

**Defending the Green New Deal:
Recommendations to Build on What's Actually in it While Reaching
Out to Others**



“Having the Green New Deal and your hamburger too”

--Embriette Hyde, Writer & Luisa Schetinger, Photographer, Unsplash

“Some men see things as they are, and ask why. I dream of things that never were, and ask why not.”

--Robert F. Kennedy

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Congresswoman Alexandria Ocasio-Cortez
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The Honorable Congresswoman Ocasio-Cortez:

For the course I teach at Ramapo College in Mahwah, New Jersey, *Economics, Ecology, & Ethics*, we studied the Green New Deal in the last third of the spring semester. We read and discussed articles and viewed videos about it, featuring both its fans and critics. This was after we had explored the course theme: how do we best put economics and the environment together, pulling in equity issues, while learning to identify economics ideas inconsistent with sustainability.

We find that your Resolution already is doing much that is right and is unusually admirable. It is extremely bold, because, as you have pointed out, it has to be to deal with the problem of climate change. It also boldly integrates economic and social issues with it. It is blunt. Its approach is unusual and very challenging, but consistent with tenets of the sustainability field that it invokes.

Much of this, though, has bought the Resolution a lot of criticism, both fairly and unfairly.

The eleven students and I aim to provide ideas to you, your staff and advisors that would build on its strengths, while providing responses to some of the criticisms. For example, as the Resolution has been criticized as “light on details,” this report provides more of these.

In any group report it is best not to assume that all contributors agree wholeheartedly with every point or recommendation, although no one expressed any reservations to anything in the report itself. As this was largely the students’ report, while I guided their exploration, for the most part I went with their views. The nuclear one was tricky. I concurred with it, partially because of the stakes, and the power of their arguments and those of some guest speakers we had. But I want to point out the necessity of the associated conditions with that recommendation discussed there for reluctantly “coming out” on the “pro-nuke” side. Another is the hope that the “new nuclear technologies” advocates cite really does result in less waste and potential for proliferation of plutonium, although I’m still not persuaded that the argument “nuclear waste is a political problem, not a technical one” gets us anywhere. But--still--as climate change is one of the biggest challenges for the next generation....there is that compelling “carbon-free” argument.

Perhaps this could be a meta-model for personal re-consideration and the associated discomfort and even occasional torment that many of us may need to go through as we seek the absolutely necessary broader convergences and compromises to bring many others into the battle to boldly address the wicked problem of climate change. The finally emerging drive we’re now seeing to make climate change a high priority issue, to which you and others have contributed, cannot

continue to be seen as belonging to just one wing of American politics. To get beyond it, none of us are likely to get everything we want.

Beyond the students' ideas, I include some of **my own** that either build on what is in the actual Report, or **goes beyond** it:

1. Regarding the inaccuracies often heard about the Green New Deal, such as banning hamburgers, air travel, or barbeques, there are three sets of ideas.
 - Take the larger picture approach of aligning the challenges of climate change with restoring our diminishing democracy, as we're not going to succeed in one without the other. Where efforts have been made with specific individuals or groups to correct clear misconceptions, and they still continue with those charges, seek to raise the playing field by saying, "Disagreements and debate can be fine, and suggestions are welcome, but deliberately mischaracterizing facts debases our democracy"
 - Complementary to this is to creatively publicize an ongoing list or memes of "The Top 5-10 Myths about the Green New Deal," perhaps adding "That refuse to die" (and perhaps further adding: "Why is that, you think?"). There are even some positive things said about it that aren't in the Resolution (yet). These, too, could be corrected
 - In the spirit of "making lemonade," some form of: "No, we're not taking away your barbeques. However, you might have heard that some are thinking about that. Hopefully, that will never happen. But if some of the harshest impacts of climate change occur (pick a few) and can no longer be avoided, that is what **might** have to happen. Isn't it better to get on-board the Green New Deal, which gives us the best chance of keeping your barbeque?"
2. While certainly mentioned from time to time in the Resolution, the concepts of "sustainability" ("to sustainably meet the challenges of the 21st century," "build a more sustainable food system") and "transformation" are not really getting noticed in the discussion about the Green New Deal. These are too important to be minor actors, with fields built around the former and starting to develop around the latter--both with ideas to mine. For instance, President Clinton's Presidents Council on Sustainable Development had members from different parts of society that don't usually cooperate. They also held public hearings, which informed their reports. That effort should not be lost to history
3. Some of the groups that support this effort (discussed in the Appendix) are proudly and justifiably advocacy-oriented. This is fine for agenda-setting, getting attention, lobbying, education, and social media presence. They helped this issue get to this point. But if we're really seeking transformational change in our society and economy, and eventually bringing in most of American society, that is not going to be enough. Prompt them to consider how they can evolve to show their leadership in new ways. This might involve some think tank-type work, negotiation, consideration of language, continued discussions with less-than-receptive audiences, publication of a "What we still don't know how to do?" list, so ideas are welcome. While their uber-young identity is an obvious strength, they should allow space for the not-as-young. This would also be consistent with more broadly practicing diversity. As it will often be unclear how to do all these things, a

learning orientation within their organizations would be helpful--as it would be for all of us

4. Realize that some disagreements are coming from places of ideology, “politics,” a different “theory of change” even among those who favor action on climate change, or are even personal. How you deal with these are a different, if overlapping, subject. But part of the answer is pointing out that the climate change issue is too important to let these get in the way (I have written about mindset issues hampering the efforts to address climate change, even among those who want to do so, here, <http://greeneconomynj.org/2019/01/03/new-jersey-now-gets-climate-change-what-we-are-still-missing-why-were-not-talking-about-what-were-not-talking-about-part-4/>)
5. While mentioned in the Report, please really consider the recommendation to take advantage of, and extend, the sustainable business revolution. For some reason, the potential of this one gets lost. But it can make this extremely difficult challenge somewhat easier. Marianna Mazzucato, Director of the University College London Institute for Innovation & Public Purpose, gives one way that is specific to the Green New Deal: government purchasing should favor companies “willing to adopt...Green New Deal goals,” such as using renewable energy and reducing their waste (Meyer, 2019). The Sierra Club concurs, suggesting a “Buy Clean” addition (Sierra Club, n.d.). There are **many** other possibilities available from the evolution of the sustainable business field. Why not utilize this untapped opportunity?
6. Take advantage of the best thinking available, including retrospective studies if available, on how best to make green jobs training work. Vachon equates the “just transition” phrase in the Resolution as meaning that fossil fuel workers would receive the same pay in solar jobs as they had received in their former work (Vachon, 2019). That’s a high, aspirational bar. But at a minimum the drop in pay should be as little as possible
7. Beyond the “Green Jobs Guarantee” section in the Report, Roberts states that some of the criticism about its “costs” are “ludicrous guesswork (Roberts, 2019)”
8. Regarding the criticism of “too bold,” use themes such as:
 - o “Who Says the U.S. can’t ‘do great’ anymore?” “This is how we now pursue greatness”
 - o Conventional wisdom isn’t going to resolve the problems, which is an argument that could be extended to many areas
 - o A sweeping but appropriate quote used three times in this Report, by Benjamin Finnegan of the Sunrise Movement, is: “What is needed to avert the climate crisis is a massive restructuring and mobilization—an overhaul of our economy and society the likes of which has not been seen since World War II (Lavelle, 2019)”
 - o Meyer says “Fighting climate change means remaking the economy (Meyer 2019A).” So we might as well get on with it
 - o Despite strongly favoring transformational over incremental change, the latter shouldn’t entirely be seen as inappropriate--as long as it’s within the framework of, and works towards, the former, particularly if legislation passes early during the next Administration. If it does, go for a few quick wins, even if they’re incremental, and publicize these. Do so even they’re not completely successful as part of a “lessons learned” component, which would show a willingness to question another conventional wisdom that you never admit imperfection

