

Thoughts on Jon Stewart's "The Cost of Energy Independence"

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I have noted before that every president since Nixon has talked about the need to get the United States off of foreign oil and moving toward energy independence. Jon Stewart recently captured this theme in a very funny, but troubling segment:

An Energy-Independent Future

While Jon does a good job of demonstrating that this idea of reducing our dependence on foreign oil has been unsuccessfully pursued by eight consecutive presidential administrations, the question he asked but did not answer was why this has been such a challenge. So I will pick up where Jon left off and explain why we couldn't get it done and what it would take to get it done. The technical issue isn't really all that difficult, but the political challenge is enormous.

U.S. oil production peaked in 1970 at 9.6 million barrels per day, and today stands at 5.3 million bpd* (Source). The average rate of decline since 1970 of U.S. oil production has been about 1.5% (an impressively low decline rate). But by the time U.S. oil production peaked, our oil consumption was already over 15 million bpd, and today stands at 18.7 million bpd (off from the high in 2005 of 20.8 million bpd). An increase in demand at the same time U.S. production has

The Oil Drum | Thoughts on Jon Stewart\'s "The Cost of Energy Independence" http://www.theoildrum.com/node/6625 been falling is not a recipe for energy independence.

It is immediately obvious that if we use 18.7 million bpd and produce only 5.3 million bpd, we have to find a way to either 1). Cut petroleum consumption by 13.4 million bpd (a drop of 72% from current rates); 2). Raise petroleum production by that amount; 3). Some combination of the two. Since oil production in the U.S. only ever achieved about half of our current consumption rate and has fallen for 40 years, I think Option 2 is out of the question. In fact, I would go so far as to say the U.S. can't raise production rates much beyond current rates, and with the public souring on offshore drilling we may find it very difficult to maintain current rates.

So that leaves us the option of reducing current consumption by 72% from current rates. This is of course why energy independence has eluded the U.S. For all of the talk of getting off of foreign oil, who is willing to cut their oil consumption down to about a third of what you currently use? I am not saying it can't be done, but I am saying it can't be done painlessly and without making some major adjustments. And that is ultimately why our political leaders have not managed to get it done. They are selling a sacrifice-free pipe dream.

In the clip above, presidents mention many different options for reducing our oil dependence. The problem is that they are all more expensive than oil, aren't fungible with oil, and/or are themselves dependent upon oil. So politicians ultimately only pay lip service to the idea of energy independence (very popular) but don't take tough measures (very unpopular) to actually achieve the goal.

But if energy independence is something that is very important to us, there is good news. We can probably do it by trimming away a lot of fat. Here is the speech that President Obama needs to make in order to explain how it is going to get done:

My fellow Americans. It has not escaped my attention that we use a lot of oil. Further, I have noticed that we consume over three times what we produce. This is a trend that has worsened over the past eight presidential administrations, but I am here to reverse the trend. Today, I am announcing a program that will move the U.S. on a path to energy independence by rationing petroleum beginning in 2011. Over the next five years we will reduce the amount of petroleum that Americans can use by 17% per year. This of course means that you need to start arranging your life in such a way that a 70% reduction in your petroleum usage over 5 years is manageable. Details of the execution of the program will soon be announced.

I recognize that this calls for sacrifice. If it were easy, energy independence would have already been achieved. But I sense that the public is ready to sacrifice some of their personal comforts for the benefit of an energy independent United States. It is possible that new domestic oil discoveries, renewable energy, nuclear power, and other alternatives are able to reduce the need for the full 70% cut in usage, but these sorts of promises have thus far not moved us very far along the path to energy independence. They have to date merely served as a nice delusion that energy independence can be achieved without sacrifice from most citizens by merely innovating our way out of this problem. Based on the trends for the past 40 years I think that is rooted more in hope than in reality, so we are going to try something a little different this time. This time, Plan A calls for sacrifice, and our former Plan A for the past 40 years — innovating our way out of this problem — will now become our hopeful Plan B.

So there is the path to energy independence for the U.S. in a nutshell. Based on today's production/consumption figures, this would require a 70% across the board cut in our energy consumption down to per capita levels of countries like Russia, Jordan, Mexico, and Malaysia (potentially adjusted based on decline rates, new discoveries, and alternative energy). We would

The Oil Drum | Thoughts on Jon Stewart\'s "The Cost of Energy Independence" http://www.theoildrum.com/node/6625 still use more oil per capita than Hungary, Chile, Thailand, Brazil, and South Africa, but we would need to come in at significantly less than the consumption of the E.U. (Per capita consumption levels for many different countries on a bbl/person/day level can be found at NationMaster.com).

That is realistically what I believe it would take to achieve energy independence. If you can't imagine a U.S. president taking those steps, then you can well imagine why our foreign oil consumption has increased over those eight consecutive administrations. What we can expect to happen as we proceed down the path we are going is that eventually the market will force those reductions anyway by simply driving prices so high that we have to voluntarily slash consumption. Until then, if you enjoy the level of mobility you have today, you can thank the oil exporting countries for making that possible.

* Total supply is somewhat larger than 5.3 million bpd because of natural gas liquids and oxygenates adding some to the supply. Nonetheless, the gap to be closed is huge.

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