

HUDSON RIVER SLOOP
CLEARWATER, INC



PUBLIC COMMENT

on

**DRAFT NEW YORK STATE ENERGY PLAN AND
DRAFT ENVIRONMENTAL IMPACT STATEMENT**

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INTRODUCTION

On behalf of the Hudson River Sloop Clearwater, we want to start by thanking the Board for the vast amount of work done in the preparation of the current Draft Energy Plan. We realize that Article VI charges the members of the New York State Energy Planning Board (the “Board”) with a huge responsibility. We especially appreciate that the Planning Board has increased its public outreach by increasing the number of public hearings beyond its legal mandate, and lastly, we thank the Board for its gracious support of our Energy Forum held in Rockland on March 14.

There is much we applaud and wholeheartedly support in this Plan. We are glad that the System Benefits Charge (SBC) has been extended. We think NYSERDA is involved in many very exciting projects that are essential to the future of this state--projects that will prepare New York to benefit from emerging new energy technologies. We applaud NYSERDA for promoting energy efficiency and clean, renewable technologies, for the educational outreach it has done, as well as all the research and development it has funded.

There are, however, some deficiencies in the Plan. We believe the major flaw in the Draft Energy Plan is the stance the Board is taking that the Plan is to provide “Broad statewide energy policy direction rather than recommending specific government agency actions.”¹ The plan is lacking in specific goals, and the targets and the timetables necessary to reach those goals. We understand that the Board can take the position that, with the State committed to deregulated markets, the State should merely indicate where it wishes the market to go.

This means the people of New York State, through their government and its agencies, will have ceded control over energy markets to corporations that are not answerable to the people of New York State. To use a sporting analogy, if government becomes the spectator, who’s going to decide what game is played in New York’s market? Who’s setting the rules?

Energy’s hidden cost: We believe that energy is too critical a resource and its effects are felt in too many areas for the State to stand on the sidelines and watch. The energy industry is not part of a closed system, and it does not bear the full costs associated with generation, distribution and consumption of its product. Industry makes vast and potentially damaging use of common property resources. Businesses discharge their waste products into our air and water. In addition, power plants require vast amounts of water for cooling, which has consequent impacts on fisheries, marine life and the entire ecosystem. In turn, these environmental degradations have an effect on the health of all the members of our society. Finally, there are long-term impacts resulting from today’s energy decisions, such as global warming, climate change, and the destruction of biodiversity and intact ecosystems—the environmental underpinnings that support all life. New York State cannot plan its energy future in a vacuum. The big picture must be the background for all such planning, and cumulative impacts must be addressed.

¹ The Draft Plan, page 1-28.

The Draft Energy Plan² states that in 40 years the Adirondacks will be too acidic during spring thaw to support life. When this occurs, on whose balance sheet will the loss appear? How will the markets account for this? For those of us who treasure the lakes and waterways of this state, the inability of government and markets to come together to prevent the gradual destruction of these resources is like watching a 20 car pile-up in slow motion. Surely, we can find the will to redirect some of those cars.

This abdication of direct responsibility does not prepare the State to adequately defend public health and the environment. It also positions the State poorly to take advantage of new economic possibilities as innovative technologies develop in energy conservation and generation.

We believe the Plan needs to provide much clearer direction for markets. We believe it is government's rightful role to decide what game is going to be played in the marketplace, and the acceptable parameters under which that game will take place. The values of the whole community must create the framework that in turn guides the markets. We believe there are some places markets simply should not go.

Meeting need by siting plants: We cannot endorse an Energy Plan that continues to increase the amount of fossil fuels burned. The Plan foresees a large increase in the number of power plants and megawatts: 3,300 MWs of additional capacity is already approved by the Siting Board, with nine more plants in the approval pipeline. There is far too little emphasis on energy efficiency (EE) or developing creative infrastructure for renewables.

We are especially concerned that the Board is not looking at the cumulative environmental impacts of all of the new power generation that is being proposed. The Board seems to be relying on 1) natural gas being "less polluting than coal" and 2) the coal plants being phased out by natural attrition, which is simply not happening. The New York Attorney General is currently suing coal-fired plants in other states for not cleaning up their emissions and continuing to operate through the grandfathering clause of the 1970 Clean Air Act and 1977 Amendment. The Attorney General recently filed suit against two coal-fired plants within the state for the similar infractions. Coal plants should not be grandfathered; they should be required to meet the same standards as other plants. Until such regulations are in place, calculations of future total emissions must include the burden imposed by burning coal. Otherwise, the Board's calculations are overly optimistic.

Utilizing EE and renewables: We believe that there is an alternative method for the State to organize its Draft Energy Plan, and this alternative has already been proposed in Albany. We would suggest to the Board that Governor Pataki's Executive Order 111 and the Governor's State of the State Address contain within them another road map for how the state should go forward in regard to energy development and energy use.

² Ibid, page 2-42.

The Draft Plan itself states that “Upon issuing Executive Order 111, Governor Pataki put State government in a leadership role for promoting energy efficiency and the wise use of natural resources to protect and enhance the State’s environment and economy.” Specifically, Executive Order 111 requires that

all State agencies, departments, and authorities must seek to reduce their buildings’ energy use by 35% relative to 1990 levels and seek to purchase 20% of their electricity from renewable energy sources by 2010.³

Renewables in the Executive Order are defined as: wind, solar thermal, photovoltaic (PV), sustainably-managed biomass, tidal, geothermal, methane, and fuel cells.⁴

This is the kind of goal-driven, specific plan that will achieve substantial reductions in energy use and spur the development of clean, renewable sources of energy. We further believe it is not enough for the State to merely demonstrate the behavior it wants the private sector to follow.

In the Final State Energy Plan we recommend that the Board should set an overall target for New York of 20% energy reduction, with 25% of electricity generation from renewable sources. We believe these goals are attainable. The Governor would not have set them as goals for state agencies if they could not be achieved. Implementation on a State-wide level need not involve miles of bureaucratic paperwork, nor should it. The Board could adopt the targets and deadlines that have already been created for State agencies as the basis of a policy.

Renewables as economic driver: Further, in the State of the State address this year, Governor Pataki made another commitment to renewable technologies, saying:

I will also introduce a program to improve our environment and reduce our dependence on imported foreign energy by leading the nation in the development and deployment of renewable energy resources like geothermal, biomass, solar, and wind power. By doing so we can not only clean our air, but also create new industries, expand markets for New York agricultural products, diversify the state’s energy supply, and increase our security.

We applaud the Governor’s desire to use renewables as an economic driver in creating jobs and economic opportunities in New York State. There is every reason to believe that there is as much economic growth potential in the transition to clean, renewable energy technologies as there was in the computerization of offices in the 1990’s. During the late 1980s and throughout the 1990s, huge capital investment was made in converting offices from mechanically based operations to computerization, voice mail and e-mail based systems. The move meant discarding

³ The Draft Plan, pg. 1-8.

⁴ Ibid, pg. 3-59.

typewriters, paper phone messages, physical facsimile machines to install computers, voice messaging systems, and e-mail. Large sums of money were expended on hardware, software technical services, and training. Ultimately, this conversion generated great productivity gains for the state and the entire nation.

Transitioning to clean, sustainable energy can act as an economic driver during the next 20 years, creating jobs and wealth for New York State, while reducing greenhouse gas emissions and lessening the severity of impending global climate change. It is time now for the State to position itself to make use of the opportunities that are coming. The State must discontinue its investment in old, polluting technologies and embrace the newer emerging technologies that are waiting to be explored.

Energy in the forefront of policy: Hudson River Sloop Clearwater considers energy one of the single most important public policy issues before us today, and we will be devoting much of our public education this year to the issue in the context of impending global warming. There is no way to stave off global warming without intelligent, sustainable energy policy.

