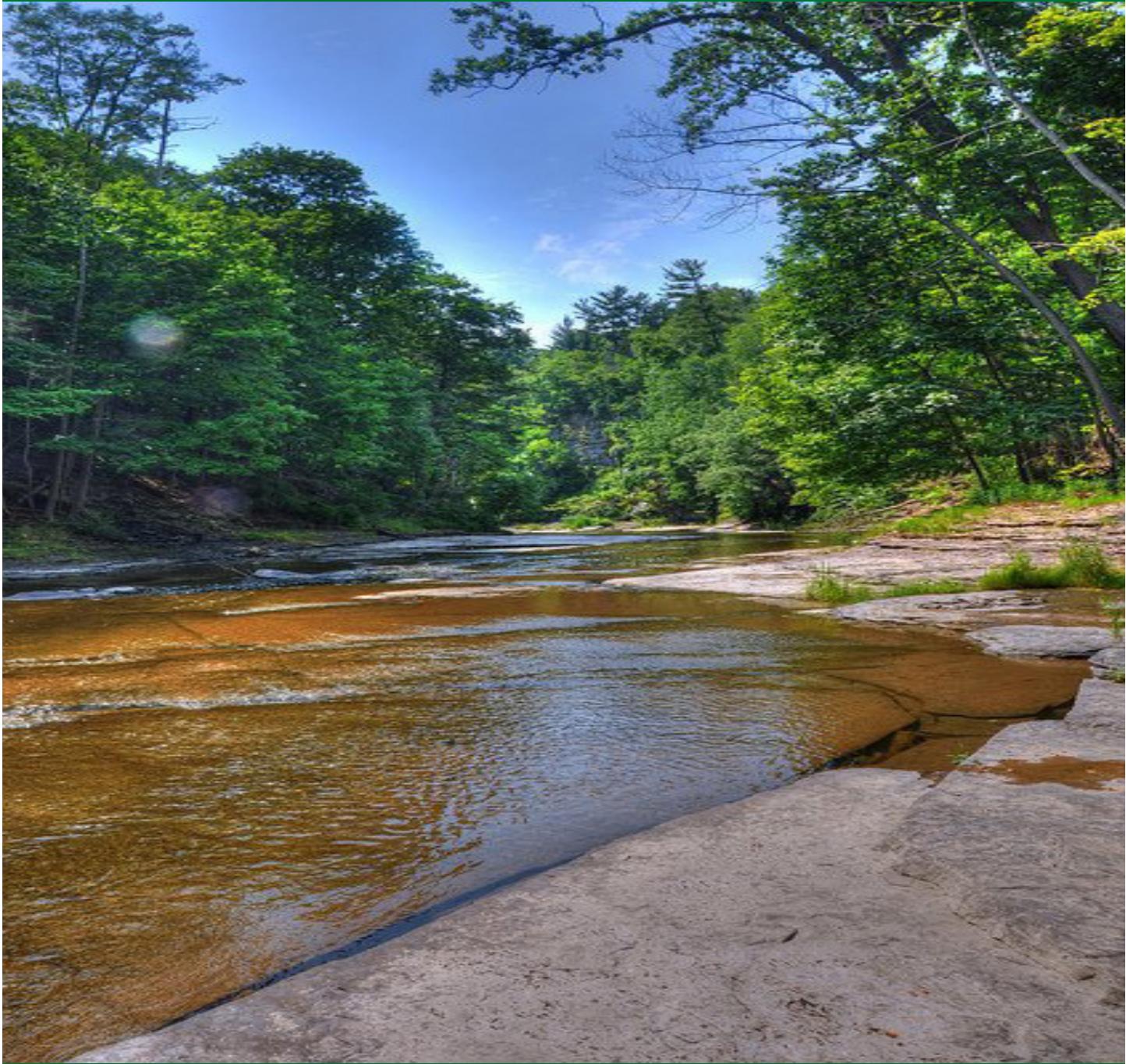


# Looking Ahead

# The Cornell Roosevelt Institute Policy Journal



# Center for Energy and Environment

## Fall 2014 Issue No. 7

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# About the Cornell Roosevelt Institute

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The Roosevelt Institute at Cornell University is a student-run policy institute that generates, advocates, and lobbies for progressive policy ideas and initiatives in local, university, state, and national government.

Members write for our campus policy journals, complete advocacy and education projects in the local community, host research discussions with professors, write policy and political blogs, and organize campus political debates and policy seminars.

The Roosevelt Institute at Cornell University is divided into seven policy centers:

Center for Economic Policy and Development

Center for Foreign Policy and International Studies

Center for Energy and Environmental Policy

Center for Education Policy and Development

Center for Healthcare Policy

Center for Domestic Policy

Center for Science and Technology Policy

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# Letter from the Director

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Dear Readers,

I am very pleased to present the seventh issue of Looking Ahead: The Cornell Roosevelt Institute Policy Journal from the Center for Energy and Environment. As Policy Director and Editor of the journal for this semester, it has been an amazing experience and I have a great appreciation for the dedication and talent of our Analysts. I have also been fortunate to welcome eight new analysts to the Center for Energy and Environment this semester and am very excited to display their work in this issue.

All of the Analysts have written creative and passionate policy proposals that reflect their high level of nuance and in-depth research. They have shown their commitment to promoting progressive policies and inspiring positive social change. The proposals are very enjoyable to read and very thought-provoking. I hope that you enjoy this journal.

Sincerely,  
Alexander Fields  
Government (A&S '16)  
Director, Center for Energy and Environment



# Taking Out the Trash: Incentivizing Sustainable Waste Management

By Julia Malits, Major: Biology (CALS '16), Email: jrm543@cornell.edu

*With its current, inefficient waste management system, New York City suffers from high levels of Municipal Solid Waste (MSW) generation. This affects its territory, as well as neighboring cities and states. The city should implement a waste management system that incentivizes proper recycling and composting practices and monetarily discourages non-reusable waste generation by its residents.*

## Background and Context:

The United States is the leading contributor of global waste, producing a quarter of the world's waste deposits.<sup>1</sup> This is particularly striking because the U.S. constitutes less than 5% of the world population. As expected, some of the largest waste generators in the United States are large cities, such as Chicago, Detroit and New York City. Housing approximately 8.4 million residents, New York City generates 14 million tons of waste annually.<sup>2</sup> Having a relatively small area with a highly concentrated population, New York City has minimal physical room for waste disposal. As a result, the city pays other states to discard much of its MSW in their landfills. The consequences of large-scale waste disposal reverberate economically and environmentally through the city. The resulting production of greenhouse gases from the transportation of waste is equally alarming. Also, New Yorkers show significantly lower average rates of recycling than people from other commercial centers, which exacerbates the financial and environmental ramifications of improper waste disposal. With its current levels of residential waste generation, the city must invest millions of its taxpayer dollars in collecting, organizing, distributing, and disposing of the MSW generated across the five boroughs.

## Policy Idea:

The root of the problem lies in the city's generation, rather than disposal, of trash. Policymakers need to adopt policies used by other cities that incentivize residential recycling and composting practices. A large proportion of the MSW generated by New York City residents is recyclable. Therefore, New York City should allow free recycling and composting disposal for apartment buildings and residential homes. New York City should also charge a fixed rate for each standard-size bag of MSW generated by residents.

## Analysis:

As already enacted in other towns across the U.S., New York City should adopt a policy that incentivizes sustainable waste management. Each year, New York City spends \$2.2 billion in taxpayer dollars to manage its garbage. Of this budget, \$300 million is spent on disposing of the garbage in out-of-state landfills, located primarily in Ohio, Virginia, Pennsylvania and New Jersey. A recent estimate reported that it costs New York City roughly \$95 for each of the 3 million tons of MSW that is trucked to landfills annually.

