



Green New Deal



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The Green New Deal will convert the decaying fossil fuel economy into a new, green economy that is environmentally sustainable, economically secure and socially just. The Green New Deal will guarantee full employment and generate up to 20 million new, living-wage jobs, as well as make the government the employer of last resort with a much-needed major public jobs program.

INTRODUCTION

Our nation — and our world — face a “perfect storm” of economic and environmental crises that threaten not only the global economy, but life on Earth as we know it. The dire, existential threats of climate change, wars for oil, and a stagnating, crisis-ridden economic system require bold and visionary solutions if we are to leave a livable world to the next generation and beyond.

These looming crises mean that the question facing us in the 2016 election is historically unique. The fate of humanity is in our hands. It is not just a question of what kind of world we want, but whether we will have a world at all.

Building on the concept of FDR’s New Deal, we call for a massive mobilization of our communities, government and the people on the scale of World War II — to transition our energy system and economy to 100% clean, renewable energy by 2030, including a complete phase out of fossil fuels, fracked gas and nuclear power. We propose an ambitious yet secure economic and environmental program that will revive the economy, turn the tide on climate change, and make wars for oil obsolete — allowing us to cut our bloated, dangerous military budget in half.¹

The Green New Deal is not only a major step towards ending unemployment for good, but also a tool to fight the corporate takeover of our democracy and exploitation of the poor and people of color. It will provide a **just transition**, with

a priority on providing resources to workers displaced from the fossil fuel industry, low-income communities and communities of color most impacted by climate change. The Green New Deal will provide assistance to workers and communities that now have workers dependent on the fossil fuel, nuclear and weapons industries, and to the developing world as it responds to climate change damage caused by the industrial world.

The transition to 100% clean energy will foster democratic control of our energy system, rather than maximizing profits for energy corporations, banks and hedge funds. It will promote clean energy as a human right and a common good. It will



Shepherds Flat Wind Farm, Oregon, USA, seen from the Empire Builder train route. Credit: Steve Wilson, cc-by-2.0

include community, worker and public ownership, as well as small businesses and non-profits.

We will cut military spending by at least half to bring our troops – currently stationed in over 800 bases worldwide – home to their families, deploying our valued servicemen and women in their own communities to build up our country's future and prosperity here

at home. Maintaining bases all over the world to safeguard fossil fuel supplies or to shore up repressive oil monarchies could no longer be justified as "protecting American interests."

The Green New Deal not only saves us from climate catastrophe. It also pays for itself through health savings alone, from the prevention of fossil fuel-related diseases – which kill 200,000 people every year and afflict millions more with asthma, heart attacks, strokes, cancer and other illnesses. This program not only addresses the urgent crises facing our society, but puts America's leading role in the world to work in a constructive way: to build a just, sustainable, and healthy planet for our young people and future generations.

WHAT THE GREEN NEW DEAL WILL DO

Right now, our federal subsidy programs benefit large agribusiness corporations and the oil, mining, nuclear, coal and timber giants at the expense of small farmers, small business, and our children's environment. We spend billions of dollars every year moving our economy in the wrong direction, turning our planet uninhabitable while imposing the greatest harm on communities of color and the poor. The Green New Deal will instead redirect that money to the real job creators who make our communities more healthy, sustainable and secure at the same time.

We will:

1. Invest in sustainable businesses including cooperatives and non-profits by providing grants and loans with an emphasis on small, locally-based companies that keep the wealth created by local labor circulating in the community rather than being drained off to enrich absentee investors.
2. Move to 100% clean energy by 2030. Invest in clean energy technologies that are ready to go now. Redirect research funds from fossil fuels and other dead-end industries toward research in wind, solar, tidal, and geothermal energy. We will invest in research in sustainable, nontoxic materials and closed-loop cycles that eliminate waste and pollution, as well as organic agriculture, permaculture, and sustainable forestry.
3. Create a Commission for Economic Democracy to provide publicity, training, education, and direct financing for cooperative development and for democratic reforms to make government agencies, private associations, and business enterprises more participatory. We will strengthen democracy via participatory budgeting and institutions that encourage local initiative and democratic decision-making.
4. Establish a Renewable Energy Administration on the scale of FDR's hugely successful Rural Electrification Administration, launched in 1935, that brought electrical power to rural America, 95 per cent of which had no power. Emulated by many other countries, this initiative provided technical support, financing, and coordination to more than 900 municipal cooperatives, many of which still exist. The Green New Deal would update this model with eco-friendly energy sources.

