

# innovations

TECHNOLOGY | GOVERNANCE | GLOBALIZATION

## Energy for Change Creating Climate Solutions

John Holdren Introduction to the Energy & Climate Special Issue

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### *Lead Essays*

Thomas Schelling A Proposal for International Coordination

Vinod Khosla Whose Rules?

Eileen Claussen Deploying Our Clean Energy Future

Bill Drayton Engage People, Retire Things

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### *Cases Authored by Innovators*

Arthur Rosenfeld The California Effect | *commentary*: Ralph Cavanagh

José Goldemberg Brazil Biofuels | *commentary*: Melinda Kimble

Shai Agassi World Without Oil | *commentary*: Daniel Kammen

Frank Alix Taking Out the CO<sub>2</sub> | *commentary*: M. Granger Morgan

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L. Hunter Lovins The Economic Case for Climate Protection

William Bonvillian and Charles Weiss Taking Covered Wagons East

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## Engage People, Retire Things

When we think about fighting climate change, we naturally focus first on its direct causes. If it is caused by carbon build-up, our first thought is to cut or offset greenhouse gas emissions. Our thinking then glides logically on to finding ways of doing so, especially adopting new energy technologies and launching carbon trading markets (which are key to stimulating innovative solutions, to lowering the costs of abatement, to helping end the north-south impasse).

All this is essential.

But it is not enough. Safeguarding the environment requires other levers, levers that are simple, fast, potentially adept, highly powerful. This power can only come from shifting the balance of forces in the larger society, balances beyond the limited circle of the problem's immediate constituents.

The most basic balance, the first tradeoff society makes, is between the two primary factors of production. Should we use more labor or more natural resources (energy, materials, and land)?

For decades, we have been tilting the scale ever more steeply in favor of using things, not people. We define "productivity" in terms of how little labor we can use in production, rather than thinking about how we can maximize value by finding whatever mix of inputs will do so. In the U.S., more or less by accident, we have sent a giant "use things, not people" price signal as payroll taxes have increased from 1% to almost 40% of federal revenues over the last several generations. And now, in some of the current proposals to finance health care reform, we are considering further increases. This tilt is even worse in most other countries.

As a result of this incentive drift towards using things more and people less, the global system is consuming natural resources very aggressively. Therefore, acceler-

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*William Drayton is board chair of Get America Working!, a nonpartisan, fuller employment policy citizen group that framed the payroll tax shifting proposal. See [www.getamericaworking.org](http://www.getamericaworking.org). Named by US News & World Report as one of America's 25 Best Leaders in 2005, he pioneered the concept of and coined the phrase "social entrepreneurship." Drayton is a MacArthur Fellow and the founder and current CEO of Ashoka: Innovators for the Public, a citizen movement dedicated to finding and fostering social entrepreneurs worldwide. A former management consultant at McKinsey and Company and faculty member at both Stanford and Harvard, during the Carter administration he served as Assistant Administrator of the Environmental Protection Agency (1977-1981) where he launched emissions trading among other reforms.*

ating natural resources exploitation no longer offers a promising avenue to greater growth. Instead, reversing this false incentive is key to fixing our climate problem.

On the other side of the equation is labor. Even as they encourage rapid exploitation of natural resources, our current policies so discourage labor demand that available labor resources are dramatically underutilized.

The result is madness. Not using labor is enormously costly and hurtful (exactly the reverse of what holds true for natural resources).

Official unemployment, now roughly 10%, is at historic highs and still climbing. This will be a political problem for a long time to come. And that official 10% represents only a fraction of the adult population that is not working; the total figure is closer to 40%.<sup>1</sup>

A closer look at the numbers shows that at least 75 million full-time-equivalent jobs that we would need to employ our people are missing from the US economy. This isn't immediately apparent from the official unemployment statistics. The figures exclude those who would love to work (e.g., 68 % of the retired) but aren't looking for what they know they won't find. They have, moreover, been repeatedly adjusted to reduce the number of people counted as not working.<sup>2</sup> In 1994, for example, the Labor Department decided not to count those out of work for a year or more (4 million people at the time). The Clinton Administration also reduced household sampling in the inner cities, which probably leaves us further undercounting unemployment among minorities. Such practices are still in place today.<sup>3</sup>

But despite this, we can still detect the 75 million missing full-time jobs in either of two ways. One way is an aggregate analysis of who isn't working and who isn't officially counted as unemployed. Another way is to add up the number of jobs needed to provide work for those groups most afflicted by today's hidden unemployment: older people, young people, people with disabilities, many groups of women, minorities, legal immigrants, those who formerly were institutionalized, and those affected by shifts in the economy due to trade or technological changes.

