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A Generational Challenge to Repower America (as prepared)
D.A.R. Constitution Hall
Washington, D.C.

Ladies and gentlemen:

There are times in the history of our nation when our very way of life depends upon dispelling illusions and awakening to the challenge of a present danger. In such moments, we are called upon to move quickly and boldly to shake off complacency, throw aside old habits and rise, clear-eyed and alert, to the necessity of big changes. Those who, for whatever reason, refuse to do their part must either be persuaded to join the effort or asked to step aside. This is such a moment. The survival of the United States of America as we know it is at risk. And even more – if more should be required – the future of human civilization is at stake.

I don't remember a time in our country when so many things seemed to be going so wrong simultaneously. Our economy is in terrible shape and getting worse, gasoline prices are increasing dramatically, and so are electricity rates. Jobs are being outsourced. Home mortgages are in trouble. Banks, automobile companies and other institutions we depend upon are under growing pressure. Distinguished senior business leaders are telling us that this is just the beginning unless we find the courage to make some major changes quickly.

The climate crisis, in particular, is getting a lot worse – much more quickly than predicted. Scientists with access to data from Navy submarines traversing underneath the North polar ice cap have warned that there is now a 75 percent chance that within five years the entire ice cap will completely disappear during the summer months. This will further increase the melting pressure on Greenland. According to experts, the Jakobshavn glacier, one of Greenland's largest, is moving at a faster rate than ever before, losing 20 million tons of ice every day, equivalent to the amount of water used every year by the residents of New York City.

Two major studies from military intelligence experts have warned our leaders about the dangerous national security implications of the climate crisis, including the possibility of hundreds of millions of climate refugees destabilizing nations around the world.

Just two days ago, 27 senior statesmen and retired military leaders warned of the national security threat from an "energy tsunami" that would be triggered by a loss of our access to foreign oil. Meanwhile, the war in Iraq continues, and now the war in Afghanistan appears to be getting worse.

And by the way, our weather sure is getting strange, isn't it? There seem to be more tornadoes than in living memory, longer droughts, bigger downpours and record floods. Unprecedented fires are burning in California and elsewhere in the American West. Higher temperatures lead to drier vegetation that makes kindling for mega-fires of the kind that have been raging in Canada, Greece, Russia, China, South America, Australia and Africa. Scientists in the Department of Geophysics and Planetary Science at Tel Aviv University tell us that for every one degree increase in temperature, lightning strikes will go up another 10 percent. And it is lightning, after all, that is principally responsible for igniting the conflagration in California today.

Like a lot of people, it seems to me that all these problems are bigger than any of the solutions that have thus far been proposed for them, and that's been worrying me.

I'm convinced that one reason we've seemed paralyzed in the face of these crises is our tendency to offer old solutions to each crisis separately – without taking the others into account. And these outdated proposals have not only been ineffective – they almost always make the other crises even worse.

Yet when we look at all three of these seemingly intractable challenges at the same time, we can see the common thread running through them, deeply ironic in its simplicity: our dangerous over-reliance on carbon-based fuels is at the core of all three of these challenges – the economic, environmental and national security crises.

We're borrowing money from China to buy oil from the Persian Gulf to burn it in ways that destroy the planet. Every bit of that's got to change.

But if we grab hold of that common thread and pull it hard, all of these complex problems begin to unravel and we will find that we're holding the answer to all of them right in our hand.

The answer is to end our reliance on carbon-based fuels.

In my search for genuinely effective answers to the climate crisis, I have held a series of "solutions summits" with engineers, scientists, and CEOs. In those discussions, one thing has become abundantly clear: when you connect the dots, it turns out that the real solutions to the climate crisis are the very same measures needed to renew our economy and escape the trap of ever-rising energy prices. Moreover, they are also the very same solutions we need to guarantee our national security without having to go to war in the Persian Gulf.

What if we could use fuels that are not expensive, don't cause pollution and are abundantly available right here at home?

We have such fuels. Scientists have confirmed that enough solar energy falls on the surface of the earth every 40 minutes to meet 100 percent of the entire world's energy

needs for a full year. Tapping just a small portion of this solar energy could provide all of the electricity America uses.

And enough wind power blows through the Midwest corridor every day to also meet 100 percent of US electricity demand. Geothermal energy, similarly, is capable of providing enormous supplies of electricity for America.

The quickest, cheapest and best way to start using all this renewable energy is in the production of electricity. In fact, we can start right now using solar power, wind power and geothermal power to make electricity for our homes and businesses.

But to make this exciting potential a reality, and truly solve our nation's problems, we need a new start.

That's why I'm proposing today a strategic initiative designed to free us from the crises that are holding us down and to regain control of our own destiny. It's not the only thing we need to do. But this strategic challenge is the lynchpin of a bold new strategy needed to re-power America.

