

Montana Petroleum Association

**The Supply, Demand, and
Conservation of
Coal, Oil, and Gas**

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With the vast amount of media sources informing Americans, the majority of people have opinions or knowledge based off bias. The issue of energy demand and oil supply is often critically judged based on this biased media. By informing the public of factual information, rather than media-based, we can increase Montana's knowledge of energy issues that affect us daily.

The energy future of America is undetermined. Some critics say that coal, oil, and gas should not be a part of America's future. During the 1980's, oil, gas, and coal contributed to approximately 87% of the United State's total energy needs. In the year 2000, coal, oil, and natural gas accounted for 86 quadrillion B⁻ in US energy consumption, which was about 82% of America's total energy needs. As that number of quadrillion B⁻ is expected to grow by the year 2020, the percentage of energy use from coal, gas, and oil is projected to be 87%.¹ The energy economy has evolved from wood (1800's), to coal, to oil, to natural gas, and hydrogen is envisioned for the future. The carbon content has gone from high to potentially zero, respectively. From wood to hydrogen, it has been increasingly clean, energy intensive, technologically sophisticated, and distributed.² America has become dependent upon natural gases, oil, and coal and if our consumption progresses at the rate it currently is, the resources will run out. Currently, the "big oil" only controls about 6% of the world's known oil reserves.³ We need to conserve these resources and use them more effectively.

The demand of oil and refined projects doesn't help us in trying to conserve the products. The Energy Information Administration "expects US production and consumption of natural gas to increase over the next 20 years, reflection increased availability of resources and higher demand for electric power generation."⁴ The United

States is expected to have 118 quadrillion B⁷ in energy consumption per year by 2020.¹ China is producing 3.724 million barrels per day and India is producing 810,000 barrels per day.⁵ China and India account for approximately 5% of the world's oil production.⁶ "From now to 2020, world oil consumption will rise by about 60%." By 2020, the consumption rate of China is expected to grow by 7.5% a year and India is projected to grow by 5.5% per year. China and India have the highest rate of growth in oil currently and are expected to grow exponentially, unless something is done to prevent it.⁷ As Dr. Michael Economides discussed in his presentation, "If China were to use the same per capita consumption as the US, it would require 80 million barrels per day (more than the entire world use!)".⁸ China and India have progressed to a more modernized style of living, comparable to the United States.

While China and India are increasing rapidly in their oil consumption rate, America uses more energy than anyone else. Our oil consumption per capita is at approximately 28 barrels per year. If we were to even cut that consumption per year in half, we would be comparable to countries such as Spain, Germany, France, Italy, and Britain. Their economies are modernized like America; however, they conserve energy and live much more reserved than we do in the United States. For instance, these countries use more public transportation than America does. Many Americans take cars with few passengers, whereas Europeans are more likely to use buses, trains, bikes or barges. If America were to cut back on individual transportation and use subways, trains, buses, etc, we would cut back considerably on oil consumption and would be able to conserve oil, gas, and coal. Living in Montana would be much more difficult to transition to this style of lifestyle due to the vast land between some cities, but in large cities this would be

a realistic transition. When traveling to the larger cities, like Seattle, it would help with traffic, accidents, and air pollution to reduce car use. Americans can also drive more energy efficient vehicles to conserve energy. Conservation is critical in the energy solution because there is only a limited amount of oil reserves, and by conserving using ways such as public transportation, we can extend the amount of time oil, coal, and natural gases are available. Most energy sectors, including motor vehicles, motor vehicle parts, iron, steel, metal casting, etc. would be impacted by this decision because they would be forced to build energy-efficient cars that Americans would prefer. A report by the Environmental Protection Agency claimed that sectors, including those listed above, “represent 85% of the industrial energy use in the United States”.⁹

While these are some ways to help our energy issue, other ways to conserve oil would be to turn off lights when leaving rooms, buy energy efficient products, and only keep electricity running when necessary. By making these adjustments to our energy demand and supply, we could help conserve the oil and gas supply. All Americans need to do their part to conserve energy and keep the United States running.

¹ Slide #6 on Michael J. Economides Presentation

² Slide #9 on Michael J. Economides Presentation

³ Energy Biosciences Institute;

<http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2008/02/01/BUMDUOD7S.DTL>

⁴ Energy Information Administration

<http://www.icis.com/Articles/2008/12/17/9179969/us-crude-use-to-be-flat-over-next-20-years-eia.html>

⁵ <https://www.cia.gov/library/publications/the-world-factbook/print/in.html>

⁶ <http://www.eia.doe.gov/basics/quickoil.html>

⁷ <http://www.iags.org/futureofoil.html>

⁸ Slide #44 on Michael J. Economides Presentation

⁹ <http://www.epa.gov/ispd/energy/index.html#sectors>

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