

Waking *UP*

*Consciousness,
Culture, and
Climate Solutions*



OUR PERSONAL AND PLANETARY JOURNEY

TAYLOR HAWKE

Our Doable Solution: Igniting a Global Clean Energy Revolution

It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change.

—Charles Darwin, English naturalist

If we don't change course radically and quickly, and by default go over the climate cliff—we will stand accused of committing the highest of crimes against humanity and nature.

The charges against us:

The collective voice of science sounded the prophetic alarm, but we would not respond. We chose our personal comforts, wealth, and standard of living over our grandchildren's future. We saw what had to happen, but did not act. We could have turned the bus of humanity, but we missed the turn, and drove over the cliff. We failed our children, the planet, and the future.

This cannot be our legacy. We cannot be the ones who betrayed our children and their future. Our great collective mission is working to create a healthy, life-sustaining future for all generations. Our calling is actively becoming part of the solution, part of the new story, *The Great Turning*.

Like it or not, here we are—right at the pivotal fork in the road. Right now is the historic point of choice—the evolutionary choice that decides the future for many generations to

come. We are the ones who must make this monumental moral decision; we cannot avoid deciding. We choose by our actions—and by our inactions.

Will we continue slumbering in our business-as-usual ways, which leads to The Great Unraveling? Or will enough of us wake up in time, and quickly change course toward a sustainable future? The decision window is closing. We must get this right.

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As we confront this global enterprise of solving so many big problems, making major cultural changes, and doing it quickly—it can all seem overwhelming, even impossible to accomplish. But we must engage, do what we can, and help it all build. This great process is bound to be messy and bring serious challenges, conflict, and dislocation. It already has.

Looking at the status quo, it is impossible to accomplish all that is so urgently needed in time—if we remain within the thinking of the current system and worldview. Many of the changes and solutions most needed move counter to the core values and interests of this entrenched system: ever-increasing growth, consumption, and standard of living; the ideology of success, unlimited resource use, no emissions liability, and little corporate regulation or accountability.

Many individuals with a traditional or modernist worldview can't see, hear, or do, what must be done. Many don't even acknowledge the most serious problems, like climate change. Not surprisingly, the existing order is not changing itself. As Einstein famously said, "You cannot solve a problem from the same level of consciousness that created it. You must learn to see the world anew." He also said, "We shall require a substantially new manner of thinking if mankind is to survive."

We urgently need to quickly evolve as individuals, and as a culture, to get outside the bubble of the existing order and old story. We need to expand to a larger worldview and

level of consciousness from which we can see and respond powerfully to the real escalating crisis we face.

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It's tempting to set about fighting the old system. But our most effective way forward is a constructive path of solving the problems, and consciously creating a higher-order system. Evolution comes through creating the new and greater reality. That is our mission.

You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete.

—Buckminster Fuller, author/futurist/systems theorist

Working to bring about the needed changes is not a path of blame or fighting. Only by coming together and cooperating can we possibly find and implement the many needed solutions in time. While our collective challenges almost defy comprehension, no single entity caused them—no country, group, or ideology. We all did it—those who came before, and all of us living now. It is the way humanity has collectively evolved to this point.

The enemy is not the rich, Wall Street, or corporations, though our economic and political systems are profoundly broken and corrupt, and change is inevitably coming. The answer is not fighting capitalism. With its runaway excesses and pathologies, this version of corporate capitalism will transform or disappear; but it is not the core issue. The political parties didn't do it, though they are clearly complicit.

The real problem we now face is bigger, deeper, and thoroughly systemic. It is our entire modern era worldview and cultural system, our collective global structures of production and consumption, our combined unsustainable ways of living on our finite

earth. All this is perpetuated by a level of consciousness that believes the illusion that we are separate and on our own, that our actions do not impact others, or the planet.

This collective modern system—powered by cheap, polluting fossil fuels—has taken on a life, energy, and massive momentum all its own. It has mushroomed completely out of control and run amok, past all limits and accountability, and is now devastating the entire ecosphere and planet. It is threatening our great-grandchildren's very survival. There's no simple, easy fix; system change is required.