However, the amount of landfilling and related costs could be severely reduced if residential recycling and composting were incentivized. As is done in Ithaca, New York,<sup>3</sup> New York City should allow its residents to purchase garbage tax-free tags at local convenience and grocery stores at a rate of \$20 per six tags. Residents would then apply a tag for each bag of MSW generated.

In tandem with this policy, New York City would continue its free recycling pick-up services and introduce composting services. There currently are 35 "Green Markets" in New York City that accept compost, but no pick-up services. Introducing a composting pick-up service could remove up to 600,000 tons of food waste normally deposited as landfill-bound waste.<sup>4</sup> Together, these policies can severely reduce the \$300 million New York City spends on waste management and reduce greenhouse gas emissions equivalent to taking 133,000 cars off the road in a given year.<sup>5</sup>

## Key Facts:

- New York City annually generates 14 million tons of waste that is primarily sent to landfills in Ohio, Pennsylvania, New Jersey and Virginia.
- Approximately 40% of the waste NYC residents generates is recyclable and 28% is compostable.<sup>6</sup>
- Since residents are not charged for garbage disposal while commercial centers are, residential recycling rates are significantly lower.
- New York City annually spends \$300 million on hauling waste to landfills, which adds 679,000 metric tons of greenhouse gases.

## Next Steps:

Legislative action is essential to reforming waste management practices. The Office of Long-Term Planning and Sustainability (OLTPS), a part of the New York City Mayor's Office, should mandate that residents pay for their MSW, as commercial centers like restaurants

already do. This legislative action should be gradually implemented and should go into full effect within a six-month span in order to give residents time to adjust. The OLTPS should also account for the costs of printing and distributing the tags to convenience and grocery stores. This budgetary action would include the necessary marketing to inform the 8.4 million residents in New York City of the upcoming change in waste management as well as an increase in the number of trucks that would pick up and distribute the recyclables to recycling centers and the compostable food scraps to composting centers. The policy would likewise increase composting pickup services to the same levels as those of recycling. This specific policy would be the most effective means of reducing New York City's MSW because it would target one of the largest contributors of waste: residences. In addition, this policy would ensure sustainable resident waste management in the future as opposed to just for a snapshot of time.

## Endnotes:

1 "World's Worst Waste," Robert Malone. Forbes Magazine, May 24, 2006. Available from, [http://www.forbes.com/2006/05/23/waste-worlds-worst-cx\\_rm\\_0524waste.html](http://www.forbes.com/2006/05/23/waste-worlds-worst-cx_rm_0524waste.html)

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## Talking Points:

- New York City has the capacity to be a recognized leader in reducing the overwhelming amount of waste that the U.S. contributes to the world.
- Diverting reusable materials from landfills to centers that execute recycling programs would have an enormously positive financial and environmental impact in New York City.
- In light of the serious concern for rising greenhouse gas emissions, introducing policies that would reduce the amount of waste sent to landfills needs to be a high priority for the New York City legislative office.



# Powering Up on Solar in America's Neediest Neighborhoods

By Mallory Shipe, Majors: International Agriculture and Rural Development and Communication (CALS '17), Email: ms2965@cornell.edu

*America's cities could be made more energy independent through the implementation of small-scale renewable energy projects like community solar gardens.*

## **Background and Context:**

The United States comprises five percent of the global population, but is responsible for roughly 20 percent of the world's total primary energy consumption.<sup>1</sup> In 2011, U.S. per capita energy consumption was 312.786 Btu per person. To put this in perspective, the average per capita Btu consumption in Germany is 165 Btu/person and in India, 19.7 Btu/person.<sup>2</sup>

EIA estimates that by 2015, 1,574 Btu are expected to be generated from renewables, with the majority in that category coming from conventional hydropower (736 MwH/day) and wind (532 MwH/day).<sup>3</sup> Nonetheless, renewables will still only comprise 14 percent of total energy generation, with nonrenewables like coal and natural gas still predicted as the country's primary resource for energy generation.

Incentivized by cost efficiency and environmental sustainability, cities and states around the country are beginning to take renewable energy generation in their own hands. Currently, solar garden laws have been established in eight states: California, Delaware, Maine, Massachusetts, Vermont and Washington—and the District of Columbia.<sup>4</sup> Solar gardens are more feasible than rooftop solar panels because rooftop panels require infrastructure improvements and regulation changes to install.

## **Policy Idea:**

The idea is to create community solar gardens in abandoned urban lots. Securing a space for the array would be the responsibility of the city. Ideally, the funding for purchase and installation of the panels would be subsidized through a federal or state grant. Citizens would then buy a portion of the power generated by the garden, which would then be added as a credit on their utility bill for use toward household electricity generation. If a grant is not awarded, citizens would have to invest in buying and installing the technology, or seek other private funding opportunities.

## **Analysis:**

Rooftop installation is not a feasible solution at this point mainly for economic reasons. Installing solar panels is a costly endeavor – a 5 kW system costs around \$25,000-\$35,000.<sup>5</sup> Although the technology is rapidly improving and costs are expected to decline, an installation cost of \$10,000 or more simply is not feasible for the average American family making \$53,064 annually.<sup>6</sup>

If renewable electricity generation is to become a widespread practice, it cannot be limited to a particular socioeconomic bracket. Therefore, the most efficient solution is to created community solar gardens that several households can draw from.

Moreover, the gentrification of cities is making it increasingly difficult for the urban poor to access resources that would otherwise be available to them. Implementation of progressive technology, like solar panels, increases the value of a property and this raises the cost of living. As neighborhoods become more developed, they attract individuals who can afford the higher cost of living and businesses who cater to their needs. As a result, residents who have lived in the neighborhood for generations but cannot afford the increased cost of living are driven out.

With tides shifting as a result of the urban development paradigm described above, installing solar panels

## **Key Facts:**

- The United States comprises five percent of the global population but is responsible for roughly 20 percent of the world's total primary energy consumption.<sup>7</sup>
- By 2015, renewables will comprise only 14 percent of the country's energy generation profile.
- Currently, solar garden laws have been established in eight states: California, Delaware, Maine, Massachusetts, Vermont and Washington—and the District of Columbia.<sup>8</sup>

on individual rooftops does not secure their place in urban energy profiles very well, if at all.

### **Next Steps:**

More information is needed on exact energy usage statistics in the particular neighborhood where the policy is to be implemented. Policymakers would need to know why the neighborhood would make a good site for the project. It would be fitting to survey residents about their motivations for installing solar panels and present this in a document for consideration.

### **Talking Points:**

- Solar panels are a fairly new technology that has been rapidly improved in a short amount of time. They are a smart investment now and will be even more efficient and economical as time goes on.
- The United States needs to reduce its fossil fuel energy consumption, and solar panels present a viable solution to reducing dependency.
- Urban areas are especially susceptible to demographic fluctuation and would benefit from a centrally located, publicly owned solar garden like the one envisioned in this proposal.

