discussion paper from

The Labor Network for Sustainability[1]

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A Jobs-Friendly Climate Change Action Plan for Connecticut

By Jeremy Brecher

Connecticut is embarking on a new era of climate protection. Governor Malloy has appointed a new 15-member Council on Climate Change charged with charting a course to meet the state's official goal of reducing greenhouse gas (GHG) emissions to 80% below 2001 levels by 2050.[2] The Council is scheduled to give its first report January 1, 2016.

Meeting the 2050 goal will require the labor of thousands of people. Recruiting, training, and deploying them efficiently and in a way that maximizes benefits to the state will require thoughtful and informed planning. The new Council presents Connecticut an opportunity not only to do our part to protect the global climate, but to do so in a way that creates thousands of good jobs and helps rectify our state's growing inequality.

Connecticut faces three deficits: a deficit in good jobs, a deficit in climate protection, and a deficit in social justice. Our new climate change initiative can provide an opportunity to put our people to work making a more just Connecticut that is safer for the global climate.

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[1] The Labor Network for Sustainability (www.labor4sustainability.org) was founded in 2009 based on an understanding that long-term sustainability cannot be achieved without environmental protection, economic fairness, and social justice. LNS helps workers and environmentalists engage in order to help our society address the deepening crises of climate and inequality. LNS is currently preparing a report on climate protection and jobs in Connecticut that will be one of a series of case studies for a national LNS report proposing credible, workable, effective programs for a just transition to a climate-safe economy. Please send comments on this discussion paper and suggestions for the report to the author at jeremy.brecher@gmail.com.

[2] The graph "Connecticut GHG Reduction Trajectories" at the end of this paper presents data on the current GHG reduction trends and possible trajectories that would meet the 2050 target. An "equity curve" that imposes the same percentage reduction each year compared to the previous year would require a year-to-year reduction of 3.74%. A linear trajectory that imposes the same quantitative reduction each year (roughly 0.8 MMT/yr) would require sharply increasing year-to-year percentage cuts, starting at 2% but rising to a nearly 8% reduction required from 2049 to 2050.

Climate change is already harming Connecticut, as seen in heat waves, storm surge, rising sea level, and extreme weather. Superstorm Sandy's storm surge was more than 9 feet in Bridgeport and New Haven, causing the highest water level ever recorded there.[3] By 2045 Connecticut's coastal cities will face increases in sea level of nearly a foot and flood events eight to eighteen times more frequently than now.[4]

Notwithstanding the economic recovery, there are tens of thousands of people in Connecticut who need jobs. Connecticut has fewer jobs than it had in 1989, twenty-five years ago, even though it has half-a-million more people.[5] It lost more than 100,000 jobs in the Great Recession, but has recovered less than half of them.[6] In 2014 Connecticut's U-6 unemployment rate, which includes those who want full-time work but have only part-time jobs and those so discouraged they have stopped looking for work, is 12.5%.[7] That's more than 200,000 workers. And remaining jobs are increasingly part-time, temporary, insecure, and lacking in benefits.

Our job deficit is accompanied by rapidly increasing inequality. The gaps in income between wealthy families and poor and middle-income families have grown more in Connecticut than any state over the past three decades.[8] Connecticut is now second only to New York in income inequality.[9] The unemployment rate for the state's Black and Hispanic workers is about twice that for white workers.[10] The unemployment rate for those 16-24 is more than double that of older workers.[11] The median hourly wage for Whites in 2012 was $22.17; for Blacks it was $16.00; for Hispanics $12.30. In 2012, men made $23.12 for women's $17.61.[12]

Planning for high-quality jobs and job ladders out of poverty

Reducing Connecticut's GHG emissions enough to meet the 2050 goal will require a rapidly-growing climate protection sector. A new climate change action plan needs to provide for sustained, orderly development of that industry – rather than spasmodic bubbles and busts.[13]

