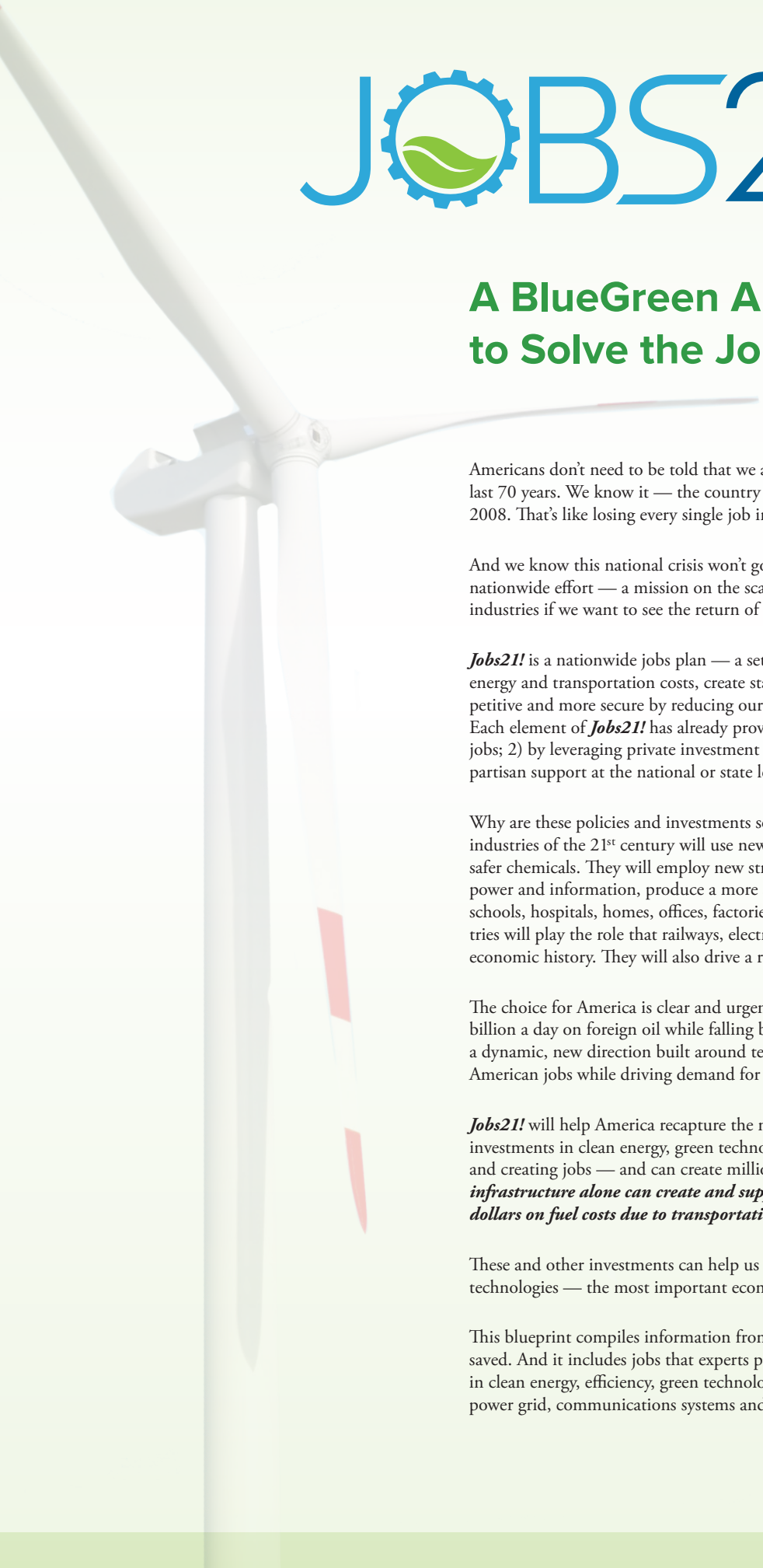


JOBS21! good jobs for the 21st century

A BlueGreen Alliance Blueprint to Solve the Jobs Crisis

Americans don't need to be told that we are experiencing an employment crisis unlike any in the last 70 years. We know it — the country lost 7 million jobs during the great financial crash of 2008. That's like losing every single job in Ohio *and* Wisconsin.