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We can't help but feel the weight of our responsibility to the future pressing in. How can we change something so systemic and complex, so huge and powerful? How do we create a new healthier system and viable future? Since this is our children's future at stake, the questions stay with us. They haunt us. What can we do? What would solve this?

What is most needed? What has been missing? What solution(s) might work? And by staying with these questions, a key awareness arises. ***What has been missing is clarity on the single most important problem—followed by focused mass action on solving that central problem.***

Considering all our serious collective challenges—let's identify the *one biggest problem* we now face in our world. Then, once that problem is identified, what is the single thing that most effectively deals with it? What is the most focused and catalytic action we can take?

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What is our single biggest collective problem? Our deepest core issue? **Most agree it is the fossil fuel emissions that we humans burn** that are causing devastating global warming, and threatening our entire world and our children's future.

And from this core issue clarity, what is the one thing that most effectively solves this central problem of getting off fossil fuels? While it is all complex, with many elements and needed changes, ***the most important part of the solution is clean energy—focusing on the great transition to clean energy.*** *Without clean energy available, we won't reduce our emissions to the extreme level required in the short time left.* We must rapidly develop the clean energy that humans and industry need to move away from burning dirty fossil fuels. The future of the planet and humanity hinges on developing and adopting clean energy—in everything, everywhere. As soon as possible.

Our fossil fuel emissions are the engine that drives the climate crisis that now threatens everything else. So let us focus there—at the root source of the mushrooming climate crisis. This is the leverage point.

Our top global priority must be a *Clean Energy Revolution.* *We will make this happen through a global emergency mobilization that includes several critical components and actions:*

- Implement a massive clean energy conversion project that does two things simultaneously and aggressively: phasing out polluting fossil fuels, and phasing in clean energy. We must do this at all levels of society, as fast as we possibly can.
- Focus on building and bringing online, all clean energy sources possible—from the individual level, to the city, state, and national levels. This includes solar, wind, geothermal, hydro, and tidal/wave—appropriate to each region.
- Promote radical conservation and energy efficiency—everywhere, immediately. This is the easiest, quickest, and cheapest area of emission reductions. Every unit of energy *not* used means the equivalent in fossil fuels was not extracted, burned, and emitted.
- Convert transportation quickly to electric vehicles. Move toward using more bikes, mass transit, car sharing, walking more, etc.

- Decarbonize electricity, and quickly convert from dirty power sources to clean electricity, however possible in each area.
- Reduce our carbon footprints as much as possible, in every way—individually, locally, nationally, and globally.

This *Clean Energy Revolution*, through such specific, doable actions, will move us all steadily toward the life-sustaining goal of becoming carbon neutral—individually and collectively. Imagine living our lives powered fully by clean energy, causing no carbon emissions. (Remember, clean energy means **zero** carbon. It doesn't mean a little less dirty. Clean means **no** emissions.)

What makes this clean energy solution work is declaring the real emergency, and setting an emergency response goal and plan—a collective time frame for implementing the solution. In a real sense, our emergency situation has set the timing for us.

*Instead of continuing our current patterns of emissions, and passing the extreme 2 °C danger point in 15 years, let us immediately initiate a **Clean Energy Revolution** — worldwide. Let us act boldly and responsibly in quickly phasing out polluting fossil fuels, while phasing in clean, green energy—through a **global emergency mobilization**. Ideally, we would do it in the needed time frame of 15 years. Pragmatically, let's begin aggressively now, and do it as soon as we possibly can.*

It's clear that phasing out dirty, polluting fossil fuels—coal, petroleum, and natural gas—will bring many critical and positive changes. The phase-out will radically cut polluting carbon emissions. We will slow, then stop, warming the planet. This change powerfully mitigates climate change and disruption. We slow the devastation of the environment. It ends dependency on foreign oil. We stop sending money to other oil countries. Our military no longer needs to protect foreign oil; the changeover greatly improves national security. It keeps our planet habitable, and preserves our children's future. All this progress flows from one thing—phasing out polluting fossil fuels.