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8. Daigneau, Elizabeth. "Solar Gardens: A Subscription to the Sun." Solar Gardens: A Subscription to the Sun. February 2014. Accessed November 25, 2014. <http://www.governing.com/topics/transportation-infrastructure/gov-solar-gardens.html>

# Weatherization: The Bulwark for Low-Income American Families From Climate Change

By Justin Cheng, Major: Policy Analysis and Management (HumEc '17)  
Email: jcc427@cornell.edu

*As climate change intensifies, policymakers must focus on increasing adaptation measures, particularly during the winter. The Weatherization Assistance Program (WAP) should be expanded to protect vulnerable low-income communities against the effects of climate change and to improve American energy efficiency.*

## Background and Context:

This coming winter, more than 90% of the 116 million homes in the United States are expected to have increased heating expenditures. Depending on how the home is heated, cost increases could range from 2-13%.<sup>1</sup> As climate change makes weather patterns more volatile and produces record snow levels, heating costs will continue to increase for ordinary Americans. Low-income families face the greatest financial risk because much of their limited budgets will be squeezed in order to pay for heat. A 2009 report stated that the energy cost burden for low-income families was 14.4% of their total budget, compared to 3.3% for other households.<sup>2</sup>

Currently, WAP subsidizes weatherization improvements for low-income Americans citizens to improve their homes' energy efficiency and to reduce heating costs.<sup>3</sup> In 2009, the American Recovery and Reinvestment Act (ARRA) allocated an additional \$5 billion for the WAP to weatherize 600,000 additional homes within three years.<sup>4</sup> WAP has empirically been effective and met the goal established by the stimulus.<sup>5</sup> Families that earn less than 200% of the federal poverty line are eligible for weatherization services. However, 20 to 30 million low-income households still have not been able to take advantage of WAP because the program is insufficiently funded as it witnessed substantial cuts in the 2013-2014 budget, from \$230 million to \$62 million.<sup>6</sup>

## Policy Idea:

Considering that low-income Americans need more weatherization assistance and the U.S. should focus on increasing energy efficiency, the federal government should increase the WAP's funding with revenues collected from a small excise tax ranging from 25 to 50 cents per ton of coal production. This is closely based on how the Black Lung Disability Trust Fund currently operates.<sup>7</sup> Additional resources could come from unspent funds from the ARRA.

## Analysis:

There is substantial evidence that WAP has effectively increased energy efficacy and has supported domestic manufacturing and construction. Weatherization involves improving heat retention in homes such as installing new insulation or caulking as well as providing more efficient methods of heating such as subsidies for newer more efficient heaters. WAP provides funding assistance to low-income families to implement such heating solutions. Between 1993 and 2005, WAP lowered excess natural gas consumption by nearly 30.5 million site British Thermal Units.<sup>8</sup> By improving energy efficiency through weatherization, WAP has reduced residential and power plant emissions of carbon dioxide by 2.65 metric tons/year per home weatherized.<sup>9</sup>

A 2010 report released by the Department of Energy stated that WAP has reduced energy bills for families by up to 35%, or an average of \$437 in the first year of savings.<sup>10</sup> As a result, there were total savings of 2.1 billion dollars for families with newly weatherized homes in 2010.<sup>11</sup> On average, for every \$1 invested, weatherization generates \$2.51 in economic benefits.<sup>12</sup>

Weatherization also supports domestic construction and manufacturing by spurring demand for industrial production. For every \$1 million invested, 75 jobs are created, mostly for low-income Americans.<sup>13</sup>

### **Key Facts:**

- The total energy cost burden for low-income families in 2009 was 14.4%, compared to 3.3% for other households.
- Every \$1 invested in the Weatherization Assistance Program generates \$2.51 in cost returns.
- An additional million households were assisted by the WAP between 2009-2012 because of support from the 2009 American Recovery and Reinvestment Act.

Additionally, around 89% of materials used by WAP, such as spray foam and gas furnaces, are produced within the United States.<sup>14</sup> This increases domestic demand for manufactured products and supports the relatively distressed manufacturing sector. Increasing weatherization initiatives can act as a stimulus for American jobs and manufacturing productivity.

### **Next Steps:**

In order to expand WAP, policymakers should introduce an additional excise tax on domestic coal production to fund WAP's expansion. Coal should be targeted as it is currently our most polluting energy source and because an

excise tax would be an efficient method of gathering revenue off its sale. If a new tax is politically infeasible, then funds from unspent portions of the ARRA may be recalled and spent. A report released in 2013 by the Federal Highway Administration noted that for highway infrastructure projects alone, that up to \$1.5 billion had not been spent yet,<sup>15</sup> more than 20 times larger than the current weatherization budget.<sup>16</sup> A bill providing WAP with additional funds will have to be written and passed through Congress and the executive branch. Once both bills have passed, spending will have to be tracked to guarantee that WAP is assisting those truly in need and that money is being prudently spent following the traditional guidelines set out within WAP.

### **Endnotes:**

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### **Talking Points:**

- Expanding the Weatherization Assistance Plan will support American energy efficiency goals and help to mitigate climate change.
- WAP is also a solid economic catalyst that supports domestic manufacturing and the employment of low-income citizens.
- Previous experience with WAP has proven that it can efficiently provide long-term economic aid to low-income households.

# Closing Orphaned Wells: Preventing Spills When Oil Companies Go Bankrupt

By Liam Berigan, Major: Biology (CALS '17) Email: lab345@cornell.edu

*By instituting annual financial security payments for oil wells and refunding these payments when wells are plugged, Louisiana state regulators can ensure that wells are safely closed if their operators go bankrupt.*

## **Background and Context:**

Oil drilling has massive upfront costs and generates revenue gradually and variably up to several decades after wells are completed. Slow investment returns ensure that many small oil companies that drill in the United States are heavily in debt and often go bankrupt.<sup>1</sup> When these companies declare bankruptcy, their oil wells become the responsibility of their resident state governments. This process is referred to as “orphaning” oil wells. Although state governments are in charge of plugging them to make sure that no oil spills occur, orphaned wells are often responsible for dangerous chemical leaks<sup>2</sup> and can pose safety hazards to boats.<sup>3</sup> In addition, unplugged oil wells will continue to emit methane, a harmful greenhouse gas, for as long as they remain open.<sup>4</sup> These methane leaks can be incredibly dangerous<sup>5</sup> and may also be making a significant contribution to global climate change.<sup>6</sup>

There are more than 2800 unplugged oil wells that are currently under the purview of the Louisiana Department of Natural Resources (DNR), many of which have been left open for decades.<sup>7</sup> According to a report released by the Louisiana Legislative Auditor last May, there is insufficient funding for plugging these wells. The report states that the Louisiana state government has instead been forced to adopt a “triage” procedure, where it plugs the most dangerous oil wells, but allows the total number of oil wells left unplugged to grow.<sup>8</sup> As thousands of unplugged oil wells left in state custody are left unattended, they will present significant environmental hazards to Louisiana’s coastal and inland habitats.

## **Policy Idea:**

Oil well operators should pay annual dividends to support financial security accounts for their wells that are currently used for production. If the well is properly plugged at the end of its use, then the operator who plugged the well would receive a reimbursement commensurate with the total amount paid for financial security over the well’s lifetime. If the operator goes bankrupt, however, this money should be used to fund the well’s closure.

## **Analysis:**

Currently, well owners in Louisiana are mandated to pay for financial security accounts that can be used to cover the cost of plugging the well should it become orphaned. However, the required financial security is only a fraction of what is actually required to plug an oil well. The Louisiana Legislative Auditor suggests that the required financial security paid upfront on oil wells should be increased drastically in order to cover these costs.<sup>9</sup>

However, oil well operators already have to pay significant upfront costs to drill wells, which can leave them perpetually in debt. Adding more upfront costs for oil production will exacerbate this issue. It makes more sense to ask the oil companies for financial security on these wells as they are actively producing and making profits that can be used to pay for plugging the well.