And we know this national crisis won't go away on its own. That's why today we need a bold, nationwide effort — a mission on the scale of the Apollo space program — to invest in key industries if we want to see the return of widespread prosperity across the country.

Jobs21! is a nationwide jobs plan — a set of policies and investments that can create jobs, cut energy and transportation costs, create stability for business and make the country more competitive and more secure by reducing our dependence on foreign oil. These aren't untested ideas. Each element of ***Jobs21!*** has already proven its effectiveness in three critical ways: 1) by creating jobs; 2) by leveraging private investment into growing our economy; and 3) by attracting bipartisan support at the national or state level.

Why are these policies and investments so critical? Because across the globe, the breakthrough industries of the 21st century will use new technologies to produce wind and solar power and safer chemicals. They will employ new strategies to strengthen existing infrastructure, move power and information, produce a more sustainable food supply, and make our buildings — schools, hospitals, homes, offices, factories — healthier and more energy efficient. These industries will play the role that railways, electricity, and motor vehicles played in earlier periods of economic history. They will also drive a resurgence in manufacturing and construction.

The choice for America is clear and urgent. We can stay on our current path, spending $1 billion a day on foreign oil while falling behind in the global race for jobs. Or we can move in a dynamic, new direction built around technologies and policies of the future that create real American jobs while driving demand for the products we make and the services we provide.

Jobs21! will help America recapture the millions of jobs we lost. Smart policies and targeted investments in clean energy, green technology and our nation's infrastructure are already saving and creating jobs — and can create millions more. ***In fact, investments in our transportation infrastructure alone can create and support more than 7 million jobs while saving billions of dollars on fuel costs due to transportation efficiencies.***[1]

These and other investments can help us win the global competition for clean energy and green technologies — the most important economic development race of the 21st century.

This blueprint compiles information from a variety of sources about jobs created, secured and saved. And it includes jobs that experts project we will produce in the future if we invest wisely in clean energy, efficiency, green technology and manufacturing and in our roads, railways, power grid, communications systems and other parts of our national infrastructure.

Here's how we can do it:

I. GROW CLEAN ENERGY

Innovation creates new markets and new markets create jobs. Although the global market for clean energy — wind, solar, biomass and other renewable sources of power — is estimated at $1.7 trillion to $2.3 trillion over the next decade, the U.S. is quickly falling behind, with China now the global leader in wind and solar.[2]

U.S. policies and investments should promote both economic growth and renewable energy generation. And expanding the production of renewable energy technologies must be coupled with the further development and support for homegrown companies making the parts for these new power sources.

Country	Clean Energy Investment 2009 (USD billions)	Five-Year Growth Rate in Clean Energy Investment (%)
China	34.6	148
United States	18.6	103
United Kingdom	11.2	127
Spain	10.4	80
Brazil	7.4	148
Germany	4.3	75

Source: Pew Charitable Trusts, "Who's Winning the Clean Energy Race."

GIVE INDUSTRY THE FINANCIAL HELP IT NEEDS

Tax incentives and loan guarantees can provide the clean energy sector with the tools it needs to produce energy, to make the parts for wind turbines, solar panels and other equipment, and to connect to new supply chains and markets while spurring private investment and job creation. This support is critical, since financing poses a major obstacle to rebuilding our manufacturing base.

- **Establish a Consistent Funding Source** for renewable energy technologies by creating a green bank. With proper safeguards to protect taxpayers, a green bank would provide seed money that would, in turn, encourage private investment to support loans for an array of advanced clean energy technologies.

  › **FAST FACT:** The seed investment provided through a green bank can be matched at a 10-1 ratio by private loans, guarantees, and credit enhancements (such as insurance for investors) to support billions of dollars in private sector investment in clean energy and energy-efficient technologies.[3]

- **Extend Tax Incentives** like long-term production and investment tax credits for renewable energy. Such incentives will create stable markets, encourage private investment and help existing industries that are positioned to create jobs.