Both methods point to some 75 million Americans who could and would work given the opportunity, but who aren't—*five times* the number counted as officially unemployed. In most of the rest of the world, the rate of hidden unemployment is even worse because payroll taxes are higher, often much higher.

Hidden mass unemployment, in the U.S. and around the world, is the world's biggest orphan issue. It is also a latent economic, social, environmental, and political force. Once effectively engaged and led, it could create an irresistible, sustained political alliance that would drive deep change in a dozen fields—climate being a crucial one.

By themselves, the environmental constituency and organizations are weak. Why has environmental progress been so uncertain since Earth Day in 1970? A prime reason is the fact that those who want environmental action are a diffuse force championing policies that irritate, and impose costs on, almost every organized constituency.

We could transform this situation by marrying the already closely linked issues of jobs and climate change, by making the decision to use more labor and fewer natural resources. Almost every major constituency will benefit in crucial ways, as will society as a whole. Every group—from young people to older people, from those with disabilities to immigrants and minorities—would gain jobs. Having the choice to work is immensely important to them, and to anyone who cares about them. All workers should, moreover, benefit once the labor market does not have 40% unused supply overhanging it. Then more workers will be earning more, fueling further economic growth. All but a very few companies will benefit from higher growth, lower costs for security and other services, and lower labor costs. The cost of the natural resources that companies use may go up and partially offset some of those labor savings. However, for most companies, labor is the bigger cost.

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The most effective way of moving society back toward a healthy mix of using more people and fewer natural resources is to send a simple price signal: make employment cheaper and natural resources dearer by shifting taxes away from payrolls and onto the use of natural resources.

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The other big beneficiary is the environment. It will benefit hugely from these powerful conservation incentives and from the backing of this extraordinary alliance—an alliance with almost no enemies.<sup>4</sup> Who opposes robust, sustainable growth and more jobs? Conservatives, and especially libertarians, recognize that people have little freedom unless they have the opportunity to work in a decent job.

The most effective way of moving society back toward a healthy mix of using more people and fewer natural resources is to send a simple price signal: make employment cheaper and natural resources dearer by shifting taxes away from payrolls and onto the use of natural resources.

Imagine what would happen in the U.S. if we made a complete switch, eliminating all payroll taxes, and compensating for the lost revenue so there was no budget deficit. Without payroll taxes the cost of hiring workers would decrease over 16%. At the same time, we could both keep the budget in balance and increase the cost of using natural resources by increasing taxes on them by a similar but smaller amount.

In other words, this tax switch would change the relative price of labor, compared to the price of things, by roughly 30%. That is a big price signal, one that would create roughly 40 million new full-time jobs. Unlike the jobs created by the recent stimulus, these jobs would be permanent, and they would entail no debt.

Such a price signal would not only be effective; it would also be welcome across the ideological spectrum. It does not require a bureaucracy. No one would choose winners and losers. There would be no delay and no need to worry about corruption. It can be configured in politically attractive ways: we need not tax gasoline, but could choose among a wide array of possible taxes to offset the loss of payroll tax revenue. For example, we could look to a non-labor Value Added Tax, or to an Energy Inefficiency Tax on the least efficient cars, appliances, and/or commercial buildings, or we could directly tax pollution such as carbon.

The national citizen group, Get America Working! analyzed 25 such taxes and found that, even at modest rates, they would yield two and a half times the revenue of all today's payroll taxes.<sup>5</sup> In other words, the political system has plenty of room to maneuver to find the least painful and most environmentally useful options.

Implementing such a tax switch would send even bigger price signals and have proportionately larger impacts in the many countries where payroll taxes are higher than in the U.S.

It is difficult to predict the exact impact of shifting the relative prices of people versus things by 30% or more. Most economic models are built up from historical data of small and usually short-term shifts. Big, permanent price shifts between the basic inputs into the economy are beyond their ken.

