REDEFINING PROGRESS

A SPECIAL REPORT
FOR THE BLUE-GREEN ALLIANCE
October 2004

# SMARTER, CLEANER, STRONGER: SECURE JOBS, A CLEAN ENVIRONMENT, AND LESS FOREIGN OIL

By J. Andrew Hoerner and James Barrett

***How smart energy policy can boost job growth, save money for consumers, and strengthen national security.***

**New**, high-quality jobs for America's workers. Clean, sustainable energy. Reduced dependence on foreign oil. Lower energy bills for consumers. This is the bold vision of a strong America that's bringing together labor unions and environmental advocates nationwide.

**How America benefits:**

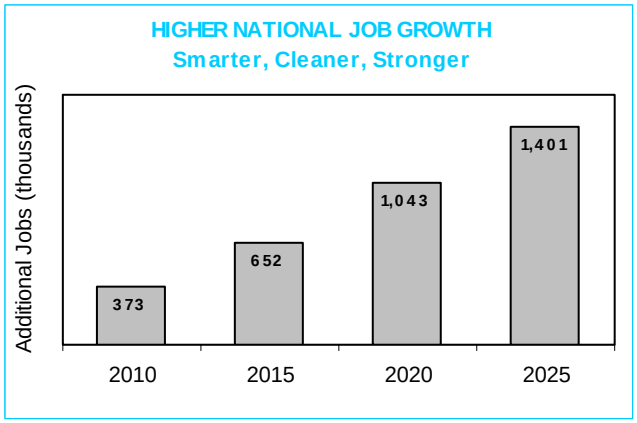
- **1.4 million additional new jobs created**
- **Average household saving on energy bills of $1,275 per year**
- **Reduced dependence on foreign oil, strengthening national and economic security for all Americans**

## BUILDING AMERICAN PROSPERITY

Energy is the lifeblood of our bustling modern economy. It lights our homes and offices, powers our factories, moves products to market, carries our kids to school. Its place in our lives is so ubiquitous that we tend to take it for granted—until something goes wrong.

The great accomplishments of our nation in the century just ended, the enormous increase in living standards we've enjoyed over the past one hundred years, all would have been unthinkable without the vast energy production and transmission system built in the early 1900s.

From ambitious public initiatives such as the Tennessee Valley Authority, with its motto of Electricity for All, to the development of a huge oil industry to tap the energy potential of fossil fuel deposits, the bold and visionary initiatives of that era provided the foundation for the prosperity enjoyed by subsequent generations.



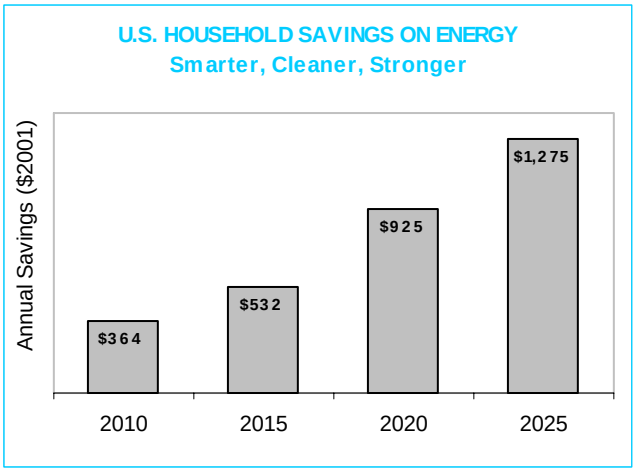

But today that foundation, still largely unchanged, is beginning to show cracks. As our economy has grown, our heavy reliance on fossil fuels has increasingly taxed our planet's ability to absorb the byproducts. Carbon emissions are now firmly established to be the major cause of global warming. And it has forced us to depend ever more heavily on foreign oil imports. Recent events in the Middle East have brought home to many just how dangerous that reliance can be.

As America begins a new century, it's time once again to rethink the basic principles of our energy system. We need an energy policy appropriate to the challenges ahead, a policy capable of ensuring our continued prosperity and security as a nation. Like our forebears a century ago, we stand on a watershed in our country's history. By making the right decisions today, we can build a secure and sustainable energy base for generations to come. It's time again for bold initiatives.