Today I challenge our nation to commit to producing 100 percent of our electricity from renewable energy and truly clean carbon-free sources within 10 years.

This goal is achievable, affordable and transformative. It represents a challenge to all Americans – in every walk of life: to our political leaders, entrepreneurs, innovators, engineers, and to every citizen.

A few years ago, it would not have been possible to issue such a challenge. But here's what's changed: the sharp cost reductions now beginning to take place in solar, wind, and geothermal power – coupled with the recent dramatic price increases for oil and coal – have radically changed the economics of energy.

When I first went to Congress 32 years ago, I listened to experts testify that if oil ever got to \$35 a barrel, then renewable sources of energy would become competitive. Well, today, the price of oil is over \$135 per barrel. And sure enough, billions of dollars of new investment are flowing into the development of concentrated solar thermal, photovoltaics, windmills, geothermal plants, and a variety of ingenious new ways to improve our efficiency and conserve presently wasted energy.

And as the demand for renewable energy grows, the costs will continue to fall. Let me give you one revealing example: the price of the specialized silicon used to make solar cells was recently as high as \$300 per kilogram. But the newest contracts have prices as low as \$50 a kilogram.

You know, the same thing happened with computer chips – also made out of silicon. The price paid for the same performance came down by 50 percent every 18 months – year after year, and that's what's happened for 40 years in a row.

To those who argue that we do not yet have the technology to accomplish these results with renewable energy: I ask them to come with me to meet the entrepreneurs who will drive this revolution. I've seen what they are doing and I have no doubt that we can meet this challenge.

To those who say the costs are still too high: I ask them to consider whether the costs of oil and coal will ever stop increasing if we keep relying on quickly depleting energy sources to feed a rapidly growing demand all around the world. When demand for oil and coal increases, their price goes up. When demand for solar cells increases, the price often comes down.

When we send money to foreign countries to buy nearly 70 percent of the oil we use every day, they build new skyscrapers and we lose jobs. When we spend that money building solar arrays and windmills, we build competitive industries and gain jobs here at home.

Of course there are those who will tell us this can't be done. Some of the voices we hear are the defenders of the status quo – the ones with a vested interest in perpetuating the current system, no matter how high a price the rest of us will have to pay. But even those who reap the profits of the carbon age have to recognize the inevitability of its demise. As one OPEC oil minister observed, “The Stone Age didn't end because of a shortage of stones.”

To those who say 10 years is not enough time, I respectfully ask them to consider what the world's scientists are telling us about the risks we face if we don't act in 10 years. The leading experts predict that we have less than 10 years to make dramatic changes in our global warming pollution lest we lose our ability to ever recover from this environmental crisis. When the use of oil and coal goes up, pollution goes up. When the use of solar, wind and geothermal increases, pollution comes down.

To those who say the challenge is not politically viable: I suggest they go before the American people and try to defend the status quo. Then bear witness to the people's appetite for change.

I for one do not believe our country can withstand 10 more years of the status quo. Our families cannot stand 10 more years of gas price increases. Our workers cannot stand 10 more years of job losses and outsourcing of factories. Our economy cannot stand 10 more years of sending \$2 billion every 24 hours to foreign countries for oil. And our soldiers and their families cannot take another 10 years of repeated troop deployments to dangerous regions that just happen to have large oil supplies.

What could we do instead for the next 10 years? What should we do during the next 10 years? Some of our greatest accomplishments as a nation have resulted from commitments to reach a goal that fell well beyond the next election: the Marshall Plan, Social Security, the interstate highway system. But a political promise to do something

40 years from now is universally ignored because everyone knows that it's meaningless. Ten years is about the maximum time that we as a nation can hold a steady aim and hit our target.

When President John F. Kennedy challenged our nation to land a man on the moon and bring him back safely in 10 years, many people doubted we could accomplish that goal. But 8 years and 2 months later, Neil Armstrong and Buzz Aldrin walked on the surface of the moon.

To be sure, reaching the goal of 100 percent renewable and truly clean electricity within 10 years will require us to overcome many obstacles. At present, for example, we do not have a unified national grid that is sufficiently advanced to link the areas where the sun shines and the wind blows to the cities in the East and the West that need the electricity. Our national electric grid is critical infrastructure, as vital to the health and security of our economy as our highways and telecommunication networks. Today, our grids are antiquated, fragile, and vulnerable to cascading failure. Power outages and defects in the current grid system cost US businesses more than \$120 billion dollars a year. It has to be upgraded anyway.

We could further increase the value and efficiency of a Unified National Grid by helping our struggling auto giants switch to the manufacture of plug-in electric cars. An electric vehicle fleet would sharply reduce the cost of driving a car, reduce pollution, and increase the flexibility of our electricity grid.

