

STORM WARNINGS

Vol. I, Issue 9: December 2012
Energy Independence: Fact or fiction?



R. Michael Conley
Founder

The *Storm Warnings* newsletter is part of a larger initiative by its founder, R. Michael Conley, to carry the message to others.

"The message is frightfully simple: We are heading into a perfect storm that will forever change our lives, and we need to act on it while there is still time," said Conley.

Under the overall umbrella of his company, Weathering the Storm, LLC, its mission to *awaken, engage and help mankind weather the storm* is carried out in a number of ways.

The energy news gets better by the day. We are on the "cusp" of energy independence and could surpass Saudi Arabia as the world's largest oil producer by 2020 – or so we are told. Bombarded with hype and half-truths, it is difficult to separate fact from fiction; panacea from placebo. In this issue, R. Michael Conley explores and debunks a few myths and tells why we should all be concerned.

WTS: You seem troubled by projections of "energy independence." What's the problem?

Conley: It's kind of a "good, the bad and the ugly" message. Let's start with the good news. We have achieved energy independence in many areas. Our electrical power is domestically produced, and our flourishing natural gas industry and its cost structures are the envy of the world. Crude oil production is up, and we are ramping up our renewable energy capacity – albeit slowly. We also possess the conservation and demand reduction technologies to produce an even bigger energy bang for the buck. What's not to like about this message?

The bad news is we consume far more oil than we produce and cannot achieve "energy independence" without first addressing our addiction to oil. Try as we might, the arithmetic for drilling our way out of it does not add up. As the "mother's milk" of economic growth, oil is indispensable to our economy and way of life. Our infrastructure, transportation systems – 94% of which are fueled by oil – and lifestyles are built around oil. While it propelled the American Dream, diminished *access to affordable* oil could cripple it.

The ugly news is: We have deluded ourselves into thinking that we can drill our way into energy independence – wasting precious time that could be used to build alternative energy models – and our complacency could be devastating. Flush with a glut of *natural gas* we hope will magically transmute into a cure for our unsustainable oil addiction, we forget that hope is not a strategy and natural gas is not oil. The clarion call of "*Drill, Baby, Drill*" drowns out the immutable laws of geologic, economic and global oil realities. In this milieu, sound-bites trump science and a herd mentality obfuscates reality. Even if the supply-side arithmetic worked – and it doesn't – you can't cure an addiction by increasing the supply of the addictive substance. Our self-delusion is the ugly news, and the hype and half-truths are the fuels that feed it.

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"The *Storm Warnings* newsletter, which provides an in-depth bi-monthly look at a specific topic, is one way we hope to awaken and engage people, but we encourage folks to log in to our web-site for a full menu of offerings and services," Conley said.

(www.weatheringthestorm.net)

The website will provide further details on other initiatives. Among them:

1. Lethal Trajectories – Conley's futurist novel on what it will be like to live through a perfect storm crisis
2. *Weathering the Storm Guide* – A guide on how to prepare for the storm
3. Weathering the Storm Seminars – In-depth seminars that are now available
4. Blog, links, other resources, and the Storm Warnings newsletter.

About the Founder: Mike Conley is the Founder of Weathering the Storm LLC, and currently serves as Chairman and CEO of the Conley Family Foundation. As a former Fortune 500 business executive, author, lecturer, and public policy

WTS: Why is it so difficult to get our arms around the idea of energy independence?

Conley: We've framed "energy independence" in amorphous terms that mean different things to different people. Lacking precision, we lump all fuels into one bucket – as though the energy produced from one fuel source can be transmuted and interchangeably used in all fuel systems – and we then imagine all is well. We forget that shale oil and shale gas are not the same; that each fuel is unique with mission-specific purposes, and that it's possible to have a glut of natural gas and still have shortages of crude oil. It's comparable to the man with his feet in a bucket of ice water and his hands on a scolding hot stove saying, "On average, my body temperature is normal and I'm doing just great."

Let's cut through all the energy independence noise and just say: "Our greatest energy challenge is to prepare for the day when affordable oil is no longer readily available" – with *affordable* being the operative word.

WTS: What exactly would it take for the United States to achieve energy independence?