The oil industry would likely be willing to negotiate with state regulators. Industry groups in a number of states, including the Louisiana Mid-Continent Oil and Gas Association and the Petroleum Association of Wyoming, have stated that they would be willing to pay larger fees and bonds in order to protect wells from being orphaned.<sup>10,11</sup> This solution would allow the Louisiana DNR to plug any new wells that are orphaned in the state, while keeping the costs on industry low enough that the solution would be politically viable.

Finally, this policy would help to reduce the harmful greenhouse gas emissions that are an inherent

### **Key Facts:**

- More than 2800 wells have been orphaned in Louisiana and remain unplugged.<sup>12</sup>
- Due to limited funding, the Louisiana Department of Natural Resources was only able to plug 95 of these wells last year, while many more were orphaned.<sup>13</sup>
- Current financial security requirements in Louisiana are holding \$1 per foot of depth for an onshore oil well. Government watchdog groups estimate that this is only one-seventh of the actual cost of plugging a well.<sup>14</sup>

product of oil and gas drilling. Once a well is plugged it will no longer emit methane into the atmosphere, decreasing the oil well's contributions to global climate change.

### **Next Steps:**

Stakeholders should begin to lobby for this policy by gathering support from industry groups that want to make the drilling process more environmentally safe. Petitions or letters of support from these groups would be an excellent way to convince politicians to support this measure. Once politicians have been convinced to write a bill, state regulators should be asked to find an appropriate level at which to set the annual dividend.

Although Louisiana is one of the states with the worst orphaned well problems, it is not the only one. States like Ohio and Pennsylvania could use similar legislation to plug their hundreds of orphaned oil wells. North Dakota, which has a booming oil and gas industry, could use this policy to slow its orphaned well problem before it becomes serious.

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### **Talking Points:**

- Orphaned oil wells leak methane, a harmful greenhouse gas, and can potentially cause hazardous oil leaks.
- The Louisiana Department of Natural Resources, which is in charge of regulating these wells, is vastly underfunded, which has been noted by many industry groups.
- This policy would be a more politically feasible way to fulfill the recommendations of the Louisiana Legislative Auditor.
- This strategy is already being used by companies such as Powder River Energy, who put aside a few cents per gallon of oil they produce to use to plug their wells.<sup>15</sup>

# Reducing the Exploitation of Communities: Full Disclosure of Environmental and Health Impacts of Coal Mining

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*Policy must be implemented at the state-level requiring coal mining companies to fully disclose the logistics and projected environmental and health impacts of their operations to protect communities and the environment from further exploitation.*

## **Background and Context:**

Many recent studies have linked coal mining, especially mountaintop removal mining, to severe health problems. Both men and women in coal mining communities reported a significantly greater number of maladies, including cardiovascular disease<sup>1</sup> and cancer.<sup>2</sup> They are thought to be associated with water and air contamination by toxicants from coal processing.<sup>3</sup> Despite the drastic impacts that coal production has on the environment and the health of members of coal mining communities, coal companies continue to go into communities and exploit their people and resources.

The United States is the second-largest coal producer, only following China.<sup>4</sup> Coal mining currently takes place in twenty-six different states across the country<sup>5</sup> and generated almost 40 percent of the electricity in the U.S. in 2013.<sup>6</sup> Many communities continue to put themselves at risk because they are promised money and jobs from coal production, but do not fully understand coal mining's environmental impacts. However, as many communities in Appalachia have experienced, the community members do not reap the same benefits as coal companies, yet they must deal with the devastated environment and the associated health problems.<sup>7</sup> Although the Surface Mining Control and Regulation Act of 1977 regulates coal mining operations and requires that the land be reclaimed to its original state, there are still lasting effects on the surrounding environment and waivers can be issued to allow for mountaintop removal mining.<sup>8</sup> Meanwhile, a 2009 study reported, "The heaviest coal mining areas of Appalachia had the poorest socioeconomic conditions."<sup>9</sup>

## **Policy Idea:**

This policy would require coal companies to fully disclose the logistics and projected impacts of their operations in a comprehensible manner to community members prior to entering the community. This includes all environmental and health risks of coal mining, the accurate extent to which the land can be reclaimed, and any waivers they have obtained excluding them from any regulations in terms that community members can understand. Furthermore, it would require a majority vote of the local population with at least a 60 percent participation rate.

## **Analysis:**

The policy would avoid much of the controversy associated with further government regulation of the industry. Obama's efforts to rewrite regulations on coal production received a lot of resistance in reaction to federal oversight and the implications they would have on the economy. However, the government does not directly control the coal companies through this policy, rather the people are given a voice and the right to choose their own future and the future of their environment. The most common arguments protecting coal mining and drawing communities to the industry are the economic benefits it can bring. However, a 2009 study showed that annual costs of premature deaths due to coal mining Appalachia is conservatively valued at nearly \$41.846 billion, over five times the \$8.088 billion in economic contributions from the industry.<sup>10</sup> With the power to vote over the entry of coal companies into the community and the knowledge of the true costs and benefits of the mining, the exploitation of these Appalachian communities would likely be eliminated and environmental

## **Key Facts:**

- Coal mining costs over five times in premature deaths than what it economically contributes annually.<sup>15</sup>
- Iron and manganese concentrations exceeded USEPA drinking-water guidelines in at least 40% of the wells and in about 70% of wells near reclaimed surface coal mines in Appalachia.<sup>16</sup>

impact alleviated.

Civic engagement campaigns have historically been effective at reducing health and environmental risks. The percentage of adult cigarette smokers in the United States has fallen by over 20 percent<sup>11</sup> since the first Surgeon General's Report on Smoking and Health in 1964 and warning label in 1966.<sup>12</sup> Highlighting the adverse health effects of cigarettes dramatically decreased the percentage of cigarette smokers in the nation. Similarly, increased awareness of the environmental consequences of coal mining can eradicate community exploitation and reduce further environmental degradation. In a democracy, people deserve the right to decide their fates and to protect their environment.

### Talking Points:

- Despite the adverse environmental and health impacts, coal mining still takes place in 26 U.S. states.
- Communities are often blinded by coal companies' empty promises and do not understand the extent of mining's environmental degradation.<sup>17</sup>
- State governments should require full disclosure by coal companies and a community vote to approve a coal mining project.

### **Next Steps:**

In addition to requiring coal companies to disclose the full environmental impacts of their projects, the public should press for greater environmental regulation of proposed coal sites, especially given Executive Order 12898 — Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations- which directs federal agencies to identify and address disproportionately high human health or environmental impacts on minority and low-income populations as the law permits.<sup>13</sup> A main target of this order should be Appalachian communities. However, areas like Prenter Hollow, whose water was contaminated by a nearby mountaintop removal site, still must cope with the increased cancer and mortality rates associated with coal production. The citizens of Prenter Hollow are plagued with a 98 percent rate of gall bladder disease.<sup>14</sup>

Through its preventative nature, the proposed policy would eliminate the costs the government would have to assume to address environmentally degraded areas, which are associated with Executive Order 12898, CERCLA, and other reconciliation policies. Furthermore, it would avoid the controversy and backlash associated with a complete ban of coal mining.