At the same time, of course, we need to greatly improve our commitment to efficiency and conservation. That's the best investment we can make.

America's transition to renewable energy sources must also include adequate provisions to assist those Americans who would unfairly face hardship. For example, we must recognize those who have toiled in dangerous conditions to bring us our present energy supply. We should guarantee good jobs in the fresh air and sunshine for any coal miner displaced by impacts on the coal industry. Every single one of them.

Of course, we could and should speed up this transition by insisting that the price of carbon-based energy include the costs of the environmental damage it causes. I have long supported a sharp reduction in payroll taxes with the difference made up in CO2 taxes. We should tax what we burn, not what we earn. This is the single most important policy change we can make.

In order to foster international cooperation, it is also essential that the United States rejoin the global community and lead efforts to secure an international treaty at Copenhagen in December of next year that includes a cap on CO2 emissions and a global partnership that recognizes the necessity of addressing the threats of extreme poverty and disease as part of the world's agenda for solving the climate crisis.

Of course the greatest obstacle to meeting the challenge of 100 percent renewable electricity in 10 years may be the deep dysfunction of our politics and our self-governing system as it exists today. In recent years, our politics has tended toward incremental proposals made up of small policies designed to avoid offending special interests, alternating with occasional baby steps in the right direction. Our democracy has become sclerotic at a time when these crises require boldness.

It is only a truly dysfunctional system that would buy into the perverse logic that the short-term answer to high gasoline prices is drilling for more oil ten years from now.

Am I the only one who finds it strange that our government so often adopts a so-called solution that has absolutely nothing to do with the problem it is supposed to address? When people rightly complain about higher gasoline prices, we propose to give more money to the oil companies and pretend that they're going to bring gasoline prices down. It will do nothing of the sort, and everyone knows it. If we keep going back to the same policies that have never ever worked in the past and have served only to produce the highest gasoline prices in history alongside the greatest oil company profits in history, nobody should be surprised if we get the same result over and over again. But the Congress may be poised to move in that direction anyway because some of them are being stampeded by lobbyists for special interests that know how to make the system work for them instead of the American people.

If you want to know the truth about gasoline prices, here it is: the exploding demand for oil, especially in places like China, is overwhelming the rate of new discoveries by so much that oil prices are almost certain to continue upward over time no matter what the oil companies promise. And politicians cannot bring gasoline prices down in the short term.

However, there actually is one extremely effective way to bring the costs of driving a car way down within a few short years. The way to bring gas prices down is to end our dependence on oil and use the renewable sources that can give us the equivalent of \$1 per gallon gasoline.

Many Americans have begun to wonder whether or not we've simply lost our appetite for bold policy solutions. And folks who claim to know how our system works these days have told us we might as well forget about our political system doing anything bold, especially if it is contrary to the wishes of special interests. And I've got to admit, that sure seems to be the way things have been going. But I've begun to hear different voices in this country from people who are not only tired of baby steps and special interest politics, but are hungry for a new, different and bold approach.

We are on the eve of a presidential election. We are in the midst of an international climate treaty process that will conclude its work before the end of the first year of the new president's term. It is a great error to say that the United States must wait for others to join us in this matter. In fact, we must move first, because that is the key to getting others to follow; and because moving first is in our own national interest.

So I ask you to join with me to call on every candidate, at every level, to accept this challenge – for America to be running on 100 percent zero-carbon electricity in 10 years. It's time for us to move beyond empty rhetoric. We need to act now.

This is a generational moment. A moment when we decide our own path and our collective fate. I'm asking you – each of you – to join me and build this future. Please join the WE campaign at wecansolveit.org. We need you. And we need you now. We're committed to changing not just light bulbs, but laws. And laws will only change with leadership.

On July 16, 1969, the United States of America was finally ready to meet President Kennedy's challenge of landing Americans on the moon. I will never forget standing beside my father a few miles from the launch site, waiting for the giant Saturn 5 rocket to lift Apollo 11 into the sky. I was a young man, 21 years old, who had graduated from college a month before and was enlisting in the United States Army three weeks later.

I will never forget the inspiration of those minutes. The power and the vibration of the giant rocket's engines shook my entire body. As I watched the rocket rise, slowly at first and then with great speed, the sound was deafening. We craned our necks to follow its path until we were looking straight up into the air. And then four days later, I watched along with hundreds of millions of others around the world as Neil Armstrong took one small step to the surface of the moon and changed the history of the human race.

We must now lift our nation to reach another goal that will change history. Our entire civilization depends upon us now embarking on a new journey of exploration and discovery. Our success depends on our willingness as a people to undertake this journey and to complete it within 10 years. Once again, we have an opportunity to take a giant leap for humankind.