Clearwater recognizes that some of our comments offered herein are beyond the scope of the Energy Planning Board's directive under Article VI. Some of the recommendations will require legislation, for which we will actively lobby in cooperation with our colleagues in the NYS Sustainable Energy Campaign. We ask the Energy Board to upgrade its final version of the NY State Energy Plan with as many of these recommendations as are appropriate. We are then interested in working with the Board in whatever ways we can to promote a more rational, environmentally-focused, energy policy -- one that ensures the integrity of the natural world, and protects the health of the humans in it, while taking a long view toward economic viability. To this end, we respectfully ask the Board to specify what we can do by way of legislative outreach, public education, or other actions to effectively reposition New York for a cleaner, more sustainable energy future.

A summary of Clearwater's major recommendations follows:

- Increase investment in energy efficiency and conservation programs to \$200 million.
- Cap emissions of greenhouse gases by setting a statewide goal of 10% below 1990 levels by 2012, with a timetable and measurable interim targets to achieve that goal.
- Establish a Renewable Portfolio Standard (RPS) of 10% of all sales by 2012.
- Expand the existing net metering programs to include commercial solar photovoltaic (PV) systems, small wind and farm-based biomass generation up to 5% vs. current 1%.
- Expand the existing net metering programs for residential customers to include small wind and larger scale solar PV installations.
- Allow New Yorkers to contribute to the funding of clean energy development through voluntary contributions (as California does) or "Clean Energy Bonds".

- Create a timetable for the phase out of nuclear power. Nuclear power plants are huge drains on water resources, require large amounts of fossil fuels for developing their fuels, and, in these post-September 11th times, represent an intolerable security threat.
- The creation of a Citizens Advisory Board. In this critical time in the development of energy, it is essential that there be a mechanism for members of the public who represent residential customers to provide oversight and accountability, as well as providing the State feedback on what citizens—who really are the majority of individuals in the state—want and need.

ENERGY EFFICIENCY AND RENEWABLES

Clearwater believes that New York needs to take a bolder, more visionary approach to meeting its energy needs, with a major focus on energy from clean, renewable sources. The current Plan leaves the state highly vulnerable to fluctuations in the natural gas market, a concern expressed in the Plan itself. The Energy Board's solution is to maintain a high level of dependence on coal. We believe that this would be a giant step backward, and suggest that there is a better way: New York State needs to move to specifically-targeted levels of energy efficiency and the development of alternative renewable fuels to balance the state's fuel mix.

Energy Intensity (EI): We believe EI to be a misleading rhetorical device, and seriously question the use of "energy intensity" as a valid measure of energy efficiency. Energy intensity is a ratio measured as British Thermal Units (BTUs) per dollar of Gross State Product. The capacity of the natural world to absorb additional pollutants does not recognize these arbitrary economic ratios. Ultimately nature must assimilate and process the total pounds of pollutants being put into the air and water. Nature has no way of dealing differently with the millions of pounds of pollution that we may think we derived greater use from. What we are discharging into the natural world is not decreasing. According to a statement by the Pew Center on Climate Change:

In 1990, total U.S. GHG emissions were 1,671 million metric tons in carbon equivalents, and in 2000, they were 14.1% higher, or 1,907 million metric tons in carbon equivalents.⁵

We assume New York State's increase in total Greenhouse Gas (GHG) output is at least proportional. The Plan must address impacts associated with the total pollutant loading. No amount of redefinition can alter this simple fact. The Board should do a more comprehensive analysis of total amount of pollutants when examining environmental issues.

Energy Efficiency (EE): With regard to total energy efficiency (EE) expenditures, total dollars spent in New York State by all participants hit a high of \$424.4 million in 1993. Expenditures have declined significantly since. The State has not done an energy efficiency Audit since 1989. We understand that an audit is now underway; nonetheless, this is far too long between energy efficiency audits. EE is especially important in areas of the state, particularly New York City and Long Island, where it is difficult to bring in additional power due to space and transmission constraints.

We believe that EE can make a significant difference. During the 1980's and 1990's, industry and business made major increases in efficiency. They now claim there is little room to further improve efficiency of operation. The facts do not support their position. The United States

⁵ "Pew Center Analysis of President Bush's February 14th Climate Change Plan" available at http://www.pewclimate.org/policy/response_bushpolicy.cfm.

consumes more than twice as much fossil fuel per person than any other country. U.S. consumption dwarfs the fuel consumption even of other industrialized nations that have a standard of life equal to or greater than our own. We must ask why the U.S. is unable to make reductions that bring us into line with the rest of the industrial world. The plan should create and emphasize incentives for private and public sectors to increase the efficiency with which they use energy.

Pollution Prevention: Clearwater also believes that as public policy, the State must make a commitment to significant reductions in total pollution levels. Greater consumption will have even more deleterious environmental and health impacts. Therefore, the State must press for energy reductions and provide powerful incentives to develop zero-emission energy.

The cheapest power New York can buy is the power that it saves. It is expensive to build power plants, and New Yorkers are going to pay for that new construction.

The New York State Energy Planning Board's commitments to EE are mild, compared with commitments being made elsewhere. According to the California Energy Commission's Independent Systems Operator, for instance, California has invested \$1 billion in EE. During the summer months of California's 2001 energy crisis, usage was reduced between 7.0%-12.2%. in weather adjusted figures because of this initiative. By comparison, NYSERDA spent only \$35.9 million on energy efficiency, and this includes selected low-income projects and Research and Development.⁶ What could New York State do with a sizable investment in EE, particularly in the downstate region where the airshed is already overloaded?

Renewables: The Draft NY State Energy Plan pulls the rug out from the Governor's stated commitment to renewables. NYSERDA will be spending only \$77.5 million during the period of 2001 to 2006. This money is not exclusively dedicated to actually bring renewable energy on line. It also funds experimental pilot projects, public education and training. The State of California started out with a fund of \$500 million to bring renewables on line when energy was deregulated in 1998.

Other municipalities are making substantial public commitments to renewables. Chicago's timetable calls for 20% of the city's own power use to be purchased from renewable sources in five years.⁷ We would like to see New York City declared a "Clean Energy Zone," with preference given to zero-emissions and low-emissions technology, with specific targets to be implemented by specific dates.

New York City as a Green Energy Zone: Putting New York City on track to create low- or zero-emissions energy would improve the City's chances of meeting all EPA clean air standards, particularly the new standards for fine particulates. It will also address the issue of

⁶ The Draft Plan, pg. 3-15.

⁷ Mark Sappenfield, "Chicago Tries to be Green-Power Leader", *The Christian Science Monitor*, July 6, 2001.

environmental justice if fewer new facilities are necessary. While clean technologies may be somewhat more expensive, most produce savings in the long run. Health and infrastructure costs, for example, are not accounted for as a true cost of fossil fuel usage.

New York City could become the first area in the state to draw a considerable amount of its energy from new generation technologies: solar, biomass, fuel cell, or other appropriate low emissions methods. Preference should be given to silent methods of generation, to minimize noise pollution as well.

A survey of public opinion on renewable energy sources finds that photovoltaics (PV) score highest among renewable energy sources,⁸ specifically because of the public's perception of its low environmental impacts. New York City has tremendous capacity for solar generation, despite its image as a dark cavern of tall buildings. The large numbers of exposed rooftops and wide open areas along the east and west sides of the City, where the highways are located, represent a huge untapped reservoir of zero-emission power. We recommend a study to determine the actual potential for solar powered electricity that can be generated in New York City by photovoltaics.

