

Governor's Commission on Climate Change
Statement of
Martin Mador, Sierra Club Connecticut Chapter Legislative and Political Chair
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Connecticut is fortunate. We have been through the debate on *why* take action on climate change. We know it is happening, we know that human activity causes it, we know it is our responsibility to act. We understand the important concept of generational equity. The world we will leave to our children is what is at stake. We cannot consider only our own selfish needs and pleasures. It is a moral imperative to leave for them the best world we can. There will always be deniers and dissenters, but, as a whole, the state is committed to action. We are then free to focus on the *how*, and the *when*. What do we do, and how quickly do we act?

We call on the members of this commission, charged as they are with monitoring our progress and ensuring that significant action in every venue is our priority, to think of themselves as the conscience for the state.

We note that there is no legislative presence on the council. Many of the solutions will involve legislative action. At least one sitting legislator needs to be appointed to the Council. As we live in a partisan society, even better, at least one from each major party.

We must understand any numeric goals are transient and interim, and must be evaluated regularly and honestly. We must remember these goals are not endpoints. They are motivational goals to be met, and surpassed, frequently. They must serve as the reminder to try harder. Never set one without a firm intent to go way beyond it. Soon.

This council is a good opportunity to focus the state on the importance of climate change. Generate media coverage, educate the public, make the issues universally visible and understood. Ensure the public understands government actions in the context of climate change minimization. Do it as an integral part of your mission.

We must tailor efforts to the best level of government: local, state, federal, global. Perhaps easiest for us is designating action at the state level. Towns have a role to play, but we have 169 of them, many far too small to have the expertise and resources to do anything more than keep the local government functioning. Consider what the state can do to assist the towns in activities addressing global warming.

Provide a framework and support for the town energy commissions/task forces. I believe there are now more than 100 of them. Provide assistance and encouragement for towns to address their energy consumption. Performance contracting for evaluating and upgrading town buildings is an excellent and well understood tool, which, through appropriate financing, can provide a guaranteed cash flow positive experience for the town as it implements the upgrades.

But, even better, take advantage of newfound regional governance. We abolished county government in 1960. But, with the ascendancy of the nine regional Councils of Government

overseen by OPM, we finally have a locus for taking action regionally. And the COGs are run by the town mayors and first selectmen, so they are not disenfranchised. Devise strategy for action at the regional level to address global warming for all the member towns, and create the resources to make it happen.

Work with the public interest advocates. Keep us informed, take advantage of our knowledge and investment in the issue, communicate with us on setting priorities and interim goals. While we work on an insane range of environmental issues on behalf of our state, climate change is a first priority, and we are all eager to lend a hand. And a voice.

There are issues which are attached to climate change recognized by all. There are other issues which are strongly related but don't come to mind immediately. Have a broad scope on identifying issues which should be within your purview. Take a holistic approach, and give every one some of your attention. A few are recognized herein.

And remember, sometimes worst case can be pretending you have done something.

My comments here concern actions we must take to minimize climate change. I do not address what we can and should do to deal with the consequences, although that is also an important part. The CT Institute for Resilience and Climate Adaptation at UCONN is recognized and appreciated, but not discussed here. The profound changes in habitat, agriculture, weather, ocean acidification and other consequences are not addressed. My focus is on prevention and minimization.

Our journey towards renewables proceeds at a crawl. Solar energy is the ultimate remedy. We cannot abandon fossil fuels until solar can take over. We are embarrassingly far from that goal. For the past 2 years, bills to enable community or shared solar have run. And all we have to show is a 2 year 2 project pilot program. This is disgraceful. At least 10 states have programs already. The legislature commissioned the CT Academy of Science and Engineering (CASE) to write a report with recommendations. They produced a 100 page roadmap. We know how to do this. We know that we can use an interim "value of solar" to put a value on the energy produced while we run a study to set a final value. Oh yeah, the legislation this year did not order such a study. However, we have value studies from other sources we can use. Energy investors have testified that they will not put money into Connecticut because renewables are not happening fast enough. The only thing we don't know is how the electric distribution companies (EDCs) can make money on solar and distributed generation. Our 2 EDCs are woefully behind developing business models to support that. But the profit margins of the EDCs should not be our first priority. Senate Bill 928 was an embarrassment. A disgrace. SB928 as passed with 2 trial programs in 2 years was not progress. It was the worst case of pretending to do something.