Phasing in clean energy will also bring many needed and transformative benefits. Converting to clean energy will help all countries heal the air and environment for all generations to come. It will provide better human health everywhere. It will provide the biggest economic opportunity in history. It will build many new industries and provide many new green jobs. The US can lead in this, and help other countries with clean energy technology and solutions.

Phasing in clean energy can make regions, states, and nations energy independent. Adopting clean energy can also make individuals or families energy independent and self-sufficient. For example, solar panels can power the home and electric car, and provide income if unused power is sold to the grid.

Once a clean energy investment—such as solar panels or a green power plant—is paid back, it just keeps providing clean energy, year after year—with **no** fuel cost, emissions, or warming. All this progress flows from one thing—phasing in clean energy, worldwide.

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*All the great work that's been done on reducing emissions has been critically important, and accomplished much. **But an essential piece of the solution has been largely missing.** If we focus mostly on reducing emissions within the fossil fuel-based system, we will sail past the 2 °C limit—and soon. We've waited too long and done too little—there's not enough time left for that approach alone. We've got to get outside of the fossil fuel box with our thinking and action.*

***We must also focus on rapidly creating the clean energy replacement for fossil fuels, as a top priority.** By aggressively developing as much clean energy as possible, people, organizations, and industry can increasingly move toward life-sustaining clean energy, and away from polluting fossil fuels. By quickly generating massive clean energy capacity, we make possible the large-scale cultural transition needed to avoid climate catastrophe.*

Our central work is not adapting to the escalating climate crisis we are causing and exacerbating by our rising fossil fuel emissions. That is *not* adapting—it's just insanely

prolonging the slow suicide we have already set in motion. *The cultural adaptation most urgently needed is **eliminating** fossil fuels, and moving quickly to a clean energy economy.* Our great mission is adapting to a life and world without polluting fossil fuels.

It's becoming increasingly clear that this Clean Energy Revolution is the fulcrum on which everything else turns. It is the cultural reboot that begins turning the bus of humanity away from the cliff. Over time, this heroic collective action will bring the historic day when global emissions finally start declining, and eventually, the temperature as well. Without this pivotal solution, it may be impossible to avoid the growing climate catastrophe that we see ahead, coming ever-closer.

This *Clean Energy Revolution* is a win-win solution—for humanity and the planet. It's good for everybody and everything. That is, except for one group—those who most profit from polluting fossil fuels and from the status quo. Unfortunately, they also wield much of the power and wealth, and have blocked most change and reform in the past.

But that old game has changed completely. With our global climate emergency bursting into public awareness, the context and the stakes have vastly expanded. The big game is no longer about a few people getting very rich from fossil fuels and the status quo. These “winners”—in what is now clearly a losing game—are now needed for something even bigger—to help solve the shared global crisis that will impact everyone's grandchildren, including theirs. They are increasingly realizing how serious the climate crisis is, and are getting on board with their talents, energy, and resources to be part of the solution.

Our great work now is about all of us, working together, solving this planetary emergency, and ensuring that we all avoid the real cliff that lies straight ahead for all humanity. The game now is about decisively changing our collective course to a clean energy future—for *all* our children—rich and poor.

In making cultural change, we can't allow the poor to suffer more. Those in power today are all too quick to cut away at the social safety net. That net needs to be strengthened,

not shredded, in the face of escalating climate change and extreme weather. The changes we make to deal with climate change must support, not punish, the people at the lower end of hierarchies of wealth and power.

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What is the appropriate response to this global climate emergency? As in the urgency of wartime, our dangerous climate situation now requires us to shift our primary focus and priorities as a civilization to the needed emergency response—to aggressively developing clean energy and phasing out fossil fuels. The great threat now demands that we now put all our collective human intelligence, ingenuity, resources, creative genius, energy, entrepreneurial spirit, and resolve into accomplishing this all important, life-sustaining project. In his book *Our Choice*, Al Gore writes about “...the collective decision that we now face: to make the rescue of civilization the central organizing principle of our politics, economics, and social action.”

