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Submission

Of

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To

The U.S. Nuclear Regulatory Commission Public Hearing

on

**Potential Environmental Impacts From a License Renewal of Indian
Point Nuclear Power Plant**

Colonial Terrace, 119 Oregon Road
Cortlandt Manor, NY

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Introduction

Madame/Mister (?) Chair and members of the committee, my name is Dr. Patrick Moore, I am a co-founder of Greenpeace, former Greenpeace leader, Chair of Greenspirit Strategies Ltd and advisor to the New York Affordable Reliable Electricity Alliance.

Thank you for the opportunity to come before you today to testify about why, from an environmental perspective, nuclear energy and Indian Point are so important to the energy future of New York.

It's an important topic, and a very positive one, from the point of view of the state and planet's environmental health.

There are few places where nuclear power makes as much sense or is as important as in New York. Indeed, the state is a microcosm of the challenges America and the world face to have ample, clean and reasonably priced electricity.

As such, I strongly support renewal of the license for the Indian Point nuclear plants in Westchester, which generates 30 percent or so of the electricity used in the New York metro area.

But before I move on, let me first say a few words about who I am and where I've come from.

Co-Founding of Greenpeace

In short, my story involves having been born in the tiny fishing and logging village of Winter Harbor, British Columbia on the northwest tip of Vancouver Island, through to my studies of the life sciences at the University of British Columbia, to my transformation to environmental activism in 1970 when a handful of us found ourselves in a Vancouver church basement planning a protest campaign against US hydrogen bomb testing in Alaska – that was the birth of Greenpeace.

I've been in the international environmental field ever since – as a founding member of Greenpeace, having served for nine years as President of Greenpeace Canada and seven years as a Director of Greenpeace International, during which time Greenpeace became the world's largest environmental activist organization.

From Confrontation to Consensus

But by the mid-1980s Greenpeace had grown from that church basement into an organization with an income of over US\$100 million per year, offices in 21 countries and over 100 campaigns around the world. We had won over a majority of the public in the

industrialized democracies. Presidents and prime ministers were talking about the environment on a daily basis.

I left the organization in 1986 because for me it was time to make a change. I had been against at least three or four things every day of my life for 15 years; I decided I'd like to be in favor of something for a change.

The Changing View of Nuclear Energy

In the early 1970s, I believed that nuclear energy was synonymous with nuclear holocaust, as did most of my Greenpeace compatriots.

That's the conviction that inspired Greenpeace's first voyage across the North Pacific coast to protest the testing of U.S. hydrogen bombs in Alaska's Aleutian Islands.

Now, you might be surprised to hear me advocate so strongly for nuclear energy. But the fact is a lot has changed in the 35 years since that initial voyage, and my views have changed along with these new circumstances.

As an advisor to AEA, and indeed as co-chair of the Clean and Safe Energy Coalition along with Gov. Christy Todd Whitman, I make it widely known that I strongly believe nuclear energy is the electricity source that can save our planet from another enormous challenge: potentially harmful climate change.

Allow me to explain.

Climate change is now high on the global agenda, witness the President's upcoming climate change talks in Washington, and I believe nuclear energy holds the greatest potential to arrest the dangers we face from global warming. It is the only non-greenhouse-gas-emitting power source capable of effectively replacing fossil fuels and satisfying growing demand.

And with Mayor Bloomberg's 2030 Commission projecting the growth of the city's population by one million over the next few decades, New York's power needs can't be expected to shrink.

Nuclear energy is already the second-largest source of electricity in the United States, and it accounts for almost one-third of New York state's electricity.

Within this state—and across the country—the demand for baseload power is growing, while climate change remains a potential threat. Nuclear energy is a clean and reliable way to meet that growing demand in the face of the possible threat.

Hydroelectric is largely built to capacity. And while other key renewable energy sources will play a growing role, wind and solar power are unreliable and intermittent. They

simply can't provide "baseload" electricity - especially in densely populated areas like downstate New York.

Let me be clear, however – nuclear energy cannot meet our energy requirements alone. In my estimation, a program of nuclear plus renewable and proven generation technologies must form a key portion of the power mix, including wind, biomass and geothermal.

In short, the path toward cleaner air lies in the reduction of fossil fuels in favor of a mix of nuclear energy and renewables.

A growing consensus among environmentalists, politicians, industry and labour groups, academics and community leaders strongly supports a move in that direction.