## SMART ENERGY POLICY—AND JOBS

For too long, the debate over America's energy future has been hamstrung by the outdated notion that there's an inherent tradeoff between environmental and economic priorities. Efforts to preserve our natural resources and protect our health and quality of life have too often been defeated by scare tactics, warning of negative economic consequences. The naysayers have told us, for example, that we can reduce oil imports and stop global warming—or we can have job growth—take your pick.

To an American, that's a challenge. And we as a people have always responded to challenges with determination, a can-do attitude, and new solutions. That's when we pull together. And that's just what an innovative alliance of thinkers from leading labor and environmental groups have been up to for the past several years, and the blueprints are now out.




A series of recent national studies have demonstrated exactly how we can build a secure domestic energy base for the twenty-first century, protect our environment, save consumers billions of dollars—*and* revitalize American industry, creating an abundance of good new jobs for American workers.

In this report, we provide a road map to America's energy future, bringing together the best ideas to come out of that body of research. The benefits of the policy package outlined here are immense: Compared to the base-case scenario of continuing current policies, the plan creates 652,000 additional high-quality jobs within ten years, rising to 1.4 million additional jobs for American workers by 2025.

The plan also generates an average $76 *billion* in savings per year on energy costs for consumers over the 20-year period, rising to $158 billion in 2025.[1] That's an average annual savings of $1,275 for every family in America by the end of the forecast period. Air quality would be improved and carbon dioxide emissions cut in half, which would go a long way toward stopping global warming. And we could call a halt to our ever-increasing dependency on foreign oil.

## HARNESSING AMERICAN INGENUITY

How does it work? By harnessing the innovative spirit that makes our economy the most dynamic in the world. The key is a comprehensive policy package combining the best elements of market-based incentives and technology-policy approaches, to

- Accelerate the implementation of existing clean, energy-efficient technologies,
- Stimulate the development of renewable domestic energy sources, and
- Promote research and development on efficient new technologies.

Investment in efficient, clean energy technologies lowers business costs and boosts the productivity and competitiveness of American industry, shifting wasted resources into productive output. That means faster economic growth, more jobs, and higher wages.

The plan includes more than 50 individual incentives for better, more efficient technology. Most of them were taken from *Scenarios for a Clean Energy Future* (CEF).[i] The CEF report is the product of a massive multi-year effort by the national laboratories of the U.S. Department of Energy to develop a consensus national energy strategy based on sound science and consistent economic assumptions.

The Smarter, Cleaner, Stronger plan includes policies to promote smarter, cleaner, more efficient energy in every sector of the economy: industry, buildings, transportation and electric generation. Industry can improve performance while cutting costs through better manufacturing processes, more efficient motors, industry agreements, and other policies. Homes and commercial buildings lower their energy bills through better building codes and building upgrades, and stronger equipment and appliance standards.

In the transportation sector, efficiency is improved through tax credits for super-efficient vehicles, better gas mileage for cars and trucks, and other policies. Power plants become more efficient through improved technology and more use of combined heat and power generation. The plan would increase electric generation through renewable energy by 1 percent per year. Federal research and development would be doubled and used to leverage additional private R&D.

The plan also includes a modest permit fee on the emission of global warming pollution to provide an efficient market incentive for a cleaner environment, similar to the one proposed in the bipartisan Climate

Stewardship Act.[ii] Revenues from the fee are used to fund investment in energy efficiency, reduce taxes on labor, and funds to assure a safe and comfortable transition for workers in transition industries.

An earlier version of the plan is contained in the report *Clean Energy and Jobs: A Comprehensive Approach to Climate and Energy Policy*.[iii] This report led to a burgeoning of interest in the potential of energy efficiency and renewable energy to contribute to job growth. In recent years, numerous other reports have confirmed the finding that investing in a smarter, cleaner, more reliable energy system can be powerful engines of job growth. These include reports by the Apollo Alliance, the Union of Concerned Scientists, the Renewable and Appropriate Energy Laboratory at the University of California, Berkeley, and Management Information Services, Inc.[iv]

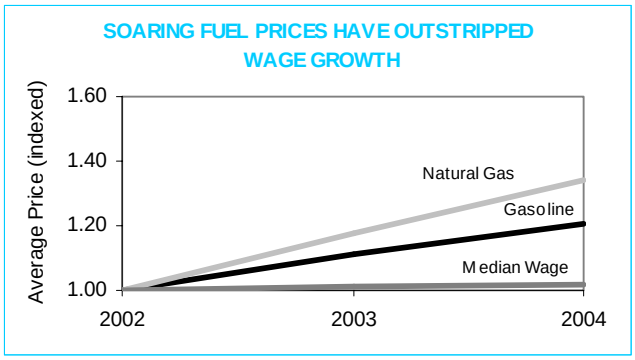
This report updates and extends the previous analysis, using a sophisticated 97-sector model to simulate the economic effects over 20 years. (Details on the model can be found in Appendix A.)