Let us all wake up to the seriousness of our carbon emissions and global warming, and withdraw from our current fossil fuel-based energy system as quickly as possible. *Let us progressively turn off the demand for fossil fuels, by using less and less of their polluting products, and soon, none—no coal, oil, or natural gas. And we must do it all quicker than it now seems possible.*

This *Clean Energy Revolution* is not about violently overthrowing the old system. It's about creating a radical, pervasive, non-violent, and sudden change in culture and society—a rapid positive transition to a clean energy economy. This revolution is about us being the constructive solution.

You have much more power when you are working for the right thing than when you are working against the wrong thing.

—Peace Pilgrim, pacifist/peace activist

At the core, *we are evolution*. We are the leading edge of the needed changes. We are actively creating the new system, and living into it. We are the growing edge of cultural evolution.

Our movement is not against the oil and coal companies, or those who got rich from them. Our movement is *for* clean energy, everywhere, in everything. We are *for* withdrawing from all dirty fossil fuels quickly. We are *for* all people and organizations being energy frugal and responsible, and becoming carbon neutral. We are *for* a life-sustaining, clean energy future—*for* the whole earth community, and all future generations.

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Fossil fuels have played a positive part in our history and progress. They are the cheap polluting energy source that has powered the Industrial Revolution, and most of modern culture. Fossil fuels got us to where we are. At first, the scale of fossil fuel use and the resulting warming weren't serious. But over time both have expanded, grown exponentially, and mushroomed completely out of control, now threatening everything we hold dear.

It's easy to blame the oil companies, or those who profit from fossil fuels. But we are all part of the same collective system; we all benefit daily from cheap, polluting fossil fuel energy. The fossil fuel industry provides a useful (though harmful) product—then, we buy it and burn it, causing more emissions and warming. The essential problem is that our whole cultural system and worldwide economy are fundamentally based on the energy from polluting fossil fuels. What is needed is system change, moving aggressively to a clean energy economy.

It's important to speak the truth about the fossil fuel companies, and stand up to them when needed. But if our main focus is on fighting them, then extended conflict could stretch everything out, play to their strengths (money and power), and divert energy and

action from the needed solutions. Time is short. In that scenario, we could miss the critical window to change—then we all fail, we all fry. Our best chance is to all come together, and cooperatively implement the clean energy solution—worldwide.

People who don't support us are not enemies. They just don't know the latest scientific information, or they can't yet absorb it. They are not yet aware of the great threat to their own children, and the short time left to change. If they knew and understood, they'd join us. Our real enemies are ignorance and avoidance; our work is education and building momentum. Let's do all we can to educate people about the climate crisis, and the real threat to all people and future generations. Let's embrace and inform all people, including deniers, skeptics, and employees of the fossil fuel companies and show them what the transition looks like. They care about their kids and future too. Let's invite everyone to join their passion with ours in being responsible to all generations, and in implementing the life-sustaining, clean energy solutions we urgently need.

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The price of fossil fuels has never reflected their true costs to society—not even close. Unlike other industries, they are not being held accountable for their pollution and waste products (most notably CO₂ emissions), or for their consequences and social costs—including global warming and environmental devastation.

One of the keys that makes the *Clean Energy Revolution* workable and powerful is finally holding fossil fuels accountable for their pollution and its many impacts. The solution is imposing a price on carbon, a direct “Carbon Pollution Tax.” The tax could be small the first year, increasing yearly thereafter.

Fossil fuels have long been artificially cheap, and unfairly cheaper than clean energy. With a carbon pollution tax, fossil fuel prices will begin rising, reflecting their true social costs more accurately. With this tax, the playing field becomes more level, and the markets get involved. As fossil fuel prices go up, clean energy costs come down,

making it progressively more competitive. People and companies will buy less fossil fuel products, conserve more, and move toward more clean energy. Electric car sales will quickly increase, as their prices will decline. Buyers will begin choosing providers of products and services based on those that have the smallest carbon footprint, or are implementing the *Clean Energy Revolution*. All this is in the public, national, and global interest. Climate expert James Hansen has said “With the climate crisis, the most important thing we can do to make the biggest difference is putting a price on carbon, imposing a carbon pollute-n tax.”

