CONNECTICUT FACTS

AMERICAN SECURITY PROJECT

Pay Now, Pay Later: Connecticut

The Environmental Protection Agency estimates that the cost of protecting Connecticut's coast from the potential damages of a 20-inch rise in sea level could be between $500 million and $3 billion by the end of the century.[1]

Rising temperatures threaten wildlife and forestry in Connecticut, which draws both state residents and visiting tourists to the state's campgrounds, helping to generate nearly $300 million in annual revenue.[2]

Nationwide adoption of green energy legislative policies will create 17,000 jobs in clean energy and green technology industries in Connecticut, and an increase of $2 billion in state revenue.[3]

According to a new study, a failure to mitigate the effects of climate change could begin to cause serious gross domestic product and job losses within the next several decades. Between 2010 and 2050, it could cost Connecticute $9.5 billion in GDP and over 36,000 jobs.*

GDP numbers are based on a 0% discount rate. Job losses are measured in labor years, or entire years of fulltime employment. Backus, George et al., "Assessing the Near-Term Risk of Climate Uncertainty: Interdependencies among the U.S. States," Sandia Report (Sandia National Laboratories, May 2010), 141.* ***https://cfwebprod.sandia.gov/cfdocs/CCIM/docs/Climate_Risk_Assessment.pdf* *(accessed March 23, 2011).*

Admittedly, the effects of climate change, a complex and intricate phenomenon, are difficult to predict with precision. Informed scientific and economic projections, as we have used in our research, however, allow us to see that Connecticut faces significant losses in industries crucial to its economy if no action is taken.

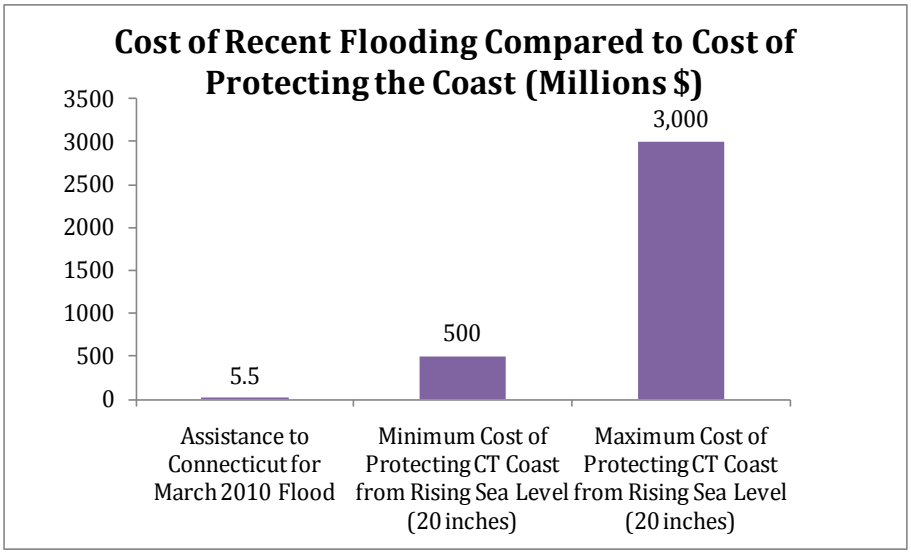
Moreover, data shows Connecticut is poised to benefit from the research, development, and distribution of renewable energy technologies. Connecticut has the resources for solar, wind, and biomass energy generation, reducing greenhouse gas emissions to slow the costly effects of climate change and enlarging the market for green industry employment.[4] Should we fail to take action against climate change, Connecticut residents have much to lose.

Pay Later: The Cost of Inaction

Climate change will have a negative impact on many of the industries that define the lifestyle of Connecticut residents. In a high emissions scenario, Connecticut is expected to see longer, more intense heat waves and more frequent flooding.[5] Flooding and a rising sea level will significantly affect coastal communities, home to 60% of Connecticut's population.[6] Temperature increases of 8-12°F in the winter and 6-14°F in the summer will alter the profitability of the agriculture, winter recreation, and wildlife industries.[7] Climate change poses a serious threat to Connecticut's economic security.