5. End unemployment in America once and for all by guaranteeing a job at a living wage for every American willing and able to work. A Full Employment Program will create up to 20 million jobs, both directly and indirectly, by implementing a nationally-funded, locally-controlled, direct employment initiative replacing unemployment offices with local employment offices. The government will be the employer of last resort, offering jobs meeting community-identified needs in the public and non-profit sectors to take up any slack in private for-profit sector employment. These will include jobs in sustainable energy and energy efficiency retrofitting, mass transit and “complete streets” that promote safe bike and pedestrian traffic, regional food systems based on sustainable organic agriculture, clean manufacturing, infrastructure, and public services (education, youth programs, child care, senior care, etc). Communities will use a process of broad stakeholder input and democratic decision making to fairly design and implement these programs.

DEALING WITH THE CLIMATE CRISIS – 100% CLEAN ENERGY BY 2030

The centerpiece of the Green New Deal is a commitment to transition to 100% clean, renewable energy by 2030. The transition to clean energy is not only a visionary plan for a better world, it’s absolutely necessary to ensure we have a world at all.

The climate crisis is a serious threat to the survival of humanity and life on Earth. To prevent catastrophe, we need a WWII-scale mobilization to transition to a sustainable economy with 100% clean renewable energy, public transit, sustainable agriculture, and conservation.

Already tens of millions of people have been turned into climate refugees, and hundreds of thousands die annually from air pollution, heat waves, drought-based food shortages, floods, rising seas, epidemics, storms and other lethal impacts of climate change and fossil fuels.



Double glass photovoltaic solar modules, installed in a support structure. Credit: Unsplash, cc0 1.0

Scientists report that sea levels are rising much faster than predicted, and could overwhelm coastal areas within decades. New York. Baltimore. Miami. Los Angeles. New Orleans. And more. Some scientists say the data shows that sea levels may rise by 9 feet within the next 50 to 150 years.²

And as global climate change worsens, wars fought over access to food, water and land will become commonplace.³

Historically, talks aimed at stopping global warming have centered on the goal of staying below a 2°C rise in average temperature. The major “victory” in COP 21 in Paris was that the industrial polluting nations such as the US agreed with the rest of the world that the existing global warming cap target of 2 degrees Celsius would lead to catastrophic change. They agreed to set a lower target of “well below 2 degrees Celsius” and, preferably, 1.5 degrees Celsius. Scientific studies show this means reducing greenhouse gases twice as fast (7 to 9% annually) compared to the old goal of “80 by 50”. The GND’s plan to transition to 100% clean energy by 2030 is the only program in any US presidential candidate’s platform that even attempts to meet the scientific goal agreed to in Paris.

CAN WE GET TO 100% CLEAN ENERGY BY 2030?

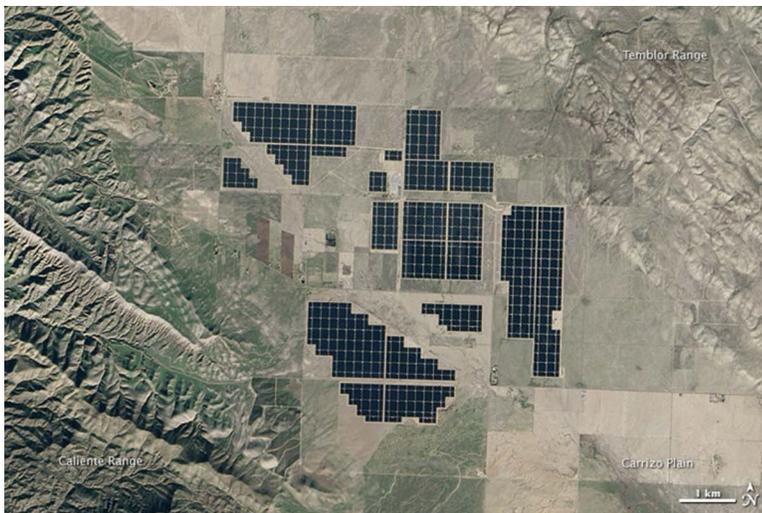
Going to 100% clean energy by 2030 means reducing energy demand as much as possible. This will require energy conservation and efficiency; replacing non-essential individual means of transport with high-quality and modern mass transit; and eliminating the use of fossil-based fertilizers and pesticides. Along with these steps it will be necessary to electrify everything else, including transport, heating, etc. Many current proposals by the state and federal government to move to renewables only address the existing electrical system, which accounts for only about 1/3 of the carbon footprint.