9. Beyond addressing the criticism of “Too comprehensive” or “A liberal wish list” discussed in the Report, consider Tienhaara’s “it is politically savvy to link issues that voters clearly care about to the fight against climate change.” She also points out that Naomi Klein charges that “the prevailing (conventional) view places issues into silos...and can only be overcome with a holistic vision for social and economic transformation;” and Pavlina Tcherneva’s “just transition,” meaning “...people who lose their jobs in the fossil fuel sector as a result of the transition to a green economy should not be left behind (Tienhaara, 2019).” Klein adds the silo “mindset” makes it easy to dismiss a sweeping...vision like the Green New Deal as a...laundry list (Klein, 2019).” Klein adds two more statements defending the often-criticized comprehensiveness: (1) “make the case for how our overlapping crises are...inextricably linked,” and (2) “connecting the dots” can be made “into an irresistible story of the future (Klein, 2019).” Making things more tangible, perhaps, Klein says “A jobs guarantee...would...lower the pressure on workers to take the kinds of jobs that destabilize our planet (Klein, 2019),” and Gunn-Wright says “we should expect a great many to (physically) move...to be part of a renewables revolution. And when they do, unlinking employment from health care means people can move for better jobs...(Klein, 2019).” Some of my own ideas on addressing “comprehensiveness” are:
- Acknowledge that it is pretty holistic, as the latter is not common and as, I’ve found, not easy for everyone, or every media source, to grasp. Some reflexively reject it. So simply admitting it might help a bit
 - Point out, though, that while not always easily digestible, issues truly are interconnected, and failing to recognize that risks creating new problems and missing creative ways to address them. Comprehensiveness doesn’t go away just because you don’t want to talk about it
 - It is not necessary to be equally bold about resolving every non-climate change issue in the Resolution in the same 10 year period as long as these have been successfully put on the mainstream agenda and suitable progress attained. Even within the energy area, it is not absolutely necessary for every building in the U.S. to be inspected and made more efficient within a decade
 - After achieving sufficient attention, it is acceptable if some of the non-energy areas needs are separated out from an evolving eventual Bill and work their way through the Congress in other legislation and/or outside of government
 - Its comprehensiveness is consistent with the tenets of sustainability
10. Don’t assume audiences are that familiar with the New Deal the Resolution is named after, its transformational goals and effects, even if there were mistakes in its execution. Varshini Prakash of the Sunrise Movement (see the Appendix) says “The only mobilizations that are in any way remotely analogous” “to the unprecedented, war-time-esque mobilization (needed) are the economic mobilization around WWII and the New Deal era...(Dickinson, 2019).” Klein states “The New Deal showed how every sector of life...can be transformed under the umbrella of a single, society-wide mission (Klein, 2019).” (For more about the New Deal, see the “Financing“ section.)
11. Occasionally mention the research behind the Green New Deal. As Tienharra points out: “...each of the key elements of the framework...is backed up by an extensive body of academic research (Tienhaara, 2019)”

12. Beyond the ideas in the student’s Report about addressing the “Socialism” charge, consider:
- In the Resolution there are these statements contrary to some notions of what socialism means in the political and common culture: “transparent and inclusive consultation, collaboration, and partnership with...business” and “working collaboratively with farmers.” You have been quoted saying there “could be public-private partnerships” and “contracting (Meyer, 2019A),” which are inconsistent with centralized government ownership and control. Roberts says it “does not shun the private sector (Roberts 2019).” Meyer, while calling it “a leftist resurrection of federal industrial policy (see immediately below for why the latter isn’t a bad thing), it is not an attempt to control the private sector...it is a bid to collaborate with it (Meyer, 2019A)”
 - While risky--and what isn’t, consider seeing it as, and even calling it, industrial policy. (The latter has been called “the policy which dare not speak its name;” that is, when it exists, historically or otherwise, proponents cannot admit it.) Meyer says such an industrial policy would “throw all of American government and industry behind an attempt to make renewable energy cheap (Meyer, 2019A)”
 - Meyer also states: in a way, the originator of the Green New Deal could be seen as Alexander Hamilton, who (industrial policy-like) “used the power of the federal government to shape the fate of the U.S. economy.” Meyer sees the Green New Deal as following that precedent, and suggests changing your own communications about it to a “plan to resuscitate American industry” as consistent with that (Meyer, 2019A)
 - Further, Hyman, who teaches history at the ILR School at Cornell University, states “The New Deal took great strides to encourage private investment (Hyman, 2019)”
 - To those who say that it is anti-capitalist, say “This is how capitalism must evolve if it is to stay viable to what the times are demanding”
13. Relatedly, mention that the Resolution already contains these conservative-friendly phrases (to the probable **surprise** of many): “climate change constitutes a direct threat to the national security of the U.S...by acting as a threat multiplier,” “depopulated rural communities” and “de-industrialized communities,” “**all people** of the U.S. may be full and equal participants in the Green New Deal mobilization (Ocasio-Cortez, 2019).” Kelton states: “A Green New Deal can...help bridge our political divides. Rural communities in the Midwest have as much to gain economically...as coastal urban areas (Kelton et al, 2018).” In the months ahead, try to develop more connections to conservatives, showing that diversity applies to them, too. Meyer makes the astonishing statement (or...maybe, not so much upon reflection), the Green New Deal “can even feel a **little...Trumpy**.” You “can start to see the potential for a certain kind of play...an attempt to integrate Trump’s working-class nostalgia with the urgency of remaking the economy to fight climate change (Meyer 2019A).” (If interested, for more on reaching out to Trump voters--and I realize how that would shock everyone, see any of the eight articles of my series about that, <https://medium.com/@innovator3/the-speaking-to-the-trump-voter-series-uncertainties-recommendations-conclusions-final-thoughts-12e717023084>)

14. Regarding the “How are you going to pay for it?” question, proponents have used a few responses, such as “Why does this only get asked around ‘useful ideas’ like this and not ‘wasteful’ ones (Hockett, 2019)?,” “What about the cost of not doing it?” or “In an emergency you just do it.” These are acceptable answers, particularly in the political arena. But as it is an important question--even if asked for political reasons, it needs a more substantive answer, to the degree one (or more) can be provided. The “Financing” section in the Report, without naming it, cites the most substantive answer to date; that is, in a number of possible ways the government could create the money and, contrary to longstanding conventional economic wisdom, as the U.S. would be “borrowing its own currency (Dudley, 2019),” this need not be inflationary or damaging. Hockett, a Professor of Law and Public Policy at Cornell University, calls the former “a silly canard (Hockett, 2019).” Hockett adds there isn’t even “a ‘pay for’ [it] challenge (Hockett, 2019).” This is even more acceptable as the “Financing” section also discusses the historic precedent for “creating money” for needed investments during the New Deal. But...we’re not quite there yet. Conventional wisdom is not--yet--so accepting of the unnamed doctrine, called Modern Monetary Theory--although the latter does seem to be making progress gaining acceptance into the mainstream with the first textbook about it recently published (Coy, 2019). But Bill Dudley, former head of the New York Federal Reserve, says: “Alas, there is no free lunch.” “The constraints are real.” It is “wishful thinking (Dudley, 2019).” Coy states “there’s a lot of debate around MMT,” with an opponent calling it “a bizarre, illogical convoluted way of thinking...” while a proponent, in turn, cites conventional thinking as “part of a degenerative paradigm that has lost credibility (Coy, 2019).” Coy also notes this “state of confusion” “suddenly matters” because MMT, once confined to blogs and a handful of colleges...[but now] the left wing...is citing [it] (Coy, 2019).” Congresswoman Ocasio-Cortez is aware of it, saying “MMT should be ‘a larger part of our conversation (Coy, 2019).” That is correct and it can even be used. However, be aware and monitor the parallel economics debate on MMT, looking at whether it becomes more accepted. Don’t fall victim to confirmation bias, the temptation to like and use it because the theory is supportive and provides the least painful substantive answer. Don’t become dependent on MMT and be open to alternative ways to finance the Green New Deal, such as offered by the Green Party US (Green Party, n.d.)
15. Perhaps even semi-independently of the Green New Deal, look for ways to extend and deepen attention to the fairness issue. For instance, our class spent some time exploring rarely made connections between sustainability and dimensions of mental health. Others are voting rights and the very poor in developing countries
16. Try to make a little time to help support Green New Deal efforts in some of the states. Finding synergies between the states and the federal level is always desirable.