Conley: With the exception of oil, we're energy independent in most areas so let's focus on oil. The numbers, I'm afraid, are daunting. The latest Energy Information Administration data shows that the U.S. will import almost half of its oil in 2012. The EIA numbers, expressed in units of a *million barrels of oil per day*, or *MB/D*, look like this:

<u>MB/D</u>	<u>Source of oil:</u>
6.33	Domestically produced crude oil
8.48	Imported crude oil
<u>3.85</u>	All other liquids such as refining gains, natural gas liquids, ethanol, etc.
18.66	Total amount of oil produced and consumed

Using these EIA numbers as a starting point, the U.S. would have to domestically produce an additional 8.48 MB/D of crude oil to replace oil imports – more than doubling current crude oil production. Wherever will we get new production of this scale? Some think the Bakken oil field is the answer, but even if it ramps up to a production

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activist, Conley has written and spoken frequently on topics related to the perfect storm. He graduated from the University of Minnesota, after serving in the United States Navy, and later completed a post-graduate program at Stanford University. He is also active on several boards and advisory groups.

level of one million barrels daily by 2015, it's only a drop in the bucket. The same could be said for the ANWR and/or intensified deep water drilling. Simply put, there are no known *proven* reserves of sufficient scale to generate the production levels needed to achieve complete energy independence.

WTS: If oil is a problem, as you say, how does this square with statements that we could surpass Saudi Arabia by 2020 as the world's largest oil producer?

Conley: It's a perfect example of how hype and half-truths shape our thinking. It implies all will be well if we ever pump more oil than the Saudis. In fact, it's a moot point because regardless of how much oil we pump, we'll still need to *import* massive amounts of oil to sate our addiction while the Saudis continue to *export* their oil.

Also, be wary of the numbers. For example, the Saudis have an excess capacity to pump another 2 MB/D or so of oil but find it advantageous to leave some of their excess capacity in the ground for extraction later at a higher price. Hence, their top line production numbers are not as large as they could be while our production numbers are inflated by the inclusion of "all other liquids" such as refining gains, liquid natural gas, and ethanol. Even though this category accounts for almost 38% of our domestic production, the fuels in it do not – for the most part – have the same energy equivalent or utility as a barrel of crude oil. It's easy to gin up the numbers with misleading apples-to-oranges comparisons like this, but it paints a false picture.

WTS: Aren't you underestimating our shale oil discoveries, off-shore drilling and new drilling technologies that will revolutionize oil production? Isn't this a game-changer?

Conley: Indeed it is – particularly the enhanced oil recovery techniques known as horizontal drilling and fracking – but not enough to make us energy independent. In fact, the cost and complexity of finding *new* oil makes it clear that the era of "easy" affordable oil is gone; new oil production will be far costlier at both the wellhead and the pump. This is what I mean by an *affordable* oil crisis; we may not run out of oil, but the economic drag of a \$6-10 dollar per gallon pump price will be staggering. Every extra dollar spent at the pump and sent overseas means fewer discretionary dollars available to support our consumer-based economy.

Shale oil is not without its problems. It's an expensive proposition, and the fracked wells require from 2 - 5 million gallons of water each; a costly challenge in arid and drought-stricken states like North Dakota and Texas. The environmental impacts are also of tremendous concern and will, at a minimum, require costly procedures to partially mitigate environmental damage.

There's also a geologic concern that gets little press: Oil is a finite resource; over time, oil wells peak and production declines. Tight shale oil formations peak and decline more rapidly than conventionally extracted oil. As such, we may be overstating the future production trends of new oil and underestimating the impact of production lost from the rapid decline rates of existing well:

STORM WARNINGS

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At a minimum, it will take intensive new drilling to merely replace the declining production from existing wells. The trifecta impact of shale oil, horizontal drilling and hydraulic fracturing – touted as the panacea that will solve our future energy needs – may instead be a “feel-good” placebo that demotivates us from making the changes we’ll eventually have to make.

WTS: A 2011 financial newspaper headline said: “U.S. Milestone: Net Fuel Exporter.” How does this square with what you said earlier about the U.S. importing almost half of its crude oil?

Conley: The headline was misleading and could easily cause the casual reader to conclude the U.S. was now a net *oil* exporter. Several paragraphs into the story, the headline was clarified to say the U.S. was on track to be a net exporter of *refined petroleum products*. There’s a world of difference between finished products made from oil and crude oil per se. A nation can be a net exporter of finished products and still be dependent on the raw material needed to make them – in this case, crude oil. The article later said the U.S. is still the largest *importer* of crude oil. Our shortfall in 2012 will be about 8.5 million barrels of crude oil per day – or about 45% of our total daily oil consumption. This hardly makes us a net *exporter* of oil, does it?