Fossil fuels as transitional: We urge that the Plan explicitly declare that henceforth, fossil fuels are a “transitional technology.” As we actively shift away from our dependence on non-renewable, polluting fossil fuel, most of which is not locally available, we should use the remaining coal, oil and natural gas resources to invest in creating infrastructure for clean, non-polluting renewables. We recognize that this requires a major paradigm shift. Energy planners and investors are used to thinking in terms of huge centralized systems. We are asking for many smaller distributed installations that will together create the equivalent of one or more massive systems, just as many tiny raindrops make up a river. Somehow we need to move our conceptual thinking to embrace this idea.

At the very least, the Planning Board should implement an aggressive Renewable Portfolio Standard. Twenty-eight states have an RPS. In Texas the RPS was signed into law by President Bush when he was governor. Only by setting targets will the Board motivate energy companies to shift to renewable, sustainable energy generation. When one looks at the State's current and proposed fuel mix, without hydropower, there's almost no renewables.

We note that the Plan criticizes California for its “mistakes,” but fails to acknowledge that California is actively exploring non-traditional methods of safe, zero-emissions energy. The state already had 12%—28,101⁹ million kilowatts—of total generation from renewables in a four-year period, 1998-2001. This reflects an investment from a pool that now stands at \$782 million, to which Californians can voluntarily add through their electric bill. By comparison, New York

⁸ Kenneth Winneg et al. *Summary Report, Baseline Survey Consumer Knowledge, Practices and Attitudes, Electric Utility Restructuring and Consumer Choice*. Denver, Colo: NCSL, National Conference of State Legislatures, January 1998.

⁹ California Energy Commission's web site at http://www.energy.ca.gov/sb1305/system_power.html

State has committed to make an investment of only \$67 million to renewable technologies between 2001-2006.¹⁰ This is embarrassing and woefully inadequate.

Lack of customer choice: While the NYS Energy Plan claims customer choice is important, right now New York State consumers cannot choose clean energy because there is none to buy. The Board's position seems to be that the only thing consumers are concerned about is price. We would suggest that there are many people who would switch, if they thought their purchase would make a significant difference to the environment. The residential sector never asked for energy deregulation, a process that was never designed to serve their needs. Choice is one small way of giving a measure of control back to consumers.

Residential Sector: NYSERDA's *Envisioning the Future – A Three-Year Plan for New York State's Energy, Economic and Environment Future, Chapter 7*, describes the State's Residential Program Portfolio. One of the most effective tools for enlisting active and long-lasting participation in energy efficiency and conservation, and implementation of renewables into the residential sector is Global Action Plan's Sustainable Lifestyle Campaign. Neighborhood by neighborhood, significant, measurable results have been documented by thousands of households that have participated in this program in more than 15 communities in the U.S. and 15 countries around the world. Rockland County has offered this program to its residents for the last three years. In Ulster County, the Town of Lloyd has recently adopted a resolution to participate as well. NYSERDA should develop a program to fund at least the Energy section of the campaign on a statewide basis. (Contact: David Gershon, President, Global Action Plan, PO Box 428, Woodstock, NY 12498; info@globalactionplan.org , 845-679-4830)

Light pollution: Fully 30% of the outdoor lighting used in the United States is reflected up into the sky, which not only wastes energy, it also has detrimental effects on birds and insects, as well as aesthetic impacts. This excess lighting is clearly visible from satellite photos taken of the U.S. that show hardly any dark areas of the country, and the large metropolitan areas here in the Northeast blazing with light. Clearwater would support legislation that offers more effective and energy saving lighting systems that minimize nocturnal light pollution.

RECOMMENDATIONS:

To summarize, Clearwater's recommendations for inclusion in the Final Plan with regard to energy efficiency and renewables include:

- Greatly expand energy efficiency Programs.
- A Renewable Portfolio Standard (RPS) to encourage distributed generation, specifically solar, wind, fuel cells and biomass, particularly in congested areas.

¹⁰ The Draft Plan, pg. 2-116.

- A cap on emissions from power plants, regardless of age, to level the playing field and guarantee that old plants will be repowered or close.
- A four pollutants approach to pollution reduction, seeking a 75% reduction in sulfur dioxide and nitrogen oxide, a reduction in mercury by 90% from 1999 levels and a cap on power plant carbon dioxide at 7% below 1990 standards.
- Specific goals for reductions in Greenhouse Gases.
- A more inclusive net metering law. Connecticut allows both residential and commercial net metering with no limit. Expand net metering to include wind and allow net metering of both solar and wind at commercial locations.
- Declare the congested areas of New York State, such as New York City and Long Island, a “Clean Energy Zone.”

A truly sustainable energy plan for New York will put solar panels on our rooftops, especially in urban, metropolitan areas, and wind generators on our farms, diversifying farmers’ income resources. This will allow New York to become increasingly energy autonomous and economically prosperous.

HEALTH IMPACTS

Because ecosystems have extensive, but finite, capacity to provide resources and absorb waste, the damage society inflicts on the environment, can be ignored for a long time. Eventually, however, the air and water become dangerously loaded and begin to inflict damage on the human population, and these are observed as health impacts. As we have permitted industry to discharge vast amounts of pollution, we now breathe the polluted air industry creates. While it may be difficult to set a price on clean air, we suggest the State begin to quantify the negative impacts of dirty air.

True cost of air pollution: In an extensive statistical study on the health effects of air pollution, Abt Associates reviewed the results of many medical studies. It statistically correlated 30,000 deaths per year with operation of power plants. Abt noted that 1,870 deaths occur in New York, and the number is 2,290 for the greater New York Metropolitan area. In looking at other effects for New York State, the study found power plants responsible for 37,000 asthma attacks; 1,180 cases of chronic bronchitis; 1,260 cardiac and respiratory hospitalizations; and 321,000 lost sick days.

When calculating the true cost of electricity, we suggest that this study forms a good basis for determining the huge social and economic costs of the current level of fossil fuel use. For example, if we assume a cost of as little as \$56 per sick day—that is, \$7 per hour for an 8-hour day—the total for those 321,000 sick days per year is just under \$18 million. This, of course, in no way comes even close to the actual cost. New York State has millions of well-educated workers in fields such as financial, computer, and legal services, whose time can easily be worth \$1,000 or more per day to their employer. If those workers make up even 10% of those sick days, the cost of lost productivity balloons to \$48 million or more. The same technique can be used to make estimates of the other categories of harmful effects.

While the productivity losses are huge, these are assumed by the members of the society as a whole, not as costs to the power industry. We would like to see dollar amounts attached to these health effects. These dollar amounts would be used to quantify, in a small way, how the destruction of at least one resource—air—has an impact on the society. Right now, when deciding between siting new plants or investing in energy efficiency, health costs, as well as the cost to the rivers, streams and the animal populations, are being counted as zero.

We believe that internalizing all these costs would greatly enhance the cost-benefit analysis. Without examining health and environmental costs, zero-emissions technology appears expensive by comparison with fossil fuel: The air impacts of both are being calculated at the same rate, namely zero. The difference is that the air impacts of zero-emissions technology really is really zero. The air impacts of the fossil fuel industry are millions of dollars.

Thus, cost benefit analysis is skewed in favor of the polluting industries, when there may be much greater benefit to humans and nature in pursuing EE or new technologies. If we implement

cleaner air technology, we will see the costs of illness, medical treatment and lost productivity declining, and quality of life dramatically improving.

In all, the Abt study finds monetary benefits of \$100 billion if we cleaned up power plants, taking a four-emissions approach to reduction. How are we going to take that \$100 billion and put it into EE and renewables?

Health impacts of natural gas: We are also concerned about the health impacts of burning natural gas, since the state is moving to natural gas as the foremost fuel used in electric generation and as a replacement to diesel in the transportation sector. The health effects of the total emissions due to natural gas contributions is not being considered thoroughly.