Studies have shown that there are no technological or logistical barriers to a clean-energy transition by 2030.⁴ A British think tank recently put out a study saying that all fossil fuels could be eliminated in 10 years.⁵

The author of the best known series of studies on how to transition to 100% clean energy, Prof. Mark Jacobson, has acknowledged that 2030 is technologically feasible but he has added 20 years to reflect political and economic challenges. However, adding an additional 20 years to the timetable based on expected political obstructionism unfortunately makes it easier for politicians to delay urgently needed action by falsely claiming that we still have over 30 years until we really need to

act. Other professors at Stanford such as Tony Seba have criticized him for not being clearer that 2030 is not only feasible but needed.⁶ We have the technology to transition to 100% clean energy, and the science shows us that we must; the only missing ingredient is the political will.

The Jacobson plan – which, while only one potential approach, is currently the most detailed and well-known – would be met with 30.9% onshore wind, 19.1% offshore wind, 30.7% utility-scale photovoltaics (PV), 7.2% rooftop PV, 7.3% concentrated solar power (CSP) with storage, 1.25% geothermal power, .37% wave power, 0.14% tidal power, and 3.01% hydroelectric power.



Satellite image of the Topaz Solar Farm. Earth Observatory image by Jesse Allen, using EO-1 ALI data provided courtesy of the NASA EO-1 team

Over all 50 states, converting would provide 3.9 million 40-year construction jobs and 2.0 million 40-year operation jobs for the energy facilities alone, the sum of which would outweigh the 3.9 million jobs displaced in the conventional energy sector.

Jacobson's jobs estimates are only for electric power production. They do not include jobs from the two most potent job creators in an energy transition: mass transit/freight rail and retrofitting buildings for insulation and efficiency. It is estimated that every dollar spent on investments in renewable energy creates 3

times as many jobs as investments in nuclear power or fossil fuels⁷. Also missing in the Jacobson study are manufacturing jobs for clean energy generation equipment and jobs for retrofitting the grid into a smart grid.

The Center for American Progress estimates that \$100 billion in green economic investment will translate into two million new jobs in two years.⁸ And a 2008 report by the Center on Wisconsin Strategies suggests that roughly 8 -11 jobs can be created by every \$1 million invested in building energy efficiency retrofitting.⁹ The American Solar Energy Society has estimated that jobs in energy efficiency industries will more

than quadruple between 2007 and 2030, from 3.75 million to 16.7 million.¹⁰ (see also Scaling Up Building Energy Retrofitting in U.S. Cities¹¹)

There is less data about how many jobs would be created by transitioning to a comprehensive national mass transit program. However, an analysis in 2011 by Smart Growth America, the Center for Neighborhood Technology and U.S. PIRG, found that every billion dollars spent on public transportation produced 16,419 job-months, while the same amount spent on highway infrastructure projects produced 8,781 job-months; meaning that investment in public transit creates almost twice as many jobs as investing in highways.¹² (See also a study by the Transportation Equity Network.¹³)

NEED TO INVEST IN OFFSHORE WIND

A major missing ingredient in moving to 100% renewable energy system in the US is the lack of offshore wind power generation. The first small offshore wind (OSW) farm will be operating shortly off of Block Island in Rhode Island.

