

# TOWARD NATIONAL SELF-RELIANCE: Ending the Energy Crisis

by Vic Berecz

In this day and age, some problems are just not solvable on a personal or local level. But, self-reliance on a larger scale ... let's call it *National Self-Reliance* could do the trick. Yet, since at least 1973 we've been enmeshed in what we call *the energy crisis*. As I write these words, gasoline prices are skyrocketing, this time ostensibly due to the chaos in Libya. There, yet another desert despot is fighting for his personal power and wealth. Libya is the world's 17th largest oil producer, and most of its production goes to Italy. So why the new *crisis* for America? Potentates, despots, oligarchs, and commodity manipulators are the reason. We must free ourselves from their greed and megalomania.

So, it's been almost 40 years without a coherent plan to move in the direction of energy self-sufficiency for our nation. I liken our situation to that of an alcoholic ... he can't stay away from the booze despite a chronic hangover that creates turmoil in all aspects of his life, and he has gotten so used to that headache that he has adjusted his expectations so he can live with it. I, for one, don't like living in a perpetual state of crisis (or is it *misery*?) ... and YES, WE CAN do something about it! We need to pull our heads out of the sand (that's a literal statement, not a metaphor) and address the problem at several levels: near-term, for our children's lifetimes, and for the more distant future.

Since it's good to have an ultimate goal in mind, let's start with the distant future. I can't imagine any disagreement with the statement that there is one ultimate, unlimited energy source available to this planet of ours ... the Sun. So, we should establish a national goal to harness the power of the sun for most of our energy needs during the next half century. I don't expect that refinements to existing technology, such as photovoltaic cell farms, will be the answer. Therefore we need to give ourselves sufficient time to identify the most appropriate technology, design and build prototypes, and then refine those prototypes into cost-effective solutions which can operate on a mass scale. That's a huge job, since it may mean satellites specific to that purpose, or even moon-based equipment. The long time horizon, necessitates that government funding of the early research is the only viable approach. Ultimately, I expect, private enterprise (perhaps a consortium of regulated utility companies) would take full control of the project.

I am, though, hesitant to *put all my eggs in one basket*. We need to have a backup plan that could provide for our energy needs in the mid-term (20-50 years) and be capable of extending its usefulness into the more distant future. Nuclear power generation is probably the answer to this need. Some would say nuclear is a relic of history ... I view it as a historical opportunity that America missed. Why did we miss out on nuclear energy? The answer is simple ... very un-American fear coupled with over-regulation. Fortunately, recent efforts to make the regulatory processes for building nuclear power plants more reasonable, and scientific evidence that the anti-nuclear fear-mongers are wrong, will lead to several new nuclear plants coming on-line in the next decade and a large number of them operating within twenty years. That's great!

You'll note that both solar and nuclear energy sources are best equipped to produce electrical energy. Therefore, to get off our liquid diet of imported gasoline ... so we're no longer beholdin' to those desert despots (and their imitators in places like Venezuela and Russia) ... we need to get our transportation system off of gasoline or ensure a secure and reasonably priced gas source. Electric and hybrid cars may be part of the answer. Ethanol may be part of the answer (disclosure: I am an ADM stockholder). Natural gas and hydrogen-fueled vehicles may be part of the answer, though being gases at normal temperatures and pressures they present some difficult technical and distribution problems. I don't believe forcibly changing America's habits, or a massive transition to public transportation are realistic solutions ... and truth be told, they aren't even necessary. I am not against conservation, but expecting reduced energy consumption in our rapidly developing world defies common sense. So let's opt for the doable.

The bottom line is getting sufficient domestic (maybe add Canada and Mexico to that) fossil energy supplies to meet our energy needs for the next couple of decades. We have those resources, but are not aggressively exploiting them. Again fear and regulation are the culprits. We must act quickly to permit oil and gas well drilling, and to encourage clean coal technologies, that will allow us to make use of these abundant resources in the near-term ... the next five-to-ten years ... for both vehicles and power plants. And, we must develop the emerging oil extraction technologies ... from shale, oil sands, etc. ... that will give us another 20-40 years of energy freedom as we move toward true solar power, backed by a safe, reliable nuclear power industry.

You may have noted that I have not addressed sources like water power and wind power. Water power ... our oldest energy source ... is pretty much built-out. It is reasonably safe and cheap, but it will never again be able to satisfy a significant percentage of our energy needs. Wind power is also old, but technology has given it new life. As yet we haven't take advantage of wind to a great extent. Again, though, it can never meet a large percentage of our energy needs. Also, if you've ever stood among a large number of wind turbines, such as those outside Palm Springs, CA or at South Point on the big-island of Hawaii, you know that large wind turbine farms have a downside. Too much noise! I view water and wind power as useful, but perennially minor players in the energy sweepstakes.

So let me summarize: if we're going to dig ourselves out of dependence on oil from the sandpits of the middle east, we must immediately get started on major programs to:

- a) Drill! Drill! Drill! ... start making use of the large off-shore and on-shore oil and natural gas reserves that are now just sitting there.
- b) Exploit fully our coal resources ... more and more of which will be used in newer clean-coal technologies, including gasification.
- c) Continue to develop battery technologies to make electric vehicles truly practical, we need to be there in twenty years.
- d) Encourage refinement of emerging oil extraction and bio-fuel technologies ... these alone can give us half a century of energy independence as we move toward solar.
- e) Build nuclear power plants as fast as we can. Nuclear should be viewed as the essential energy backstop for the many years we'll be weaning ourselves off of fossil fuels and moving fully toward solar energy.
- f) Get started right now on serious research that will lead to solar becoming the primary energy source for all our activities in the lifetimes of our grandchildren. This is the only one of these actions that will take significant government funding now.

Do these actions involve risk? Damn right they do! But, nothing is risk-free. America was built by risk-takers. That's what self-reliance is all about ... taking prudent risks to achieve desired goals. In this case, national self-reliance dictates that we as a nation take actions like those above to achieve the necessary goal of energy independence. Do we need regulation of these activities? Sure, we need some regulation ... enough to keep the charlatans out and mitigate the most consequential risks. But, what we don't need is the kind of regulation that would stifle American innovation and creativity. Let's push the fear-mongers aside and move ahead.