

A few Notes on Stuff

Slide 2 CO₂ is plant food and with increased levels of this gas in the atmosphere there has been increased (as much as 20%) growth of global plants – global greening – in recent decades

Slide 3 is an old chart (circa 2002). See attached graphic of Energy Flow that is a 2013 chart. There is very little change. And note the huge losses of energy in both of them. Finding some small improvements in efficiency may extend several of our existing energy sources farther out into the future. Actually FF part of 2002 is 88% and for 2013 was 82%. There was actually an efficiency? gain of about 3 Quads by 2013. Quad= 1000 quadrillion (10^{15}) BTUs.

Notice on slide 5 what Smith's comment is on liquid motor fuels. Then the shale oil deluge started after 2010 and made a mockery of any sort of control or peak.

Slide 12 We know that the mantle is made up of about 5% sedimentary rock. But an odd fact is that land surface rocks are made up of 75% of sedimentary rocks. Most places on the planet's surface consist of sedimentary rocks.

Slides 13 and 14 show deep sea bottom nodules that the UN would tax heavily for revenue. There are methods of recovery that without the tax would make getting these several metals relatively inexpensive. Especially Cobalt which is found in large quantities in the Congo and almost nowhere else on land surfaces. Well, except all over the sea bottom.

Slide 20 reference to fractal coastline means that it is difficult to calculate the length of a fractal coastline. But by drawing 100 yard straight lines one can get an idea of the numbers of buildings required.

Slide 23 – As for the Club of Rome doomsayers, both AGW and Peak Oil are, for the next 100 years, mostly a fantasy

Slide 28 I generally hate the word sustainability. But if we lightly harvest wood from existing and returning new forests, we will have plenty to burn for effect (and some heat) in our cabins in the mountains or houses by the sea etc.

Support Material for Stuff

1. Mark Mills Shale 2.0

<https://www.youtube.com/watch?v=6j0RDf4GMY>

2. Willis Eisenbach Extinction

<https://wattsupwiththat.com/2010/01/04/where-are-the-corpses/>

3. Chiefio's discussion of Jevon's Paradox

<https://chiefio.wordpress.com/2009/05/12/jevons-paradox-coal-oil-conservation/>

Note the date (2009). Buried in this discussion is the following:

We hit “peak fish” some time ago (the maximum we could harvest from the ocean about 20 years ago). At present, some 30% of fish we eat comes from aquaculture. Did you even notice? When we finally hit peak oil, no one will notice because we will simply start using other, very slightly more expensive, energy supplies. This, BTW, has already started. The “tar sands” of Canada are now being used to produce petroleum products. A couple of decades ago these were not classed as a “resource” because oil was too cheap. The Trillions of barrels of oil and oil equivalents in U.S. Oil Shale and the global Methane Clathrate deposits are still not an ‘economic resource’ due to low oil prices even though we could extract fuel if we wanted to.. -ems }

4. EM Smith's original musings

<https://chiefio.wordpress.com/2009/05/08/there-is-no-shortage-of-stuff/>

<https://chiefio.wordpress.com/2009/03/20/there-is-no-energy-shortage/>

5. Bernie's presentations on Earth Land Use and Tropical Rainforests are available. Just ask and I will send you copies