  › **FAST FACT:** Some energy-related tax incentives, including some supportive of the oil and gas industries, are permanent fixtures in our tax code. But the incentive programs for renewable energy have been allowed to expire multiple times over the last 15 years, resulting in constant fights for reinstatement and causing severe market instability.[4]

  › **FAST FACT:** *The Treasury Grant Program*, a temporary and effective provision of the tax code passed as part of the American Recovery and Reinvestment Act (ARRA), Section 1603, with Davis Bacon wage protections is essential for wind and solar development, with new goals and reporting required for the creation and retention of domestic jobs.[5] The program is set to expire at the end of 2011.
  Job Creation for Wind: 55,000 jobs.[6]
  Job Creation for Solar: 45,000 jobs.[7]
  Job Creation for Geothermal: 11,200 jobs.

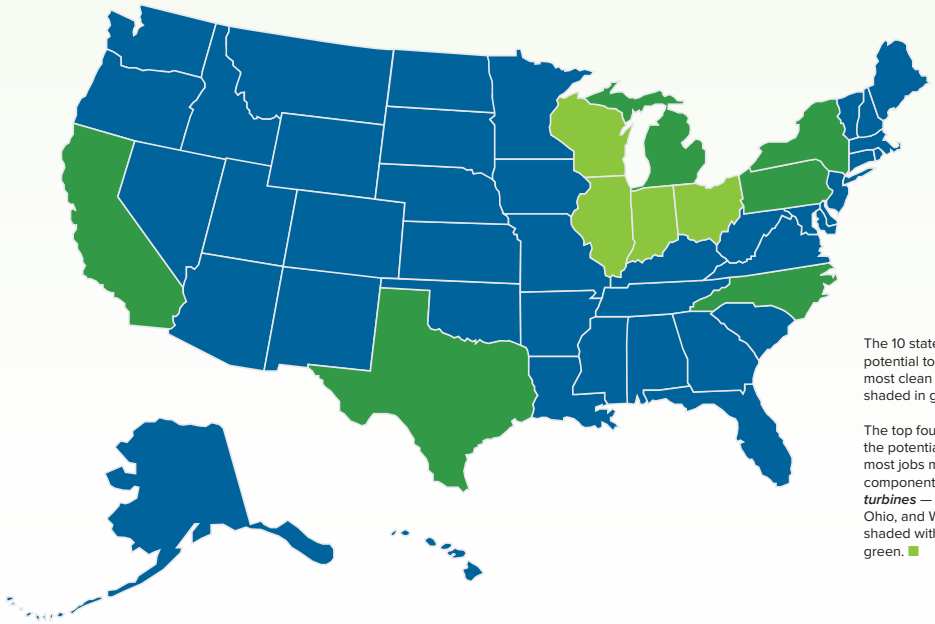
- **Establish a National Renewable Electricity Standard (RES)** that includes a target of producing 25 percent of the country's electricity from renewable energy sources by 2025.
  Job Creation: 850,000 jobs in existing manufacturing firms over 15 years.[8]

  › **FAST FACT:** ***Jobs21!*** focuses on eight of the 10 states with the greatest potential to create clean energy manufacturing jobs: California, Illinois, Indiana, Michigan, New York, Ohio, Pennsylvania, and Wisconsin.

MAKE BUILDINGS MORE ENERGY EFFICIENT

Our residential, commercial, industrial, and public buildings account for more than 70 percent of the energy we consume. As a result, embracing energy efficiency will lower electricity bills and protect our environment — but we also must do this for the sake of U.S. competitiveness. These investments will also create jobs while paying for themselves. For every dollar we spend making our buildings more energy efficient, we get two dollars in savings. Think about all of our schools, grocery stores, hospitals, high-rise offices and apartments. Building efficiency is the easiest way to achieve significant energy savings. Also, important in the greening of buildings is their operation and maintenance, which can reduce building energy use by 10 percent with modest up-front costs, making it the cheapest, fastest way to reduce energy bills and greenhouse gas emissions.

States with potential to create the most energy jobs



The 10 states with the potential to create the most clean energy jobs are shaded in green.

The top four states with the potential to create the most jobs manufacturing components ***for wind turbines*** — Illinois, Indiana, Ohio, and Wisconsin — are shaded with a lighter green.

Source: Research conducted by the Renewable Energy Policy Project, 2009.