The results are clear: strategic investment in clean, efficient energy technologies saves consumers money and creates jobs. That's good news for America.

## AMERICA NEEDS ACTION NOW

Over the past few years, America's working families have struggled to keep up with soaring and erratic energy prices (see graph). With a tank of gasoline in 2004 costing 20 percent more than it did in 2002 and natural gas prices more than a third higher, consumers are spending an ever-growing portion of their household budgets on basic energy needs. Overall, total consumer spending on energy has outstripped median wage growth by a factor of more than four to one.

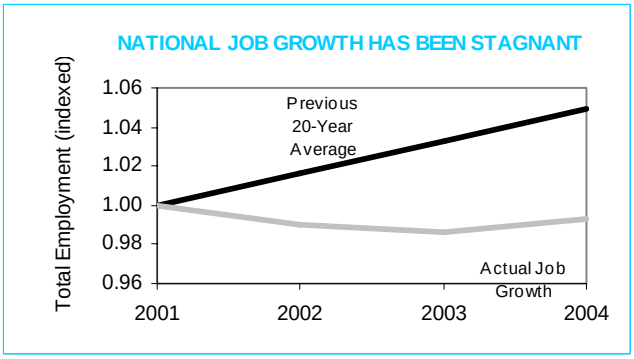
Businesses are also hurt by rising energy costs, particularly in such energy-intensive sectors as manufacturing and transportation. Planning is difficult with unpredictable price swings, causing reluctance to commit to major investment projects.




At the same time, there's a growing recognition that America's dependence on Middle East oil puts our national security at risk and makes our economy vulnerable to supply disruptions and price manipulation. Global oil price shocks have preceded nearly every major postwar recession, with tremendous costs in lost jobs and income.

Given current economic conditions, that's a risk we can ill afford. U.S. job growth has been stagnant in recent years (see graph), with 3 million jobs lost in manufacturing alone in the past four years—a decline of 17 percent in the nation's manufacturing workforce. Although 2004 has brought some recovery in total employment, many of those jobs pay less and offer less secure benefits than the ones that have vanished.

Unemployment, currently at nearly 8 million, remains far above the level of five years ago, and even well above 2001, the year of our most recent recession. By comparison, every previous recession since World War II has been followed by significant job growth after a comparable time period.

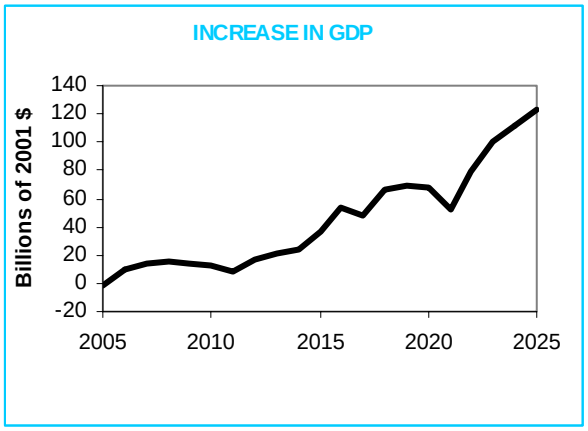



In these uncertain economic times, and facing an unstable world political environment, environmental issues tend to get pushed off the table. But the problems don't go away. Global climate change, which has now been proven conclusively to be caused by human activities, particularly the combustion of fossil fuels for energy, continues apace in the absence of any U.S. plan to deal with it. Although it may feel less pressing, the long-term economic costs of ignoring this problem are potentially catastrophic.