Although natural gas does not produce the quantities of large particulates of sulfur dioxide (SO₂) that coal does, the combustion of natural gas does produce oxides of nitrogen (NO_x) and carbon monoxide (CO) in quantities comparable to coal burning. Further, NO_x in the presence of sunlight become ozone. This production of ozone accounts for much of the opposition to NYPA gas-fired generation built in New York City to handle summer shortfalls. Ozone is one of the most problematic emissions in our downstate areas. To quote from medical testimony on its physical effects:

Ozone, or smog, oxidizes pulmonary tissue, burning holes through the lung's cell walls, allowing cellular fluids to seep out. Over time, normal ciliated cells are destroyed by ozone and replaced by abnormally squat, thick-walled, squamous cells, causing lungs to stiffen and decreasing the ability to breathe normally.¹¹

Ciliated cells are responsible for trapping foreign matter and sweeping it clear of our mucus membranes. The membranes in turn are an essential part of our immune system, necessary to protect us from bacteria, germs, viruses, dust, dirt and other material. Continued exposure to ozone leads to scars and lesions in the airways.

According to Clear The Air, The National Campaign Against Dirty Power, Ozone is the single most aggressive pollutant attacking vegetation, including U.S. crops.¹² Agriculture is a large and essential industry for New York State. Assessment of crop loss is another cost the Energy Board can attempt to quantify when examining the true cost of fossil fuels.

Dangers of fine particles: The NO_x from natural gas is also converted through chemical interactions into fine particles. These particles are highly acidic, tissue-damaging substances that affect the respiratory tracts of humans and animals. Children are particularly vulnerable. Studies of animals indicate that exposure to NO_x leaves them more susceptible to bacterial and viral

¹¹ Curtis A. Moore, "Dying Needlessly: Sickness and Death Due to Energy-Related Air Pollution", pg. 5, Senate Committee on Environment and Public Works, February 1997.

¹² "Nitrogen Oxides and the Environment", available at <http://www.cleartheair.org/>.

infections and more likely to die.¹³

There are studies that have correlated the relationship between fine particulates and asthma attacks. Other studies solidly demonstrate the relationship between fine particulates and hospital admissions. These studies are motivating the U.S. EPA to regulate particulates of 2.5 microns (PPM 2.5). It now appears from the medical literature that there are no safe levels of exposure to fine particulates. Studies in Europe have concluded that harm can be demonstrated even at “legal” levels.

Therefore, everyone is being impacted by fine particulates with every breath they take, whether they demonstrate respiratory disease or not. Fine particulates are inhaled more deeply into the lung and are more difficult for the body to eliminate than larger particulates. We are especially concerned because natural gas produces more ultrafine particulates (those less than .1 micron), and it appears that there is not a lot of information on the health and environmental impacts of these ultrafine particulates.

While we applaud the Environmental Labeling of Power Sources law that goes into effect soon, we note that it will supply customers with a set of facts, but the facts have no context. People still need a context in which to understand how the emissions listed on their bill relate to health effects. In short, consumers would need much more extensive labeling to understand the health effects their electricity purchase is inflicting on other people—the asthma attacks, hospitalizations, and number of ER visits.

RECOMMENDATIONS:

ACTIONS:

We believe the New York State Energy Board needs to expand the Board upon renewal of Article VI to include the NYS Department of Health. This would promote a better understanding of the relationship between health and energy usage.

POSSIBLE ACTIONS:

- We recommend that in calculating the costs of energy generation, the Board track the costs of health problems and lost productivity attributable to four-pollutants: sulfur dioxide, nitrogen oxides, carbon dioxide and mercury.
- We recommend that the Board assess the costs of crop loss due to acid rain caused by the burning of fossil fuels.

¹³ D.E. Gardner, “Oxidant-induced Enhanced Sensitivity to Infection in Animal Models and their Extrapolations to Man,” *Journal of Toxicology and Environmental Health*, 13 (1984); 423-39; D.E. Gardner, et al., “Influence of Exposure Mode on the Toxicity of NO₂”.

- And we recommend that the Board then compare the costs of investing in energy efficiency and renewable energy alternatives with the true costs to society of fossil-fuel generated energy.

NATURAL GAS

The Draft Energy Plan foresees close to a 75% increase in natural gas (NG) use due to new construction, expansion or conversion to gas powered facilities. This rapid increase in the demand for natural gas will inevitably result in unreliable supplies as neighboring states also compete for this non-renewable resource.

Although cleaner than coal or oil, natural gas combustion is not without resulting emissions. When compared to coal, natural gas contains methane and therefore greater use of NG will lead to greater methane emissions. Methane is 20 times more powerful as a Greenhouse Gas (GHG) than carbon, raising concerns about the global warming effects of increased gas combustion.

Questions surrounding natural gas: In regard to the state's move to compressed natural gas in order to drive down emissions from diesel, we have enclosed the article *Fueling Heavy Duty Trucks: Diesel or Natural Gas?*¹⁴ from the Harvard Center for Risk Analysis (HCRA) (attached). The study indicates that there may be no advantage to using natural gas to replace diesel. The study outlines the advantages and disadvantages to each, and notes that many regulators in Europe are using diesel to stabilize GHG and to meet their compliance with the Kyoto agreements. In Europe, there is a lot of concern over the GHG effects of methane. The more gas that is used, the more methane that is released into the atmosphere.

We are also concerned that the long-term health effects of ultra-fine particulates does not seem to be well researched. This is noted in the HCRA study when it states:

In addition, little is known about whether particulates from natural gas engines have the same effects as diesel particulates in terms of their possible carcinogenicity.¹⁵

This means the Energy Planning Board may be assuming that natural gas will provide benefits that will not materialize.

The enormous proposed increase in the use of natural gas will require a 40% increase in pipeline capacity. The Draft Plan lists all of the pipelines that have been approved. First, these pipelines are going to run through already established, densely populated neighborhoods. Following the initial disruption to these communities, the presence of a pipeline will potentially compromise their safety and/or their capability to respond to a potential explosion.

Environmental impacts of pipeline: Pipeline construction poses serious, negative environmental impacts. For example, the Millennium Pipeline is being built in New York City's watershed, with the possibility of run-off, erosion, sedimentation and nutrient loading. Right

¹⁴ Edmond Toy, et. al, *Fueling Heavy Duty Trucks: Diesel or Natural Gas?*, Harvard Center for Risk Analysis, Vol.8, Issue 1, January 2000.

¹⁵ Ibid., pg. 2.

now, the plan permits the construction company to use explosives to blast in portions of the Hudson River, which are especially sensitive breeding, feeding and overwintering areas for several species of fish. The Federal Energy Regulatory Commission (FERC) has issued interim certificates bypassing environmental review of the project. Clearwater vehemently disagrees with this decision. No large-scale project should be built in an environmentally sensitive area without adequate review and mitigation. If mitigation is not possible, the project should not be allowed to proceed.

Virtually all of our methods of generating energy are huge, have big environmental footprints, and require large amounts of space. All of these faults will be a factor in driving communities to unite against them.

RECOMMENDATIONS:

- **Locate or fund studies into the health effects of ultrafine particulates.**
- **Require an environmental review of the Millennium Pipeline.**

COAL

Using Coal for energy generation is one area where the economics and the environmental impacts of a fuel fall into radically different categories. It is noted in the Draft Energy Plan that coal is the most abundant fuel in the United States, that the U.S. has a large storage of coal and that the price of coal is low relative to the price of other fuels. These factors will drive markets toward use of the fuel.