The money from the carbon pollution tax shouldn't become a revenue source for governments. If we are smart, this money will go to our highest emergency priority—**creating clean energy**, which enables us to move away from dirty fossil fuels and carbon pollution. Let's use the carbon tax money to develop, promote, and subsidize clean energy in all ways possible. It goes toward building clean energy sources and power plants, small and large. It goes toward subsidizing individuals, cities, and organizations in converting to solar power, electric vehicles, energy efficiency, etc. Some of the money could help low-income people offset higher energy costs. Another carbon tax option is “Fee and Dividend,” a revenue-neutral mechanism that returns all the tax money to the public.

Also, the vast amounts now spent subsidizing polluting fossil fuel companies should immediately be stopped—and ideally be shifted to subsidize massive clean energy development. In 2013, an International Monetary Fund report estimated that worldwide subsidies to fossil fuel companies total \$1.9 trillion annually. Plus they are massively subsidized by not having to pay a carbon pollution tax yet for the worldwide damage fossil fuels are causing. Let that sink in. After earning eye-popping profits, we are paying \$1.9 trillion a year in additional subsidies to the most profitable industries and companies in history. We are paying them \$1.9 trillion more to increasingly pollute the planet, accelerate global warming, and further wreck our children's future. This travesty must end. As a moral imperative, let's begin directing all incentives toward clean energy development, everywhere, as soon as possible. This would powerfully jump start the global clean energy solution so urgently needed.

Beginning with Scandinavian countries in the 1990s, many countries have already imposed some form of carbon pollution tax. These include Finland, Denmark, Norway, Sweden, India, Japan, Australia, S. Korea, Germany, Ireland, Italy, UK, Netherlands, Switzerland, Costa Rica, and others. China, France, Taiwan, and others are considering carbon taxes. While no US state has a carbon pollution tax yet, California has a cap and trade system in place. Quebec, Alberta, and British Columbia have carbon taxes in effect. Montgomery County, Maryland, is the first US county to impose such a tax. Boulder, CO. is the first city in the US with a carbon pollution tax. In early 2013, Senators Barbara Boxer and Bernie Sanders introduced a bill that would impose a \$20 per ton tax on carbon. The wave is building.

With this one key change—holding fossil fuel companies accountable for their pollution and social costs—the *Clean Energy Revolution* gets immediate funding to develop the new clean energy capacity and infrastructure we desperately need to avoid climate catastrophe. Every jurisdiction that commits to this project—at the city, state, and national levels—could have immediate funds to begin implementing the needed emergency actions and solutions by imposing a small, but rising, carbon pollution tax.

Christine Lagarde served as the conservative finance minister of France, and as managing director of the International Monetary Fund. She is also a climate hawk. At the World Economic Forum in Davos, she called climate change “the greatest economic challenge of the twenty-first century.” She said “We need growth, but we also need green growth that respects environmental sustainability. Good ecology is good economics. This is one reason why getting carbon pricing right and removing fossil fuel subsidies are so important.” Answering an audience question, she said: “Unless we take action on climate change, future generations will be roasted, toasted, fried and grilled.”

Considering honestly the consequences of how dependent we are on burning fossil fuels, it becomes clear: fossil fuels are like a drug. We are collectively addicted to them, and are unconscious and irresponsible about the enormous impacts—present and future—of our addiction. Our habit with these high-energy substances is gradually killing us. We are hooked, in denial, and don't want to quit.

Getting off an addiction can be profoundly painful and difficult. It often requires powerful intervention, along with major changes in living and lifestyle. The *Clean Energy Revolution* is just that—a massive strategic intervention. It will be challenging in many ways. Since our worldwide economy and modern way of life are organized around, and powered by, low-priced, highly polluting fossil fuel energy, it won't be easy.