## A STRONGER ECONOMY

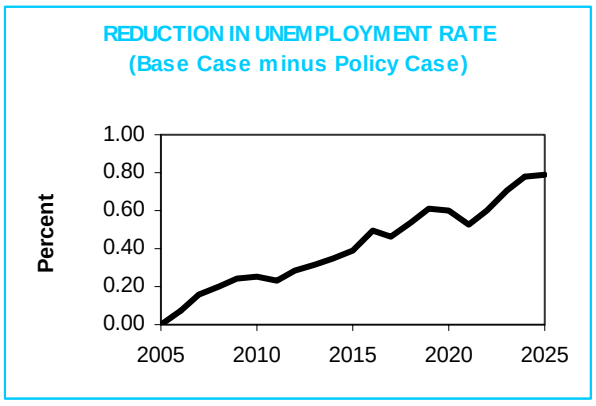
With the economy slowing over the last three years, working families find themselves working harder than ever just to keep from falling behind. A slumping manufacturing sector, outsourcing, offshoring, and growing trade and federal deficits have all contributed to the growing sense of economic uneasiness and insecurity. To reverse these trends, the plan relies on a simple but critical truth: invest in America and good things will happen. The plan would accelerate GDP

growth, the broadest measure of overall economic health. Under the plan, GDP (essentially national income) increases by over $120 billion by 2025 (see graph).

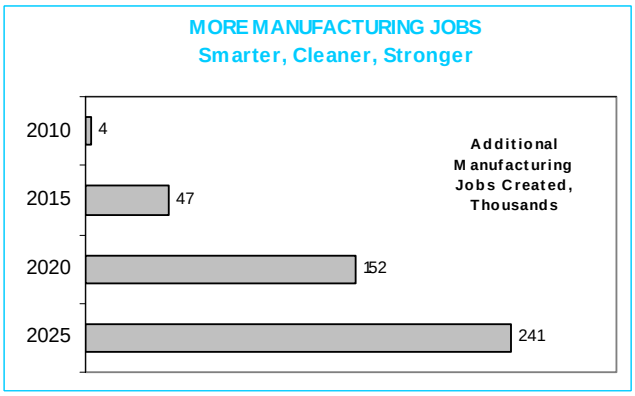


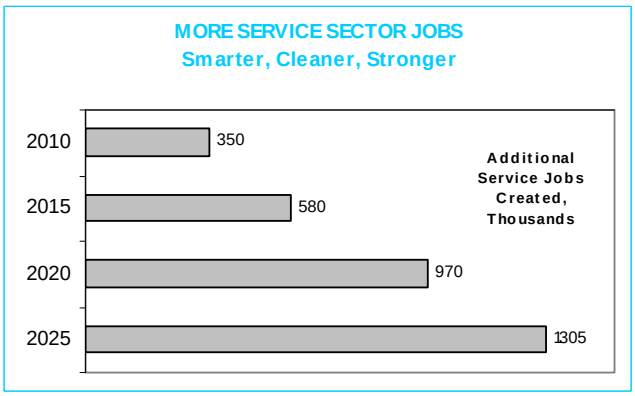

Unlike some types of policies that try to spur economic growth while focusing the benefits on a fortunate few, the plan is specifically designed to help boost job growth and ensure that the economic gains are broadly shared. The plan would create over 1.4 million additional jobs by 2025. A major component of this increase is a boost to the manufacturing sector, which would add over 240,000 more jobs. The agricultural and service sectors would gain as well, as shown.

As might be expected, this increase in job growth helps to reduce unemployment rates, by as much as 8 tenths of a percent in 2025—a 14 percent reduction in unemployment from the base case. (see graph).

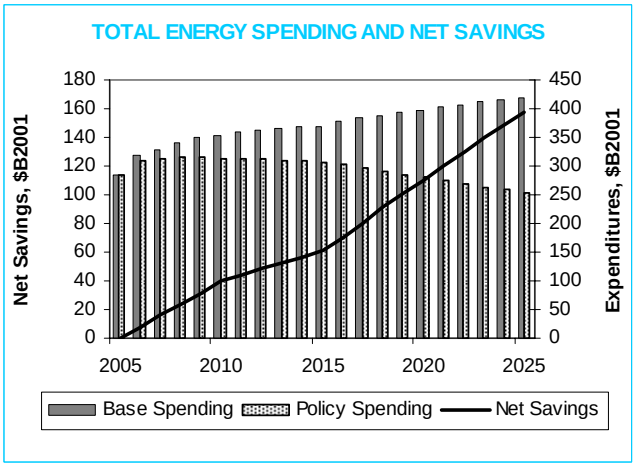



These encouraging outcomes are no accident. The plan is aimed at creating a fair and efficient tax code, easing the burden on working families, and boosting take-home pay. This puts more money in the hands of consumers to spend and invest here at home, helping ensure that the benefits of the plan spread throughout the economy. The plan also uses specifically targeted tax credits to help businesses invest in alternative fuel and energy efficient technologies. Along with other measures that accelerate the creation and adoption of these advanced technologies, the plan helps businesses do more with less, freeing up additional dollars to invest elsewhere, creating jobs in nearly every sector of the economy.