Rising Sea Level, Rising Costs

The threat of rising sea levels has the potential to devastate the state of Connecticut. **By 2100, sea levels along the Connecticut coast are expected to rise between 10 inches**



Sources: National Wildlife Federation, Global Warming and Connecticut*; Federal Emergency Management Agency*[8]

and two feet. To the 2 million coastal residents (and Connecticut's tourists), this could present unlimited economic and infrastructural damage.[9] Wetlands and marshes along Connecticut's shores currently provide natural protection from flooding and sea level fluctuations, saving the state about $13,000 per acre annually[10] for each of the approximately 17,500 acres of tidal wetlands in Connecticut.[11] More frequent disastrous weather events, including hurricanes and winter storms, will destroy both natural barriers and man-made dams and levees.[12] **Approximately 32,000 homes along Connecticut's 100-year floodplain will be in danger,**[13] **which places the state in a position to lose over $18 billion in property damage and business interruption**, according to the Federal Emergency Management Agency.[14] The rise in sea level will also impact wildlife by threatening salt marshes and estuaries that serve as habitats and food sources for many species of birds and fish; for example, the Long Island Sound lobster population has already declined by 70% as a result of warmer waters.[15] Shellfish are particularly susceptible to the diseases associated with warmer waters.[16]

With several deepwater seaports, Connecticut is uniquely positioned for an advantage in the shipping and freight trade, as well as shipbuilding, seafood preparation and packaging, commercial fishing, and water transportation. **The maritime sector accounts for nearly $2.7 billion of gross state product (GSP) and employs more than 30,000 state residents**.[17] If damage to ports occurs at projected levels, these industries, and the individuals who rely on this income, will lose substantially due to rising sea levels and environmental disasters.

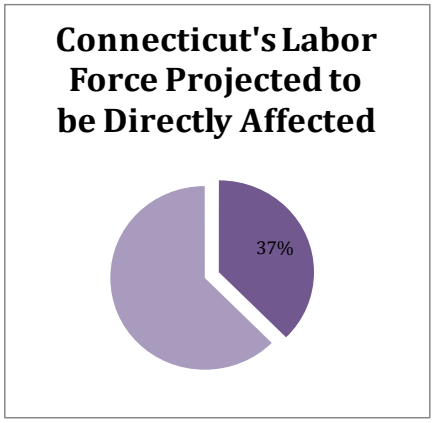
Threats to Connecticut's Beautiful Landscape

As a state covered in 60% woodlands and 360,000 acres of farmland, Connecticut's economy has much to lose as a result of impacts on agriculture. State agriculture income averages $350 million per year.[18] Under a high emissions scenario, dairy production would drop by 15% during the peak summer season. Fruit production, specifically apples and pears, will be harmed by an increase in precipitation.[19] Higher temperatures will yield some benefits, lengthening the growing season and making Connecticut more suitable for warm-weather crops.[20] Pests and weeds will also increase, however, eliminating some—if not all—of these benefits.[21] Furthermore, as the climate of Connecticut begins to change, the environment will become unsuitable for many species of birds that provide natural insect and pest removal.[22]

Unfortunate for a top national supplier, maple syrup production in Connecticut will also be severely affected, and may cease by 2080. Maple syrup is not only a crucial source of income to those who produce it, but a part of Connecticut history. Places like Hebron, host to numerous maple syrup festivals, will be significantly impacted.[23] Furthermore, rising temperatures will likely threaten the species of trees—maple, beech, and birch[24]—that attract foliage viewers.

The forested Connecticut landscape provides ample opportunity for residents and tourists alike to appreciate hunting, fishing, and wildlife viewing, which supplies nearly 10,000 jobs and brings in an average of $830 million annually.[25] An additional $500 million comes from the sale of forestry products.[26] The state's timberlands also provide the necessary environment for the profitable camping industry. Over 900,000 tourists—nearly 40% are from out-of-state—visit Connecticut's state parks and campgrounds each year. Campground visitors spend almost $300 million each year, which directly and indirectly affects the hotel, food service, transportation, and entertainment industries.[27]

Culture and tourism generates over $14 billion for the state each year—approximately 8% of GSP.[28] Connecticut has much at stake should climate change continue unmitigated. Increased temperatures, greenhouse gases, and related effects will impact all industries tied to tourism, including the recreation and hospitality industries that rely on tourists and visitors to the state, as well as agricultural sustainability and the productivity of Connecticut's ports.[29]