I very much hope you find this Report useful. I anticipate it will soon also be available online.

If you are interested in going further into other ways to integrate the economy and the environment beyond the Green New Deal, particularly but not limited to the sustainable business area, and/or how such initiatives can go off-track to better understand “lessons learned,” I refer you to the Report issued by last year’s class. Theirs was somewhat similar, but pre-Green New Deal, and sent to New Jersey’s Governor.

Here is that report:

A Green Economy for New Jersey: A Proposal to the New New Jersey Governor Phil Murphy, with Ramapo College class; & “Postscript: Going Wider and Deeper with the Green Economy,” June 12, 2018.

https://www.ramapo.edu/mass/files/2018/06/PolskyA_Green_Economy_for_NJ.pdf

Best of luck on these issues, both during the next two years and into the long-term.

A handwritten signature in black ink on a light pink rectangular background. The signature is cursive and appears to read "Matt Polsky".

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Table of Contents

Executive Summary	11
Introduction	12
Overconsumption	13
Ecosystem Services	15
Challenges to Defining Ecosystem Services	16
A Proposed Definition	17
Green Jobs Guarantee and a Transition for Workers	17
Nuclear Power as a Source of Green Energy, Whether Seen as Green Or Not	19
Mitigating Energy Consumption in and Through Food Systems	21
The Possibilities of Carbon Farming	22
Building for Resilience	23
Carbon Tax	24
Financing the Green New Deal	27
Historical Organizations That Supported the Original New Deal	27
Making Climate Change Transformation a Bipartisan Issue, Including By Using Some Market-Based Strategies	28

Business and the UN Sustainable Development Goals	30
Addressing the Socialism Stigma	32
Too Comprehensive	33
Gender Equality	34
Conclusions	36
Recommendations	38
References	39
Appendix	44
Plastics Usage and the Anthropocene Age	44
New York City's Green New Deal	45
Organizations Which Support the Green New Deal	46
Acknowledgements	46

Executive Summary

The main energy/environmental goals of the Green New Deal are 100% clean, renewable, zero-emission energy by 2030 and net-zero carbon emissions by 2050. This is **what is needed**, and, until very recently, the only game in town at the federal level for getting us there (indeed, its existence and the discussion it has generated may have partially prompted the boldness of other's proposals). It is only through bold, conventional wisdom-shattering policies and actions that we have a chance of achieving these goals. Thus, despite both fair and a host of unfair criticisms, the Green New Deal holds up.

Those qualities, though, set it up for a lot of criticism. Some of that might be because such boldness is just so unfamiliar (which also could be said about its comprehensiveness, or the linkages it makes between issues, or some of its specific social justice elements). But these critiques can be answered.

Indeed, we're going to have to become comfortable with boldness or transformational change--and at a time when even incremental change seems impossible, especially when too much federal policy is going in the wrong direction. Questioning conventional wisdoms and what we think we know, including about how things are done, is going to have to become the new way we do things. This doesn't exclude the originators and proponents of the Green New Deal.

The students came up with several ideas on how to deal with both the fair and the unfair, as well as build on its existing strengths. They addressed many of the criticisms: "too bold," "too comprehensive," "socialistic," and "how are you going to pay for it (whether the questioner really cared about the answer or not)."

Making things even harder, but necessary--as if there aren't already enough challenges, the Report promotes elevating the protection of ecosystem services into the Green New Deal framework, as the state of ecosystems is even worse than for climate change (although the two issues are deeply related). The revitalization of our democracy is also linked with these issues, as we're not going to be able to fix one without the other. A major part of both is the need to reach beyond political progressives, which is not a commonly held position, as conservatives are going to have to change their environmental behaviors just as much as anyone else. Surprisingly, the Cover Letter points out an existing foundation within the Resolution that could speak to conservatives, and which could be built upon.

The Report suggests more utilization of sustainability. Although somewhat present in the Resolution, it is not a focus. Sustainability could be a source of ideas, including the U.N.'s Sustainable Development Goals, more ideas about agriculture, taking advantage of the rarely noted evolution of some businesses to become increasingly more environmentally and socially responsible, as well as general comfort with taking a more comprehensive view of things.

The Report also takes positions on a carbon tax (a needed complement but it does not suggest specific forms of it), and nuclear power ("Yes," but **only under** certain conditions).

The Green New Deal has been credited with generating needed discussions. As we await better prospects for its actual passage in two years, proponents must work to generate the support for that day, but not just among its existing base, or using only familiar arguments. It must evolve to facilitate getting us to much better footing when it has its moment.

However unlikely this seems now, there are ideas for accomplishing this.

Introduction

This Report is the final requirement for students of an *Economics, Ecology, and Ethics* course, which uses that three-prong sustainability perspective to look deeper into many of the environmental issues we face today, as well as other issues such as philanthropy, efficiency, psychology, philosophy. After we gained some perspective on when and how economics could be a useful tool, and when it is not, we focused on the Green New Deal as a unique, timely, highly visible, and extremely important example of trying to pull these prongs together in the right way.

The Green New Deal famously combines a bold approach to addressing climate change along with other (to critics) unrelated, social issues. It has received a lot of attention, both favorable and unfavorable.

Still, the class sees the need for the Green New Deal. This Report is a culmination of the discussions held throughout the course as they apply to improving it.

Each student co-author wrote two sections of their choice, with references, which led to of further in-class discussions, where some voids were identified and ideas generated on how to fill them. Both specific and general recommendations were developed.

The goal of this Report is to provide our perspective on a critical public policy issue and both try to improve it and suggest ways to bring along others to support it.

Three of the students' contributions are not directly relevant to providing suggestions about the Green New Deal and therefore are included in the Appendix.

Overconsumption

The Green New Deal mentions that clean manufacturing is a component to solving the climate crisis. This is a great first step. However, overconsumption goes beyond this and includes reducing consumption, as well as repairing items we already have. We live in a world

where wealthy nations, especially the U.S., are excessively wasteful. According to the United Nations Environment Programme, one third of food across the world (an equivalent of \$1 trillion) ends up in the garbage due to poor farming and transportation practices (UN Environment, n.d.-a). The household products we purchase are often made to last only a limited amount of time before needing replacement. Further, the manufacturers can make it difficult and/or expensive to repair items, which forces consumers to buy new ones. The culture in the United States is to buy new products. For example, fast fashion trends, constantly changing styles of decorating, and even new model automobiles help fuel the desire for new products as the first option.