But there is no doubt that such big price signals would be hugely effective. Consider the following precedents: In the U.S. in the 1970s, when the energy crisis pushed commodity prices up and held labor costs down, the proportion of Americans who were working increased for the first time in decades. In the OECD countries, there is on average an 11.5% difference in the proportion of the population working in countries where payroll taxes are higher (over 40%), compared to countries where they are lower (below 30%).<sup>6</sup>

This 11-1/2% difference, though huge, way understates the impact of a tax switch, which increases the price of things as well as reducing the cost of hiring people. Such a tax shift would also be hugely powerful, in terms of both policy and politics, because it achieves multiple and multiplying benefits for society:

- It accelerates growth sustainably as it puts to work society's one huge underutilized resource: people, and the enormous human capital invested in them.
- It sharply reduces today's tremendous costs—to individuals, families, business, and government—of supporting all those who are not working.
- It cuts away many of the root causes of today's hugely expensive social ills. To cite one example, researchers find that the rates of illness are sharply higher among people who stop working, once they control for personality and prior health. Work seems to keep people healthy.<sup>7</sup> Another example: mass unemployment feeds the cycle of drugs, crime, and fear.
- It gives everyone a big incentive to conserve. For example, farmers facing a higher costs for equipment, fuel, and agricultural chemicals on the one hand and lower labor costs on the other, will do more composting and spend less on chemicals. Homeowners will hire people to insulate their houses, so they con-

sume less heating oil. At the same time, people- and human capital-intensive sectors will grow faster than before.

- It gives those who work the gift of being useful. And of building skills, understanding, and contacts. Not to mention winning personal independence and greater ability to help others. (Those without work deteriorate on all these fronts).

Such tax switching has a further very significant advantage. Because it triggers faster, sustainable growth (which automatically increases public revenues) even as it reduces many of society and government's costs, it makes some combinations of tax cuts and/or new social investments (e.g., in climate change control and adjustment) possible. This revenue and choice dividend, of course, makes it far easier for all the many affected interests to come together effectively.

A successful national and global response to climate change is going to require very heavy lifting for years. The environmental community alone cannot possibly succeed.

Success requires the extraordinary power of the alliance tax switching brings together. Jobs, growth, equity, and the environment together, conservatives and labor together, can do the job.

Such a realignment may already be underway. Most European countries, and now increasingly those in Asia and Latin America, have begun to cut payroll taxes. Even international financial institutions have begun advising nations, for example in Eastern Europe, to cut payroll taxes as a way to increase employment.<sup>8</sup>

The U.S. has lagged. Historically, this has been in part because the biggest payroll tax is for Social Security, and politicians have feared giving opponents any remote grounds for attacking them here. However, over the last five or so years, this taboo has fallen away. Both parties have long since advocated cuts, albeit at different times and with varying specifics. In any case, one can avoid this concern in many ways. One could cut other payroll taxes first. One could (as several U.S. cities have) issue an offsetting credit, in any case attractive because sending a check is so visible.

The U.S. is beginning to catch up with the rest of the world—with leadership coming from across the spectrum. Recent advocates of offsetting payroll tax cuts with taxes on gasoline or carbon emissions range from Charles Krauthammer to Thomas Friedman, Al Gore to Richard Lugar and T. Boone Pickens. This year Rep. Bob Inglis (R-SC) and Rep. John Larson (D-CT) both introduced climate change

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Facing up to climate change also virtually compels us to face up to the economy's fundamental need to increase demand for labor, *structurally* and very significantly.

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bills that recycle over 90% of carbon pricing revenues into payroll tax cuts. Robert Shapiro, President Clinton's Undersecretary of Commerce, argues for this approach. Bruce Bartlett, Deputy Assistant Treasury Secretary under President George H. W. Bush, recently proposed cutting the Medicare portion of payroll taxes coupled with a non-labor Value Added Tax to finance health care reform. The Obama White House 2010 budget proposal envisioned using 85% of the \$645 billion in projected carbon trading permit revenues to extend the Making Work Pay payroll tax credit, initially created as a stimulus measure.

As fear itself fades, the chief remaining barrier to enacting a tax switch is resistance to an idea that is new and represents a different conceptual framework. To embrace it, people have to look beyond the old and ever-narrowing definition of "unemployment" and see the larger reality of who is and isn't working, who could be, and how more labor utilization could reduce natural resource consumption and protect the climate. This is doubly challenging since it combines transformations in two major spheres: climate and jobs. But the two need one another on several levels.

There is huge synergy between them. Allowing the economy to fly will make it far more likely that society will face up to climate change and make the very large investments required to deal credibly with it. And, given that our economic challenges far transcend transient business cycle economics, facing up to climate change also virtually compels us to face up to the economy's fundamental need to increase demand for labor, *structurally* and very significantly.