- **Establish a National Energy Efficiency Resource Standard (EERS)** to encourage more efficient generation, transmission, and use of electricity and natural gas. Such a standard requires utilities to reduce energy use by a specified and increasing amount each year. The 19 states that already have an EERS have demonstrated effective results. However, the full potential of energy efficiency cannot be realized unless there is one federal standard in place. A national policy that increases the energy efficiency of America's homes, offices and factories is critical to achieving short and long-term progress toward a clean energy economy.
  Job Creation: 220,000 jobs over 10 years.[9]

  › **FAST FACT:** An EERS will save consumers and businesses nearly $170 billion per year on utility bills.[10]

- **Support Residential Efficiency** incentive programs like the Weatherization Assistance Program (WAP) and Home Star, a rebate program that encourages homeowners to upgrade their homes by investing in energy-efficient appliances, building mechanical systems, windows and insulation. Americans should also support programs like Rural Star, which is a program that provides loans to families and farmers to improve their energy efficiency and lower their utility bills, creating manufacturing and installation jobs in the process.
  Job Creation: Under Home Star alone, 168,000 jobs based on a proposed $6 billion, two-year rebate program.[11]

  › **FAST FACT:** Homeowners who take advantage of Home Star could reduce their home energy costs anywhere from 20 to 40 percent.[12]

- **Support Building Efficiency** through a broad and diverse program like the *Better Buildings Initiative* that encourages building owners, schools, apartment buildings and hospitals to invest in energy-efficient equipment and services that will cut energy use and costs while creating jobs.
  Job Creation: Save and create more than 300,000 jobs based on $1 billion of federal investment generating $16.4 billion in private investment.[13]

- **Propel Industrial Energy Efficiency** programs in our nation's manufacturing sector, a sector accounting for more than a quarter of all energy use in the U.S. We need a package of programs, investments and incentives that help industry pinpoint areas of high energy use and ways to improve efficiency. In industrial settings, even small improvements in efficiency can yield large energy savings using technologies such as combined heat and power (CHP) — which generates power onsite and recovers and reuses waste heat — and other industrial improvements. Job Creation: 1 million jobs by 2030, based on a $234 billion investment.[14]

- **Support the Greening of America's Schools,** which will provide students with the necessary foundation to shape and participate in that future economy and fund greatly needed construction and modernization of school buildings. Students require learning environments that are safe, healthy, and chemical free, creating jobs for construction and manufacturing workers, better learning and teaching environments for our students, and our nation's educators.

  › **FAST FACT:** Green schools use less water and energy and can save an average of $100,000 a year on operational expenses. That is enough savings to hire at least one teacher, purchase 200 computers or buy 5,000 textbooks.[15]

II. REVITALIZE AMERICAN MANUFACTURING

Our industrial heartland is fading in the face of global competition. During the recession, the manufacturing sector lost 2 million jobs, or 15 percent of the workforce.[16] Today, we must rebuild manufacturing across the United States by leading the world in the production of new, green technologies and components. The good news is that clean energy and green technologies use more manufacturing than many other sectors of the economy. Today, roughly 26 percent of all "clean economy" jobs are in manufacturing establishments, compared to 9 percent in the economy overall.[17]