The current system causes major environmental degradations, including but beyond climate change. Manufacturing usually relies on fossil fuels, as well as the harvesting of natural resources to create products. For example, our electronic gadgets require rare earth metals, which are both difficult and environmentally destructive to extract. Our increased reliance on these technologies, as well as the increasing number of people using them, are only going to increase pressure on the natural environment, unless business-as-usual practices are challenged.

Products need to be built to last for extended periods, with the capacity to facilitate model updates. They also need to be manufactured in a way so that when they do break, they are more easily repairable by the consumer at low cost.

Transitioning to clean manufacturing will help reduce the amount of greenhouse gases released into the atmosphere, but if we switch to an economy which does not rely as heavily on the manufacturing of new products, we will be able to make corresponding improvements to environmental quality more quickly.

It is time to begin to challenge the current mindset.

As part of that, and consistent with the “jobs” orientation within the Resolution, there should be an emphasis on developing a repair-oriented economy.

In addition, a carbon tax (see that section below) also may help discourage mass consumption.

These measures will help to create a cleaner, greener society.

Finally, there is a need to begin to align public policy thinking in the U.S. with the United Nations Sustainable Development Goals (United Nations, n.d.). The suggestions here align with Goal 12, Responsible Consumption & Production (United Nations Environmental Program, n.d.-b).

Ecosystem Services

The benefits humans receive from ecosystems are known as ecosystem services. These include such things as breakdown of wastes, recycling and cleaning of water, pollination of plants. As the ecological economist Herman Daly wrote years ago, they underpin the economy, which is not widely appreciated. Ecosystem services also are important because they protect us from natural disasters.

Ecosystem services also tend to be free, which leads to their overuse.

When a certain species becomes threatened, it usually goes unnoticed, and ultimately can affect the whole ecosystem. The United States is over-developing many natural resources, especially the less-known ecosystem services. Many ecosystem services are threatened or endangered, with their role in supporting the environment and humanity not understood by the majority of the people.

It is critically important that the United States make every attempt to protect these services.

As climate change becomes more prominent, we need to find more defenses to protect us. Much of this may entail expensive physical investments to infrastructure, like sea walls. However, protecting and restoring ecosystems can be a more effective, less disruptive, and even a cheaper way to seek resiliency and reduce some of the risks of future natural disasters. Further, we can take more advantage of the properties of greenery to sequester carbon.

The Green New Deal Resolution does mention ecosystem services, but as the threat is comparable to that of climate change it needs to give it more emphasis. The Green New Deal could offer a platform for discussing ecosystem services and create the basis for new legal protections. To facilitate protection, the “Recommendations” section has a special series of needed actions just about ecosystems.

Challenges to Defining Ecosystem Services

There is a need to properly and legally define ecosystem services. Various agencies throughout the United States have their own definitions of ecosystem services, largely based on the goals or missions of the agency. This can create confusion when deciding how ecosystem services are developed or protected. The National Parks Service defines ecosystem services as benefits ranging “from inspiration for artists, fish for food or recreation, and clean water for future public use (USNPS, n.d.)” Under this definition, priority is placed on those services that benefit visitors to the National Parks, so it is highly limited in scope and does not cover avoiding over-development of natural resources. The Environmental Protection Agency defines ecosystem services as those services that “produce the many life-sustaining benefits we receive from nature—clean air and water, fertile soil for crop production, pollination, and flood control (USEPA, 2016).” This definition also has a limited scope. The U.S. Forest Service goes the farthest. It describes ecosystems services as free or public goods, which can lead to these

services and their contributions being left out of the decision-making process (U.S. Forest Service, n.d.).

A standard definition might work off of the Millennium Ecosystem Assessment, which defines ecosystem services based on four categories: provisioning, regulating, cultural and supporting services. Provisioning Services provide humanity with a direct benefit. Regulating Services work to mediate natural phenomenon. Cultural Services provide nonmaterial benefit, and Supporting Services form the basis for all other ecosystem services (Millennium Assessment, 2003).

A Proposed Definition

Ecosystem services require a standard definition to be used by all branches of government. One potential definition might be:

Ecosystem Services are those natural services that provide a direct or indirect benefit to human society. The value of these services lack a set market value, often leading to misuse and overdevelopment. All ecosystem services can be categorized based upon their benefit to society and their capacity to regulate and support the environment.

Such a definition includes the benefits to humanity and provides for categorization. Any laws based on this definition are better able to protect and manage crucial, and potentially endangered ecosystem services.

Green Jobs Guarantee and a Transition for Workers

The Green New Deal implies an end to the fossil fuel-dependent economy (Green Party, n.d.) and a transition to a green economy that is environmentally sustainable, economically sound, and pursues justice for everyone. The goal set out by the Resolution is to transition to 100% renewable energy by the year 2030. The pushback from critics of the Green New Deal

includes claims that this would cost billions or even trillions of dollars to change current infrastructure, transportation systems, renovate all buildings, and entire electrical systems. Those who support the Green New Deal cite research that the U.S. economy could lose billions of dollars by 2100 by **not dealing with** climate change (Friedman, 2019). One of the provisions in the Green New Deal is a jobs guarantee, if necessary, at a livable wage. How this could be done is on the minds of many skeptics and critics of the deal.

The Green Party US offers an approach. It would be a Full Employment Program, creating up to 20 million jobs, replacing unemployment offices with employment ones. It would be federally funded and locally managed. Those last resort jobs will be provided by the government in sectors of the local community where needed. The jobs would be either environmentally or socially-based. The former would include sustainable energy and green buildings jobs. The latter would be based in the social sector, such as education programs, child care, and senior care (The Green Party, n.d.).

Although this is positive in many ways, it presents a major problem for those who work in the coal, oil, and gas industries. With the rise of the green energy revolution, these Americans will lose their jobs and will suffer disproportionately. Many of these workers have only a high school education and not many reasonably comparable financial alternatives.

They are some of the hardest working blue-collar workers in our country. Oil workers go out on rigs, sacrificing their family lives to make a decent income. Coal workers risk a shorter lifespan due to Black Lung to support their families. But in places like West Virginia and Wyoming where the coal industry is huge, there are not many other job options that pay a decent wage.

This is an aspect of equity, too.

We must do more to help these workers find jobs in the renewable industries. They should be among the priority hires. They will need proper training, which could include the environmental benefits of these clean sectors. These workers and their families and union representatives may or may not care that much about the environmental consequences, but some would take advantage of the offer of a decent alternative job, and may come to appreciate the “clean” aspects.

Perhaps, there would be less resistance to the switch to renewables, and more political and other support for the Green New Deal, which may be enough to help pass it in a future Congress.

Nuclear Power as a Source of Energy, Whether Seen as Green or Not

Nuclear energy is a long-time controversial topic in the world of energy, but perhaps it is time for a re-evaluation, given the Green New Deal’s very high priority on reducing carbon emissions. Without minimizing the historic problems, like the accidents at plants in Chernobyl, Three-Mile Island, and Fukushima that have haunted us, many nuclear plants have been successful. Perhaps a re-look, also urged by an increasing number of even environmentalists, will find a way to adequately reduce and manage those consequences, bringing the risks down to minimal levels. If so, this could lead to an unprecedented compromise which would provide a place for nuclear power in The Green New Deal, where currently there is none.

Some already believe that nuclear energy is the future of the energy industry and a great solution to the fossil fuel pollution issues we now face. Others think that nuclear energy isn’t clean, and is too dangerous and risky to justify the gains. Each of these beliefs can be supported, but perhaps the times now require that we find an in-between area, even of reluctant agreement.

