

The American Energy Addiction
The Use and Overuse of Energy in the U.S.

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The United States uses more energy than any other country in the world, especially in the form of crude oil, yet we produce only a quarter of what we use here on U.S. soil. This leads to a dependence on foreign countries to provide the oil we need to sustain our standard of living. This is coupled with an ever increasing demand for more oil in the U.S., while production in the country decreases. Meanwhile many developing countries, such as China and India, are increasing their own demands, which drive worldwide oil prices skyward. All of this is compounded by a distinctly American refusal to risk a decreased standard of living via conservation of energy.

In the United States of America, over twenty million barrels of petroleum were consumed every day in the year 2005¹. During this same year only about eight million barrels were produced in the country². Thankfully, this huge disparity between production and consumption is not as prevalent in other forms of energy. The U.S. produced almost as much coal as it used in

¹ United States, World Energy Consumption in Standard U.S. Physical Units, Table 1.2

² United States, World Energy Production in Standard U.S. Physical Units, Table 2.2

2005, only lacking fifty short tons per day to break even. Also only about three trillion cubic feet of natural gas is used that is not produced natively. Additionally about one hundred billion kilowatt hours of nuclear energy was produced that could then be sold to other countries.³ However, this does not even come close to correcting the dependence on foreign energy sources. With this information it is clear that our nation is too dependent on foreign production of crude oil.

Unfortunately, the U.S. is not currently in a position to drastically reduce liquid fuel consumption. Liquid fuels, such as gasoline and diesel, account for roughly forty percent of all energy production in the United States. What makes a transition away from liquid fuels particularly difficult is that over two-thirds of this total is used in the transportation sector. The use of liquid fuels is expected to increase by seventeen percent before 2030, with increased demands for transportation via domestic vehicles, trucking, and airline travel⁴. With so many separate consumers of liquid fuels, it is very difficult to transition away from them.

Demand for all forms of energy is expected to increase through 2030, especially in the U.S. In the United States, electricity is expected to maintain an upward trend that it has held for the last twenty years, driven by increasing demands in both residential and commercial sectors. This increase in demand for electricity will likely increase production of coal, as current environmental standards favor coal power plants⁵. Demand for liquid fuels will increase as the increases in income, population, and economic output increases travel. This is expected to offset any technological advances in efficiency that are made in the next thirty years⁶. Use of renewable resources is also expected to increase significantly, although it will still be used very little by the

³ United States, World Energy Production in Standard U.S. Physical Units, Table 2.5 and United States, World Energy Consumption in Standard U.S. Physical Units, Table 1.4

⁴ United States, Annual Energy Outlook 2008 With Projections to 2008, Section 2, paragraph 2

⁵ United States, Annual Energy Outlook 2008 With Projections to 2008, Section 2, Paragraph 1

⁶ United States, Annual Energy Outlook 2008 With Projections to 2008, Section 2

commercial and residential sectors. The real driving force for the increase in energy demands is the desire of individual citizens to advance their own standard of living. This desire, as well as increasing wealth of the general populous, leads to a growth in consumption that outpaces technological advances in efficiency, and this creates an overall increase in demand.

Across the entire world, energy demand is expected to double by 2030⁷. This is due in no small part to increasing energy needs in India and China. These two countries have grown from a combined seven percent share of all energy use in 1980, to an eighteen percent share in 2005, and this energy use is expected to double by 2030 leaving them with one-quarter of all energy use in the world⁸. This is compounded by increased demand from African and Middle Eastern countries that are expected to rise by as much as sixty percent in the next twenty-five years. This dramatic swell in demand is caused by many relatively poor countries attempting to achieve a higher standard of living via increased energy use. They do this because they cannot afford a massive investment in more efficient technologies. Instead they attempt to follow the example the United States has left, and increase their energy use until they achieve the same standard of living. This desire for a better life, as well as a poor example left by the United States, leads to a drastic expansion in worldwide energy needs.

The most major roadblock that stands in the way of a reduction of energy use by American citizens is misinformation. People widely believe that one cannot reduce energy use without reducing his or her own standard of living. This is simply not true. The United States uses about three hundred and forty million British thermal units per person⁹. This number in comparison to countries with similar living standards is out of proportion. The United Kingdom, for example, has a living standard fairly close to that of the United States, yet uses only half as

⁷ United States, International Energy Outlook 2008, ch. 1

⁸ United States, International Energy Outlook 2008, ch. 1

⁹ United States, World Consumption in British Thermal Units, Table E.1c

much energy per person. In fact if we use the human development index to determine standard of living, we find that Australia outranks us by nine places¹⁰, despite using only sixty-five percent of our energy per person. This illustrates the truth that a person's standard of living is not directly related to the amount of energy he or she uses. Instead an equal or higher standard of living can be achieved by investing money that would otherwise be spent on energy on developing and proliferating more efficient transportation systems, buildings, and industrial processes.

All of these things, when taken as a whole, form a dire picture. They vividly display the impact of the current American life on world energy use. They also demonstrate the important role of the United States in leading the world to a more efficient and sustainable future. Countries that are developing quickly, such as India and China, are looking at the U.S. for guidance, and this is a time when major technological advances could seriously alter the world for the better. It is now more important than ever to both increase production of energy as well as develop more efficient systems for using that energy. The actions of the United States at this time will likely have more impact than any other time in recent history.

¹⁰ Human Development Reports, Statistics page

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