This Council must, as step one, make it clear that those many shaded homeowners, apartment dweller, condo denizens, and business who rent their office space must be given an opportunity to sign on as subscribers to a solar installation. We shouldn't wait until 2017, or even May of 2016. We should do it in special session right now. With the full throated support and advocacy of DEEP.

Parallel with growing solar energy program, we must do everything we can to leave the carbon sequestered in fossil fuels in the ground. Purchasing fossil fuels:

- costs money
 - sends money out of state, as there is no extraction or refining of coal, petroleum or NG in Connecticut
 - does significant environmental harm elsewhere, as we are learn more about the dangers of fracking. The consequences may occur elsewhere, but they must be on our conscience for fuels used in Connecticut.
- ultimately releases carbon as CO₂ and methane to the atmosphere
 - results in significant environment harm from pipe spills, drilling accidents, train derailments

Investing enormous capital in constructing interim infrastructure to deliver fossil fuels is not good policy. It is nothing more than subsidizing climate change. Money that is being used to increase fossil fuel supplies should be used to speed up the growth of solar and other renewable energy generation.

We may have to live with very short term use of natural gas, but we certainly shouldn't be increasing its supply and use. But let's be clear that natural gas use is only for a few years, not a few decades. And let's not commit so much funding for the infrastructure that we'll be reluctant to walk away from it. Especially if there will be stranded costs, which is where we are headed now.

Certainly we must not commit enormous ratepayer funds simply to making fossil fuels available elsewhere, as SB 1078 did this year. Bad global warming strategy, bad state policy, bad economic consequences for our citizens.

Let's look at a few important issues which are directly tied to increasing climate change.

Buildings consume a considerable fraction of our energy. We have had green building prescriptions for 15 years, starting with the US Green Building Council LEED formulary. The state has one for buildings built with state funds. They cover a broad range of important issues such as indoor environmental quality, site impacts, water, and materials. They all address energy performance. But mostly they are not aggressive enough. We need to commit to new building design (and renovation) which results in minimal energy consumption. Some design professionals know how to do this. The knowledge is there. We need the commitment. And, perhaps most importantly, a pledge to use life cycle costing, with appropriate discount rates. Enhanced energy performance may cost a little more up front, but cost savings will come in just a few short years. Let's not make our economic horizon as soon as the next election.

Let's ensure we are committed at all levels of government to addressing energy performance. Hamden has announced it will renovate 2 elementary schools "as new". We need to make sure that does not mean "as new when built decades ago". A few strategies for residential, commercial, industrial, and public buildings:

- update our 2009 state green building protocol for new construction and renovation
- provide funding for replacement of inefficient heating and cooling systems

- recognize the tremendous benefits of energy efficiency for the building envelope, HVAC systems, and appliances
- recognize how local and state building codes can impede progress

Transportation is recognized as one of the significant energy consumers. Reducing vehicle miles travelled (VMT) must be a priority to reduce emissions. Promote ride sharing, discourage single occupant commuting, make mass transit travel as available as our sprawl growth patterns allow, and, very importantly, see the next paragraph.

Electric vehicles (EVs) can significantly reduce energy consumption compared to fossil fuel powered cars. But there are roadblocks. They are more expensive, as battery technology is not yet mature. Government subsidies of consumer purchases at the federal and state level pay public dividends as global warming emissions are reduced. Hybrids address range anxiety, but they are not nearly desirable as pure electrics. But of course EVs require charging stations. Facilitate installing of residential stations. Fast track municipal permitting, which is currently painful. Install public charging stations, as we are doing. But make sure many more appear. Devise a reservation system so an owner is assured that, not only is there a station at his destination, but that he is guaranteed access to it. Devise meaningful preferences for EV drivers. HOV lanes on our interstates don't qualify. The state has an EV program which is making progress. Let's multiply its efforts.

Investors such as universities and foundations are now divesting from fossil fuel company stocks. The statement such action makes is powerful. Using the fundamentals of our capitalist economy to say you are taking significant and important action is a rare treat. Have the conversation about the state divesting. Our state treasurer, Denise Nappier, is very strong on this issue. She has been a leader among her peers across the country. She prefers a strategy of engagement as a stockholder, rather than actual divestment. We have great respect for her for leadership. But a conversation about a state divesting all of its invested assets from fossil fuel companies can be a powerful tool in addressing public awareness, and we think that conversation must take place. Hopefully, it will drive those companies to realize future profits must come from somewhere else.