So while nuclear energy is risky and not entirely clean. But, as a start, if built in safe locations and with newer technologies, it might find its place.

A challenge is to view this with a fresh perspective, along with creativity. France is often cited as a model in this area. According to Planete-Energies, they use nuclear energy for 72% of their electricity. If other countries built reactors the way France has, there would be less risk of nuclear accidents and waste. France has special safety measures for their plants that other places don't. They have backup generators for the cooling tower and reactor. In the event of a power failure, the most vital areas stay up and running. Also, the power cables are reinforced in concrete to keep them from being damaged.

If done properly, nuclear energy could be an aide to pushing out extremely harmful fossil fuels.

We recognize nuclear comes with a lot of cons against it like a potential meltdown and radiation emissions into the surrounding area. And there is the long-time issue of where the waste from the plant would go. Another issue is the cost and time it takes to create and decommission the plant. It takes roughly eight years to create a new plant, which includes the various permits it must obtain and the building of the plant. Ways to address these issues must also be found, such as standardization of designs.

It would help further if these new nuclear technologies were developed and implemented without subsidies, showing "they can pay for themselves."

Since nuclear has the potential to help contribute to addressing the challenge of ending climate change, and we do not have a lot of time to get there, we can't overlook the advantages. Nuclear energy emits no carbon pollution while the plant is active. The only time emissions are released is during the creation and decommission of the plant where they must use heavy

machinery to build and take apart the plant. Nuclear is also one of the most reliable energy sources compared to solar and wind. The sun does not need to be out, and the wind does not need to be blowing for nuclear energy to work. Nuclear energy can more easily provide power to a large area compared to renewable energy sources.

It is hard for some to envision intermittent renewable energy becoming capable of completely powering the economy. **Ironically**, perhaps adding a planned nuclear component, by providing a steady source of power, could help increase the credibility of large scale green energy.

Mitigating Energy Consumption in and Through Food Systems

As fossil fuels become scarcer throughout the world, and as we see more of their environmental impacts, our society faces many questions. A big one is how can we reverse the detrimental impacts we have caused through our energy consumption and still feed ourselves and (if we retain that traditional vision/expectation of the U.S. role) the world?

The Green New Deal mentions the importance of “supporting family farming, investing in sustainable farming practices, and building a sustainable food system where everyone has access to safe and health foods (Ocasio-Cortez, 2019).” But it does not talk very much about the impacts of the agricultural sector on our water, soil, health, and what mitigation strategies can be implemented to create more sustainable agriculture. Considering that industrial agriculture exploits people and the land, uses harmful fertilizers and chemicals, and emits tremendous amounts of greenhouse gases, an overhaul of our food system is needed to reach the goal of zero greenhouse gas emissions by 2050.

The ways in which we grow our food and produce livestock are unsustainable and inhumane, as profits and yield are the major concerns. Factory farms are the biggest culprits.

Monocrops take over industrial farms, producing only one crop to gain the best profit. Fruits, vegetables, and grains are grown with chemicals and fertilizers to produce as much food as possible without losing crop yields. Mass livestock production contains thousands of cows, pigs, chickens on factory farms, injecting them with antibiotics and hormones, to produce as much meat as possible for human consumption. Energy is used for tractors and trucks, trees are cleared to expand more land for livestock, and freshwater, contaminated with these chemicals, is used for our plants and to hydrate our livestock. These are all part of our food systems, creating greenhouse gases and eroding soil. According to the article, “Sustainability of meat-based and plant-based diets and the environment,” “The US food production system uses about 50% of the total US land area, approximately 80% of the freshwater, and 17% of the fossil fuel energy used in the country (Pimentel & Pimentel, 2003).”

To mitigate these unsustainable practices requires, in part, the promotion and support of smaller and local farms. However, there are multiple ways to do this, some of which are not well known.

The Possibilities of Carbon Farming

Carbon farming is the practice of using farming methods to reduce greenhouse gas emissions and/or capture carbon using plants and healthy soils. The Resolution seems to open the door to sequestration in farms, but says little about it.

The photosynthetic capabilities of plants capture CO₂ from the atmosphere, which is converted into plant energy or organic soil matter (Carbon Cycle Institute, 2019). Another practice captures carbon using soil through the addition of compost. This has been shown to boost the capabilities of carbon-capturing soil in grasslands and cropland. Improvement is two-fold because the addition of compost improves moisture retention and increases organic matter

and soil quality, which boosts productivity in crops. Whereas, when organic matter is left in a landfill, methane is released because it decomposes without oxygen (Block, n.d.).

At the University of California Berkeley, Whendee Silver, Professor of Ecosystem Ecology and Biogeochemistry, is working with the Marin Carbon Project on ways to use rangelands, forest soils, and grasslands to sequester carbon and improve farm productivity, while combating climate change. By contrast, overgrazing, erosion, unmanaged fires, and poor land management practices deplete the soil and its capability to absorb and store carbon.

The rate of carbon sequestration in areas where compost is added holds a rate of 1 metric ton of carbon each year for three years after the compost is added (Block, n.d.). The practice of carbon farming has potential to reduce the amount of carbon in the atmosphere, while reducing organic waste put into landfills.

And this is done without banning hamburgers!

Building for Resilience

Resilience can be looked at as the ability of a city, state, or country and its people to regenerate/recover after a disaster. As climate change worsens, our society will face more frequent and severe natural disasters. The Green New Deal mentions this, but more emphasis is desirable.

According to the United States Geological Survey, “With increasing global surface temperatures the possibility of more droughts and increased intensity of storms will likely occur. As more water vapor is evaporated into the atmosphere it increases the possibilities of more powerful storms. More heat in the atmosphere and warmer ocean surface temperatures can lead to increased wind speeds in tropical storms. Rising sea levels expose higher locations not usually

subject to the power of the sea and to the erosive forces of waves and currents (US Geological Survey, 2017).” We are increasingly seeing these effects.

By making towns and cities more resilient to these climate change-caused (or, as some would still have it, linked) disasters, we’ll reduce the possibility that our homes and other buildings will become demolished, leaving the country with obscene amounts of debt, families without homes, businesses without work, and people without spirit.

In an article about how The Rockefeller Foundation invested in creating more resilient cities, the author says, “Building resilience is about making people, communities, and systems better prepared to withstand catastrophic events - both natural and manmade - and more able to bounce back quickly and stronger (US Geological Survey, 2013).”

From the wildfires in California, to Hurricanes Irma, Harvey, Sandy, and Katrina, to more coastal flooding, these devastations will clearly continue. We have no choice but to build stronger, **but** adding in accordance with the laws of nature, including protecting and restoring ecosystem services. The latter is no small thing, and would strengthen the existing language in the Resolution: “ensure that any infrastructure bill considered by Congress addresses climate change (Ocasio-Cortez).”

Carbon Tax

It has been noted that the Green New Deal doesn’t mention a carbon tax, but some have noted it doesn’t exclude one either. We think it needs to be added.

One way to look at this is on one side there are some hardcore environmentalists who want an economic and ecological revolution which doesn’t have a need for a carbon tax. On the other side are some moderate change-seekers who believe that a carbon tax is an essential part of a climate plan, and perhaps the only thing really needed. Creators and supporters of the Green

New Deal stress that they have not yet settled on a specific plan to cut carbon emissions. Benjamin Finnegan, of the Sunrise Movement in Philadelphia, said “The door is not closed to cap-and-trade and carbon taxes...the important thing is that carbon taxes are simply not enough. What is needed to avert the climate crisis is a massive restructuring and mobilization—an overhaul of our economy and society the likes of which has not been seen since World War II (Lavelle, 2019).”