Nonetheless, burning coal as fuel has severe impacts on the environment, especially its large contribution in the generation of carbon dioxide (CO₂). Coal-burning plants are continually cited as the single largest industrial source of air pollution. The air impacts of the use of coal are noted by the Board in the Draft Plan:

A major consideration in the use of coal as a fuel in electricity generation is the emission of sulfur dioxide, nitrogen oxides, particulate matter, and carbon dioxide.¹⁶

Global warming: The carbon we are loading into the air brings increased global warming, with its concomitant climate change. Such weather related changes will create more volatile weather, with faster alternation from hot to cold, and greater variability in rainfall. In short, climate change implies that an area can experience both more hot and cold weather, more flooding and droughts. The warming of the earth will lead to melting of the polar ice caps. The earth's oceans will rise. Climatologists studying the arctic are reporting that the melting at the poles is arriving ahead of estimates.

The fossil fuel industry has continued to oppose regulating CO₂ emissions, and has spent huge sums attempting to disprove the scientific basis of global warming predictions. The insurance industry, however, is addressing the climate change issue empirically. Insurance companies, having looked at actual increased financial losses due to weather volatility, are moving to guard against future losses by refusing to insure a large amount of the coastal area of the country. New York State has a great vulnerability to coastal flooding. Manhattan, arguably the world's foremost financial centers, is an island. Long Island is another area where even small increases in the height of oceans would have devastating financial impacts.

The Draft Energy Plan recognizes global warming as a danger, but fails to actually make solid commitments to targeted reductions in carbon dioxide output and greenhouse gases. The Planning Board needs to look for ways to cap carbon levels and implement the recommendations of the Greenhouse Gas Task Force.

¹⁶ Draft Plan, pg. 3-185.

Dangers of sulfur dioxide: The U.S. EPA estimates that 70% of SO₂ comes from coal-fired power plants.¹⁷ The sulfur emissions from burning coal are virtually the sole cause of acid rain.¹⁸ These emissions are especially irritating to the human respiratory system. Statistical epidemiological studies demonstrate that proximity to coal-fired power plants is a significant hazard to health. There is a direct correlation to an increase in deaths due to respiratory and cardiac disease in locations where there are coal-fired power plants, as can be seen from the tables in the statistical study by Abt Associates (attached).

Coal and mercury pollution: Additionally, coal-fired plants have failed to reduce their emissions of mercury into the air and are now the only unregulated source of mercury. Nationwide, 34% of the total mercury emitted comes from power plants, and virtually all is from coal-fired plants. According to the EPA, mercury emissions can be expected to climb 33% by 2010. The question is, can New York State protect New Yorkers from receiving this additional mercury?

We understand that the State is funding clean coal technology research. It is also our understanding clean coal technologies receive the largest block of funding from the U.S. Department of Energy of any of the fuel sectors. Clean coal makes significant reductions in NO_x and SO₂, but no technology can change the chemistry of coal. No matter how much cleaner coal is made, there are no significant reductions in carbon. We think money would be better spent on zero-emissions new technologies that will have significant air benefits. The Plan mentions that the use of coal will increase by 1% per year. Again, we think the State should be looking at total material used and total pollutants dumped into the airshed.

Grandfathered coal plants: The State's coal-fired plants have also managed to avoid cleaning up their emissions, using grandfathering clauses, as coal plants elsewhere do. The New York State Attorney General, recently filed suit against the Huntley Steam Station in Tonawanda and the Dunkirk Steam Station in Chautauqua County. These two coal burning plants account for more than 20% of the Nitrogen Oxide and 38% of the Sulfur Dioxide¹⁹ emissions of the total power plant emissions for these pollutants in New York State. This is another example of how the right to pollute is taking precedence over the public's right to breathe clean air.

Old polluting power plants are over-contributing to emissions in the state. Far from causing them to close, market forces and the current deregulated environment, are actually keeping these plants going. It is cheaper to operate old plants because they are long paid for, and their costs are minimal. New plants that have to meet current environmental regulations are therefore economically "punished". Under Article X there is no mechanism to require that new, cleaner plants displace older, dirtier plants. Until an excess of new plants are constructed, old, polluting

¹⁷ U.S. Environmental Protection Agency, "National Air Pollutant Emission Trends", 1900-1992 (Washington, DC, 1993), 3-5.

¹⁸ Union of Concerned Scientists, "How Coal Works", available through their web site at <http://www.ucsusa.org/index.html>

¹⁹ Press Release dated January 10, 2002, Office of New York State Attorney General Eliot Spitzer.

plants will not be forced out of the generation mix. We recommend the state level the playing field by accepting and implementing the pending recommendations of the Governor's GHG Task Force:

- Reduce emissions of Greenhouse Gases by setting a Statewide goal of 10% below 1990 levels by 2012, with a timetable and measurable interim targets to achieve that goal.
- Establish a Renewable Portfolio Standard (RPS) of 10% of all sales by 2012.
- Expand the existing net metering programs to include solar PV installed by commercial customers, small wind and farm-based biomass generation.
- Expand the existing net metering programs for residential customers to include small wind and commercial scale solar PV installations.
- Establish a cap-and-trade program through a Carbon Registry.

NUCLEAR POWER

Nuclear power went from being the energy source that was going to be too cheap to meter, to a power source that is recognized by the financial community as too expensive to fund. Nuclear energy would be unable to survive without huge government subsidies that remove the risk from the power company shareholders and place it on the taxpayers and the society as a whole.

For example, the U.S. Senate just renewed the Price Anderson Act. This law limits the liability of owners of commercial nuclear power facilities, in the event of a nuclear accident. Each nuclear power plant must carry \$200 million dollars of primary insurance and contribute another \$88 million to an industry-wide pool. The pool totals approximately \$9 billion that could be paid out in the event of an accident at any of the 103 nuclear plants currently operating in the United States.

This \$9 billion figure can be seen as wholly inadequate even in comparison with money spent following the World Trade Center disaster. This leaves taxpayers open to paying the damages for any nuclear accident that exceeds that \$9 billion figures.

Environmental impacts of nuclear energy: Nuclear power is not clean energy. Uranium mining involves toxic acids and is environmentally destructive. As noted by the Union of Concerned Scientists, uranium mining contaminates ground water with both heavy metals and radioactivity.²⁰ All the waste debris of uranium mining is radioactive and requires special handling.

Nuclear power is also a major contributor to greenhouse gas emissions. The uranium enrichment process which makes the fuel even more radioactive, requires huge amounts of fossil fuels, as does the process that pelletizes the fuel.

Once in operation, nuclear power plants require huge amounts of water for their cooling systems. For example, Indian Point draws more than 2 billion gallons of water per day from the Hudson River, and then returns the water heated. This cooling method is using a living, natural system for heat dispersal. The Hudson River receives the impacts of providing this service: massive fish and larvae kills, increased water temperature and radioactivity from small leaks in the cooling system. Now 15 years overdue in meeting SPDES renewal permit conditions in a process known as the Hudson River Settlement Agreement, the plant, along with Bowline and Roseton should be required to use cooling towers to minimize these impacts if it is not closed.

Financial costs: The financial costs to fund the storage of nuclear wastes is far too great to be shouldered by industry, and will be subsidized by taxpayers and ratepayers. Because radioactive waste continues to produce ionizing radiation for thousands of years, it presents long-term, even if low level, health hazards to all living things. However, the decision-making processes which

²⁰ Union of Concerned Scientists website at <http://www.ucsusa.org/energy/brief.nuclear.html>

address these issues places great weight on industry's needs, while disregarding public sentiment by the very taxpayers who are and will shoulder these costs.

