

A Wakeup Call

by Doug Craig

A moment of clarity arrived on November 7, 2007 with the release of the International Energy Agency's (IEA) annual World Energy Outlook report on global energy needs. It may be the first time in human history a scientific body has issued an ultimatum to the world this severe that unequivocally demands an urgent response: immediately curb production of greenhouse gas emissions or face devastating, staggering consequences.

Far more urgent than the most dire warnings issued by the Intergovernmental Panel on Climate Change, the IEA, an "energy watchdog" and advisor to 26 countries warned the nations of Earth, "The next ten years are critical."

The IEA predicted under a "best case scenario" that emissions of greenhouse gases will rise by 57 percent by 2030 compared to current levels and this will increase the earth's surface temperature by at least 5.4 degrees Fahrenheit, an unprecedented rate of warming. However, the Paris-based agency warned that if we fail to act decisively that this warming could double to 10.4 degrees in the next two decades, a level of warming which would devastate life across the planet to a degree that is beyond calculation.

Most of the world's climate scientists say 2 degrees is probably the maximum threshold beyond which there would be significant social and economic disruption. It is now clear that our current course will take us barreling beyond that

barrier within the lifetime of most people currently alive.

The IEA said, "Emissions savings (would have to) come from improved efficiency in fossil-fuel use in industry, buildings and transport, switching to nuclear power and renewables, and the widespread deployment of CO2 capture and storage in power generation and industry. Exceptionally quick and vigorous action by all countries and unprecedented technological advances entailing substantial costs would be needed to make this case a reality."

The wild cards in this scenario are the newly arriving blockbuster nations China and India who are expected to "account for 45% of the increase in global primary energy demand" as their "energy use is set to more than double between 2005 and 2030." By 2030 these two giants are expected to join the rest of the world's major polluters including the United States, Russia and Japan in filling the atmosphere with as much as 42 billion tons of CO2 per year.

Nobuo Tanaka, Executive Director of the IEA announced that the report "demonstrates more clearly than ever that, if governments don't change their policies, oil and gas imports, coal use and greenhouse-gas emissions are set to grow inexorably through to 2030" and "would threaten energy security and accelerate climate change."

A portion of the "Executive Summary" of the 663-page report states, "Vigorous, immediate and collective policy action by *all* governments is essential to move the world onto a more sustainable energy path. There has so far been more talk than action in most countries. To achieve a much

bigger reduction in emissions would require immediate policy action and technological transformation on an unprecedented scale."

The summary goes on to state, "The emergence of China and India as major players in global energy markets makes it all the more important that *all* countries take decisive and urgent action to curb runaway energy demand. The primary scarcity facing the planet is not of natural resources nor money, but time. The next ten years will be crucial, as the pace of expansion in energy-supply infrastructure is expected to be particularly rapid. China's and India's energy challenges are the world's energy challenges, which call for collective responses. No major energy consumer can be confident of secure supply if supplies to others are at risk. And there can be no effective long-term solution to the threat of climate change unless all major energy consumers contribute. The adoption and full implementation of policies by IEA countries to address their energy-security and climate-change concerns are essential, but far from sufficient."

One week after this report was released, Fatih Birol, chief economist of the IEA and the report's chief author spoke at the World Energy Congress in Rome, Italy and said China, the United States and India will be the world's top emitters in 2015, accounting for more than half of the world's total. Birol said that unless these three countries began implementing drastic policy changes, "we should expect no realistic results in reducing emissions."

Peak Oil and the Looming World Energy Crisis

by Van Wigington

Peak Oil: The concept that world oil production will reach a peak, after which an inevitable decline will follow. Peak Oil does not mean the world has run out of oil, but roughly represents the point at which the world has used half of its cumulative oil reserves. The easiest access, and best quality oil has been naturally sought out first, and after oil production has reached its peak, the supplies will be increasingly poorer in quality, and much harder and more expensive to develop. World demand for oil continues to increase dramatically, and Peak Oil represents imminent energy declines. An energy crisis is on the very near horizon, and big problems will begin once Peak Oil is reached, because world demand for oil will start outpacing supply.

Indications are that this situation began around 2006. Currently, the world is using about 85 million barrels of oil per day, and demand is in the range of 88 million barrels. Many experts cite this as an ominous sign that we are at the peak of oil production now.

The oil needed to fuel the US economy will be getting increasingly unavailable and expensive, to the extent that the US looks likely to be headed soon for big economic and social reper-

cussions. Half a century ago the US supplied all of its own oil, and was the world's biggest exporter of oil. Today the US imports close to 70% of the oil it consumes, with many of those oil exporters being in problematic geopolitical regions.

Fifty years ago US Big Oil had access to, and the ability to capitalize on, 85% of the oil reserves found throughout the world. Now US Big Oil has access to less than 15% of world oil reserves, and this figure continues to drop.

The benefits of oil allowed world population to sky rocket to the point where it will be 7 billion in just a few years. This happened in just 150

years, and oil was the driving force behind this massive change. US production of its own oil reserves actually peaked in 1971, and has declined ever since. The discovery of new oil reserves worldwide peaked around 1965.

New technologies have allowed oil producers to extract more oil at a faster rate. This means that the oil fields are essentially being used up faster. Of the 50 biggest oil fields in the world, approximately 40 are already past peak, and going into depletion. These fields provide the lion's share of the world's oil supply. As an oil field is exhausted and goes into depletion, the diminishing percentage of reserve still in the ground becomes increasingly problematic to remove, and eventually the energy invested, as compared to the barrels of oil returned, turns negative. Also another huge developing problem is the growing astronomical cost of trying to develop oil fields. The cost of oil industry experts and personnel, along with the cost of oil infrastructure removal has made these projects that were once viable, no

longer economically possible.

Countries with remaining reserves are increasingly nationalizing their oil production. Exporting countries are seeing dramatic increases in their own internal demand, which is causing them to reduce the oil supplies they are willing to export. The competition for remaining supplies of these hydrocarbon fuels, is oil the US won't be seeing. Other countries are also laying plans to further disrupt, in a host of ways, the energy supply the US could have access to.

Saudi Arabia has the number one stated reserves of oil. US administrations began a close cooperation with the Saudi Royals as US oil production began going into depletion. The US agreed to protect the Saudi Royal House of Saud and to keep their power intact, in return the US would have privileged access to Saudi Arabia's abundant oil. Through the 60s, 70s, 80s and early 90s Saudi Arabia had so much excess oil production it was able to put extra oil into the world system to keep oil prices in a moderate range and help the US economy. It is becoming apparent that Saudi Arabia no longer has this *spare capacity* with which to moderate world oil prices. Gwar, the world's biggest oil field located in Saudi Arabia, is showing many indications that it has peaked, and is heading into depletion. The reality is, if this huge oil field has truly peaked, then world oil production has peaked too.

Reserves in the Gulf of Mexico, coastal and Arctic regions won't save the US, because even the most promising projections of supplies in these areas are utterly insignificant when you compare it to what the US uses in hydrocarbon fuel every day.

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