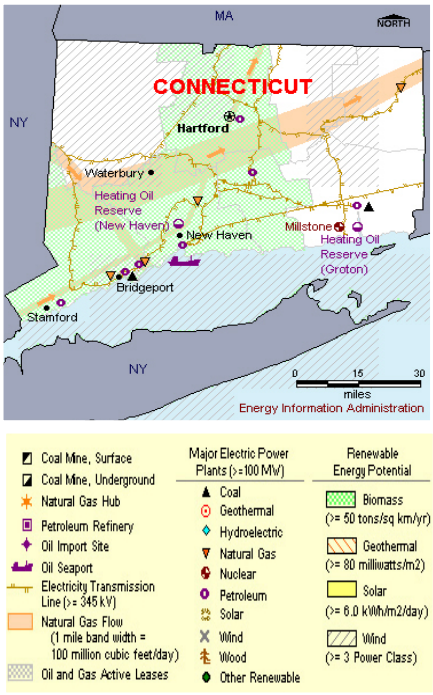


Source: Connecticut Department of Labor[30]

Pay Now: The Benefits of Taking Action

The Constitution State has long been an innovative leader among its peers, and with several renew-

able energy generation options and few energy-intensive industries, Connecticut is in a position to become a model for energy efficiency, too.[31] **Connecticut is already investing $58 million annually in green technology, making it 4th in national rankings of energy efficiency.**[32] The state has the ability to use biomass, wind power, landfill gas, and hydroelectric power to generate energy; in addition, Connecticut is leading the nation as one of the top 10 states in terms of solar power capacity.[33]



The state's existing efforts are already putting Connecticut on a path to success. The state is a signatory to the Regional Greenhouse Gas Initiative (RGGI), a group which pledges to cap and reduce the amount of carbon its power plants emit 10% by 2018.[34] The Connecticut Energy Efficiency Fund supports businesses and households in their ventures to invest in clean energy by providing resources, support programs, and financial incentives to encourage more efficient energy usage habits.[35] Adopted in 2005, the state's Climate Change Action Plan outlines recommendations for changing transportation standards, adjusting building efficiency, increasing recycling, clean energy supply programs, and climate change education.[36] By 2007, Connecticut had an average return of four to one on energy efficiency investments and had enrolled 16,000 residents as clean energy options customers.[37]

Investment in clean energy will provide new employment opportunities to Connecticut residents. Should nationwide adoption of green energy legislative policies be implemented, **Connecticut could see an introduction of almost 17,000 jobs in clean energy and green technology industries and an increase of $2 billion in state revenue**.[38] An investment in clean energy options provides Connecticut with the opportunity to reduce the future damage of climate change while enhancing the existing economic structure with new revenue and employment markets.

Conclusion

Connecticut must consider action on climate change not just in terms of cost, but also in terms of opportunities. If we give Connecticut's population, businesses, and investors clear and consistent signals by properly offering initiatives and cultivating demand, investment and innovation in renewable technologies will follow.

Connecticut residents will have to pay for the effects of climate change. The only remaining question is whether they will pay now, or pay later and run the risk of paying significantly more.

(Endnotes)

1 National Wildlife Federation, *Global Warming and Connecticut*, January 2009, 2. **http://www.nwf.org/Global-Warming/~/media/PDFs/Global%20Warming/Global%20Warming%20State%20Fact%20Sheets/Connecticut.ashx** (accessed September 10, 2010).

2 Connecticut Department of Environmental Protection, *Facing Our Future: Adapting to Connecticut's Changing Climate,* March 2009, 36. **http://www.ct.gov/dep/lib/dep/air/climatechange/adaptation/090320facingourfuture.pdf** (accessed July 20, 2010).

3 Robert Pollin, James Heintz and Heidi Garrett-Peltier, *Clean Energy Investments Create Jobs in Connecticut,* Political Economy Research Institute, 1. **http://images2.americanprogress.org/CAP/2009/06/factsheets/peri_ct.pdf** (accessed July 26, 2010).

4 National Wildlife Federation, *Charting a New Path for Connecticut's Electricity Generation and Use*. **http://www.nwf.org/Global-Warming/~/media/PDFs/Global%20Warming/Clean%20Energy%20State%20Fact%20Sheets/CONNECTICUT_10-22-7.ashx** (accessed September 10, 2010).

