

STORM WARNINGS

Vol. I, Issue 6: July 2012
Transforming our energy systems



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 *Storm Warnings* newsletter, which provides an in-depth look each month

There have been many stories of late touting our surging domestic oil production and the pathway it supposedly provides to energy independence, but the evidence suggests otherwise. In an earlier issue, R. Michael Conley described how the decline of "King Oil" could lead to a perfect storm. He will now explore the challenges of transitioning away from oil and the race against time it will pose.

WTS: Pump prices are down and production is increasing with shale finds and new drilling techniques; do we really have an oil problem?

Conley: Unfortunately, we do. Industry hype about the Bakken oil field, shale deposits, horizontal drilling, and fracking has lulled us into a false sense of energy security. We confuse natural gas with crude oil production and attribute oil surpluses to ramped-up production rather than a sputtering global economy that has quelled demand. We still import about half our oil in a global market straining to sate the oil appetites of China and others, and with little excess capacity in the system our financial markets roil at the slightest blip in global oil production. For more information, I'd invite readers to download my March article on "Energy and the Future of Oil" www.weatheringthestorm.net

WTS: Okay, assuming there is a problem, could you elaborate on what it is?

Conley: We're addicted to oil. Our economy is built around it, and we're flirting with a tipping point where supply can no longer meet demand. When that point is reached, we'll find there's no *scalable* alternative fuel ready to replace oil. Rising oil prices and spot shortages will create an economic drag that worsens as the oil shortfall gap widens.

We're in a race against time but don't know it. The race will center on whether or not we can replace a dwindling – and costlier – supply of oil with alternative energy in a timely manner. To the extent we can't, we'll experience a direct hit to our economy and way of life. We can't drill our way out of this and should use what time we have to quick-start the transition to new energy systems.

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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 activist, Conley has written and spoken frequently on topics related to the perfect storm. He graduated from

WTS: Surely, we have other fuels and technologies that can replace oil. Do we not?

Conley: Yes, but there's no one fuel or energy system that can match the power punch, portability and utility of a barrel of oil. A barrel of oil has the power equivalent of 1700 kilowatts of electricity; it provides *portable* energy that can move people and goods hundreds of miles on a tank of gasoline, and its utility extends beyond energy to lubricants and feedstock for manufactured products from paints to plastics. Above all, it's the fuel that drives over 93% of our transportation system – truly our Achilles Heel. Where can you find a fuel that can do all of these things? How long will it take to build an infrastructure to replace it? Our future may well depend on the answers.

WTS: Can you give us a sense of how much oil we use daily and how it is used?

Conley: Sure. In rounded-up numbers, Americans use about 19 MB/D (million barrels per day). Of this amount, 71% is used for transportation, and about 65% of that is used for personal vehicles. The remainder is used for lubricants, asphalt, manufacturing feedstock and a host of other things. Clearly, our efforts should focus on transportation and the infrastructure supporting it.

WTS: How long will it take to create a new infrastructure to replace our current oil-based energy model?

Conley: Let's be clear: I'm not suggesting we totally replace oil, but rather that we wean ourselves from it as our primary transportation fuel. Using alternative fuels, our goal should be to limit our oil consumption to whatever we can produce domestically.

Time is our enemy. Studies have shown it could take a couple of decades to completely transition to a new energy model. Not surprising in that almost all of our cars, trucks, trains, and planes are powered by oil-powered engines with an infrastructure of gas stations, pipelines, and refineries built to support them. Given oil's predominance, the transition away from it will be daunting –

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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.

particularly as oil stocks become less *affordable* and *accessible*: akin to changing a tire on a moving car.

WTS: What's preventing us from aggressively transitioning while there's still time?

Conley: As a nation, we're hardwired to quick fixes and pain-free solutions. Our timeframes are short; tied more to quarterly earnings and winning the next election than strategic imperatives. Powerful forces are resistant to change, and misguided media hype has lulled us into a false sense of energy security. Absent a visible crisis – ala Pearl Harbor – there is little political will for change; instead, we twiddle our thumbs as the time bomb ticks.

WTS: Let's suppose the political will existed. How would you start?

Conley: I'd be clear that the coming oil crisis is a significant threat to our national security and way of life; that it will require a *national* energy plan that combines the best and brightest of both the public and private sectors; that it will take an all-out effort comparable to the totality of our response following the Pearl Harbor attack, and that failure is not an option. I'd also offer a set of organizing principles and with it a message of hope if we do it right.

WTS: What might some of these guiding principles be?

Conley: Albert Einstein once said: "You cannot solve the world's problems with the same thinking that created them." This applies to our energy transition challenge. It is all new ground and we'll need a set of operating principles for a compass such as:

Think long, deep and wide: Our timeframe should be the remainder of the 21st century. Our scope should be strategic and account for environmental impacts, future availability of domestic fuels, capital generation and financing requirements, optimizing public and private sector efforts, and behavioral changes. Our solutions should be wide-reaching; touching all facets of the economy. This can not be solved in a piecemeal fashion.

The 2% Rule: Panaceas are nice, but success will ultimately come from two percent solutions here and two percent solutions there; all tied to a *common vision and comprehensive strategy*. This requires a *national policy* framework from which to align markets and attract innovations and localized solutions.