Some supporters of a carbon tax envision a reliance on the otherwise-free market, rather than any other federal government involvement. There are currently two plans proposed. One was introduced by House Representative Ted Deutch and backed by the Citizens’ Climate Lobby, and another supported by elder Republican statesmen James Baker and George Shultz, and backed by the Climate Leadership Council. Both plans would increase taxes on carbon-based fuels, which would encourage consumers to prefer or invest in cleaner energy sources. The revenue collected would go back to American households as “dividends.”

But there are differences. The Citizens Climate Lobby plan would have a more sharply rising tax, increasing the direct behavioral effect, while keeping other measures in place for climate action. The Climate Leadership Council plan would reduce other strategies for climate action, while setting limits to climate lawsuits (a difficult, but possibly necessary-to-accept trade-off). Their plans, though not perfect, do the important job of addressing the fact that cutting down on carbon through an essentially market mechanism will have to be part of the process in a capitalist system that is dependent on prices to guide the countless transactions between buyers and sellers. Its potential effect on changing behavior would likely be irreplaceable as there could be no other single measure as powerful.

We see it as actually strengthening, rather than replacing or competing with, the Green New Deal. (Of course, if either one or not the other continues to be “politically impossible,” even two years from now, despite the efforts of those supporting either policy approach, it is better to go with the one that can make its way into law and be implemented, while continuing to support complementary efforts to pass the other.)

While we don’t take a position on the exact dimensions such a tax would take, we urge a focus on its range of benefits--even beyond **its necessity**, and certain properties it holds:

- A carbon tax could help speed up the process of restructuring away from fossil fuels in order to reach net-zero greenhouse gas emissions
- The size of the tax must be high enough to change behavior--even if the necessary high enough rate has to be phased in
- While we don’t take a position on the rebate/dividend option (i.e. returning the revenues raised to low and middle-income citizens), we note its proponents’ view that it could increase its political viability (Aucott, 2019) and would be fairer--no small attributes. We suggest that not all the revenues gained necessarily have to be returned to taxpayers, as some of it could be used for needed basic research, to pay for monitoring and revising the program, as nothing is ever perfect the first time around, or for some other necessary purpose
- Forcing carbon users to pay close to the external cost of carbon is both fair and good, if often dimly remembered, economics 101. It helps sustainable technologies and businesses compete, which helps with the earlier economic transition discussed. Also, it is consistent with the existing provision of the Green New Deal Resolution calling for

“the federal government [to] take into account the complete environmental and social costs and impacts of emissions through...new policies... (Ocasio-Cortez, 2019).”

Financing the Green New Deal

One of the key issues that has arisen about the Green New Deal is where the funds to pay for it will come. The Green New Deal cannot be implemented without revenue sources.

According to Brown, Congresswoman Ocasio-Cortez has “proposed a novel way to fund the program.” She is advocating that financing “will primarily come from the federal government, using a combination of the Federal Reserve, a new public bank..., public venture funds and such other vehicles or structures... (Brown, 2018).”

If needed, Congress could assign the Federal Reserve to “fund any program” that was necessary to raise money. “Or the Treasury itself could do it... (Brown, 2018).”

A public bank system would be “self-funded...generating resources and fees that can repay the loans (Brown, 2018).” Therefore, “taxpayer money” will not [be] required (Brown, 2018).” This is how the Reconstruction Finance Corporation (RFC) did it during the New Deal (see below).

In addition, some revenues from the Carbon Tax (see above) could be utilized.

Historical Organizations That Supported the Original New Deal

The RFC was one of the first organizations established to support the New Deal. It was created to support loans, and did so “for thousands of infrastructure and small business projects (Brown, 2018).” It “set up lending systems to channel private capital into publicly desirable investments...all without the government needing to spend a dime of taxpayer money (Hyman, 2019).”

Furthermore, other organizations such as the Federal Housing Administration (FHA), Rural Electrification Administration (REA), which innovated the creation of rural cooperatives, and the Defense Plant Corporation (DPC) did similar work during the original New Deal. These government agencies “provide many examples of how to harness private capital for public good...” including “helping businesses overcome risk aversion... (Hyman, 2019).”

Hyman concludes: “As we imagine policies to fight climate change...let’s remember how the New Deal really worked, so that we can do it again (Hyman, 2019).”

Making Climate Change Transformation a Bipartisan Issue, Including by Using Some Market-Based Strategies

The Green New Deal, while admirably bold, is currently positioned as the property and sole concern of the progressive left, which is being (and, by assumption, has to be) opposed by the political right. Even centrists are seen as the enemy, although as discussed in the very recent article, “The Green New Deal has already won: The far-left policy has shifted the climate debate—and what now counts as ‘moderate’ is surprisingly muscular,” this might have **just begun** to change (Meyer, 2019B). This will not work to address the issue, even if in a couple of years the political left gains enough clout to pass an Act. It’s not just the Resolution, but eventually the support, efforts, and some level of the spirits of those at the other parts of the political spectrum (even most of the skeptics and some of the deniers) are going to have to become part of the huge efforts ahead. The battle against the effects of climate change requires an all-hands-on-deck philosophy, as these changes will affect all people on earth, regardless of political affiliation or generational status, going long into the future. The political right and centrists cannot be permanently positioned as the implacable enemy or wished away. Their active participation to change their behaviors will be as necessary as anyone else’s. As part of

that, there will need to be many discussions with them, negotiations, along with lots of creativity and persistence.

One way to make this energy transformation bipartisan is to apply certain aspects of a “market-based” approach--but not others, as everyone speaks the language of money. Even Herman Daly found a role for the market in helping people make decisions and allocating resources. He was against it as far as ignoring externalities and equity, discounting the future, as well as the conventional mindset of seeing the market as much more important than ecosystems. But parts of it could be both substantively useful and making some people more amenable to joining the effort.

For instance, long time energy efficiency visionary, Amory Lovins, along with Rushad Nanavatty, provide what they call a three-part “market-driven” framework for a “business-led transition,” “harnessing America’s immensely powerful and creative economic engine...” The three parts are:

- “Unleash the market in sectors where we already know how to profitably reduce emissions (electricity, transportation, buildings)
- Create markets for solutions in areas where there aren’t yet enough answers (heavy industry, agriculture)
- Fix market failures (unpriced carbon)...”

They challenge the premise that climate change policy is always bad for business or the economy, adding the critique by some that it will cost \$400B to retrofit buildings should be answered by citing the \$1.4 trillion dollar **net value** of these retrofits that would be returned back to Americans, especially to those disproportionately affected by the consequences of climate change (Lovins and Nanavatty, 2019).

Low income families can pay up to three times the national energy burden due to owning older, less efficient furnaces, appliances and homes. They are also more likely to be diagnosed with a chronic illness resulting from living near fossil fuel production (Lovins and Nanavatty, 2019). The initial costs of these retrofits will be offset by the improved living and health conditions for low income Americans, as well as help level the economic playing field by reducing their monthly expenses.

They also advocate Federal research and development “to solve our remaining technology challenges,” citing a number of historic successful precedents. They see government research and development working “in concert with private enterprise.” This is not seen as a conflict with “fully leveraging the power of the market through smart (what they call) trans-ideological policy...(Lovings and Nanavatty, 2019).”