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# From Farm to Fallacy: America's Ethanol 'Industry' and the Institutional Idiocy of Big Ag

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*In the wake of the 2014 midterms and leading up to the 2016 general elections, one of the unnoticed policies that will continue to draw support is the Renewable Volume Obligations (RVO) mandated by the EPA for ethanol production as part of the 2005 Energy Policy Act.<sup>1</sup> The ethanol RVO and large agricultural subsidies should be completely discarded and replaced by new policies to rebuild the American agriculture system to address the food, health, and energy issues currently facing the United States.*

## **Background and Context:**

There are many concerns over special interests and how they influence the political process. With the Citizens United and Hobby Lobby decisions, corporations can vote and have religious views. Although many ordinary citizens have criticized lobbying efforts to promote weak regulations and corporate overreach, many elected officials have chosen not to confront this problem. One area of corporate overreach and special interest influence that does not get as much press is America's agriculture industry. Their influence is exceedingly broad, ranging from Justice Clarence Thomas on the Supreme Court, who was once a lawyer for Monsanto, a large agricultural corporation,<sup>2</sup> to incoming Senator Joni Ernst (IA), whose main campaign platform in many of her ads is her former experience castrating pigs growing up.<sup>3</sup> The agriculture industry can rely on having advocates in policymaking for maintaining agriculture subsidies and preserving patent laws for agriculture companies. This is especially evident with the sustenance of an artificial market for ethanol to boost corn production as well as farmer and corporate profits.

### **Key Facts:**

- Price supports may raise food prices to cost consumers an extra \$12 billion annually, amounting to an average annual food tax of \$104 per household.
- Annual farm subsidies have gone from \$14 billion in the 1990s to \$25 billion since 2002, which cost the average household \$216 per year.
- Small farmers receive virtually none of the subsidies, but they must endure the market distortions and financial pain caused by these policies.

Ethanol's origin story is curious. The fuel is a derivative of corn, one of the largest staple crops grown in the United States. However, it is very costly to produce and does not seem like a sensible energy source. Climate-conscious Democrats know that ethanol burns fuel and free-market Republicans should naturally despise ethanol for having monumental costs to make it cost-competitive. So why ethanol is still prevalent? The answer lies in the special interests of large industrial farmers in the country and the lobbying power of Big Ag.

Before, farmers controlled their off-farm inputs, raised and bred their own seeds, and generally cultivated a sustainable model of farming. With the Supreme Court case *Diamond v. Chakrabarty*,<sup>4</sup> patenting genetically engineered life legal, leading to the rush of genetically modified crops, pesticides, herbicides, and other off-farm inputs. This was done to produce greater yields and to enable crops to grow under more adverse circumstances.<sup>5</sup> Farmers should not be blamed for the development of large industrial farms responsible for planting, growing, and reaping crops consisting mainly of corn, wheat, and soybeans. Seeds and necessary off-farm inputs arrive pre-packaged and are sent to grain elevators where the corn is grouped together, regardless of quality. It took a couple of decades after *Diamond v. Chakrabarty* to build up GMO corn production in the United States, which has focused on ethanol since 2005, but this poses severe economic, environmental, and health consequences.

## **Policy Idea:**

Abolishing the RVO that creates an artificial ethanol market and limiting agriculture subsidies will help transform American agriculture. This will improve the environment, lower health costs, and give hardworking farmers more control over agricultural production. This new food system without ethanol may raise the price of

gasoline, but will make renewable energy more competitive, diversify the crops grown across the Midwest, lessen carbon emissions, and provide healthier, free market food for the entire country.

### **Analysis:**

Ethanol is taking over American agriculture. In 2000, over 90% of corn grown in the United States went to feed livestock and people, including in developing countries around the world. In 2013, 40% of corn went to create ethanol, 45% was used to feed livestock, and only 15% was used to make food and beverages.<sup>6</sup> Although ethanol played a role in replacing MTBEs (methyl tert-butyl ether) as an additive in gasoline to reduce groundwater pollution, ethanol is still very chemically delicate. It cannot mix with any other fluids and still operate as a fuel, and is less potent than gasoline. It cannot travel through pipelines and has to be shipped via rail or by barge.<sup>7</sup>

Burning ethanol and intense corn farming of GMO crops, including corn, is leading to nitrogen pollution. The extra energy needed to create and transport ethanol erases any efficiency gains from ethanol's chemical makeup. Artificially suppressed corn prices coupled with a rising use of corn for ethanol means that land will now be fought over to grow corn for either fuel or for food. As ethanol becomes a greater percentage of American liquid fuels, the price of food will be more closely linked to the price of fuel. This price volatility will be detrimental to many poor Americans.

Corn is prevalent in our food in various processed forms. New research shows that derivatives of corn and other major industrially grown crops are not processed the same way as natural produce is in our bodies. Their genetic modification results in the loss of many nutrients, possibly linked to increases in Type 2 diabetes and obesity, which have trended up since the 1972 *Diamond v. Chakrabarty* decision.<sup>8,9</sup>

### **Next Steps:**

The Renewable Volume Obligations (RVO) is the key statute by which the ethanol market is created. EPA and the White House enforce this law as part of the Renewable Fuel Standard and the Office of Management and Budget (OMB) has not resisted the political proponents of ethanol. In the Senate, Midwestern Senators who stand to lose the most votes and corporate donations will be the main opponents, if the EPA and Obama Administration do not wish to remove the RVO themselves, then Congress should take action when they next have an opportunity to review the 2005 Energy Policy Act and the next version of the Farm Bill.

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### **Talking Points:**

- Farmers no longer get to control much of their work and can be shut down by big agribusinesses if they violate patent laws.
- Reducing ethanol use and farm subsidies would reduce special interests in American society and would produce economic, environmental, and health benefits.
- Large agribusinesses represent the 1% of the population that has an overwhelming effect on us, the 99%, and disproportionately benefits at our expense.

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# Linking Federal Crop Insurance to Sustainable Agriculture Practices

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*Environmental degradation caused by nitrogen pollution from the overuse of synthetic fertilizers can be mitigated by adopting agricultural practices such as crop rotation and planting cover crops. Given the widespread adoption of the U.S. Federal Crop Insurance Program among farmers, the insurance program should be linked to these cost-effective sustainable practices to ensure their adoption and to decrease damages introduced by excess nitrogen inputs, beginning with corn and soybean crops.*

## **Background and Context:**

The Federal Crop Insurance Program provides subsidized insurance for farmers to protect against losses due to natural disasters including hail, drought, freezes, floods, fire, insect and wildlife infestations, diseases, or revenue losses due to decreases in prices. In 2013, more than 290 million acres of farmland were protected through the Federal Crop Insurance Program. This included 84% of the acreage for corn and soybeans, the two largest agricultural exports in the U.S. and the largest revenue source for premium subsidies.<sup>1</sup> Last year, the program insured \$117 billion worth of crops, costing taxpayers \$90 million. The government subsidizes from 38-80% of the cost of insurance premiums, depending on the specific policy.<sup>2</sup>

- Key Facts:**
- 84% of corn is insured through federal policy.<sup>2</sup>
  - Corn accounts for 40% of U.S. fertilizer consumption, and fertilizer is the highest contributor to nitrogen in soils.<sup>7</sup>
  - Half of all nitrogen added to soil is leached from agricultural landscapes.<sup>5</sup>
  - Legume-based nitrogen systems could reduce the fossil fuel demand of agricultural landscapes by 45%.<sup>5</sup>

Crop insurance is linked to environmental degradation because it has been shown to increase the use of chemical pesticides by farmers and increased soil erosion.<sup>3, 4</sup> Insured farmers are subject to moral hazard, engaging in riskier production methods because insurance coverage shields them from complete risk and encourages them to plant on land with low productivity. Those purchasing federal insurance for corn crops applied significantly more nitrogen per acre and spent more pesticides, including herbicides and insecticides.<sup>3</sup>

Overuse of chemical fertilizers and other human activities have doubled the amount of biologically active nitrogen in the biosphere. In the U.S., agriculture is the single largest source of nitrogen compounds, with nitrogen fertilizer use increasing from 2.7 million tons in 1960 to 12.8 million tons in 2011. Half of all applied fertilizer in the U.S. is lost from agricultural landscapes.<sup>5</sup> Nitrogen leached from soils enters waterways where it creates dead zones, killing species and contaminating drinking water.<sup>6</sup>

Meanwhile, the amount of corn and soybeans grown in continuous monoculture and two-year rotation has increased significantly in recent years, most likely due to federal policy encouraging the rapid production of biofuels.<sup>7</sup> Many pests prefer specific crops, and continuous growth of the same crop or short two-year rotations ensures a steady food supply, increasing the amounts of pesticides and herbicides needed to keep pests at bay.<sup>6</sup>

## **Policy Idea:**

Farmers growing corn should only be offered subsidies for crop insurance from the federal government if it is grown in crop rotation of at least three years with soybeans and nitrogen-fixing legumes. Additionally, farmers receiving insurance will be required to replace at least 50% of bare fallows with cover crops during winter months. Farmers who comply with this policy will not face a decrease in their subsidized crop insurance premiums.

