

Dear President Obama,

Now that we've all gone through the election cycle, now that the people have spoken and a majority opinion has voiced their approval of you to lead the country forward, I wanted to express an idea that could have a transformational impact on our country, an idea that you would spearhead. Here it is in a nutshell: invoke John Kennedy's 1960 call to put a man on the moon by asking Americans to direct their enterprises, their resources, their educational decisions and their aspirations toward a plan of energy self-sufficiency for the country within a decade. Frame the issue as a call to destiny, a goal to reinvent the petrochemical-based world as we know it. The call would be to develop truly green technologies that carry no negative environmental impact for air, water, animal and mineral resources. The goal would be to eliminate our carbon footprint with no caveats or compromises.

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Climate change is a real phenomenon and the need for a forceful response is no longer debatable. We must stop adding CO² and other industrial pollutants to the atmosphere as soon as possible. Air-borne pollutants from burning fossil fuel befoul the air we breathe. They contribute to rising temperatures around the globe, which causes the melting of polar ice caps, which in turn raises the level of the world's oceans. The threat is real. Hurricane Sandy, first considered an once-in-a-lifetime event, has been officially recognized as the new climatic norm, meaning that low-lying areas like Manhattan could flood on a regular basis. Further, the process of extracting oil and coal threaten the world's oceans. The BP spill in the Gulf is still being mitigated and good research on its real environmental consequences are yet unknown.

While petroleum products power our world and provide a reliable employment base, we pay a huge price for living with their consequences. We must therefore do all we can to rid our society of its addiction to petroleum, coal and nuclear energy. That said, it would be naïve to say a wand can be waived for all of this to disappear. One hundred years of infrastructure, jobs and societal practice make such a move unrealistic.

To get to a full solution, our public and private policy must work multiple paths simultaneously. The first path would be to research and perfect true green solutions without regard for tradition, infrastructure or practice. We have to reinvent how and where energy is made, delivered and used. Our cities, housing, transportation and industry must be reengineered to utilize new energy sources. This

approach is the hardest to swallow in terms of cost and practicality, but it is no less imperative. The second path would seek to find new ways to do old things. For example, like strengthening EPA regulations on automobile emissions and coupling that with car registration that disincentivizes people from keeping older cars that don't meet these standards. The second path takes traditional methods and makes them as safe as possible. The second path is only a short-term solution and can't be confused with real change.

Furthermore, the second path will be roundly opposed on multiple fronts since there is a century or so of gas and oil still in the ground. These same interests insist that our infrastructure is so entrenched that to change would be too costly and time-consuming. Proponents play the jobs card and say that it is wrongheaded to question anything that creates jobs. They are all absolutely right to point out these challenges. But they are wrong to say we must slow down the pace of change.

Like the call for the moon shot, your call, Mr. President, for change must be a directive pushed at the highest level of the country. A president supplies vision and an argument in favor of ideas that aren't obvious at the moment, ideas that might fly in the face of convention and huge financial interests. Some will say it's the wrong thing to do.

And that's where JFK comes in. He took the existential problem of Soviet expansionism and turned it into a national and cultural agenda. He transformed fear into strength. He walked the country out of fallout shelters and into the glowing light of the starry sky. Kennedy put the country on the path toward the conquest of space, calling on all sectors of society to contribute to the effort, weaving a sense of mission into the fabric of American society, harnessing a vast array of intellectual and financial power to gestate the ideas and execute the plans, eventually, as we all know well, culminating with Neil Armstrong's famous words as he stepped onto the surface of the moon in 1969—less than a decade after JFK started the ball rolling.

Gaining control of the skies and the heavens required an education-industrial complex — universities, research institutions, NASA, US military, along with any American citizen eager to take part — to function highly, all of which was buttressed by a positive press only too glad to report the good news. The test astronauts became heroes and celebrities. NASA received impressive budgets and mandates to push forward with dreams. Corollary institutions like Cal Tech or MIT gained Ozz-like bona fides.

Politically, the removal of foreign-procured petrochemicals from our national agenda disentangles international involvements, which would go a long way in neutralizing negative feelings against us. We couldn't be accused as we are now of depleting foreign resources, degrading the

environment, appropriating treasure and supporting non-democratic governments. This is not to suggest a panacea for all American nay-sayers, only to say that such a move would obviate many salient reasons for these feelings.

And on the positive side of the ledger what would we gain in return for such an effort? Start with renewable energy that powers our world and run through the gamut of job creation and local enterprise that has been hitherto outsourced to those places where the oil was procured. It would embrace the verity of science, tasking researchers, students and workers to take in theory and practice in all fields: engineers for building new infrastructure and energy networks, urban planners to rethink large-scale ergonomics of the new systems, biologists for managing resources, meteorologists for understanding climate formation, not to mention media experts to inform the rest of us about all the possibilities. The list goes on.

Just ask yourself if there was ever any downside from America's space effort? We have mourned those heroes of the skies when they died, but never have we scorned the mission. We have redesigned failed spacecraft when flaws were uncovered, but we have never redesigned the original wonder and awe of the flight to the stars. We continue to push further. And the industrial and commercial products and inventions flowing out of the effort continue to improve our lives today. We could have saved the money for other uses, but the sense of hope and wonder brought about by a space program was a tonic for the American psyche—it invigorated us then and still gives the task of moving forward a target and purpose.

Some will say that this idea is already part of your administration's policies, but let me make something very clear: energy derived from petrochemical resources always carries environmental downside, which should give us great pause. The British Petroleum spill in the Gulf last year serves as recent example. It is wonderful that BP is kicking in gobs of money to clean up the water, and adding new safeguards to mitigate a repeat of the spill, not to mention all the nice press to spur tourism and give the impression that all is even better than before. But it is clear that extracting resources at such great distances underwater carries great risk and we would be foolish to think that it and other areas won't suffer similar fates again, and at tumultuous cost. Likewise, can we allow fracking in the watershed that supports New York City when the science and outcomes are proven to be questionable at best and harmful at worst? When the basic argument that it is not and won't apparently be 100% safe is still made, why risk the treasured water of so many people? The same can be said of coal whose extraction decimates habitats and burns uncleanly. No proponent claims to have eradicated all its

detrimental impact on the environment, so why support an old problem by relabeling it something different?

Renewable green technologies are the only logical, long-term solutions that will keep us, our descendants and our environment healthy. Green solutions like tidal, wind and solar power and biofuels don't carry cataclysmic downsides. They have yet to be scaled up to handle the massive needs to be sure and that's where the national agenda comes in: the entire country focused on a goal will yield an Apollo-like payback. It's more a question of when than if. And along the way new ideas will probably emerge as well that could be game changers. As long as our energy horizon terminates on noxious energy sources, human society commits a slow suicide.

The search for better energy sources, just like the conquest of the skies under the JFK mandate, will ignite the appetite for success and striving that animates our American culture. It satisfies the great psychic and real need we Americans have in our bones. The dream of energy independence from clean sources is timely and justified. It becomes a transformational moment in a culture whose benefit will be felt—and recognized—for generations to come.

Mr. President, this is your moment to seize, to inspire and to lead the country toward a positive, attainable goal. I urge you to consider this idea.