5 Adaptation Subcommittee, Governor's Committee on Climate Change, *The Impacts of Climate Change on Connecticut Agriculture, Infrastructure, Natural Resources and Public Health,* April 2010, 86. **http://ctclimatechange.com/wp-content/uploads/2010/05/Impacts-of-Climate-Change-on-CT-Ag-Infr-Nat-Res-and-Pub-Health-April-2010.pdf** (accessed September 10, 2010).

6 Union of Concerned Scientists, *Connecticut: Confronting Climate Change in the U.S. Northeast*, 2007, 2. **http://www.climatechoices.org/assets/documents/climatechoices/connecticut_necia.pdf** (accessed September 10, 2010).

7 Ibid, 1.

8 Federal Emergency Management Agency, *Disaster Aid Tops $5.5 Million For Connecticut Residents*, July 7, 2010. **http://www.fema.gov/news/newsrelease.fema?id=52074** (accessed December 8, 2010).

9 Union of Concerned Scientists, 2.

10 Governor's Committee on Climate Change, 160.

11 Council on Environmental Quality, *Environmental Quality in Connecticut,* 2008. **http://www.ct.gov/ceq/cwp/view.asp?a=3718&Q=435690** (accessed September 10, 2010).

12 Governor's Committee on Climate Change, 18.

13 Connecticut Department of Environmental Protection, 1.

14 Governor's Committee on Climate Change, 18.

15 Union of Concerned Scientists, 3.

16 Governor's Committee on Climate Change, 80.

17 Apex Companies and FXM Associates, *Economic Impact Study of Maritime Industries in Connecticut,* February 2010, 1-2. **http://www.ctmaritime.com/final_conn_maritime_report_051810.pdf** (accessed September 10, 2010).

18 Union of Concerned Scientists, 4.

19 Governor's Committee on Climate Change, 66.

20 Ibid., 69-71.

21 Ibid., 43.

22 National Wildlife Federation, *Global Warming and Connecticut*, 1.

23 Governor's Committee on Climate Change, 46.

24 Union of Concerned Scientists, 3-4.

25 National Wildlife Federation, *Global Warming and Connecticut,* 2.

26 Connecticut Department of Environmental Protection, 15.

27 Ibid., 36.

28 Department of Economic and Community Development, *Connecticut Economic Strategic Plan*, September 2009, 14. **http://www.ct.gov/ecd/lib/ecd/connecticut_esp-final.pdf** (accessed September 10, 2010).

29 Connecticut Department of Environmental Protection.

30 Based on 2008 employment levels and includes farm, forestry and related sectors, trade, transportation, manufacturing, hospitality and tourism sectors. Connecticut Department of Labor, *Covered Employment and Wages by Industry,* August 2009. **http://www.ctdol.state.ct.us/lmi/202/202state_2008.htm** (accessed September 10, 2010).

31 U.S. Energy Information Administration, *State Energy Profiles: Connecticut,* July 2010. **http://tonto.eia.doe.gov/state/state_energy_profiles.cfm?sid=CT** (accessed September 10, 2010).

32 National Wildlife Federation, *Charting a New Path for Connecticut's Electricity Generation and Use*, 1.

33 U.S. Energy Information Administration.

34 Regional Greenhouse Gas Initiative, *Fact Sheet: The Regional Greenhouse Gas Initiative*, 1-2. **http://www.rggi.org/docs/RGGI_Fact_Sheet.pdf** (accessed January 25, 2011).

35 National Wildlife Federation, *Charting a New Path for Connecticut's Electricity Generation and Use*, 2.

36 Connecticut Climate Change, *Connecticut Climate Change Action Plan*, January 2005. **http://ctclimatechange.com/wp-content/uploads/2009/03/CT_Climate_Change_Action_Plan_2005.pdf** (accessed September 10, 2010).

37 Connecticut Climate Change, *Challenges and Accomplishments in Implementing Connecticut's Climate Change Action Plan: Progress Made in 2007*, 5. **http://ctclimatechange.com/wp-content/uploads/2009/03/2007ProgressReport.pdf** (accessed September 10, 2010).

38 Pollin et al., 1.