## **Analysis:**

Corn is the most widely planted crop in the US, requiring the most nitrogen per acre and accounting for approximately 40% of U.S. fertilizer consumption.<sup>7</sup> It is usually grown in two-year rotation with soybeans. When grown in three-year rotations with a legume such as alfalfa, corn crops show 4% higher yields while soybeans show 9% higher yields.<sup>8</sup> These diverse crop rotations are more productive and require 80-86% less nitrogen

inputs, using half the energy of the conventional two-year rotation.<sup>8</sup> Mandatory crop rotation policy for corn and soybeans would not reduce profits for farmers because of the cost savings of decreased fertilizers and increased yields, but crop rotation would lead to the positive externality of substantial environmental benefits.<sup>8,9,10</sup> Crop rotation has been shown to improve soil quality, reduce greenhouse gas emissions, and to decrease the presence of invasive species, crop diseases, and other agricultural pests.<sup>12</sup> In some cases, integrated pest control with smart crop rotation has reduced the need for fertilizers and herbicides by 90% or more.<sup>11</sup>

Additionally, legume cover crops can add between 50 and 200 pounds of nitrogen to each acre of soil each year, further reducing the need for synthetic fertilizers.<sup>11</sup> Cover crops reduce contamination of drinking water between 40 and 70%, compared to bare soil, thus mitigating externalities imposed on public health.<sup>5</sup> Legumes such as red clover, crimson clover, and hairy vetch have been shown to grow as prolific cover crops during winter months when fields are usually left bare, decreasing the need for fertilizers and reducing the fossil-fuel inputs to the system by almost half.<sup>5</sup>

### **Next Steps:**

The Senate and House Agriculture Committee's Subcommittees on Conservation, Energy, and Forestry, the Senate Subcommittee on Commodities, Markets, Trade and Risk Management, and the House Subcommittee on General Farm Commodities and Risk Management should investigate adding a clause to the Federal Crop Insurance Program that requires all corn to be planted in three-year rotation with soybeans and legumes, and for all corn-soybean systems to be planted with cover crops. The Subcommittees on Conservation, Energy, and Forestry in both Houses should hold public hearings in the states with the highest production of corn and soybeans, including Iowa, Illinois, and Minnesota, on the possibility of mandating these policies at the federal level. Concurrent to it passing through committees of both houses, the policy can become an initiative of the National Resources Conservation Service, which carries out conservation compliance on agricultural landscapes.<sup>13</sup>

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### **Talking Points:**

- Voluntary programs used to encourage sustainable agriculture practices such as crop rotation or planting cover crops have not been widely adopted.<sup>14</sup>
- Targeting corn, the largest US crop, will also bring environmental protection to the production of soybeans, the second largest crop, as they are often grown on the same field in a two-year rotation.
- Crop rotation that includes legumes can lead to higher yields and decreases the need for chemical fertilizers, pesticides, and herbicides which are fossil-fuel intensive to produce and leach from soils, polluting the environment.<sup>3</sup>
- Tying crop rotation and cover crop mandates to an already-running government policy can ensure they are feasibly adopted.

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# Invest in the Future, Not Fossil Fuels

By Elizabeth Chi, Major: Environmental Science and Sustainability (CALS '18)

Email: ec686@cornell.edu

*Fossil fuel combustion is the primary culprit in driving global climate change and subsequent environmental degradation. Cornell University, a pioneer institution in renewable energy research and application, should stop investing millions of dollars in fossil fuels.*

## **Background and Context:**

The Cornell University Assembly voted against fossil fuel divestment, in spite of the environmental implications of fossil fuel production and combustion. It wanted to maintain financial stability and disagreed with the Undergraduate, Professional, and Faculty Assemblies' decisions. Cornell's "public energy [stock]" investments generated \$100 million this past decade; however, that trend is not guaranteed to continue.<sup>1</sup> Moreover, multimillion-dollar fluctuations are common with Cornell's endowment, which is more than \$5 billion, and \$2 billion annual operating budget.<sup>2</sup>

Divestment proponents urge Cornell to practice what it preaches. Oil, coal, and gas consumption carries tremendous environmental costs and is unsustainable.

Cornell already divested from coal, but some hope to inspire divestment initiatives at other universities and organizations.<sup>3</sup> Some colleges have already committed to complete fossil fuel divestment. Among them are Humboldt State University, Pitzer College, and Sterling College, and the University of Dayton.<sup>4</sup> These schools either expected insignificant financial repercussions<sup>5</sup> or made adjustments to promote green investments while compensating for lower returns.<sup>4</sup>

Cornell's fossil fuel divestment probably will not significantly impact carbon emission levels, but investing in fossil fuels fundamentally contradicts Cornell's vision and commitment to sustainability.<sup>6</sup> If even leading liberal educational institutions continue to invest in fossil fuels, then there is little hope of phasing out fossil fuels anytime soon.

## **Policy Idea:**

By 2025, Cornell University should divest from all public stocks in major fossil fuel companies, and by 2035 it should divest from all private ones as well. Alternative investments include rapidly-growing renewable energy industries and Sustainable, Responsible, and Impact investing (SRI).<sup>7</sup>

## **Analysis:**

Global fossil fuel supplies are constantly becoming more scarce. BP estimates that oil reserves would meet global production needs for 53 more years<sup>8</sup> and proven natural gas reserves for 55 years.<sup>9</sup> For purely financial reasons, Cornell should divest before these markets crash. Meanwhile, renewable energy is on the rise; even oil and gas companies are investing some of their earnings in renewables.

Burning fossil fuels releases ancient carbon into the atmosphere, trapping planetary infrared radiation. For 800,000 years, atmospheric CO<sub>2</sub> levels fluctuated but never passed 300 ppm until recently.<sup>10</sup> From 1750-2014, CO<sub>2</sub> levels rose from 278ppm to 396ppm.<sup>11</sup> Greenhouse gas emissions are connected to global warming, which is linked to sea level rise, polar ice and glacial thawing, extreme weather patterns and events, pest and disease proliferation, and species extinctions.