The University of Delaware recently said that the United States has moved backwards in the last decade with respect to wind power due to overreliance on market forces. There needs to be increased federal and state financial support to develop offshore wind.¹⁴

A report by the NYS Energy Research and Development Authority, written by the University of Delaware, found that the best way to lower costs for offshore wind was to commit to OSW development at scale, rather than on a project by project basis. It concluded that costs could be lowered as much as 30%. Taking advantage of wind turbine innovations and other technology and industry advances could lower costs by roughly an additional 20 percent. The NYSERDA report's author added "well-designed policies and actions taken by New York, as well as by other states, can play an essential role in helping New York City and other U.S. East Coast population centers benefit from gigawatts of clean energy that could be generated by deploying wind turbines off the Atlantic coast."¹⁵

THE GREEN NEW DEAL AND PUBLIC JOBS PROGRAM

The Green New Deal will redirect research money from fossil fuels and other dead-end industries toward research in wind, solar, and geothermal as well as wave and tidal power. We will invest in research in sustainable, nontoxic materials, closed-

loop cycles that eliminate waste and pollution, as well as organic agriculture, permaculture, and sustainable forestry.

It will provide jobs in sustainable energy, transportation and manufacturing infrastructure: clean renewable energy generation, energy efficiency retrofitting, intra-city mass transit and inter-city railroads, weatherization, “complete streets” that safely encourage bike and pedestrian traffic, regional food systems based on sustainable organic agriculture, and clean manufacturing of the goods needed to support this sustainable economy.

This would include a WPA-style public jobs program to secure the right to decent paid work through public jobs for the unemployed and those presently working in low paid service-sector jobs such as in fast food and retail. That would include a significant portion of non-construction, non-energy jobs in public services and non-profits, which is crucial because many unemployed are not skilled in building trades or physically fit to do construction work, skilled or unskilled. Construction workers have one of the highest unemployment rates by economic sectors, while unemployment and underemployment is concentrated among women and minorities.



Wind turbines under construction in the Biglow Canyon Wind Farm. Credit: Tedder, cc-by-3.0

Economist Philip Harvey estimated the net federal cost for 1 million living-wage public jobs in 2011 at \$28.6 billion. The economic multiplier of this fiscal stimulus would generate another 414,000 jobs in Harvey’s analysis. In an analysis of the July 2016 Bureau of Labor Statistics report, the National Jobs for All Coalition identified a need for 19.6 million jobs to achieve full employment. Dividing 19.6 million needed

jobs by 1.4 million created jobs equals 14, which multiplied by \$28.6 billion equals \$400.4 billion for a 19.6 million jobs program.¹⁶

Other economists also estimate the cost of a program for the federal government as employer of last resort (ELR) would be relatively small, around 1-2% of GDP, because it corresponds with huge savings in unemployment insurance in a way that pays people to work rather than paying them to not work. A federally funded ELR program will also help the budgets of every state as incomes from employment add to the tax revenue of states and local governments.¹⁷

Bernie Sanders' recent presidential campaign called for the creation of 13 million living-wage jobs, primarily through \$200 billion a year in investments in infrastructure: water system, transportation, seaports, electric grid, dams and broadband.¹⁸ As outlined above, the Green New Deal would invest in infrastructure that reduces the carbon footprint (e.g., energy retrofits, renewable energy), as well as education, child and adult care, home health services and other essential human services.

A job guarantee would also be good for the private sector, as it guarantees that domestic demand never collapses as much as it does under current conditions with chronically low wages and structural unemployment and underemployment. It would also lift incomes for the most vulnerable households, helping to significantly reduce income inequality.

PAYING FOR THE GREEN NEW DEAL

We will need revenues between \$700 billion to \$1 trillion annually for the Green New Deal. \$400 billion will be for the public jobs programs. Estimates for the transition to 100% clean energy start at \$200 billion a year.

Economists predict that we can build a 100 percent renewable energy system at costs comparable to or less than what we would have to spend to continue our reliance on dirty energy. The International Energy Agency estimates that limiting warming to 2° C would require an additional investment of about 1 percent of global GDP per year, which would be \$170 billion a year for the US¹⁹. The former chairperson of the Intergovernmental Panel on Climate Change (IPCC) has made similar estimates.

Jacobson estimates that the total capital cost to go to 100% renewable energy in the US would be \$13.4 trillion²⁰. Much of those capital costs could be covered by diverting existing investments in nonrenewable energy. America's coal and nuclear power

stations are old and many are dilapidated. In order to keep the lights on in the United States, a new energy system will need to be constructed. Large corporations are walking away from existing power stations, closing them and laying off the workers.