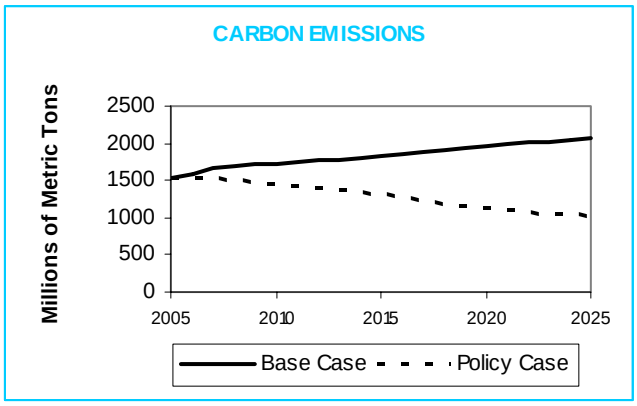




Consumers also see substantial benefits. By promoting more efficient homes, cars, and appliances, the plan helps working families reduce their home energy costs. As shown, American families would see their energy bills drop dramatically, yielding net annual savings of almost $160 billion by 2025, with the average household saving over $1,200.



## A CLEANER ENVIRONMENT

As global temperatures slowly rise, it is broadly recognized that something needs to be done to cut the pollution that causes global warming. At the same time, vested interests and other naysayers claim that cutting that pollution would cost too much – that we can't afford a healthy environment. But a well-designed, comprehensive policy package such as the plan laid out here can make dramatic cuts in greenhouse pollution while boosting economic growth. The plan would cut emissions of carbon (the main global warming pollutant) in half in 20 years (see graph).




The policies laid out here would go along way toward cutting back on the pollution that causes global warming and reestablish the United States as a leader in responsible economic and environmental policy.

## LESS FOREIGN OIL

Gasoline and other petroleum products are a major component of our economy, fueling not only our cars and planes but our factories and homes. In 2003, we imported over 55% of our oil needs, with about half of that coming from OPEC. Our dependence on foreign oil suppliers puts our economy and our security at risk. When oil prices spike, as they have this year and as they do with unfortunate frequency, we send hundreds of millions of dollars abroad every day. In the fall of 2004, nearly half a billion dollars went from American families and businesses into the pockets of foreign oil producers every day.

Because we are so heavily dependent on oil, our economy is vulnerable to volatile oil markets and volatile oil suppliers. With OPEC being the dominant player in the global oil markets, able to exert considerable influence over global oil prices, we have given control of a critical part of our economic security to a small handful of sometimes unstable and occasionally hostile foreign governments. With oil imports projected to rise to 80% of demand by 2025, the situation will only get worse.

By investing in energy efficiency and alternative fuels, this plan can reverse this trend. Under the policies outlined here, oil imports would slow and eventually decline. As shown below, oil imports will actually be lower in 2025 than they are today and about 1.7 billion barrels lower than they otherwise would be. At today's prices, that's over $245 million dollars *per day* that won't be going to foreign oil producers, or nearly $90 billion dollars per year worth of consumption, investment, and job creation that could stay here at home. Relative to the baseline, this plan would cut our oil imports by more than our total current imports from OPEC nations.

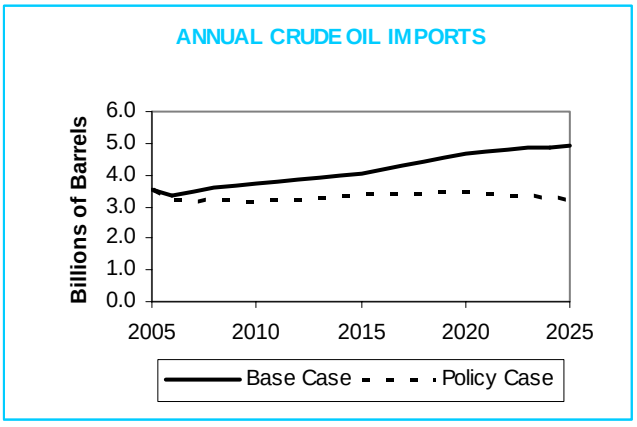
Relative to business as usual, the plan would cut our oil imports by more than our total current imports from OPEC nations.