Selling fossil fuel stocks is predicted to decrease returns of the endowment by only .2%,<sup>12</sup> and Cornell can replace them with SRI investments. In 2013, 4-5% of the endowment<sup>2</sup> was used for less than 10% of Cornell's operating expenses.<sup>13</sup> Although less than 2% of Cornell's endowment is currently dedicated to

## **Key Facts:**

- Cornell plans to reach carbon neutrality by 2035.<sup>14</sup>
- Fossil fuel combustion is largely responsible for the unprecedented rapid rise in atmospheric CO<sub>2</sub> from approximately 280ppm pre-industrial levels to 400ppm present-day levels.<sup>10</sup>
- Divestment from fossil fuels will result in only a .2% reduction in returns on Cornell's endowment over ten years.<sup>12</sup>

## Analysis:

Global fossil fuel supplies are constantly becoming more scarce. BP estimates that oil reserves would meet global production needs for 53 more years<sup>8</sup> and proven natural gas reserves for 55 years.<sup>9</sup> For purely financial reasons, Cornell should divest before these markets crash. Meanwhile, renewable energy is on the rise; even oil and gas companies are investing some of their earnings in renewables.

## Next Steps:

The University Assembly must see the senselessness of continuing to invest in fossil fuels after Cornell reaches carbon neutrality by 2035.<sup>14</sup> Students and faculty must continue to mobilize

support to pressure the Assembly to vote to divest and also research the actual financial costs of shifting from fossil fuel to SRI investments. Undergraduate, Graduate, and/or Faculty Assembly members should work with consultants and the investment office to make necessary adjustments to Cornell's portfolio. Keeping the big picture in mind, students and faculty should also push for implementation of either a national or state carbon tax to further motivate Cornell and other universities to pursue carbon neutrality and divest from fossil fuels.

## Talking Points:

- Progressive academic institutions send conflicting messages to the world by investing in fossil fuels.
- Divestment could potentially reduce the size of Cornell's endowment.
- Eventual divestment is inevitable because fossil fuel reserves are limited.
- If an institution of Cornell's prestige divests from fossil fuels, others may follow suit.

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# An Egalitarian Approach to Reducing Environmental Waste: Subsidizing Sustainable Feminine Products

By Kelsey Clough, Major: College Scholar (A&S '15) Email: kec93@cornell.edu

*The stigmatization of menstruation influences disregard for the negative environmental impacts of feminine products. Federally subsidizing sustainable feminine products for impoverished women will reduce environmental concerns, as well as female health and human rights issues.*

## Background and Context:

Approximately 56% of Earth's females are of reproductive age, menstruating monthly, yet periods remain taboo.<sup>1</sup> Cultural and religious traditions stigmatize menstruation as impure and unsanitary, thereby cultivating shame and embarrassment.<sup>2</sup> Consequently, the environmental issues of menstruation receive insufficient consideration.

Feminine products significantly contribute to the global waste stream. An average woman discards approximately 125 to 150 kilograms of tampons, pads, and applicators in her lifetime.<sup>3</sup> The production of cotton, a necessary component, requires considerable use of water, insecticide and pesticide.<sup>4</sup> Most disposable products contain polyester, rayon, chlorine dioxin, and Polysorbate 20, which cause water and air pollution during manufacturing and disposal.<sup>5</sup> Plastic tampon applicators and polyethylene pads are also non-recyclable and non-biodegradable.<sup>6</sup> In the United States, over 12 billion disposable feminine products are discarded annually in trash receptacles and toilets.<sup>7</sup> Menstrual hygiene products accumulate in landfills, disrupt septic systems, and infiltrate water systems. This jeopardizes the health and livelihood of animals and humans by increasing the risk of cancer, immune system damage, and reduced fertility.<sup>8</sup> Currently, there are no national or state policies to reduce menstruation waste.<sup>9</sup>

Environmental concerns amplify due to the lack of affordable and readily available sustainable feminine products.<sup>10</sup> While 49% of Americans receive government aid or benefits, no program provides subsidized feminine products.<sup>11</sup> Thus, the industry's supply is driven by considerable demand for low cost products, which are often unsustainable and disposable.

## Policy Idea:

Through the creation of a government assistance program, women in poverty should receive federally subsidized sustainable feminine products. Modeled on the structure and individual requirements of Supplemental Nutrition Assistance Program (SNAP), commonly known as food stamps, women can receive a voucher toward a reusable silicone menstrual cup, or reusable or biodegradable pads. This voucher, renewed annually to ensure quality of care, can be used with any interested business that qualifies as a manufacturer of sustainable feminine products.

## Analysis:

A government subsidy of sustainable feminine products for impoverished women will improve environmental conditions. This program affects a large proportion of the population, therefore, drastically reducing menstruation waste. In the US, 20% of the population receives food stamps.<sup>12</sup> By modeling the subsidy on SNAP, a similar overall proportion of women would likely receive the subsidy. The inclusion of such a significant amount of women normalizes the topic of menstruation, thereby increasing and improving future solutions to menstruation waste.

Including human rights advocacy into the policy supplements its effectiveness. The national and

### Key Facts:

- Disposable feminine products significantly contribute to environmental degradation.
- The production, use and disposal of feminine products risk human and environmental exposure to harmful chemical contaminants.
- Consumer demand for low-cost and readily available products maintains the disposable menstruation hygiene product market.
- The stigmatization of menstruation eliminates the topic from public discussions.

## Analysis:

A government subsidy of sustainable feminine products for impoverished women will improve environmental conditions. This program affects a large proportion of the population, therefore, drastically reducing menstruation waste. In the US, 20% of the population receives food stamps.<sup>12</sup> By modeling the subsidy on SNAP, a similar overall proportion of women would likely receive the subsidy. The inclusion of such a significant amount of women normalizes the topic of menstruation, thereby increasing and improving future solutions to menstruation waste.

Including human rights advocacy into the policy supplements its effectiveness. The national and international articulation of inalienable human rights, particularly through the United Nations Office of the High Commissioner for Human Rights, entitles everyone an equal and non-discriminatory life.<sup>13</sup> Ineffective or unavailable menstruation hygiene management for poor women diminishes educational and

**Next Steps:**

For the effective implementation of this policy, several steps must occur. There must be discussions to normalize the topic of menstruation, and remove its stigma. These efforts include increased discussion of menstruation in schools, family settings, and the media. By shedding menstruation's abhorrent reputation, concerned citizens and policymakers will be more likely to engage in discussions about menstruation waste management. Also, consumers should begin to demand more affordable and readily available sustainable feminine products. With the cultivation of this industry, the quality, cost and availability of the products will improve, thereby reducing the initial cost of the proposed subsidy.

Additionally, quantitative metrics must be compiled to more thoroughly distinguish the environmental impacts of feminine products. Grants and foundations dedicated to research on the environment, health, gender equality, and human rights, should focus funding in this area. With more detailed and accurate information supporting a need to address menstruation waste, the policy will gain public and legislative traction.

## Endnotes:

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## **Talking Points:**

- Subsidizing sustainable feminine products for impoverished women will decrease marine debris and land litter.
- Increased use of sustainable feminine products reduces risk of ecosystem chemical contamination.
- A subsidy for menstrual hygiene management increases female health and human rights.
- Subsidizing sustainable feminine products allows for reinvestment in the American economy.

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# A Healthier Approach to the Farm Bill

By Kavin Lam, Major: Agricultural Sciences (CALS '18) Email: kl743@cornell.edu

*The obesity crisis in America is unarguably linked to fast food and junk food. As the United States federal government promotes the consumption of healthier and fresher food alternatives, the majority of crop subsidies are going towards corn, which is the main ingredient in both fast food and junk food. The United States federal government should empower the United States Department of Health and Human Services (HHS) with oversight and executive power in the establishment of the Farm Bill in order to keep health at the forefront of policymakers' goals.*

## **Background and Context:**

America is the second-most obese country in the developed world.<sup>7</sup> Hospitals are ridden with patients with heart complications while prescription drug consumption for diabetes and cholesterol are at an all-time high. Americans are facing a pandemic. Yet, the call for change has been limited to campaigns for exercise and healthy eating.