Prices for renewable energy have been falling very fast in recent years, which would reduce the costs in outlining years. The Jacobson report shows that between 2009 and 2014, the cost of solar electricity in the United States fell by 78 percent and the cost of wind energy fell by 58 percent. In many parts of the United States, wind is now the cheapest source of electricity, and solar power is on track to be the cheapest source of power in many parts of the world in the near future. Renewable energy technologies are also continually improving in performance.

When we make the investment required to clean up our emissions and waste, our economy will be revitalized by the wealth created. Our national security will no longer be vulnerable to disruption of oil supplies, and there will be absolutely no reason to send our people abroad to fight wars for oil. Using renewable energy instead of coal and gas will mean health care costs will go down because the foundations of a green economy – clean energy, healthy food, pollution prevention, and active transportation – are also the foundations of human health. The Green New Deal pays for itself through the prevention of chronic disease, which consumes a staggering 75% of \$3 trillion in annual health care costs. All in all, this is an investment in our future that will pay off enormously as we build healthy, just, sustainable communities.

According to Jacobson et al, converting to 100% clean energy would also eliminate approximately 62,000 (19,000–115,000) U.S. air pollution premature mortalities per year today, avoiding 600 (\$85–\$2400) billion per year (2013 dollars) in healthcare costs by 2050. Converting to clean energy would further eliminate \$3.3 (1.9–7.1) trillion per year in 2050 global warming costs to the world due to U.S. emissions. These plans will result in each person in the U.S. in 2050 saving \$260 (190–320) per year in energy costs (2013 dollars), U.S. health costs per person decreasing by \$1500 (210–6000) per year, and global climate costs per person (including costs incurred by extreme weather events, sea level rise, adverse effects on water and agriculture, etc) decreasing by \$8300 (4700–17600) per year.

The Green New Deal includes a major cut in federal spending on the military (including the Pentagon budget as well as expenditures on war, nuclear weapons and other military-related areas), which would free up from roughly \$500 billion per year. The \$1 trillion in current annual United States military spending is equivalent to the rest of the world's military budgets combined. A 50% cut would leave us with a budget

that is still three times the size of China's, the next biggest spender. U.S. military expenditures have doubled over the past decade without improving security. At the same time, the shift towards a policy of "full spectrum dominance" and expanding American empire has proven counterproductive to peace and security.

A carbon fee will ensure more realistic fossil fuel prices that include the cost to the environment, and are high enough to tackle climate change effectively by creating the economic incentive to drive efficiency and bring alternative fuels to market. The revenues will provide funding for the Green New Deal as well as safety nets for low-income households vulnerable to higher prices on certain items due to rising carbon taxes. We advocate establishing an Oil Legacy Fund, paid for by a tax on the assets of oil and gas companies. The funds raised would help deal with the effects of climate change and smooth the transition to a low-carbon economy.

According to the Congressional Budget Office, a carbon tax of \$20 per ton would raise \$120 billion a year.²¹ We would support a carbon tax of at least \$60 per ton (\$360 billion per year) and then rising \$15 to \$20 per ton annually. (Some of the carbon tax revenues would be rebated in various forms to low and middle income households to offset the regressive nature of any consumption or sales tax.)

A carbon tax is an "upstream" tax on the carbon contents of fossil fuels (coal, oil and natural gas) and biofuels. A carbon tax is the most efficient means to instill crucial price signals that spur carbon-reducing investment. A carbon tax can also be used to recapture some of the costs pushed on to taxpayers and consumers from burning fossil fuels. Unlike cap-and-trade, carbon taxes don't create complex and easily-gamed "carbon markets" with allowances, trading and offsets. Also, because carbon taxes / fees are predictable, unlike volatile cap-and-trade markets, it is easier to plan clean energy investments to avoid carbon taxes.

The wealthy, who have most benefited from the excessive burning of fossil fuels, should pay increased taxes to help with the cost of transitioning to a green economy. Jill Stein has called for a higher estate tax on the wealthiest Americans; raising the top income tax rate while lowering it for low and middle income Americans; and closing various tax loopholes, especially for corporations. Similar tax proposals advanced by Sen. Sanders during the recent primary, including a financial transaction tax, would have raised an extra \$130 billion a year.²²

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