In going through our collective withdrawal from this systemic, life-threatening carbon addiction, our economic and cultural systems will undergo fundamental, disruptive change. The carbon bubble is larger than the high-tech or real estate bubbles. We cannot burn all the carbon reserves that the stock prices of the fossil fuel companies are based on. At some point, their stocks will decline substantially, and maybe crash. The fossil fuel based economy will likely go through a serious contraction. This contraction could be largely offset by a fast growing clean energy economy, *if* we collectively manage the transition well. Some companies and industries will suffer. Others will grow and prosper. If a product or service is energy-intensive, it will cost more than before, to rightly account for its pollution and social costs. The price of gas, coal-powered electricity, and other high-carbon products will go up, reflecting more of their true cost. All this will happen as clean energy prices keep declining, and its use increases.

Only by consciously going through this difficult intervention and withdrawal will we change our collective suicidal trajectory. By quickly reducing, and ultimately stopping our destructive fossil fuel use, by going clean (clean energy), we will end our collective destructive addiction. And in a few decades, we will end up with a clean energy economy powering us forward into a viable, sustainable future.

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To accomplish this great transition in time, it will take an emergency mass mobilization. This effort will be comparable in some ways to the moon landing project, building the interstate highway system, or fighting the Second World War. Our crisis now is bigger than any of these, and the needed global solutions must happen fast.

To carry out this mass mobilization, we need people to step forward in powerful leadership at every level—individual, city, state, national, and global. Roosevelt embodied such visionary leadership in the crisis of World War II, when he quickly converted the entire auto industry to wartime production. We need that kind of leadership and action now, in spades, everywhere.

This mass mobilization will convert the entire energy and transportation infrastructure of the world—a project unprecedented in size, scope, and opportunity. It will focus on two simultaneous tracks: on every practical way to develop clean energy, and make more of it available; and on everything that reduces dirty fossil fuel use and emissions.

This project's work is to generate as many clean energy sources and power plants as possible, using solar, wind, geothermal, hydro, tidal/wave, and others (maybe next-generation nuclear), appropriate to each region. This mobilization will put solar panels on every possible house, school, and building (where the sun is strong enough). It will build wind turbine farms and solar farms on available land. Companies and governments will quickly convert their fleets to electric vehicles. Individuals will soon buy only electric vehicles (with some hybrids). Auto companies will phase over production to electric vehicles.

This great mobilization project will build and implement a national electric car-charging infrastructure. It will develop more public transportation. It will implement aggressive

energy efficiency and retrofitting projects. The militaries of the world can assist in this great transition: in fact, the US military is already a real leader in “going green”.

This noble work will involve massive efforts in education, research, and new technologies. It will support and subsidize individuals, companies, and cities in implementing the *Clean Energy Revolution* in their domains. It will also provide many new green jobs everywhere, and build a strong clean energy economy moving forward.

Some will say, “It’s impossible, it can’t be done.” Those of us working for this new future will just go ahead and do it anyway. Iceland has shown real leadership, and has reached 100% of their electricity coming from clean sources, mostly geothermal. Germany has reached 50% in clean energy generated, mostly through solar energy—and they are not in a prime solar area. These pioneers show us that *what must be done, can be done*.

In the past, most business and corporate interests have acted as a powerful monolithic block, collectively resisting action on climate change. But a significant split is developing between the fossil fuel industry and many other industries. The leaders of many non-fossil fuel companies and industries are becoming acutely aware of the reality of the accelerating climate crisis, and the enormous risks to their future business, and to the entire world. They also see the monumental economic opportunity in converting everything to a clean energy economy. Many business leaders are realizing that broad climate action and a carbon pollution tax are very much in their self-interest, good for individuals and companies, and good for the world. They are starting to rise up in action, and will be a strong, growing force in addressing emission reductions and dealing with the climate crisis.

We really can invest in new energy sources, divest from old sources, and actually make the economy stronger. So let’s do it.

—Paul Krugman, Nobel Prize-winning economist

Many hopeful reports, books, and proposals keep coming out showing how we **can** solve this crisis—how *we can* achieve radical energy efficiency, how *we can* generate massive clean energy capacity quickly, how *we can* eliminate fossil fuels by 2050, or even earlier. Such innovative thinking creates the possibility and confidence that somehow we can find the ways and means to accomplish the *Clean Energy Revolution*—and do it in the short time left.