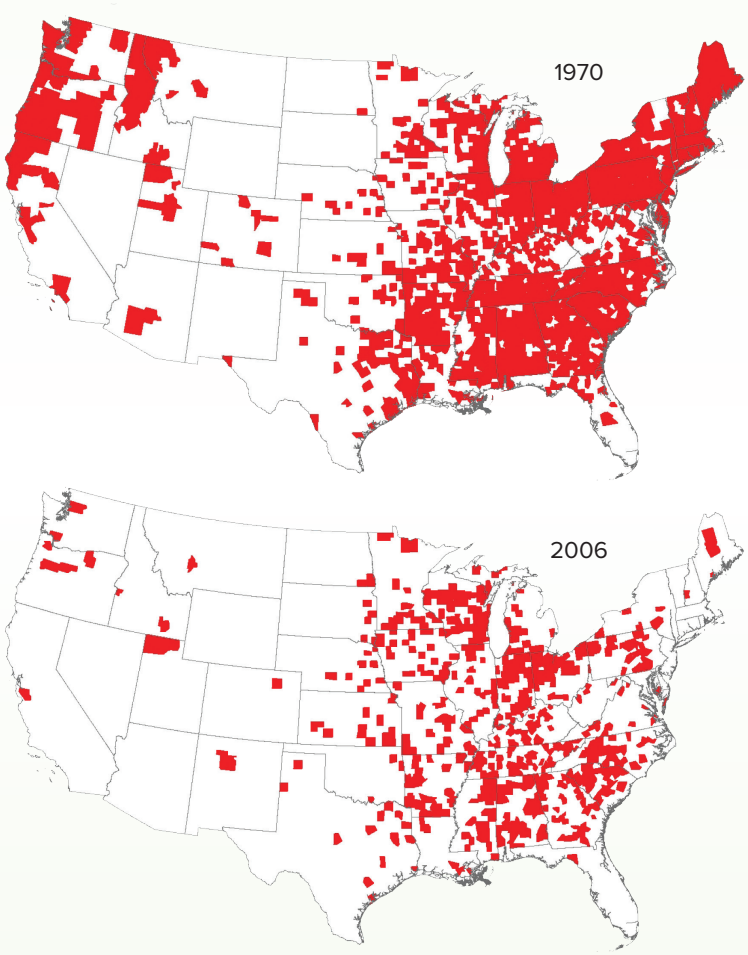
- **Support a Comprehensive Manufacturing Plan** that defines a long-term vision for the growth of our industrial base, and its positioning in the global clean energy and green technology economy. Such a plan must also coordinate strategy among our large manufacturing states.

- **Enact and Fund Green Manufacturing Loan Programs.** Loan programs that establish revolving loan funds can provide a stable financing mechanism for manufactures that want to retool.
  Job Creation: A revolving loan fund could create 680,000 manufacturing jobs and 1,972,000 additional jobs over five years as a result of spending in local economies.[18]

- **Encourage Public Private Partnerships for Innovation.** The U.S. has a long tradition of public support for technological innovation — in its colleges and universities and through public-private partnerships. Programs like the Manufacturing Extension Partnership play a crucial role in helping businesses develop and bring to market new technologies.

- **Extension and expansion of the Advanced Energy Manufacturing Tax Credit 48c** will help secure American leadership in clean energy manufacturing and leverage significant private sector investment. The tax credit, which should be extended and allow for grants in lieu of tax credits, provides a 30 percent credit for investments in new, expanded, or re-equipped advanced energy manufacturing projects.[19]
  Job Creation: 58,000 jobs based on $2.3 billion federal investment.[20]

Counties with at least 50 Percent of Employment in the Manufacturing Sector in 1970 and 2006



Source: Bureau of Economic Analysis; America2050.

***Jobs21!* is a plan committed to combatting climate change.** Every day and throughout every season, human society and our environment are affected by climate variability and change. *Jobs21!* will help America achieve greenhouse gas reductions and sustainable adaptation strategies that are critical to preventing the worst impacts of climate change, to securing the jobs and welfare of workers, and to ensuring the long-term future of our planet

III. MOVE POWER AND CONNECT THE COUNTRY

Enhancing our electric power transmission system and expanding high-speed information technologies have the potential to revolutionize energy management, communications and economic development across the U.S.

- **Support Expansion of a Modern Interstate Power Grid,** including "Smart Grid" computer-based technologies and devices, to more efficiently deliver clean energy throughout the country. "Smart grid" technologies improve the management and distribution of energy in a strategic, efficient and reliable manner and reduce energy use at homes or offices.
  Job Creation: 239,000 jobs can be created or retained with every $10 billion investment.[21]

- **Expand Broadband** communication services that guarantee adequate and affordable high-speed internet connections for everyone, regardless of income level or location, and for every community's anchor institutions, such as schools and universities. This will jumpstart business development in tele-medicine, long-distance business communication and e-commerce, and it will also reduce travel and associated fuel costs, with a special benefit to rural areas.
  Job Creation: 489,000 jobs can be created or retained with every $10 billion investment.[22]

  › **FAST FACT:** Increased adoption of broadband technology and tele-health practices can decrease travel by allowing doctors to monitor and consult with patients remotely. Tele-health can help avoid 850,000 transports between emergency departments, resulting in transit cost savings of $537 million a year.[23]

› What is the Smart Grid?