Business and the U.N. Sustainable Development Goals

The organization, AIM2Flourish, a part of the Weatherhead School of Management at Case Western Reserve University, celebrates stories of sustainable and profitable businesses supporting the UN Sustainable Development Goals. They utilize student-led interviews of certain business leaders. The students write stories about these innovative businesses, with the help of their professors and the AIM2Flourish editing staff. The stories are then published at AIM2Flourish.com as a way to inspire other businesses to adopt the Sustainable Development Goals (AIM2Flourish, n.d.).

Two stories from our class were published: one was about sustainable initiatives in healthcare at Hackensack University Medical Center (HUMC), and the other was about greener cleaning products offered by Earth Friendly Products (ECOS).

HUMC, having discovered that its use of energy was excessive and wasteful, began practices to reduce its waste, limit pollution, and also eliminate exposure to toxic materials. HUMC is striving to become the best hospital in its area in sustainability, with initiatives involving the health of their employees, patients, and the environment.

ECOS creates cleaning products that are made mostly from plants and are biodegradable, pH balanced, greywater and septic-safe, and never tested on animals. Once used, their products will break down naturally and won't infect the soil, water, or hurt biodiversity. All five of their manufacturing facilities use renewable energy, with 40-50% of their energy needs coming from installed solar panels, and the rest offset by wind turbines. Along with operating in carbon neutral plants and creating biodegradable products, ECOS also follows Zero Waste Guidelines. Their goal is to divert all their waste from landfills. Up to 95% of their packaging has either been reused or recycled.

AIM2Flourish aims to encourage businesses to adopt more than just the environmentally-based Sustainable Development Goals. These include, but are not limited to, building towards zero poverty (ECOS has a \$17/hour starting wage), good health and wellbeing, education, and gender equity.

Four “Why Not? Questions come to mind--and are being missed by all green economy initiatives, including the Green New Deal (thus far):

1. Why not encourage more businesses to do what HUMC and ECOS are doing, for reasons of environment, jobs, social welfare, and the employees don't seem to mind?
2. Why not **many** more?
3. Why not tap a new ally?

4. And, while perhaps a giant stretch, but noting the quote on the Title Page by Robert F. Kennedy, as well as the overall boldness of the Resolution, Why not a vision of, and working towards, most companies in the country practicing increasing levels of environmental and social responsibility?

It also could help to argue, as a partial response to the “Socialism” charge (in the next section), that no one is forcing these two businesses, or any others, to be more environmentally responsible (or even much more) beyond legally required levels.

It’s a new way of thinking, with many available resources--there for the taking!

Addressing the Socialism Stigma

While the Green New Deal has been criticized by some as “Socialistic,” skeptics ought to reflect on the inner workings of many public systems that help their communities every day: libraries, police, fire departments, garbage removal services. In America, these vital organizations are usually government-funded by tax dollars for the collective benefit of society to provide citizens a publicly-owned or supported essential service (Maisano, 2016). Hence, if you think about it that way, they can be considered “Socialistic.” And our society seems fine with that! So socialist ideas have long had a place in democratic nations through civil service institutions that remain highly respected and appreciated by many.

Ultimately, our country is **not as “anti-socialist”** as some in the media and in politics portray it to be.

An earlier section of this Report proposes certain uses of “The Market” and facilitation of voluntary actions by businesses to be more socially responsible. It is hard to reconcile these with a policy called--or **caricatured** as--socialistic. That quick and superficial labeling by some is not

helpful in moving the country forward, and there are ways to combat that, both here and discussed in the Cover Letter.

In addition, as the class explored various themes with which society is struggling, and possible approaches to them, we concluded that “We’re not against having rich people.”

An earlier section discussed the importance of bringing both the Center and the Right into the “high priority for climate change” side. Perhaps at some point, once we’re actually collectively making real progress in addressing climate change, it may be possible to at least temporarily forget which camp everyone is in, and forgo the use of misleading labels.

Too Comprehensive

The Green New Deal has been charged with being too comprehensive; that is, it covers several social areas, some of which often come up independently within their own realms, and some not commonly seen in mainstream circles at all, and attaches them to the main theme of aggressive action on climate change. Relatedly, it has been called a “liberal’s wish list.”

There are several ways to respond.

Americans have become skittish, almost fearful, of comprehensive legislation. In the past several years, some comprehensive bills have been touted as “great compromises” between Democrats and Republicans. These bills tend to be controversial and include many concessions to lobbyists or other groups. The Green New Deal differs from this other legislation due to its current status as a non-binding framework. Hopefully, when it gets to a point of political viability in two years, the eventual Bill and Act will avoid this watering down, with the different parts continuing to work together.

Ironically, the inherent problem is that the Green New Deal currently fails to bring together all, or where present, sufficiently, seemingly unconnected and branching topics such as

wage stagnation, healthcare, justice and inequality, and others under the environmental umbrella in a way that is understandable by the public. It calls attention to climate change as one of the biggest threats facing the United States and the world but does not sufficiently include many parallel issues of natural and human resource degradation. It is actually not comprehensive enough, at least in its current form. The problem is a lack of perspective.

By contrast, many of the topics discussed within the Green New Deal are also found within the United Nations Sustainable Development Goals, a super-comprehensive framework known widely in certain circles, but not in common discussion in the U.S. For example, Goal 1 deals with inclusive economic growth, Goal 3 aims to provide good health, and Goals 5 and 10 aim to combat inequality (United Nations, n.d.).

If some of the focus is shifted from climate change to sustainability, or if sustainability is better highlighted, it could help in familiarizing us with seeing issues as interrelated. It could create a better mindset to not only link the seemingly disparate foci of the eventual legislation, but entirely void the issue of the Green New Deal as too comprehensive.

Beyond this, the Cover Letter offers more ideas to address the “too comprehensive” charge.

Gender Equality

As the Resolution is bold in so many simultaneous ways, including in its implications for the fossil fuel industry (unless perhaps massive and safe sequestration comes on board to somewhat address concerns), new opportunities for leadership roles will emerge, especially for women. The restructuring of the fossil fuel industry and growth of the renewable energy one can be complemented by equal opportunity hiring practices to incorporate women into higher level positions in companies across America.

The same is true for politics. As stated in an article by the EVE Programme:

In politics, there is growing evidence that when more women are involved, they improve the political process. Women are more interested in working across party lines, they champion issues of gender equality; from working to eliminate gender based violence to fighting for equal pay. They design policies that impact their communities for generations such as making school and the workplace more compatible for girls and women (Worku, 2017).

This is just one of a number of possible ways to promote more equity within American society. The country needs this, in a range of areas, right now, even apart from the climate change issue, although, as noted in an earlier section, this is in parallel to the need for job retraining in fossil fuel-dependent regions, and for all genders.

Conclusions

It was found that the Green New Deal is fundamentally sound. It needs enhancements and more details, to which this Report seeks to contribute. It is the best bet we have at the federal level to adequately address climate change--although, of course, many more changes will be needed outside of government, to many more aspects of society.

Most of the charges against it are bogus and/or politically opportunistic, reflecting the currently poor state of our democracy, as well as denial or not realizing the severity of the problem. Revitalizing the former is a parallel--or better, interrelated and also massive challenge.

Re-utilizing the Finnegan quote yet again: “What is needed to avert the climate crisis is a massive restructuring and mobilization—an overhaul of our economy and society the likes of which has not been seen since World War II (Lavelle, 2019).” And that’s what the Green New Deal sets out to do.

Therefore, even it is “naive,” as has been charged, we have no choice but to try to disprove this, including using the fresh eyes and energy that can bring, while creating new conventional wisdoms of what is both necessary and possible.