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[3] NOAA, http://www.nhc.noaa.gov/data/tcr/AL182012_Sandy.pdf
[4] Union of Concerned Scientists, *Encroaching Tides*, October, 2014, p. 52. http://www.theday.com/assets/pdf/NL3243081017.PDF
[5] Nicholas Defiesta and Wade Gibson, J.D., *The State of Working Connecticut* 2014, Connecticut Voices for Children, September 2014. P. 10. http://www.ctvoices.org/publications/state-working-connecticut-2014
[6] Defiesta and Gibson, p. 2.
[7] Bureau of Labor Statistics http://www.bls.gov/lau/stalt.htm
[8] "Equity and Opportunity," Connecticut Voices for Children, August 2014.
[9] Defiesta and Gibson, p. 2 (and citation there).
[10] Defiesta and Gibson, p. 4.
[11] Defiesta and Gibson, p. 4.
[12] Voices, 2013, p. 21. (confirm reference)
[13] "Sustained Orderly Development - A condition in which a growing and stable market is identified by orders that are placed on a reliable schedule. The orders increase in

A climate protection sector will require the creation of tens of thousands of new jobs and the recruitment, training, and deployment of tens of thousands of workers. That will require workforce planning and investment.

Initial recruitment should include both skilled, experienced workers who can start work immediately on sophisticated climate protection projects and less skilled, inexperienced workers who can be rapidly trained to start work on less sophisticated work, such as some aspects of weatherization and solar panel installation. Such recruitment needs to include strong racial, gender, age, and locational affirmative action to counter Connecticut's current employment inequality and a job ladder to higher-level employment.

Connecticut has a ready supply of unemployed and underemployed skilled and experienced electricians, plumbers, carpenters, and other craft workers who possess many of the skills needed for the climate protection sector. The sector can be organized to provide them steady work. One model is the development of utility-scale solar energy in California, which has quadrupled since 2010. That required the creation of 10,200 well-paid construction jobs offering health and pension benefits. Most of the construction was covered by collectively bargained contracts or project labor agreements. Contractors contributed tens of millions of dollars to apprenticeship and pre-apprenticeship training for electricians, construction craft laborers, ironworkers, carpenters, and operating engineers.[14]

Connecticut's jobs deficit is not only a deficit of numbers, but also a deficit in quality. For several decades the tendency of the Connecticut and US economies has been toward insecure, contingent work, often with low wages and few health insurance, pension, or other benefits. Countering that tendency in the climate protection industry will take deliberate policies to raise wages and increase security, especially for those at the bottom of the labor market, to counter that tendency in the climate protection industry. These policies should support "high road" employers, Davis-Bacon-type prevailing wage provisions, and project labor agreements negotiated between unions and employers to ensure that climate protection jobs elevate rather than depress Connecticut wages and working conditions.[15]

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magnitude as previous deliveries and engineering and field experience lead to further reductions in costs. The reliability of these orders can be projected many years into the future, on the basis of long-term contracts, to minimize market risks and investor exposure." California Energy Commission Glossary of Energy Terms http://www.energy.ca.gov/glossary/glossary-s.html See also Dr. Donald W. Aitken, "Sustained Orderly Development," *Solar Age* May/June 1992, p. 21.

[14] Peter Philips, "Environmental and Economic Benefits of Building Solar in California: Quality Careers – Cleaner Lives," p. 9.

[15] "High Road or Low Road? Job Quality in the New Green Economy," recommends among other things that "green jobs" specify wage requirements for subsidies; wage standards and prevailing wage requirements for contractors; and web-based disclosure of company compliance.

Ensuring that climate protection helps correct Connecticut's inequalities will require deliberate policies. Just as jobs and unemployment are distributed very unevenly to different groups and localities in the state, so are job skills and experience. Climate protection jobs require a wide range of skills from the most highly technical to just having the ability to show up on the job and follow instructions. While this makes it possible to provide jobs for a wide range of workers, it also has the danger of providing only low-quality dead-end jobs for those who are already most economically deprived. Climate protection must make use of workers' existing skills while at the same time developing new ones that reduce these inequalities.

Job training has often been an ineffective means of countering unemployment when people are trained for jobs that mostly aren't there. In a rapidly growing climate protection sector, however, people can be trained for jobs that are waiting to be filled.

Programs need to provide job ladders within and between employers lest those who currently face only dead-end jobs continue to face only dead-end jobs in the climate protection sector. *Connecticut's 2013 Comprehensive Energy Strategy* (CES) notes, for example, that asbestos removal and replacement of knob and tube wiring "could be coordinated with workforce development efforts to train residents in the community for skilled jobs in the trades industries."[16]

While climate protection will produce far more jobs than it eliminates, it may also threaten the jobs of some workers in fossil fuel producing and using industries. It is unjust than any workers should suffer through no fault of their own because of a policy that is necessary to protect society. Protecting their wellbeing and the wellbeing of their communities must be a fundamental principle of climate protection policy.