The smart grid is a distribution system that allows the flow of information to the consumer and to the utility company through thermostats, web-based programs, appliances and other devices. It is designed to improve the reliability, security and efficiency of the electric system. The smart grid provides real-time monitoring and data retrieval that allows the utility to better regulate and respond to issues on electricity distribution — making it easier to move to renewable energy sources like wind and solar — as well as provide detailed real-time information to consumers on their energy consumption.

› What is Broadband?

The term broadband commonly refers to high-speed Internet access that is always on and faster at moving data than the traditional dial-up access. A more efficient broadband network will provide access via computer to a wide range of resources, services, and products — including healthcare and educational services — without the need to travel. This will reduce air and ground transportation, decreasing gas consumption and greenhouse gas emissions.

IV. REBUILD ROADS AND RAILWAYS AND DRIVE 21ST CENTURY VEHICLES

America needs a 21st century transportation system that expands and modernizes our highways, railways and mass transit systems — with the resources to maintain and operate them. At the same time, we need American-made, cleaner vehicles that will create manufacturing jobs across the nation. These investments to rebuild our infrastructure and to expand production of clean fuels, coupled with homegrown production of advanced vehicles and their component parts, will position the U.S. as a global economic leader for decades to come.

INVEST IN TRANSPORTATION INFRASTRUCTURE

- **Invest in America's highways, rail, transit systems** and in biking and walking infrastructure to make America more energy independent and globally competitive.[24]
  Job Creation: 13,700 jobs created or sustained per $1 billion invested — a total of 7.7 million jobs in a six-year, $550 billion reauthorization bill.[25]

  › **FAST FACT:** There are two million jobless men and women who are ready, willing and trained to build America's infrastructure. Total public spending on infrastructure has fallen steadily since the 1960s and now stands at 2.4 percent of our Gross Domestic Product (GDP). Europe, by contrast, invests 5 percent of its GDP on infrastructure, while China is racing into the future — and leaving other countries behind — at nine percent.[26]

- **Invest in Our Railways,** including high-speed passenger rail, to move passengers and deliver freight more efficiently while creating good jobs and reducing oil dependence and pollution.

Job Creation: 20,000 jobs created or sustained per $1 billion invested.[27]

› **FAST FACT:** Demand for freight transportation is projected to rise more than 60 percent over the next 30 years — from 16.9 billion tons in 2007 to 27.1 billion tons in 2040. An estimated $70 billion in improvements will be required to handle projected rail freight demand, suggesting potential to create or sustain 1.4 million jobs throughout the economy over the next 30 years.[28]

- **Support the Clean Transportation Manufacturing Action Plan (TMAP),** a national strategy to combine federal and private investments to build a modern, efficient transportation system and to create quality, high-paying manufacturing jobs. The U.S. needs to support the domestic manufacture of advanced rail vehicles, efficient buses, clean trucks and their component parts.
  Job Creation: Investing $30 billion into public transit and $10 billion into intercity/high-speed rail annually for six years would support 15,524 direct and indirect jobs for each billion dollars invested — 3.7 million jobs in transit and rail over that time period. Of those jobs, 605,352 would be in manufacturing.[29]

- **Fund Public Transportation** and provide regional, state and local transit systems with flexibility to use their federal funds for operating costs to maintain critical service that keeps people connected to their communities. Federal transit operating assistance puts transit employees and transit-dependent individuals to work quickly. Transportation investments should support day-to-day transit operations to preserve and create quality jobs, ensure millions of working Americans are able to get to work affordably and reliably, and while reducing automobile pollution.

DRIVE 21ST CENTURY VEHICLES

- **Build Cleaner Cars and Vehicles** to keep American auto manufacturers competitive and employ hundreds of thousands throughout the supply chain; and include light, medium and heavy-duty vehicle standards that improve fuel efficiency, cut America's oil dependence and reduce greenhouse gas pollution. By developing and producing advanced fuel-saving technologies in the U.S., including batteries for electric vehicles, automakers and their suppliers can create quality jobs, which provide the efficient cars and light trucks demanded in the marketplace. Energy-efficient vehicles drive demand for new technology, including hybrid drive trains and advanced diesel engines.