Plants as terrorist targets: Perhaps most importantly, since September 11, nuclear power plants are now recognized as posing unacceptable risks to the communities in which they are sited. Recent documentation by Secretary of Defense Rumsfeld and President Bush in his 2002 State of the Union address offer documented proof that nuclear power plants have been sited as future terrorists targets. The Nuclear Regulatory Commission has primary responsibility for managing the specific risks associated with nuclear power plants. Ultimately, though, it is society-at-large which must make the determination as to whether or not the risks these plants present are tolerable.

In the face of the significant environmental impacts and serious health and safety risks associated with nuclear power, one might reasonably ask, "What is this highly radioactive nuclear fuel doing inside that power plant?" The answer is that it is merely heating water to turn a turbine. In other words, nuclear fuel is used to generate electricity in much the same way it's been done for the past 70 years by fossil fuels and hydropower, only at a much greater cost and with an added element of the potential danger of a nuclear accident or incident. In comparing the total government spending on nuclear power vs. renewables, the ratio is approximately 98% for nuclear to less than 2% for solar, wind, geothermal and other zero-emission energy sources. If this investment of resources were reversed, more jobs would be created and safer, more sustainable distributed systems of energy production would dominate the industry.

Indian Point: Clearwater is working with the Indian Point Safe Energy Coalition (IPSEC), a broad-based coalition of environmental and grassroots groups, municipalities, civic organizations and concerned individuals that are calling for the decommissioning of Indian Point 2. Indian Point was sited in its present location before the government developed its current siting guidelines for nuclear power plants. The Indian Point nuclear power plant is located in the most densely populated area in the nation. Eight percent of the nation's population or 22 million people live within a 50-miles radius of the plant. This has been designated as the "peak injury zone."²¹

Indian Point has a long history of problems, including backlogged safety violation, leaks and other accidents. Despite the change in management and intense involvement by NRC, IP2 is still designated as the worst nuclear power plant in the U.S., as documented in the March 8, 2002 issue of *Newsday*.²² Nuclear energy facilities are not permitted to operate without a viable evacuation plan. Given the gridlock that is already experienced twice a day in the greater metropolitan area, IPSEC believes that it is not possible to develop an evacuation plan that will adequately protect human health and safety.

Furthermore, we are concerned that there are no epidemiological studies being done on the people living near nuclear plants. Health is where the deficiencies of our current energy policy hide.

²¹ IPSEC can be contacted through their web site at <http://www.closeindianpoint.org>

²² Thomas Frank, *Indian Point Worst Nuclear Power Plant in U.S.*, available through their website at <http://www.newsday.com/>.

Finally, in light of the events of September 11, 2001, and the increased likelihood that Indian Point and other nuclear power plants in New York State will be decommissioned before their permits expire, it behooves the Energy Planning board to create a contingency plan, especially with regard to energy reduction and energy efficiency, and to place greater emphasis on an accelerated schedule for phasing in renewables as part of a long-term solution.

RECOMMENDATIONS:

- **Decommission Indian Point 2.** It's simply too risky to continue operation.
- **Require the reinforcement of the physical structure** around the stored radioactive spent fuel rods and other vulnerable infrastructure at Indian Point and at other nuclear power plants in New York state.
- **Phase out of all nuclear power plants** in New York.
- **Begin epidemiological analysis:** Assess need and provide recommendations for funding studies to analyze health effects to populations around nuclear power plants. People should not pay with their health for the continued benefit of Entergy and other utility companies.
- **Prepare a contingency plan** for replacing or reducing need for lost capacity in the event of early closure and decommissioning of nuclear facilities in New York.

MARKET CONDITIONS

Clearwater believes that pure market deregulation will (and has) led to excesses which will require a measure of public-sector intervention. We urge the state to incorporate the lessons learned elsewhere so we do not have to repeat them. The fundamentalist economic theories that undergird deregulation have led to some oversimplification in the discussion of energy deregulation. We are outlining some of our concerns for the Planning Board here. The two largest are:

- The State's newly deregulated energy market includes many players, including generators, providers, marketers, brokers, aggregators and traders. Each group has its own costs including rental space, staff, management, public relations, advertising, legal, etc. These firms must generate sufficient money to carry that overhead and return a profit to their shareholders. We fail to see how the energy industry in New York State can support the additional burdens of capital debt and profit added by these market players, while creating positive outcomes for the consumers and the society. Put simply, you cannot add costs, and expect prices to drop.
- Second, the State seems to be proposing energy markets in which consumers purchase energy as they buy food at the supermarket: lots of choices, and if you don't see what you like, go down another aisle or to another store. The State seems to be ignoring the fact that many of the above-mentioned market players will push energy markets to act more like commodities markets because that's where companies can make the highest profits. Commodities are among the most volatile markets. Market players seek volatility, and often create it, because they earn huge sums of money from the spread between spikes and drops. Responsible financial advisers will not discuss commodities trading unless a person has a lot of money to lose and high risk tolerance. We suggest that the cowboy economy of New York's energy market will work against small consumers who are the majority of users.

We also believe discussions of market forces must go beyond the simplistic slogans. We'd like to make some real-life observations about the current "free markets:"

1. **There is no level playing field.** The traditional energy production industry, that is, oil, coal and nuclear, receives some \$32 billion per year in subsidies.²³ When the industry talks about government stepping out of the way so businesses can compete on a level playing field, coal, oil and nuclear do so while standing on a mountain of taxpayer-generated benefits. Small, emerging market segments can't compete with these already wealthy and powerful businesses. Thus, the nation continues to subsidize these mature industries while smaller innovative technology companies struggle. Free markets tend naturally toward monopolistic structures, at the elimination of consumer choice.

²³ Doug Koplow, "Energy Subsidies and the Environment" in *Subsidies and the Environment: Exploring the Linkages*. (Organization for Economic Cooperation and Development, 1996).

2. **Markets cannot differentiate between “good” and “bad” outcomes or “good” and “bad” expenditures.** Our current accounting systems consider all expenditures as positive economic activity without regard to the origins of or reasons for the expenditure. Although the World Trade Center disaster, with its huge loss of life and property, is a loss to the insurance industry, the huge clean up effort and capital expenditures to rebuild will generate a large spike in Gross State Product (GSP) and will be registered as a positive in GDP. The current accounting methods do not differentiate between clean up and repair after a tragic loss and expenditures that really do improve the quality of life within the society: building schools, repairing and expanding the infrastructure, public health projects, etc. The environmental destruction and negative health impacts of our current energy policy make positive contributions to the GSP as people seek medical care for their health problems, and governments seek to ameliorate environmental damages such as those caused by MTBE. The Energy Board analysis must include qualitative recognition of whether expenditures are for replacement, or for growth that creates other deleterious effects, or true advancement of society’s needs
3. **Markets don’t automatically know what’s best for the society.** Government has traditionally had a role in all those areas where important values of society need protection: public health, worker health and safety, consumer well-being and protection from market fraud. Government has had an active role in protection of the natural environment because it is the shared wealth of all people, the basis for all human health and well-being. In many cases, government regulation only occurred after there was great harm done over a long-period of time
4. **Consumers have little leverage in energy markets.** The most powerful leverage consumers ever have to drive down costs in the market is their ability to walk away. In electricity markets, consumers have virtually no place else to go.
5. **The values of deregulated energy markets are not society’s values.** These markets seek to expand consumption and make financial returns to executive and stockholders, while humans value health, family and community. The difference between the two must be honored. The more fundamentalist a market may be, the more likely it is that broader social values will be trampled.
6. **Deregulated energy markets do a poor job of calculating and protecting future losses.** The markets don’t do well calculating the effects of today’s actions on the future, especially when costs are uncertain. For example, despite repeated analysis that security at airports endangered passengers, airlines looking at their bottom lines could not justify investing in upgrading security and inconveniencing passengers based on a future possibility. Since a serious security breach had never occurred and impacted the airlines financially, they could not estimate the future cost vs. the present benefit of not upgrading security. The same is true of the environment. When ecosystems collapse and the full social and economic impact

of that collapse is felt, then markets will be able to calculate the value of the remaining scarce resources. Just as airport security will not bring back the thousands that died at the World Trade Center, ecosystems and human lives lost to long term damage from the energy sector cannot be replaced.