More About the Benefits of Nuclear Energy

Allow me to make three key points:

Nuclear energy is reliable and affordable

Nuclear energy makes economic sense. The cost of producing nuclear energy in the United States is on par with coal and hydroelectric. That's a very important consideration in New York, which has the country's second-highest electricity costs. This impacts the poor and elderly, in particular, and makes it difficult for the business sector to operate efficiently as well.

Nuclear power is safe.

Worldwide, nuclear energy is one of the safest industrial sectors. Here in North America, no one has been harmed by a radiation-related incident in the entire history of civilian nuclear power generation. Indeed, it's proven safer to work at a nuclear power plant than in the finance or real estate sectors.

A 2004 Columbia University Study of 35,000 respondents concluded that "...nuclear power plant workers in the United States...live longer and have significantly lower cancer rates compared to the general population."

Very much related to the topic of safety, people often talk about the dangers of nuclear waste. The notion is misleading, as used fuel is not 'waste'. After its first cycle, spent fuel still contains 90 percent of its energy. Future generations will be able to put this valuable resource to work, powering the country.

Nuclear energy has strong environmental benefits

Nuclear energy has the lowest impact on the environment – air, land, water and wildlife – of any major energy source. Not only does it produce no harmful greenhouse gases or controlled air pollutants, but its waste byproducts are isolated from the environment.

As well, nuclear energy requires less land to produce the same amount of electricity as any other electricity sources.

Nuclear power plants improve air quality by reducing smog. It is well established that this pollution has harmful health effects, especially for children and the elderly. This needs to be addressed now. Downstate New York arguably has the worst air quality of any region in the country, thanks to high levels of ozone and particulate pollution.

Governor Spitzer cites the following U.S. EPA statistics about New York on his website: pollution from coal power plants shortens the lives of 1,212 citizens annually, causes 164,612 lost workdays, 1,191 hospitalizations, and 28,665 asthma attacks.

More On Indian Point

I would like you to consider the following points about Indian Point nuclear facility:

1) Indian Point nuclear makes New York a cleaner, healthier place

- Indian Point mitigates 14 million tons of CO₂ annually. In fact, New York has the fifth lowest per capita amount of CO₂ emissions of any state, because approximately 45 percent of its electricity comes from nuclear and hydro sources.
- The American Lung Association's State of the Air 2007 gives several counties in New York State failing air quality grades and the U.S. EPA says New York has some of the worst air in the country. The situation would be even worse without Indian Point.
- It would require four to five natural gas fired power plants to replace Indian Point's 2,000 megawatts of electricity. This would increase toxins and airborne particulates significantly, which we know are linked to asthma and other respiratory illnesses.

2) Indian Point is compatible with a clean, thriving Hudson River

- Back in the early 1970s when my colleagues at Greenpeace were advocating for fundamental environmental changes, the Hudson River used to be extremely polluted, "dead" in some areas, and was an international disgrace. Since then, Indian Point's two current operating plants were built.
- Bobby Kennedy recently said, and I quote, "This waterway was a national joke in 1966 ... It was dead water for 20-mile stretches north of New York City, south of Albany. It turned color. It caught fire ... Today it's the richest body of water in the North Atlantic region, producing more pounds of fish per acre than any other waterway in the Atlantic Ocean north of the equator."
- Indian Point not only is compatible with a clean Hudson River, but by mitigating pollution from other plants that cause the release of other harmful substances, including acid rain, it makes the Hudson cleaner.

3) Nuclear energy from Indian Point is much safer than the alternatives

- If the power generated by Indian Point nuclear plant was replaced with coal power almost 6,300 tons of SO_x emissions and over 1,400 tons of NO_x emissions would be released into the New York air every year. Also released would be 48 tons of particulate matter and almost 1,500 tons of CO would enter the atmosphere.
- Replacing Indian Point energy with natural gas energy isn't much better: 212 tons of SO_x and 679 tons of NO_x emissions per year would be released. 143 tons of CO and 118 tons of particulate matter would also be generated from creation of natural gas energy.

Conclusion

Nearly 70 percent of Americans think more needs to be done to reduce greenhouse-gas emissions. I believe nuclear energy is well positioned to help achieve this goal and bring New York in line with the federal Clean Air Act.

In order to meet New York's energy needs going forward, and to continue to do so in an environmentally responsible manner, we must mobilize all the clean energy sources available. The time for common sense, for scientifically sound decisions on energy and support for nuclear power generation is here and now.

Thank you.