  As Americans use more hybrid and electric vehicles, we also need to invest in the electrification infrastructure that will support these advanced vehicles. These infrastructure investments will serve to make our existing road networks more efficient by tying into the smart grid and new broadband networks to provide charging systems for electric vehicles.
  Job Creation: 150,000 new U.S. jobs by 2020, based on demand for new vehicles and parts resulting solely from the increased national fuel-efficiency standard.[30]

› **FAST FACT:** Section 136 is a direct loan program to support engineering and retooling costs associated with the domestic production of advanced technology vehicles and their key components. The program has been a huge success, with the $8.3 billion in loans creating more than 38,000 U.S. auto sector jobs.[31]

V. IMPROVE JOB QUALITY, THE HEALTH OF OUR COMMUNITIES — AND THE ENVIRONMENT WE SHARE

Twenty-first century job creation and security must go hand in hand with 21st century safeguards to protect the health and safety of employees and communities and create high-road, good-paying jobs that respect employees' rights. We need to increase the number *and* improve the quality of our homegrown jobs. And we need to ensure that manufacturing jobs grow here in America.

SUPPORT WORKING FAMILIES

There are efforts taking place in states across the country that would undermine collective bargaining rights. Such efforts would not create a single job. Indeed, they actually hurt working families, small businesses and communities. ***America needs a hiring plan not a firing plan.***

› **FAST FACT:** Countries with a strong middle class all have strong union movements. In America today, states with higher concentrations of union members have a much stronger middle class. The 10 states with the lowest percentage of workers in unions all have a relatively weak middle class.[32]

SUPPORT CLEAN AIR

Our country's Clean Air Act has been a tremendous success, delivering cleaner air, improved public health and employment opportunities. Over the last four decades, our country's environmental safeguards have resulted in waste reduction, energy efficiency, and greater economic competitiveness — creating thousands of new jobs and making existing jobs more secure. Today, we must defend the Environmental Protection Agency's (EPA) existing authority to protect the health of all Americans by regulating greenhouse gases. Failure to regulate greenhouse gases will damage U.S. competitiveness in the race to lead the clean energy economy.

› **FAST FACT:** In the 40 years since passage of the Clean Air Act, our nation's GDP grew by 204 percent and private sector jobs grew by 86 percent..[33]

KEEP OUR WATER SAFE

The Clean Water State Revolving Fund and the Safe Drinking Water Act provide loans for the construction of wastewater facilities, pollution control and estuary protection projects. The nation must make significant investments to install, upgrade, or replace our water systems and infrastructure to continue to improve the quality of drinking water and better protect public health.

Job Creation: 27,000 jobs for every $1 billion invested.[34]

› **FAST FACT:** The EPA, the U.S. Government Accountability Office and the Water Infrastructure Network estimate that the nation faces a $500 billion funding shortfall for water infrastructure over the next two decades. Continued funding will ensure that we can supply safe drinking water to millions of Americans and create good infrastructure jobs along the way.[35]

RECYCLE

The United States should establish a national recycling rate of 75 percent by 2030.[36] There are costs — financial, human and environmental — for everything we buy, use and throw away. The promotion of waste reduction and investments designed to expand America's recycling infrastructure will create significant job opportunities for working men and women while saving billions in wasted resources.
Job Creation: With a 75 percent national recycling rate, more than 2.3 million jobs would be created.[37]

› **FAST FACT:** The U.S. generates some 2.5 million tons of electronic waste per year containing potentially dangerous chemicals and pollutants. However, this waste also contains precious metals, rare earth minerals, and glass that can be recovered and recycled here in the U.S. instead of in other countries. Such a strategy would reduce the economic costs and environmental impacts of securing and processing materials for new products — and it would stop the devastating impacts on human health and the environment associated with e-waste recycling in developing countries..