7. **Government plays an important role in R&D of new technologies.** Contrary to the impression given by industry, research and development on new technologies that have a long incubation time or involve large amounts of market risk, have traditionally been funded by government. Transistors, jet engines, computers, and telecommunications satellites, all resulted from long-term government investment. Even the internet was a 30-year investment by American taxpayers before it was “privatized” in the 1990s. Most of these developments were in some way found to be necessary for national defense. We do not believe it makes sense to have the fossil fuel industry decide how to go forward with solar or wind technologies that compete with them and will ultimately lead to their phase-out. Similarly, energy security is vital to national security—and fossil fuel dependence is inversely correlated with national security.

Summarizing, we are not convinced that market forces will encourage maximum economy, leading to lowest retail price for energy; and especially market forces will not cause a comprehensive shift away from reliance on large central fossil-fueled generation and to reliance on smaller, distributed, less polluting forms of generation. Even Alfred Kahn, Professor Emeritus at Cornell University and former PSC Commissioner, who originally conceived of deregulation, now acknowledges that while this form of hands-off privatization may work well for airlines and other industries, it may not be an appropriate mechanism for the energy industry. Professor Kahn points to the fact that some consumers depend on a single local utility as evidence that their service must be protected. He now says that regulation will be required to assure competitors access to the utility companies' lines and wires, on terms that permit them to compete if they are equally efficient.

ARTICLE X

Clearwater is currently participating in a coalition of environmental and citizens' grassroots organizations called the New York State Sustainable Energy Campaign (NYYSSEC). NYSSEC grew out of the issues being confronted by many different groups around the state, particularly in relation to the siting of power plants. Article X is the law that regulates the siting of power plants. The Draft Plan characterizes Article X as successful in protecting the environment. We do not know what evidence the Board is using for that statement, other than the fact that only gas-fired plants are being sited. We believe the environment is, in fact, left vulnerable by Article X, since each plant is looked at in isolation from any other, and each plant's impacts are looked at in isolation from the environmental setting and regional character issues without consideration of cumulative impacts.

The view from communities: The people in communities where Siting Boards have convened would disagree vehemently with the Planning Board's characterization of Article X. They tell a different story. These people confront a confusing legal process. People describe trying to participate in Siting Board meetings while going to work and caring for their families as an overwhelming difficulty. People describe arbitrary decisions by the presiding examiner that cut them out of the process after they had given up hours of their time. Legal fees needed to mount a legal opposition to plant siting can overwhelm citizens' groups.

Because "need" for a new power plant is defined away on the assumption that all new generation contributes to providing reliability and market competition, participants find they are in a process that seems to have a foregone conclusion before the community even begins its involvement. We believe communities are largely correct in this assertion. As an industry representative stated at the March 1 Albany Law School Forum on Article X, "It's a Siting Board. It's supposed to site power plants." In other words, Siting Boards are not supposed to find against siting new plants.

Going faster vs. going slower: Industry has been heard, loud and clear: Its position is that, for the most part, the Article X process is working; now just make it work faster. This is the exact opposite of what communities are asking for. Power plants are going to be in operation for decades. Communities have a right to sort through their needs and have some impact on the process. These power plants will impact them in a most personal way for years to come—right where they live, work, and raise their children.

The people in the community may seem to be an unnecessary obstruction when business is looking at money being spent as the clock ticks during hearings. Yet the Planning Board should not forget that these communities may bear the greatest price of power generation. These are the people who pay for electrical energy with their health or the health of their children. Those who live in neighborhoods with nuclear power are risking everything that humans value: their well-being, the well-being of family members, their homes and personal property, and their

communities. Siting Boards must recognize the difference between dollars and lives. This is why we are recommending much greater depth of analysis of health risks from energy generation.

Impacts on the Hudson River: We at Clearwater are extremely concerned about the potential for harm that can be done by siting power plants along the Hudson River. Power plants, even modern combined cycle plants, require enormous amounts of water. To industry, the Hudson River represents a huge cooling system. Power companies seem to envision a Hudson River dotted with power plants. The Hudson River is a vast living ecosystem. It supports marine life and wilderness areas that in turn support jobs in the tourism and marine industries.

The current version of Article X will not provide sufficient protection for the River. Cumulative environmental impacts are not examined. Regional character and special regional attributes are not considered. Further, the Siting process effectively gives too much power to power companies in the selection of a site. The Siting Board is not allowed to look at alternative sites when a private applicant has offered a single site. It must either license or deny the proposed power plant. The only test applied is whether the applicant can profitably generate power at the proposed site.

Alternative sites and loopholes: We believe that Siting Boards understand their mission is to say ‘yes’ to power plants whenever possible. There must be requirements in Article X to search for, and propose only the least impacting sites. We believe alternative siting suggestions must always be allowed, either from the Siting Board or the community, if industry is unwilling to offer such alternatives, but the burden to demonstrate they are reasonable and available should remain with the applicant and not be shifted to intervenors.

We also believe that it is essential to close the 80 MW loophole. In some locations, power companies are siting multiples of 79.9 MW units or double 40 MW units to “game” the Article X siting process. Again, the examination of environmental impacts must be cumulative. The State is allowing the siting of many small plants with no calculation of their impacts overall.

Clearwater believes that a better answer to siting more power plants is energy efficiency and zero-emissions technologies.

The members of NYSSEC will be coming to Albany to talk to law makers about Article X issues and the improvements that are needed. NYSSEC is looking for the following:

- **A greater public voice.** The public should receive earlier decisions on intervenor status and financial assistance for legal services.
- **All hearings and Siting Board meetings to be local, public and publicized.** The Siting Board should contain community representatives.

- **A thorough analysis of need.** Whenever possible, methods of using energy efficiency to ensure lower demand should be sought first. Markets should not decide how many environmental impacts are placed on a community. New York State must decide what its needs are, and seek to meet those in a way that causes the least harm to the environment of the state as a whole, and that does not over burden communities.
- **Single Site Selection yes-or-no must be eliminated.** Siting Boards must be able to examine multiple plants at one time, weighing the positives and negatives of each plant. Then the Board can select the plant that really offers New York State the most benefits with the least number of harmful impacts. This allows power companies to do what they claim they want to do in a free market: compete with each other to provide New Yorkers with the best possible solution.
- **80 MW Loophole must be closed.** New York State must track all power plants over the size of 15 MW that emit into the air or water.
- **Cumulative impact studies.** Multiple plants are seeking to site in close proximity to each other. We want to know that the environment is not going to be overstressed, and that residents are not accepting undue health risk. Potential interactions with other industries, and the effect that siting will encourage further industrialization in a region must be considered.
- **The public needs more time.** Thoughtful analysis never harms a process. There should be more time before and between hearings, conferences and deadlines, for towns and community groups to prepare. Please remember people are working, caring for family, and carrying on their normal lives while attempting to participating in a process they didn't ask for.
- **Clean up old polluting power plants.** There are 20 large grandfathered power plants in the State. Each new power plant adds to the burden of the airshed. As noted in the March 1 edition of *The Albany Times Union*,²⁴ it is possible for power plants to get sited quickly when it's a win-win for both the power company and the community.
- **Develop Environmental Justice Policies.** Communities that are already burdened must not be forced to accept additional pollution. The State must ensure fairness.
- **Restrictive Use of Small Diesel Generators.** Use of small diesel generators to meet peak power demand cannot be sustained on any grounds.
- **Intervenor funds** for communities to get legal assistance.