Building support for jobs-friendly climate protection

Connecticut needs a climate action plan that will win a broad on-going base of support for the transition to a climate-safe state. That is possible because climate change threatens every Connecticut resident and all of our posterity. As the impacts of climate change become more and more devastating, more and more people and institutions will decide that correcting it is an absolute moral and existential necessity. But that decision will be impeded if climate protection appears to be more of a threat than a stimulus to jobs and the economy. Conversely, a program that provides both stable job growth and the necessary climate protection can pull together a wide and deeply-committed array of forces.

[16] Department of Energy and Environmental Protection, *2013 Comprehensive Energy Strategy*, http://www.ct.gov/deep/lib/deep/energy/cep/2013_ces_final.pdf p.18. Large amounts of information about experience with such programs elsewhere is available from such organizations as Emerald Cities and Green for All.

A climate change action plan needs to combine an overarching vision and plan for transition with concrete programs that start us on the critical path to realize our goals. A plan that meshes our need for climate protection with our need for jobs can win wide public support. Implementing it will require educating the public; mobilizing support for necessary state and municipal policies; and dedicated effort from citizens and from private, municipal, and community enterprises.

More than 200,000 Connecticut workers want full-time work but are unemployed, have only part-time jobs, or are so discouraged they have stopped looking for work. Connecticut's workers, given the opportunity, can transform our state to a model of low-GHG climate safety. Connecticut's climate protection strategy should be designed to provide the maximum number of good, secure, permanent jobs with education, training, and advancement that provide maximum possible reduction in our job deficit.

World War II represented the greatest mobilization of human and material resources our country has ever seen, and Connecticut as the "arsenal state" was at the center of it. In the process of transforming its economy to produce vast quantities of planes, tanks, weapons, and ammunition, Connecticut created more than enough jobs for everyone who wanted to work. Making Connecticut safe for the climate will require a mobilization on a similar scale – and one that can have a similar impact on the economic opportunity of our people. The two mobilizations are different in many ways, but the World War II mobilization can serve as an inspiration for what we can accomplish if we are willing to move beyond "business as usual."

Appendix A: Some job-creating climate protection programs

Transportation and land use
Bus transit
Light and high-speed rail
Transit-oriented development/smart growth
Rebuild poor urban neighborhoods around transit hubs
Infrastructure to support Renewable-charged electric vehicles

Residential, commercial, and industrial
Retrofit existing buildings for energy efficiency: residential, commercial, educational, government
Carbon-neutral new construction
Building operation
Combined heat and power (CHP)
Manufacturing, such as fuel cells, renewables components, weatherization materials, mass transit engines and components, specialized maintenance equipment, etc.

Agriculture, Forestry, and waste
Buy local food
Forest management
Urban forest
Recycling and source reduction
Low-fertilizer, low-pesticide local agriculture and planting
Bioenergy
Kelp farming

Electricity
RPS - continuing raising and produce the required renewable energy in Connecticut
Residential/industrial/commercial solar
Community solar/shared solar/solar gardens
Utility scale solar/solar farms
Smart grid/grid modernization/distributed generation
Wind, geothermal, bioenergy

Appendix B: Occupations with large growth potential through green investments[17]

College degree jobs

Operations managers
Sales managers
Accountants
Civil engineers
Mechanical engineers
Human resource managers
Lawyers
Architects
Electrical engineers
Computer programmers