Bridgeport Harbor Station (BHS) is the last remaining coal plant in Connecticut. It is a major source of climate pollution for the region. In 2014 the plant operated at a capacity factor of 25% while emitting nearly 1 million tons of CO₂, making it one of the highest contributors to climate disrupting pollution in the state. The plant further emitted 1,182,615 pounds of nitrous oxide and 1,843,297 pounds of sulfur oxide in 2014, exacerbating health problems in Bridgeport where nearly 15% of school-aged children suffer from asthma. BHS has been cited by the NAACP as one of the top ten environmental justice offenders in the nation and the Bridgeport City Council called for retirement of the coal plant via council resolution adopted in October of 2014. Continued operation of Bridgeport Harbor Station is inconsistent with the Connecticut's Global Warming Solutions Act and goals specified under the EPA's Clean Power Plan. Therefore, we ask that providing assistance a strong voice for the retirement of the coal operation at Bridgeport Harbor Station be accepted as a top priority for the Climate Change Council.

The Regional Greenhouse Gas Initiative (RGGI) has been one of the most successful programs to reduce electric sector carbon pollution anywhere in the country. As such, opportunities to drive further progress to meeting the state's goals through the upcoming 2016 Program Review should be a key consideration for the Climate Change Council. As experience with RGGI has shown, reducing carbon pollution from the electric sector is readily accessible and very affordable, creating new jobs and actually lowering electric bills due to corresponding investments in energy savings. As an example, setting a RGGI cap level that essentially eliminates carbon pollution from the electric sector by 2030 would position the state to easily reach the state's 2050 goal, delivering more than a quarter of the necessary progress. The Council should consider advocating with other partner states in the program for RGGI cap levels that exceed those required by the Clean Power Plan. Exceeding the minimum federal standards through RGGI will also help states with similar carbon pollution reduction goals like Maryland, Massachusetts, and New York.

The authority given to the Department of Energy and Environmental Protection under Senate Bill 1078 this year is another important opportunity to meet the goals of the Global Warming Solutions Act. By purchasing large amounts of zero-carbon wind and solar power that keep our jobs and energy dollars here in New England, rather than continuing to export our hard earned money out of the region for natural gas or hydroelectric power, we will both make significant progress toward those goals and create more jobs in the region. We've already seen that wind and solar power are working to deliver new jobs and stable electric bills, especially when fossil fuel prices spike. More energy savings, expanding RGGI, retiring the Bridgeport coal plant, and more wind and solar power contracts in Connecticut like those signed in 2013 will help us reduce our dependence on dirty, dangerous energy, keep our regional economy growing, and put us well on track to meet the GWSA targets.

Our GreenBank is becoming the model for the nation in leveraging public money to engage the private sector, and will certainly be involved in financing renewable energy projects. Green Bank should be focused on energy efficiency and renewable energy efforts. Green Bank should not be involved in any way in facilitating, encouraging, funding fossil fuel use.

Consider how to leverage land use policies to address global warming. Use transit oriented development design to reduce travel. Draw lessons from the urban sprawl which has scattered development patterns since World War II. Much of the state is already developed, so we are decades overdue on this, but let's do what is still available. Invest in our cities so they become residences of choice for millennials. Reduce the miles traveled to reach far flung residences, and use the density of cities to enhance mass transit. Promote non-vehicular travel. Make our cities walkable and bike-friendly.

At the same time support local agriculture to provide an ever growing amount of local food supply that will cut expensive and CO₂-producing transportation.

Low income residents need targeted help to reduce their energy consumption. I remember talking to a friend who lived in a subsidized housing complex. She bitterly complained about the winds blowing through her apartment in the winter. The builder had installed little insulation, as there was no financial benefit to him to do so. Programs which help

low income folks optimize the energy performance of their residences will make a significant difference. Explore creative connected solutions, such as the use of community shared solar program through Operation Fuel for low income residents.

Energy from hydro can offset fossil fuel use, but hydro has its own problems: disruption of the environment and aquatic life; displacement of residents as has happened in large scale projects in Quebec; negative consequences of transmission lines. Small hydro can be beneficial if low-impact standards are followed, but the in-state energy potential is limited because the state has low elevation gradients. We're just too flat.

And finally, do this. Go up to a stranger on the street and start talking about carbon caps. You probably won't get far. Do it again, but this time ask if he uses a clothesline. Did her sainted grandmother use one? I have found it the most effective way, by far, to start a conversation about energy. Everyone has some connection somewhere in his past. Use this as the hook to lead the conversation into discussions of energy. Most fun I've ever had.