²⁴ Dina Cappiello, "Power Plant wins quick OK", Albany Times Union, March 1, 2002, pg. 1

JOBS AND RENEWABLES AS A SOLUTION

The Draft Plan covers the relationship between Energy and Economic Development. Right now, clean, sustainable energy policy is joined with, not in conflict with, sound economic policy.

Market Developments in Renewables

The easy answer to New York's energy needs seems to be to allow the power industry to finance and build new plants. We believe this is not in the best long-term interests of the people of the State of New York. A close look at events in the markets for renewables favors making large-scale investments in energy efficiency and renewable energy technologies. According to the January 25, 2002 issue of *The Christian Science Monitor*,²⁵ the Pacific Northwest is using green power to build its economy. It is estimated that jobs in renewables, such as the manufacture and installation of photovoltaic, wind generation, and geothermal systems, are already adding \$1.6 billion to the economies of Washington, Oregon and British Columbia. Recent developments in the area of production and installation of zero-emission or renewable energy are inspiring.

New York State should participate more aggressively in these markets. Here are the figures: According to a recent article in *Fortune Magazine*,²⁶ the world-wide market for wind power has been growing at the rate of 25% per year during the past decade. Solar power is only slightly behind at 20% per year for the same timeframe. Last year, sales of PV were up 38% worldwide. The market outside the U.S. is huge and developing much faster than the domestic market. Europe is on track to have 60 billion watts of wind generation by 2010.²⁷ One would be hard pressed to find a faster growing business segment.

New York exports dollars for fuel

As the Energy Board looks at whether to fulfill New York's energy needs with ENERGY EFFICIENCY and renewables or to allow companies to site new plants, the Board is shaping the economic future of New York State for years to come. Power plants are not gifts from the power companies. Their huge capital costs will be borne by New York's consumers. Then the plants have to purchase fuel. As the Draft Plan notes, since New York State has no sizable intrastate supply of fossil fuels, we must import vast quantities of fuel from other states and countries.

The constant need for fuel creates an income stream for fossil fuel companies in other states, drawing money out of New York State for as long as the plants are operational, certainly for decades. In addition, many of the companies that own these plants are large national or multinational corporations headquartered elsewhere. Therefore, the profits generated to the company are exported from New York. We would like to see some number generated on a

²⁵ Brad Knickerbocker "Northwest aims to be clean energy leader", available at *The Christian Science Monitor* web site: <http://www.csmonitor.com/>

²⁶ David Stipp, "The Coming Hydrogen Economy," *Fortune*, November 12, 2001, pg. 96.

²⁷ Ibid.

megawatt basis as to dollars retained in-state versus dollars sent out-of-state. The more power plants we site, the more money that New York ships out of state.

It must be understood that siting more power plants is 1) a decision about how much wealth created in New York will be retained here and 2) a commitment of the money of New York consumers to support the fossil fuel industry, instead of local industry.

New technology as a jobs generator

When extolling the benefits of building new power plants, power companies point to the number of people that will be employed and payments to the tax base as important economic contributions.

To quantify the number of jobs attached to generating power at traditional oil, coal or nuclear power plants, the U.S. Bureau of Labor Statistics (attached) reports that there are only 55,000 people nationwide who held jobs in these categories. That number is unlikely to change in the next eight years, because it's a mature industry and thoroughly automated. A mature industry that's highly automated does not generate a large numbers of jobs. The first bulleted item on the report notes, "Overall employment of operators, distributors and dispatchers is expected to change little due to increasing industry competition."

Even including all the people in ancillary functions: billing and accounting, customer service, sales and marketing, legal services, public relations and advertising, maintenance, etc., the power industry employs very few people.

These ancillary people would have similar jobs even if energy were being produced by zero-emissions or renewable technologies. See "The Work That Goes Into Renewable Energy,"²⁸ by The Renewable Energy Policy Project (REPP) (attached). The study specifically documents the benefits of producing and installing renewable energy systems. The report surveyed and quantifies the number of jobs created by the manufacture and installation of solar photovoltaic (PV) systems, the manufacture and installation of wind mills, and additional jobs created through biomass co-firing.

The REPP study notes that to manufacture, install and service photovoltaic panels sufficient to generate 1 MW of solar capacity, 35.5 person years of employment is created; that is, 35.5 people are employed for a year. For every megawatt of wind power developed, the production and installation of wind mills will create 4.8 person years of employment.

Until New York develops its own production facilities utilizing PV and wind generators or other devices, products will have to be purchased from outside the state. Nonetheless, the creation of

²⁸ Virinder Singh with BBC Research and Consulting and Jeffrey Fehrs, "The Work That Goes Into Renewable Energy", The Renewable Energy Policy Project, November 2001.

the human infrastructure can take place without waiting for production facilities to be available. In other words, a work force with the technical knowledge necessary for the installation and production of PV and wind will draw the businesses involved in production.

Jobs will retain money in New York

The dollars invested in clean technologies will create good jobs right here. There is no cost for imported fuel. Workers will be spending their dollars in New York State, and funding the taxes in local communities. No one needs to inform the Planning Board that the upstate economy needs jobs. The jobs created by renewables are the kind of skilled labor that is well-paid and allows people to their support families

As noted in the section on wind generation, like other industries, renewables pay taxes. The REPP study notes the kind of money returned to communities by a wind farm in Iowa: \$2 million per year in payments to counties and school districts and \$640,000 to landowners. Those landowners could be our upstate farmers who are struggling .

Furthermore, manufacturing the new hardware for renewables will allow New York to become an exporter of technologies in what is a rapidly expanding international market.

To us the State has a clear choice: to fund industries and shareholder profits of established corporations outside the State or create community-building jobs in a growing market with a high dollars-retained ratio.

RECOMMENDATIONS:

- Increase investment in energy efficiency (EE) and conservation programs to \$200 million.
- Establish an aggressive Renewable Portfolio Standard.
- Implement aggressive energy efficiency measures, such as superinsulation, weatherization, motion sensitive devices, etc in all publicly owned buildings and provide incentives for the private sector to do likewise.
- New York should implement energy efficiency in all state owned buildings and should provide incentives for the private sectors. Convert all non-resident electricity, outdoor and hall lighting, for example, to renewable energy.
- Use the half million units of public housing as locations for training in alternative energy.

CONCLUSION:

In summary, Clearwater would like to thank the members of the New York State Energy Board for their thorough and admirable work on the Draft Energy Plan. We would like to reiterate the need to assess the “triple bottom line” of economic prosperity, environmental quality, and social equity in all analyses regarding energy policy.

We are at a moment in history where the decisions we make now regarding energy policy will have long-term impacts on the future of New York and potentially the rest of the world. New York can continue on a path of business-as-usual energy policies, tweaked slightly to assure only token opportunities for conservation, efficiency, and renewable sources. Or we can accept the challenges presented by impending global warming, increasing health disorders, and rapidly deteriorating ecosystems by taking an aggressive approach and becoming leaders in sustainable energy policy. The benefits that will accrue include increased jobs for New Yorkers while keeping New York dollars in state, rather than exporting this currency to pay for fuel from external sources.

P.T. Barnum is credited with having said, “Money makes a terrible master, but an excellent servant.” The same can be said of the marketplace. It is clearly the role of business to provide goods and services in a profitable manner. The role of government is to ensure this happens in a manner that is fair, equitable, and efficient, and protects human health and the health of the natural environment.

Finally, in the face of the possible closure of Indian Point and other nuclear power facilities because of unacceptable risks they pose, the Energy Board must revisit their analysis and provide recommendations for safer alternatives.

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