WTS: Can you think of other half-truths that distort reality?

Conley: Oh my, yes. The words “oil reserves” are often manipulated to make a point. There are several gradations of reserves ranging from *proven* reserves to *unproven* reserves with subsets within the categories. “*Proven* reserves” – the good stuff – have a reasonable certainty of being economically recoverable under prevailing conditions. From there, the scale grades down to *unproven* reserves with little or no chance of being recoverable. Now, if you use “unproven” reserves to describe a new find, you’re likely to come up with breathtakingly large – but unrealistic – numbers. It’s not an uncommon practice and makes for flashy headlines that gin up the share price of oil stocks. There’s an old oil adage that says, “It’s the size of the spigot (daily flow of oil) that counts – not the size of the tank (potential size of the oil field)”

The reserve issue is important in other ways. For example, OPEC may have grossly overstated their recoverable oil reserves, and the *alleged* magnitude of Bakken oil field reserves has, at times, reached la-la land proportions. Some have even said we have reserves that dwarf Saudi Arabia’s in our Rocky Mountain oil-shale deposits. The problem is that this *oil-shale* reserve is actually a *kerogen* – a precursor to oil that will only become oil if left in the ground to compact for several million more years; hardly comparable to the liquid crude oil reserves the Saudis could extract with ease. Sadly, we’re betting the farm on these spurious assertions and could pay a heavy price for our folly.

I’m also appalled by political candidates vowing to bring down the pump price of gas if elected – completely ignoring the fact that oil is a globally-priced commodity. It takes little imagination to foresee the demand and pricing impacts of even a slight per capita uptick in auto ownership in China and India – with seven times our population. In a way, it’s symptomatic of the misinformation permeating the energy dialogue today. I concede it is difficult to separate fact from fiction but hope this gives you a flavor for some of the hype-related issues.

STORM WARNINGS

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WTS: We get the point, but who are the culprits behind the hype and half-truths?

Conley: I have to be careful here, but let me just say that it's wise to follow the money trail behind articles written on oil, energy and other important matters. What are the data sources? Who financed the studies? Who stands to gain or lose from a change in the status quo? Questions like this will help alert folks to potential biases within an article or report.

Certainly, oil, drilling companies and Wall Street gain from a heightened interest in the "*Drill, Baby, Drill*" hype. Political leaders often benefit from special interest campaign contributions, and local governments enjoy the revenue and job creation impact from local oil well production. The list is long. Now, I'm not suggesting they are bad guys, because they have every right to spin a story to suit their needs, but we need to understand that there are strong vested interests perpetuating the myth that oil is forever as long as we drill like there's no tomorrow.

So, before getting too caught up in the hype and herd mentality about energy independence, pause a moment, be mindful of the evidence and sources of information and, above all, follow the money – and power – trail for a more complete picture.

WTS: it's a complex situation. Do you have any parting words to share with our readers?

Conley: I agree that it's complex and hope I've shed a little light on some of the more prevalent myths. Let me leave you with these thoughts:

- 1) We are barraged with hype about being on the cusp of energy independence, but we are hopelessly dependent on foreign oil to sate our oil addiction.
- 2) Our danger is not in running out of oil, but rather in running out of *affordable* oil. The easy oil is gone; the marginal price of new oil will soar as the costs of exploration, extraction, refining and distribution skyrocket in the future. This is our dilemma.
- 3) Oil is our Achilles Heel and oil addiction our challenge. It could take decades to wean away from our oil addiction and transition into more sustainable clean energy systems, but we are not responding.
- 4) If we reach a tipping point where oil becomes unaffordable, and if it happens before we are able to transition over to newer energy systems, the threat to our economy and way of life could be catastrophic.
- 5) It need not be this way, but time is running out. Our greatest enemy is complacency built on false hopes. My advice: Be wary of misguided energy hype; get informed on the issues, and get engaged at a personal and community level.

For more information on how to get actively engaged, please go to my website and download my free *Weathering the Storm* guide. www.WeatheringtheStorm.net