Metrics, accountability and predictability: We can't achieve what we don't target and measure. We're all accountable and need to know the ground-rules, scoring mechanisms, risks and rewards. There must also be a high degree of predictability in the system to assure capital markets the

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ground rules won't be changed midway through the financing of their respective projects.

WTS: Could you be more specific about what a transformational plan might look like?

Conley: Yes. In August 2009, I published a detailed 94 page report titled: "*Vision 2020: A Blueprint for Achieving Energy Independence in an Environmentally Clean and Economically Viable World,*" Let me share a few updated thoughts on it:

We'll need to develop specific energy targets and get the marketplace involved early in the game. For example, we could set a stretch goal of reducing daily oil consumption by 4% per year. This game-changer alone would make us independent of foreign oil by about 2025. Every president since Richard Nixon has talked about energy independence; isn't it about time we set specific targets and worked toward achieving them?

WTS: What role would the marketplace play?

Conley: It would play the key role. Once the ground rules are established, I'd get out of the way and let the free market do what it does best: create, innovate, and execute. I'd recognize it will take a blended portfolio of fuels to materially replace oil, and then rely heavily on the marketplace to determine the optimal mix. An engaged market will find ways to conserve and optimize energy, cut costs, boost efficiencies and pick the right fuels for the right missions. For example, Company A might retool its fleet of trucks – or buses – to run on compressed natural gas refueled from a central source. Company B might develop new synthetics to replace oil feedstock used in paints; Company C might retrofit its buildings to save energy and reduce costs – thus freeing up energy for re-deployment to the transportation sectors; and Company D might use on-site wind, solar and geothermal energy in it's daily operation. My point: With clear incentives, disincentives and guidelines, the market will respond.

WTS: Could you comment more on the incentives, disincentives and accountabilities?

Conley: There has to be a carrot and a stick. While the ultimate carrot is to safeguard our living standard, it could include tax incentives, accelerated depreciation allowances, and funding grants for basic research, pilot projects and more. The stick might include taxes or surcharges on activities that are counterproductive to the strategic transitional effort.

We're all in this together and can learn from the efforts of our citizenry to win WWII. Like them, households today could participate by saving energy and water, buying more local products, planting a small "victory" garden, walking and biking more, taking public transportation where possible, and shucking off misguided feelings of entitlement. Small businesses might benefit by adopting cost-saving energy practices. Utility company incentives could be redirected toward energy *conservation*, not *consumption* – perhaps saving them the need to build a new power plant. In essence, everyone plays and there is zero tolerance for gaming the system.

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WTS: Could you say more about infrastructure and behavioral changes?

Conley: Sure. As an example, consider what it would take to replace a declining supply of affordable oil with electricity: We would need to build a new national electrical “super highway” grid system with efficient long-distance transmission lines and “smart grid” connections. We’d need energy efficient power stations with heavier usages of renewable energy – all connected with energy-efficient end-user products ranging from appliances to automobiles. Smart meters could facilitate the process, and consumer behaviors could be redirected through pricing policies that encourage conservation – the low hanging fruit with the most immediate impact. It’s not rocket science.

Continuing, it would take an enormous amount of electrical energy to replace oil. While renewable energy should be dramatically fast-tracked, it won’t be enough. I can see the need to build a new generation of nuclear power plants. If coal is still needed - as seems likely - let’s make it as clean and energy efficient as possible. Natural gas would be a workhorse fuel, and hydrogen power research would be high on my R&D list.

It will require a total effort with heavy front-end costs. Naysayers will call it a job killer or economic anchor, but I disagree. I see it as our ticket out of the unsustainable box we’ve built for ourselves. It’s time to take our medicine and get on with it.

WTS: What upside do you see in the plan you’ve proposed?

Conley: A meaningful survival, for openers, because our current course is unsustainable. A proactive approach is certainly preferable to panic-driven, knee-jerk reactions.

Second, it would be a huge economic catalyst creating several new engines of growth in the areas of transportation, infrastructure, renewable energy, electrical power, natural gas, conservation, synthetics and more – many of them shovel-ready projects.

In softer terms, an effort of this magnitude would galvanize families and communities around a more sensible way of living. Our educational system would be stimulated by efforts ranging from basic research to adaptation skill training. We might even find that renewing, recycling and reengineering is not a bad thing, and that the “inconvenience” of walking or biking pales in comparison to the chronic health and obesity problems that afflict so many Americans.

WTS: How would such an effort change the domestic and geopolitical equation?

Conley: Our addiction to oil and need to protect our “stash” is a national security issue that places our military in harm’s way. The transfer of our national wealth to purchase foreign oil is a heavy drag on our economic growth, and our wasteful energy practices and debt-ridden balance sheets add to the burden. It doesn’t have to be this way.

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Imagine instead the transformational impact of a new clean energy infrastructure not dependent on foreign oil; an economy that once again features America's technological and innovative prowess – in which we make and export products and services of value. Imagine creating a more sustainable environment for our children, conserving more and maybe even living within our means. Imagine our number one workforce problem being to fill labor shortages not unemployment. Imagine a nation that once again finds its greatness in the adversity it overcomes.

It's all doable if we'll shake off the gravitational pull of short-term thinking, denial, or whatever else is holding us back from what we ought to be doing. If for no other reason than the intergenerational responsibility we have to our children, let's get started.

For more information, I would invite readers to go to my website and download a free copy of my *Weathering the Storm* guide. www.WeatheringtheStorm.net