As one implication, upheaval of one of the most powerful industries in America will allow opportunity to restructure the country, and not only its energy usage. The creative destruction of the fossil fuel industry opens doors to adjust the economics, health care, social fabric, and infrastructure of the United States in ways that citizens have campaigned for over the decades, while simultaneously addressing climate change.

The students provide several recommendations that could build on the current Green New Deal framework and which could help guide its improvement, chances of passage, and, vitally, the success of its implementation.

Recommendations

Our class’ recommendations are:

1. Terms used in the Green New Deal should be clear and logical, with potentially ambiguous ones defined
2. While a nationally oriented effort, some efforts should be made to take advantage of, and further catalyze, interest and actions at the local level. The Resolution mentions “providing investments for community-defined projects and strategies (Ocasio-Cortez, 2019),” but this could be a larger part of the eventual effort
3. The political left has been successful in elevating interest and mainstreaming this issue. Climate change can no longer be seen as just another talking point by would-be leaders, or modest incremental improvements treated as the best we can do. However, as discussed in both the Report and the Cover Letter, the transformational mindset must become bi-partisan, as naive or impractical as that currently sounds. Selective use of “market” and conservative ideas could be strategies to reach others
4. Transportation did not get much attention in this Report. However, it is extremely important. The class suggests more shuttles and interconnected mass transit systems between one service and another
5. The different aspects of Clean Manufacturing are all important. There needs to be more attention to facilitating repair, with sectors built around this, bringing back some elements of the past. In addition, product upgrades should be easier
6. Plastics use must be more judicious and disposal of it in oceans must end. Alternatives to most uses of it need to be encouraged

7. Begin financing the Green New Deal along the lines of what worked during the New Deal, including the use of the same or similar government agencies and functions, such as an explicit Public Bank. However, if these prove not to carry over to modern times, or if the underlying theory (see the Cover Letter) proves faulty, be open to other alternatives and ideas. Hire or have access to a public finance expert with an open mind
8. Begin to utilize the UNSDGs in formulating and assessing public policy. Encourage businesses to use them, too
9. Take advantage of the sustainable business revolution. A lot of progress has been made there. Its potential should be encouraged so that it has a much larger presence in the economy
10. Fossil fuel workers should be one of the priority students for green jobs training and then hiring
11. Sequestration should be given greater attention, as long as it is environmentally sound
12. Nuclear power should be re-considered, as long as it meets a higher bar than in the past, including (but not limited to) being located in safer areas and eliminating subsidies
13. A carbon tax is needed, would be complementary, and should be added to the Green New Deal
14. Given the special importance of ecosystem services, as discussed in an earlier section, on a par with climate change, the students recommend a range of steps specifically for this.

Ecosystem Services

- Upgrade the attention to ecosystem services within the overall Green New Deal
- Do more to ensure that more sustainable products are put on the market. For instance, fair trade should get some attention. Certified fair trade products aim to improve social conditions in developing countries, thus addressing the equity area in another way
- Too many companies use resources that take away important habitats or pollute the air with harmful toxins. These practices will have to be phased out in the pursuit of a sustainable future
- Introduce more native plants back into the ecosystem. Many modern landscape designs incorporate invasive species that out-compete native species. Native species are important because they provide habitats to many animals, absorb excess water that prevent flooding, block harsh winds, and are part of the food chain
- Chemicals that are sprayed or added to fruits, vegetables, and lawns are depleting and/or killing beneficial insect populations. This is inconsistent with sustainability
- Protecting public lands that hold diverse ecosystems should be a priority. Ensuring that more land is protected from developmental changes helps protect wildlife and other species
- Stricter conservation laws and regulations are needed, although economics, used thoughtfully in ways consistent with sustainability, can be helpful in their construction
- Introduce or further more creative education in schools about environmental issues, which will help inspire the youth of America to create a better future
- While the recommendations implicit in the “Food Systems” section are important, including the one about carbon farming as it has multiple benefits, many more are possible in this area. Consult with a range of experts from all groups trying to improve

the sustainability of farming, although they might use different adjectives (e.g. “Regenerative” agriculture).

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Appendix

Plastics Usage and the Anthropocene Age

It is now widely known that plastic waste is a huge problem in our oceans. It is affecting wildlife that lives in or near the ocean, including fish, birds and other animals. There are islands made of plastic forming in the middle of the oceans. The oceans have tons of microplastics in it. A microplastic is a small piece of plastic coming from larger pieces of plastics. There is an “estimate of a minimum of 5.25 trillion particles weighing 268,940 tons (Eriksen et al, 2014).”

Because of bioaccumulation, microplastics get eaten by fish, and then we eat the fish. Hence, humans end up consuming the waste we throw into the ocean.

In addition, the Anthropocene is the officially pending name for the historical period we are now in which human activity has been the dominant influence on climate and the environment. Naming it as such emphasizes our unique role and huge responsibility.

Part of the relevance of the Anthropocene Age to the Green New Deal is that plastics use and our stewardship responsibility towards it requires us to step up our actions. Plastics is a major use and, to a significant degree, waster of the fossil fuels which the Resolution implicitly moves us away from. Although sometimes that use can be essential, as in the medical field, the ocean disposal of it must be treated as a crisis requiring extended, beyond business-as-usual treatment. There have to be some serious changes made soon or future generations will never get the opportunity to see how blue and wonderful the oceans are.

Therefore, unnecessary plastics can be seen as an iconic villain requiring attention by the Green New Deal.

Another aspect of the relevance of plastics to the Green New Deal are job opportunities through the technologies which are starting to be developed to recover and reuse plastics from the ocean.

There are some private companies starting to take action, complementing the many volunteer-oriented clean-ups. A young man named Boyan Slat dropped out of college at the age of 18 to take action. He started to raise money for his machine and launched his dream in 2018. Boyan's machine is massive at 600 meters long (The Ocean Clean-up, 2019). It works but it is going to take time to undo years of damage. It is a step in the right direction, which others have to follow.

Our generation will do something special about the ocean plastic pollution and take the right steps forward to fix this problem with no shortcuts.

New York City's Green New Deal

New York City has a plan for becoming more sustainable for the future, which includes their version of a Green New Deal. Theirs has some of the same proposals as the federal version. Its authors believe it is important to “meet the challenges of climate change and inequality across the nation (De Blasio, Fuleihan, Williams, & Zarrilli, 2019).”

They also are incorporating issues of the economy, education, health, buildings, society, and environment. Some of their strategies involve teaching individuals how to be more productive citizens, ensuring that all children have an opportunity of fair and equal education, trying to make sure there is health insurance available for everyone that is affordable and guaranteed. Lastly, they are undertaking several environmental issues (De Blasio, Fuleihan, Williams, & Zarrilli, 2019).

This can help demonstrate that if many of the ideas and actions of the Green New Deal can be achieved on a citywide scale, it may seem more feasible that it could be enacted nationwide.

Organizations Which Support the Green New Deal

There are existing organizations that support the Green New Deal. One example is the Sunrise Movement. The Sunrise Movement helps spread the word about the Green New Deal through the voices of the youth. “Sunrise is a movement to stop climate change and to create millions of good jobs in the process.” They fear the effects of climate change on the environment that we live in. They strive to push for policies that the Green New Deal represents (Sunrise, 2019).

Other groups such as Friends of the Earth and the Climate Justice Alliance are working towards the passing of the Green New Deal as well. They are urging the use of renewable energy sources for electricity for the future. They are striving to eventually eliminate the use of fossil fuels altogether (Cama, 2019).

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