Department of Ocean and Resources Engineering

Seminar

Peak Everything: Running out of commodities in a crowded world

By

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Wednesday, March 19, 2008, Holmes Hall 243
3:00-3:30 pm Coffee Hour
3:30-4:30 pm Seminar

Please join us for the coffee hour near the seminar venue a half hour before the seminar, 3:00 – 3:30 pm

Abstract

Reaching the production peak of a commodity is not the end, usually it's just the halfway point and a warning that the easiest and least-costly half of the commodity has been extracted. We already live in a post-peak world for many commodities of value to industrialized society, among them mercury which peaked in 1962, lead (1986), gold (2000), and phosphate rock and natural gas, which peaked in North America in 1989 and 2001, respectively. Metals such as mercury and gold are scarce and expensive, and are heavily recycled where possible, whereas phosphate rock and natural gas are destroyed (transformed to waste products) although phosphate's use cycle could in theory be closed. Before being imported, post-peak usage of natural gas and phosphate rock will follow their production declines until extraction and supply costs become locally prohibitive or they become exhausted. Conventional crude oil production peaked in North America in 1970 and globally in 2005. Living with the post-peak effects of global "Peak Oil" may be different, because the USA already imports nearly 70% of its oil consumption and because we have foolishly allowed it to heavily permeate our culture on the erroneous assumptions of infinite supply or viable alternatives to liquid fuel at present use levels.

Besides not checking our general population growth, perhaps one of mankind's greatest mistakes has been implementation of the global "green revolution", whereby we have unwittingly used finite supplies of fossil-fuels (natural gas, oil) and phosphate rock to grow human populations well past the Earth's carrying capacity, a condition known ecologically as overshoot. Going forward, we will have to conserve, recycle, close open cycles, and learn to live within our means once again. We must "make other living arrangements", and soon. Peak Everything, climate change, and the Anthropocene Mass Extinction Event are all part of the same problem: human overpopulation and over-consumption, processes stemming from the fossil-fueled irrational exuberance of "Homo colossus" (W. Catton, "Overshoot", 1980).

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