A powerful example is the work of Stanford Professor Mark Jacobson, UC Davis professor Mark Delucchi, and their team. They published “A Plan to Power 100 Percent of the Planet With Renewables” in *Scientific American*. This report shows how the entire world could be powered by clean energy by 2050 for all purposes—electricity, transportation, heating and cooling, and industrial processes. By massive implementation of what he calls WWS (wind, water, solar), virtually all global energy needs could be met with clean sources—no fossil fuel energy or carbon emissions. Jacobson and his team have calculated how many wind turbines, solar power plants and rooftop installations, geothermal plants, tidal/wave energy systems, and hydroelectric dams it would take to power everything in the world. And they are producing specific plans like this for the US and for each state.

Jacobson has shown that 100% clean energy is technically doable and economical feasible with the technology we now have. Amazingly, with this plan, global power demand would drop by about 32% (37% in the US) since the clean energy sources are more efficient than fossil fuel power, with massive savings. Additionally, this approach eventually stops global warming. It creates many new green jobs, saves billions in fuel costs and climate change costs, provides energy stability, and reduces health impacts and damage from pollution and extreme weather. *We can* do this! Here’s how. Let’s all get behind this hopeful and powerful solution with our actions, energy, and resources.

Professor Jacobson, director of Stanford’s Atmosphere and Energy Program, says our task now is to build the political will and the broad movement to accomplish this vast transition. Jacobson is also part of the Solutions Project, “*a group of top scientists,*

visionary business leaders and cultural influencers with a mission of accelerating the transition to 100% renewable energy.” (From TheSolutionsProject.org.)

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We modern humans, especially Americans, have a difficult time with limits, or with needing to change our ways. But we are facing unprecedented challenges, and are now going through a historic sea change. We have entered a new age, one with real limits that will require all of us to participate and sacrifice. We will all need to conserve more, move toward clean energy, and live more simply. But together, we can do this—the way our ancestors did in wartime emergencies. Everyone pitched in and did their part. The same is needed now for this global climate emergency.

Let all countries come together in a great emergency summit for a “Clean Energy Future.” Let the countries debate what must be done, and how to do it. Let them align on the global solutions—including an emergency *Clean Energy Revolution* and mass mobilization, financed by a carbon pollution tax. And then let them begin! .

With broad cooperation, and with our *Clean Energy Revolution*, most fossil fuels will be phased out in a generation, and almost all energy will be clean energy. We’ll have solar, wind, and geothermal everywhere, much of it small and decentralized. We’ll have non-polluting electric vehicles. We’ll have much greater energy efficiency and conservation, and we’ll use much less electricity. We’ll stop increasing CO₂ levels, then start reducing them. And many unforeseen innovations will emerge to make new solutions possible. We’ll be well on our way to a healthy, clean energy economy and future. It’s the right and moral thing to do. There seems no other option.

While no single step can reverse the effects of climate change, we have a moral obligation to future generations to leave them a planet that is not polluted and damaged. Through steady, responsible action to cut carbon pollution, we can protect our children’s health and begin to slow the effects

of climate change so that we leave behind a cleaner, more stable environment.

—President Obama’s Climate Action Plan



Inquire:

How can I implement a *Clean Energy Revolution* in my personal life?

How can I help implement it in my city, and in the world?

How can I help spread the word, and be part of the solution?

We are in the midst of vast destruction, but it is simultaneously a moment of profound creativity. We are involved in building a new era of Earth's life. Our human role is to deepen our consciousness in resonance with the dynamics of the fourteen-billion-year creative event in which we find ourselves. Our challenge now is to construct livable cities and to cultivate healthy foods in ways congruent with Earth's patterns. Our role is to provide the hands and hearts that will enable the universe's energies to come forth in a new order of well-being. Our destiny is to bring forth a planetary civilization that is both culturally diverse and locally vibrant, a multiform civilization that will enable life and humanity to flourish.

–Brian Swimme, cosmologist/author, *Journey of the Universe*