The battle with obesity must begin with the nation changing its dietary habits. High fructose corn syrup, hydrogenated corn oil, and corn have overcrowded the American plate. The scientific debate on the negative effects of corn products is ongoing, but it is clear that a lack of diversity in crops endangers the human body and the environment. Americans need to eat more fruits and vegetables.

The government incentivizes corn production by subsidizing crop insurance. Farmers purchase the crop insurance at a much lower rate than market value. The insurance supplements farmer income when yields or purchasing prices are low. The federal government has set base prices of corn at \$3.705 per bushel. This guarantee makes growing corn much more economically secure than smaller crops that don't have a nationally set guarantee.

The federal government has attempted to increase fruit and vegetable yields with organic and specialty crop stimulus in the 2014 Farm Bill known as the Specialty Crop Block Grant Program (SCBG). Fifty-two million dollars has been set aside to invest in fruit and vegetable production, but this is only a short-term investment.<sup>6</sup>

## **Policy Idea:**

The farm bill draft has traditionally been marked up by lobbyists from all over the farming community, particularly those representing corn producers. Even though Farm Bill is closely tied to the health of the nation, there is a void for a voice championing health. By giving HHS executive oversight of the bill, crop prioritization and economic incentives would ensure that health issues are not overlooked by solely focusing on economic concerns.

## **Analysis:**

This policy will change the foundations of the Farm Bill. Crop insurance will remain in place because farming is a risky investment. The investment in horticultural crops for fruits and vegetables will come in two forms. The first incentive will be increasing subsidies and financial incentives for farms to transition to horticultural crops. The second is crop insurance reform to include all horticultural crops. It is impossible to create a base price for all horticultural crops like the ones corn and soy have. Rather, crop insurance will be based on the crop losses and market prices.

### **Key Facts:**

- The cost of obesity in 2008 was \$147 billion.<sup>1</sup>
- In 2013 there were 97 million acres of corn, which is nearly 25% of total American crop land.<sup>2</sup>
- In 2013, only 10.7 million acres of land was planted for fruits and vegetables. This is less than 3% of US crop land.<sup>2</sup>
- Jon Scholl, the President of American Farmland Trust concluded that America needs an additional 13 million acres of farmland for fruits and vegetables to meet the USDA's guidelines.<sup>3</sup>
- Since 1995, America has spent \$19.2 billion subsidizing corn- and soy- derived junk food ingredients.<sup>4</sup>

## Analysis:

This policy will change the foundations of the Farm Bill. Crop insurance will remain in place because farming is a risky investment. The investment in horticultural crops for fruits and vegetables will come in two forms. The first incentive will be increasing subsidies and financial incentives for farms to transition to horticultural crops. The second is crop insurance reform to include all horticultural crops. It is impossible to create a base price for all horticultural crops like the ones corn and soy have. Rather, crop insurance will be based on the crop losses and market prices.

Major costs will result from funding and incentivizing farms to change crops. This cost will be incurred during the early years of the bill. Short term benefits include economic stimulus due to spending on

## Next Steps:

Congress needs to pass a bill giving HHS oversight over the Farm Bill. All appropriation bills must originate with the House of Representatives; therefore, the HHS should work closely with the House of Representatives. The United States Department of Agriculture must then begin expansion of its current SCBG program to get ready for expansion and outreach. These two departments should then establish an independent panel to create steps to incentivize horticultural crop production and identify which crops would be appropriate for different regions of America. A hearing should be held so farming interests can be voiced and considered during the writing of the Farm Bill.

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## Talking Points:

- The U.S. needs a radical change in how we grow food in order to radically change our diets
- Farmers react to market situations and the government can help create a market situation that stimulates good diets.
- Obesity is a critical issue that is garnering the attention it needs. However, there must be more efforts to reduce the prevalence of corn-based junk food.

# Meet Our Energy and Environmental Policy Center



**Julia Malits**

Julia Malits is a junior majoring in Biology and minoring in Business in the College of Agriculture and Life Sciences. She is interested in examining methods to improve sustainable water and waste management practices in both developed and developing countries. Julia has been a member of the Roosevelt Institute since Fall 2014.



**Mallory Shipe**

Mallory Shipe is a sophomore double majoring in International Agriculture and Rural Development and Communication in the College of Agriculture and Life Sciences. Among other topics, she is interested in the intersection between environmental innovation and urban development, both domestically and internationally. Mallory has been a member of the Roosevelt Institute since Fall 2014.



**Justin Cheng**

Justin Cheng is a sophomore majoring in Policy Analysis and Management and is minoring in Business in the College of Human Ecology. His main interests lie in understanding the economic and social consequences of environmental policy and from long-term environmental damage. Justin became a member of the Roosevelt Institute in Fall 2014.



**Liam Berigan**

Liam Berigan is a sophomore at Cornell University, majoring in Biology with a concentration in Ecology and Evolutionary Biology. His interests include natural resources law at the federal and state levels, and he hopes to go into public service after he graduates from college. This is Liam's third semester with the Roosevelt Institute



### Danielle Ragin

Danielle Ragin is a sophomore Applied Economics and Management and Development Sociology double major from Long Island. Concentrating in Environmental, Energy, and Resource Economics, she is passionate about environmental sustainability and environmental issues in developing societies. This is her first semester in the Roosevelt Institute and she hopes to continue working as a policy analyst in the future.



### Ben Krapels

Ben Krapels is a sophomore majoring in Government and minoring in International Relations and European Studies in the College of Arts and Sciences. He is interested in energy policy, the maintenance of our current nuclear and fossil fuel infrastructure, the transition to renewables, and the role of the United States internationally, especially in Eastern Europe and Southeast Asia. Ben has been a member of the Cornell Roosevelt Institute since Fall 2014, and is also a brother in Pi Kappa Alpha (Pike) and a member of Cornell's Men's Rugby Team.



### Emma Johnston

Emma Johnston is a junior majoring in Government and Natural Resources. She is interested in a wide range of environmental policy topics, from clean public transportation to environmental justice, accountable energy regulation, and land management. Fall 2014 is Emma's first semester with the Roosevelt Institute.



### Elizabeth Chi

Elizabeth is a freshman majoring in Environmental Science and Sustainability in the College of Agriculture and Life Sciences. As a passionate environmentalist and self-proclaimed tree hugger, her interests range from agriculture to habitat preservation to renewable energy to zebra mussels. Elizabeth joined the Cornell Roosevelt in Fall 2014.



### **Kelsey Clough**

Kelsey Clough, a senior in the College of Arts and Sciences, is majoring in the College Scholar Program. Since her start with the Roosevelt Institute in Spring 2013, Kelsey has been fascinated by utilizing unorthodox approaches to analyze and solve larger environmental predicaments. She hopes to continue her research as a policy analyst by proposing simple modifications and regulations to influence sustainable change.



### **Kavin Lam**

Kavin Lam is a freshman majoring in Agricultural Sciences in the College of Agriculture and Life Sciences. He is interested in agricultural public policy. Kavin has been a member of the Roosevelt Institute since Fall 2014.



### **Alexander Fields, Director**

Alexander Fields is a junior majoring in Government and minoring in International Relations, History, and Law and Society in the College of Arts and Sciences. He is interested in examining the domestic legal mechanisms and geopolitical consequences of energy policy. Alexander has been a member of the Roosevelt Institute since Fall 2012.



“A nation that destroys its soils destroys itself. Forests are the lungs of our land, purifying the air and giving fresh strength to our people.”

- Franklin D. Roosevelt