Not only would this help boost economic and job growth, strengthening our economy, it would also reduce our exposure to oil price shocks and political instability in oil producing countries, enhancing our security. As we use less and less oil to power our growing economy, oil prices and oil producers will have less and less influence over our economic future.

The plan outlined here would cut carbon emissions while spurring economic growth. It would reduce oil imports and increase economic security. It would boost employment, output, and take-home pay. It would help marginalize unstable governments who think they can threaten us because they happen to be sitting on a lake full of oil. It would make us more efficient, more prosperous, and safer.

## IT'S TIME FOR ACTION

As we venture into the twenty-first century, America needs an energy policy appropriate to the challenges ahead, a policy capable of ensuring our continued prosperity and security as a nation.



Today, working families throughout the country face spiraling energy prices, stagnant job growth, and growing concerns about the vulnerability of our economy and our national security to foreign oil interests. Environmental degradation continues apace, with potentially catastrophic long-term consequences. It's time for action.

The plan proposed here harnesses American ingenuity to help consumers, workers, businesses, and the environment. It gets the economy moving again, generates new jobs, raises wages, and keeps billions of oil dollars at home. And it ensures the country of a secure and sustainable domestic energy base for generations to come.

The time has come for America to replace its aging, inefficient energy supply system with better technologies for the new century. We need to act boldly, just as our nation did at the beginning of the previous century. This plan provides the roadmap to a smart energy policy for a clean environment and a strong nation—smarter, cleaner, stronger.

## NOTES

[i] Interlaboratory Working Group. 2000. *Scenarios for a Clean Energy Future*. LBNL-44029 and ORNL/CON-476. Washington D.C.: U.S. Government Printing Office. www.ornl.gov/sci/eere/cef/.

[ii] Also known as the McCain-Lieberman bill.

[iii] *Clean Energy and Jobs: A Comprehensive Approach to Climate Change and Energy Policy*, by James P. Barrett and J. Andrew Hoerner, Economic Policy Institute and Center for a Sustainable Economy (2002).

[iv] For example, see *New Energy for America: The Apollo Jobs Report*, The Institute for America's Future and Center on Wisconsin Strategy (2004), www.apolloalliance.org/jobs/index.cfm; *Renewing America's Economy*, Union of Concerned Scientists (2004), www.ucsusa.org/clean_energy/renewable_energy/page.cfm?pageID=1505; and Daniel M. Kammen, D.K., Kapadia, K., & Fripp, M. *Putting Renewables to Work: How Many Jobs Can the Clean Energy Industry Generate?* Renewable and Appropriate Energy Laboratory, University of California, Berkeley (2004), see http://ist-socrates.berkeley.edu/~rael/. See also the reports under the MISI Jobs and Environment Initiative, www.misi-net.com/publications.html.

## ACKNOWLEDGEMENT

*This work was made possible by the generous support of the Energy Foundation.*

**Redefining Progress** is a non-profit research and policy organization based in Oakland, California, that believes that genuine progress entails providing a better life for all within the capacity of nature. RP's tools and policies emerge from three "Big Ideas:"

**SUSTAINABLE ECONOMICS: The Center for Sustainable Economy** The cost of many products we purchase each day fails to fully account for their effects on society and the environment. Pollution, traffic congestion, and health risks are examples of such effects. RP's Center for Sustainable Economy works to promote creative, market-based solutions to capturing these costs and to balancing a healthy environment, a strong economy, and a fair society.

**SUSTAINABILITY INDICATORS PROGRAM:** The Sustainability Indicators Program documents where we really stand with respect to our society's natural and social limits. The GPI, for example, subtracts destructive costs and adds in social and economic benefits ignored by the Gross Domestic Product. The Ecological Footprint tracks the consumption and waste patterns of individuals, communities, businesses and nations, and has rigorously shown that we overuse our planet's natural capital by up to 25%.

**COMMON ASSETS PROGRAM:** The Common Assets program reclaims our shared resources as the basis for our common wealth. Resources like water, genetic information, parks, public education and safe recreation areas are critical to ensuring sustainable development and quality of life. All of us lose out as these common assets are increasingly privatized, enclosed, divested and depleted. Low-income communities are historically more vulnerable to these trends.

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