find our most efficient energy in the future?

Right now, our future is uncertain. The markets behind our energy sources are changing rapidly. Recent developments in technology have made it possible to find energy in the most surprising sources. We can utilize energy from the sun and wind. With this, we have opened our doors to a free, clean, and virtually infinite energy source. This is what all progressive economies strive to achieve.

In a truly optimal economy, abundant and inexpensive resources are used without waste and pollution. As an American citizen, I wonder why we are not taking more strides toward this goal. Maximizing the efficiencies of our technologies, in addition to harnessing clean and abundant energy from our sun, guides us to a prosperous society and economic equilibrium.

What are the obstacles that keep us from this ideal economy? Our nation's infrastructure is not designed to run on electricity alone, and we have a large dependence on oil. Fossil fuels are a cheap and energy dense resource that has driven our growth for decades. Most of our current policies are in favor of the production and utilization of fossil fuels.

The cost of oil production is much more than we pay out of our pockets. Oil also requires payment in the form of human health. Burning fossil fuel and drilling natural gas change the chemistry of our world and expose human lives to dangerous chemicals. These externalities should be accounted for when determining the appropriate price of oil. To truly have an optimal market, a carbon tax should be implemented that accounts for the dollar value of these negative externalities.

As a country that was founded on coal and oil, most of our leaders tend to favor policies that keep these resources around. We are currently investing in extracting natural gas. Research shows that this will boost our economy and make us a leading exporter of synthetic oil in the next 25 years. Why invest in renewable technology when you're sitting on a natural gas reservoir?

The answer is very simple. These methods of extracting energy will not get us to our goal. Yes, having natural gas will boost our economy for a short time. Yes, exporting this fuel will keep gas prices down…for now. Will these techniques give us a free, clean, and unlimited source of energy? NO. The billions of dollars that we are spending on fossil fuel research, if redirected to renewable technology research, could accelerate our societal progress and lead us to our ideal economy.

Many criticize renewable technology because it requires high upfront costs. However, as more money is directed to these projects, we will be able to provide America with inexpensive energy that will save money. The energy saved over time will far surpass the upfront costs.

What is the future of energy technology? Carbon nanotubing in solar panels. This brilliantly engineered nanotechnology is being developed right now at the University of Wisconsin –

Madison. Scientists have created a thin transparent film that absorbs solar energy and is composed of only carbon. They are working on slimming it down to its optimal thickness of a few atoms thick. Their theorized efficiency is 75%. This amazing technology will be inexpensive and could easily cover large areas like windows or rooftops .

A major obstacle we must overcome is energy storage. Solar panels are not feasible for our primary energy source because we have no way to ration our energy for dark periods. However, Donald Sadoway, a materials chemist at MIT, is working on a new battery design that could store enough energy to provide consistent electricity during the night and cloudy days. By using molten metal and molten salts, this battery will be able to operate at currents that are ten times higher than any other battery ever seen. These new technologies could redefine our definition of energy stability.

How can we find our future energy today? Rather than investing in technologies that are tangential to our goal, we should dedicate our funds to making renewables cheaper. We need to redesign our infrastructure to run on electricity instead of fossil fuels. Adding a carbon tax will help to discourage companies from funding technology that distracts us from our goal and will give them an incentive to redesign their machinery. As a society, we need to become aware of the fact that increasing the efficiency of our technology and investing money in free, clean, and abundant energy sources will save us enormous amounts of money in the long term. Why spend billions of dollars developing our fossil fuel sources when we could invest it in our future. We will find our future energy when we begin to truly invest in our long term success.

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