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To: Inquiry into Australia's future oil supply and alternative transport fuels

From: Ugo Bardi, ASPO-Italia (Italian Section of the Association for the Study of Peak Oil)

Feb 21, 2006

Dear sirs,

Your inquiry deals with crucial element of the present situation. eliminating our dependence on fossil fuels is not an abstract necessity, but something that will be soon forced on us by the progressive depletion of the resources. Moving to alternative fuels will not be easy, nor painless. The purpose of governments at this stage should be to take action to reduce the pain of the transition as much as possible.

In my activity of research on depletion, I am often asked the question, "when are fossil fuels going to run out?" But this is the wrong question. Oil started to run out when the first oil well was dug in Pennsylvania in 1859. It continues to run out this very day, but we will continue to extract it for many years. The important question is: when is depletion going to start to hurt?

Some experts in fossil fuels appear to think that barrel counting is what matters and much discussion is dedicated to determine when, exactly, the production peak (the "Hubbert peak") will occur. This is an important question, but not the crucial one. The depletion of mineral resources is a gradual process that shows no dramatic changes. The Hubbert peak is just a noticeable point in the cycle, but not a discontinuity. At some point, that may be well after the peak, we'll arrive to a point when the choking effect of depletion on the world's economy will be impossible to ignore. At that moment, the situation will be obvious to everybody, but it may be too late for countermeasures.

In order to understand this point, I would invite you to reconsider the study "The Limits to Growth" produced by a team of scientists of the Massachusetts Institute of Technology in 1972. This study has been denigrated and demonized over the years to the point that for most people it is now considered as an obvious mistake. But the demonization campaign of the MIT work was based in part on misunderstandings and in part to falsifications and pure slander. There was nothing wrong in a study which was just so advanced that it could not be understood by mainstream economists.

The MIT work of 1972 was taken by many as a prophecy of doom. It was not; it was a series of scenarios, none of which was unavoidable. The "base case" scenario, the one based on the data and the trends available at the time, could have been played out or not depending on our actions and decisions. We chose to ignore the results of this work and, as a result, we moved on, blindly, along the base case curve, towards the present situation. According to this scenario, an irreversible worldwide economic collapse could



start around 2010 if the present trends continue. What we are seeing in the world now could well be a premonition of such an incoming collapse.

Averting the incoming economic collapse is not an easy task and the study of the "Limits" tells us that none of the major world problems can be solved in isolation. Actions which appear to "solve" a specific problem may (and often do) cause worse problems in other areas as a consequence. So, some think of switching from oil and natural gas to still abundant resources such as coal and tar sands. But the large scale use of such inefficient and dirty fuels would have devastating effects on the atmosphere, further accelerating global warming. As another example, ethanol might replace gasoline for powering vehicle engines, but what are going to be the effects of the extensive cultivation of sugar beets or cane for the world tropical forests? And, as a further example, improving the energetic efficiency of buildings is a good thing, but it is subjected to what is called the "Jevons effect". When people realize that heating costs less, they tend to increase the temperature of the rooms, thus nullifying the advantage.

There are no easy solutions for the problems raised with this inquiry, no "magic bullet" that, alone, will slay the vampire of depletion. The problem is not the depletion of a specific resource, such as oil, but the gradual reduction of the availability of *all* mineral resources, combined with overpopulation and environmental degradation. Technical solutions, such as efficiency and renewable energies are essential in the present situation, but must be used in the framework of a systemic approach that sees all problems as related and influencing each other.

Therefore, the recommendation that I feel I can make with the present submission is that governments, including the Australian one, should be working at studying the situation by dynamic models before engaging their resources in technologies hastily presented as "solutions". Before thinking of solutions, we must be sure we understand what the problem is. There is only one thing worse than not having the right solution; it is to have the right solution to the wrong problem.

Sincerely yours

Ugo Bardi
President, ASPO-Italia.

Note: I am including with this submission the announcement of the upcoming conference on oil and gas depletion (ASPO-5) that I am organizing in Italy this July (details at <http://tinyurl.com/c9b38> or go to www.aspoitalia.net and click on the pisa tower

This is the 5th conference of the series, I note that none was attended by official representatives of the Australian government; I venture to say that ASPO-5 could be a good occasion to do that



References

Unfortunately, most of the published work of ASPO-Italia is in Italian; it can be accessed anyway at www.aspoitalia.net. It includes several works of mine. Also my book on oil depletion (La Fine del Petrolio, Ed. Riuniti, 2003) is in Italian. However, you can find several texts of mine in English at <http://www.aspoitalia.net/aspoenglish/documents/index.html>. In this page you can also find links to two recent academic papers of mine dealing with oil depletion.



5° International Conference on Oil and Gas Depletion (ASPO-5)

The Fifth International Conference of the Association for the Study of Peak Oil and Gas (ASPO-5) will be held in San Rossore (near Pisa) in Italy, on **July 18-19 2006**. Previous ASPO conferences were held in Lisbon (2005), Berlin (2004), Paris (2003) and Uppsala (2002).

The objective of the ASPO-5 conference is to raise the awareness of the impending peak of oil extraction and the general phenomenon of depletion of all mineral resources. For this purpose, international experts will evaluate the consistence of the resources, assess the effects of depletion on society and economy, and discuss dynamic models able to help us understand the present and future situation. The conference will also examine the need for political action to reduce the impact of depletion. Among the experts who have already agreed to speak at the conference, we have **Kjell Aleklett** (president of ASPO), **Colin Campbell** (honorary chairman of ASPO), **Richard Heinberg** ("The Party is Over" and "Powerdown"), **Jean Laherrere** (one of the founders of ASPO), **Dennis Meadows** ("The Limits to Growth") and others.

The conference will be held in the open air, in the park of San Rossore, near Pisa, an area conveniently located near the international "G. Galilei" airport and a few km from the leaning tower. It is organized by the Italian section of ASPO (ASPO-Italia, www.aspoitalia.net) with the support of the University of Firenze and of the Tuscan Regional Government.