REBUILD OUR CHEMICALS INDUSTRY

Rebuild our chemicals industry by reforming our outdated laws governing toxic substances. Most chemicals now in use were grandfathered in under the Toxic Substances Control Act (TSCA), a 1976 law. In the 35 years since TSCA was implemented, new science has shown how chemicals can impact human health and lead to increased rates of asthma, cancer, infertility, birth defects and other chronic diseases. But strengthening the rules governing toxics can encourage innovation and investment in new markets of sustainable chemistry, unleashing the health, environmental and economic benefits of cleaner, safer production of chemicals.

Job Creation: 100,000 new jobs in the bioplastics sector alone over the next 20 years.[38]
Job Security: A move to sustainable production will make the U.S. chemical industry more competitive by:

- lowering handling and disposal costs for the chemical industry and downstream users;
- ensuring access to important global markets;
- reducing waste;
- meeting consumer demand for safer products;
- protecting shareholder value; and
- encouraging research and the development of innovative products.[39]

PROTECT COMMUNITIES BY SAFEGUARDING EMPLOYEES

Safety and health protections for Americans have not been significantly changed since the 1970s. By strengthening the enforcement of workplace safety and health laws, including increased penalties and whistleblower protections, we will improve the quality of American jobs and protect our communities. Why? Because many environmental hazards begin as unresolved workplace safety and health problems.

PROVIDE TRAINING OPPORTUNITIES FOR AMERICA'S WORKERS

We can strengthen our workforce by providing workers with opportunities to acquire the skills and qualifications to retrofit and maintain buildings, install solar panels, maintain wind farms, manufacture component parts, and build new facilities and infrastructure. This means expanding federal, state, and local support for green industry career programs in high schools and community colleges, and continuing programs like the Green Jobs Act, which has helped identify the most needed skills and supports training for workers in those jobs. This also means supporting and encouraging labor apprenticeship programs, which ensure that the work performed is of quality and high standard.

MAKE IT IN AMERICA

The jobs and industries of tomorrow must be created in America. We have seen too many U.S. manufacturing jobs move offshore. This includes jobs making solar panels, wind turbines, energy-efficient appliances and light bulbs — and the list goes on. We need to ensure that investments are made in the U.S. and that jobs stay here. Whenever possible it is important that standards be attached to funding so that support for manufacturers is conditioned on their ability to meet labor standards and "domestic content" requirements. We must also ensure that the rules of global trade are fair and enforced.

PROVIDE HEALTHY FOOD AND LOCAL JOBS

The quality of the food we eat is linked to the safety and health of the people who grow, process and distribute food. When food industry workers have rights at work, they have the power to protect the safety of the food they're producing. When there are stronger ties between communities and their local food systems, there can be more support for food workers, significant reductions in long-distance transport and the creation of more local jobs — from our inner cities to our rural communities.

CREATE JOBS THROUGH RESTORATION AND CONSERVATION

Rebuilding wetlands along our coasts and lakes, replanting forests, and restoring our parklands, wildlife refuges, and rural ecosystems are not only essential in protecting and conserving our environment and communities, but lead to the creation of jobs. However, these efforts must be accompanied by monitoring and adaptive management in order to ensure long-term success,

› **FAST FACT:** The Great Lakes Restoration Initiative is important in improving conditions in this important region, which includes 10,000 miles of lakefront. Since 2010, nearly 600 projects have begun throughout the region, each playing a part in restoring the Great Lakes.[40]

LEAD, INNOVATE, WIN

Jobs21! makes good economic sense, supporting an agenda to create and secure good American jobs. The green investments of the Recovery Act leveraged three dollars of private capital for every one dollar of government support and created or saved almost 1 million jobs. Through the programs and policies outlined above, we have the capacity to recover the 7 million jobs we lost during the recession. And since these programs rely on private investment, we can do it in a way our country can afford.

If we put the right set of policies in place, we will send the right market signals to investors and companies, and America will become a job-creation force for the 21st century.

Visit **www.bluegreenalliance.org/jobs21** to sign the ***Jobs21!*** pledge today.

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37 "More Jobs, Less Pollution: Growing the Recycling Economy in the U.S." Tellus Institute, August 2011.

38 "The Economic Benefits of a Green Chemical Industry: Renewing Manufacturing Jobs While Protecting Health and the Environment," Political Economy Research Institute, University of Massachusetts, May 2011.

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