Some college jobs

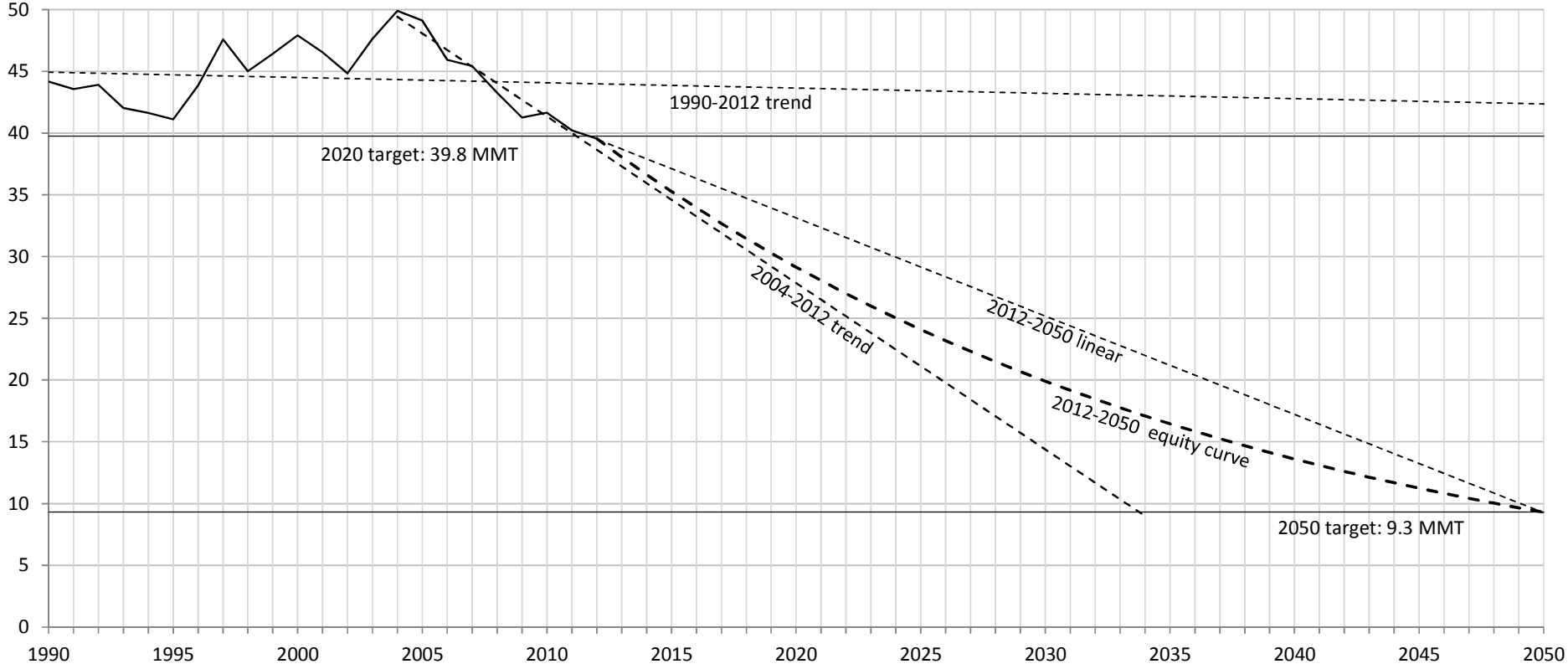
Construction managers
First-line supervisors of office workers
First-line supervisors of production workers
Accounting clerks
Secretaries
Farmers and ranchers
Engineering technicians
Computer support specialists
Payroll clerks
Paralegals

High school or less jobs

Agricultural workers
Machinery assemblers
Material movers
Customer service representatives
Shipping clerks
Carpenters
Electricians
Roofers
Sheet metal workers
Industrial truck drivers
Janitors
Grounds maintenance workers
Cashiers
Retail salespersons
Stock clerks
Construction laborers
Insulation workers
Machinists
Bus drivers
Truck and bus dispatchers

[17] *Green Growth* table 6.10, p. 226. Source: U.S. Census Bureau, 2008 *January-December Current Population Survey* (U.S. Department of Commerce, 2008). Note: These occupations are selected from the top 100 occupations with the largest growth potential within each educational category.

Connecticut GHG Reduction Trajectories



Important features

A The 2020 target is lax and has already been met. But reduction since 1990 has been slow, and the 1990-2012 trend will not hit the 2050 target.

B Reduction since 2004 has been rapid, however. The 2004-2012 trend will hit the 2050 target by 2034.

C The linear trajectory between 2012 and 2050 represents the least-aggressive average trajectory capable of hitting the 2050 target. For a credible course to the 2050 target, interim targets for the period 2025-2045 must be below this line.

D Crucially, however, the linear trajectory for 2012-2050 (representing an annual reduction of 0.80 MMT) has an insidious feature: it imposes sharply increasing year-to-year percentage reductions, starting at 2% but culminating in a reduction of nearly 8% from 2049 to 2050.

E The stable year-to-year reduction necessary to avoid this problem is 3.74%. The 2012-2050 "equity curve" is based on this reduction.

F The "equity curve" also offers important benefits for job creation, green economic growth, air quality, public health, and climate change mitigation.

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