There is also negative synergy between jobs and climate. If we do not stop climate change quickly, the consequences will be enormously destructive to society and the economy. In some of the darker climate change scenarios, economic dislocation might reduce global per capita consumption by 20%. By the time the economy is in such shambles, we will probably have missed our chance to keep climate change within manageable bounds.

We need to muster the vision and determination to get the jobs/climate synergy working in a positive direction now, or we risk losing the opportunity to ride their spiral upward, and may find ourselves being ground down as job loss and climate change feed each other in a deadly downward spiral.

Fortunately, we still have the opportunity to press them forward together, and to reap the benefit of a very powerful combined uplift.

Both transformations, structurally greatly increasing employment and preventing climate change, would set in motion profound innovation and investment cycles. That is because each requires huge shifts in research, science, technology, skills, infrastructure, and systems. These two cycles would reinforce and feed one another directly in many ways. For example, given environmental limits, more jobs are possible only if the level of natural resources needed for each job drops quickly. Moreover, we know from the history of earlier such bursts of creative energy, igniting this two-jet supercycle will bring out the best in all of us, individually and collectively. Such periods foster optimism, creativity, and generosity. They are times of community cohesion.

As important, when societies grow faster than expected, they benefit from unity and community-mindedness, which in turn makes life happier and removes many of the barriers to change and growth. (However, if we allow ourselves to slip towards failure, we should not forget that the reverse is equally true.)

Today's two giant imbalances—in climate and in jobs—are in fact a giant opportunity. If we break out of the narrow conceptual frameworks around them, if we allow ourselves to see and act in terms of all the forces at play, this moment in history offers us a chance to create an unstoppable, probably permanent, alliance of everyone who gives him/herself permission to help the world change.

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1. According to data from the Bureau of Labor Statistics, on the 2008 current and potential US workforce, of the non-institutionalized adult U.S. population of 216.5 million, 63.5 million were not considered part of the labor force at all, and another 8.9 million were officially unemployed (at present, that number is about 15 million). Only 119.5 million, or about 55% of adults, were considered part of the full-time labor force. Of those considered in the full- and part-time workforces, many were out of work during at least some of last year.
  2. The Bureau of Labor Statistics figures (Employment Situation Summary, Sept. 4, 2009) for August 2009 reported the unemployment rate at 9.7%, but only reported 14.9 million as “unemployed.” The BLS summary notes that an additional 9.1 million Americans are working “part time for economic reasons”; i.e., they were unable to find a full-time job. These workers could be working as little as an hour per week. Still uncounted in the BLS numbers are the millions who have given up or do not look because they think they cannot find jobs with flexible schedules that would work with their lives, given responsibilities for childcare, eldercare, etc.
  3. For commentary on the inadequacies of the current reporting of the unemployment rate see [www.workinglife.org/](http://www.workinglife.org/).
  4. Early in its design, John Gardener, former U.S. Secretary of Health, Education, and Welfare, advised Get America Working!, a citizen group formed to encourage fuller employment policy and build a broad coalition of supporters. At Stanford Business School in the late 1980s he told me, “These policies bring great value to everyone and will help create the sort of standing alliance between constituencies that was key to the progress we made” when he was secretary of HEW.
  5. Get America Working! background paper “Job Creating Tax Options.”
  6. Robert Walker, 2007, *Declining Payroll Taxes: The European Example* [www.getamericaworking.org/europeanexperience](http://www.getamericaworking.org/europeanexperience)
  7. There is considerable empirical evidence that older people who continue working beyond “retirement age” live longer and are far healthier than those who stop working. For example, a study done in North Carolina showed that a 1% decline in labor force participation among people over 65 translated into a 7.29% increase in the rate of hospitalization. The author of the study, David Weaver, Ph.D., a researcher at the Social Security Administration, concluded, “policies encouraging labor force participation [among the elderly] will dampen the demand for hospital care.” A study published in *The British Medical Journal* found that men aged 40-59 “who became unemployed or retired for reasons other than illness had a significantly raised risk of dying compared with continuously employed men, which suggests that non-employment even in apparently healthy men was associated with increased mortality.”
  8. Germany and Canada cut payroll taxes earlier this year as an economic stimulus in response to the downturn. Italy, France, Sweden, and Australia have also vowed to cut theirs. The European Commission called for its member states to do likewise, and the World Bank recommended that Central European nations cut payroll taxes to stimulate jobs.

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