

End to cheap coal closer than we thought?

22 November 2010, by Lin Edwards



(PhysOrg.com) -- A report entitled "The End of Cheap Coal," published in the journal *Nature* by Richard Heinberg and David Fridley, suggests we may reach peak coal in the next two decades.

The report assumes <u>oil prices</u> will remain high in the next two decades, that the rate of oil consumption will level for a few years before dropping, and that governments will make progress towards reaching <u>carbon emissions</u> goals. Even without these assumptions the authors suggest we may soon hit peak <u>coal</u> because inexpensive sources of coal are rapidly being used up. Their conclusion is that "energy policies relying on cheap coal have no future."

Most estimates of coal reserves suggest there is plenty to last at least a couple of hundred years, and the authors, who are both Fellows with the Post-Carbon Institute in Santa Rosa, California, do not dispute this, but say using it will become progressively more expensive. They point to the fact that over the last twenty years or so the projected global coal supply has been falling faster than coal is consumed, suggesting the projections are inaccurate. For example, Germany and South Africa have reduced estimates of their recoverable reserves by a third over the last five years, since they have found some reserves previously thought to be economically recoverable are not. The US, with around 25 percent of global coal reserves, last

updated its estimates in 1974.

The authors point to the history of getting forecasts wrong, saying that official estimates of oil prices for 2010 issued in the late 1990s were less a third of the current oil price. With both oil and coal the problem is not that we are running out of supplies, but that prices rise and become volatile as we approach peak levels.

Heinberg and Fridley suggest another factor at play is the mismatch between the locations of coal supply and demand. Global demand for cheap coal is fairly steady, but China's demand is growing so rapidly it is unable to extract its own massive coal reserves fast enough and is increasingly sourcing supplies from Australia, the US, and elsewhere. The export and import of coal increases the prices at both ends.

The authors want the prospect of an end to cheap coal to be considered seriously, especially as many energy decisions are based on the assumption that coal will remain cheap. Their first proposal is that the US coal reserves estimate be updated, along with the estimated costs of extracting the coal. They also urge countries to plan for higher coal prices, and consider the effect higher prices would have on the viability of clean coal technologies.

The International Energy Agency (IEA), which is generally considered a conservative body aligned to the fossil fuel industries, also suggests that if global warming is to be limited to 2°C the demand for coal will need to peak by 2020 and drop to 2003 levels by 2035.

More information: The end of cheap coal, Richard Heinberg and David Fridley, *Nature* 468, 367-369 (18 November 2010) doi:10.1038/468367a; Published online 17 November 2010

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