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Canadian Association of Physicians for the Environment
– the National Voice of Physicians on the Environment and Health

ENERGY AND YOUR HEALTH: A Special Edition Newsletter

From the President

Greetings!

I WANTED TO SHARE A BIT WITH YOU ABOUT the special nature of this summer's newsletter.

You're well aware of CAPE's strong reputation as a leader in the national campaign to ban pesticide use. The work your support has made possible has lead to victory after victory. There are now over 160 municipalities and four provinces that have pesticide bans in place. And of course we are working to extend the ban right across the country.

With your help CAPE has managed to move the campaign to ban pesticides further than it has ever gone.

It's due to the success and progress on our campaign to ban pesticides that we are now able to expand our campaign work to include a new issue, advocating for the speedy adoption of

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Renewable Energy Clear Winner on Climate Change

By Dr. Warren Bell and Gideon Forman

EVERYONE KNOWS COAL IS A MAJOR CONTRIBUTOR TO CLIMATE change. Energy expert Jeff Rubin says it's "the most carbon-intensive fuel out there, emitting twice as much carbon per unit of energy as natural gas and about 20 percent more than oil." At the height of their operations, Ontario's coal plants emitted the greenhouse gas equivalent of almost seven million cars.

But less well-known is the fact our climate is also threatened by nuclear power. The nuclear industry claims it is "emissions-free" but this is not true if we look – as we must – at the full nuclear cycle, which entails production of uranium. When the latter is included, atomic energy is seen to be a large producer of carbon dioxide, the main greenhouse gas.

Dr. Helen Caldicott, the renowned physician and public health advocate, writes: "Nuclear power is not 'clean and green', as the industry claims,

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Cancer Prevention is in our Power

By Farrah Khan

IT'S HARD TO FIND SOMEONE IN THIS COUNTRY WHO ISN'T connected to cancer either through personal diagnosis, or that of a close friend or relative. Recent statistics from the Canadian Cancer Society show that "Cancer is the leading cause of premature death in Canada," and, "approximately one in four Canadians will die of Cancer."

Because of its prevalence, we begin to question the causes of cancer and wonder if there is more we can do to prevent its occurrence. We know now that popular sources of power, namely coal and nuclear energy, are contributing factors to cancer. But there's good news – renewable energy sources offer a solution.

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renewable energy. Conservation, along with wind, solar and other renewable energy options offer tremendous hope as Canada grapples with the many problems posed by our reliance on dirty and dangerous sources of power, especially coal and nuclear.

I hope you enjoy your newsletter. It focuses entirely on CAPE's newly adopted Renewable Energy campaign. Thank you again for supporting CAPE.

Here's to a great summer!

Sincerely,

Dr. Kapil Khatter, MD, CAPE President



... the choice of embracing renewable technology is a must if we're serious about fighting cancer.



In a 2009 position paper authored by Dr. Cathy Vakil and Dr. Linda Harvey, scientific data about the nuclear energy lifecycle and its relation to human health is thoroughly reviewed. According to this paper, health studies from Canada and around the world show an increase in leukemia cases, lung cancer, thyroid cancer, breast cancer and other serious illnesses, with both people who work in and live near nuclear facilities. Chemicals of concern include radon, the second leading cause of lung cancer (after smoking), and tritium, a carcinogen and mutagen. With our heavy water CANDU reactors, Canada releases large quantities of tritium but our use of nuclear energy continues, despite this health risk.

Coal is another cancer culprit, emitting the carcinogens chromium and arsenic. Ontario's Nanticoke coal-fired plant is the largest coal plant in North America and contributes to increased incidence of illness, including severe respiratory problems. According to the Ontario Clean Air Alliance, **nearly 250 people die each year as a result of illnesses related to Ontario's coal plants.** Most are in agreement that we need to find healthier sources to meet our electricity needs.

Renewable energy sources – including wind power, solar photovoltaic, low-impact hydro and geothermal – are free from polluting emissions and cancer-causing chemicals. Though there are some energy costs with initial production and set-up, these renewable energy technologies are much safer than coal and nuclear. While there are unavoidable dangers with using coal (toxic chemicals released into the atmosphere) and nuclear (uranium extraction and toxic waste disposal), there is nothing

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ENERGY MYTH-BUSTERS



MYTH: “Clean coal” technology eliminates all toxic chemicals released from coal plants.

FACT: “Clean coal” end-of-pipe scrubbers will still allow the release of some harmful pollutants and have absolutely no impact on the amount of CO₂ a coal plant releases, thus harming human health and adding to our planet’s global warming.

MYTH: Nuclear energy is clean and green.

FACT: When you take into account the full lifecycle of the process – from uranium mining to waste disposal – nuclear energy contaminates our water, air and soil with cancer-causing chemicals and can have harmful effects on human health and our ecosystems.

MYTH: Wind turbines are bad for your health.

FACT: According to Ontario’s Chief Medical Officer of Health, reports that turbine noise harms health are anecdotal. There is no scientific data that proves these claims. On the other hand, scientific evidence does show that coal power can cause fatal illness.

MYTH: Solar energy only works when the sun is directly shining.

FACT: Solar energy cells work best when they are receiving direct sunlight. However, they continue to work on overcast days and as technology improves their effectiveness under all day light conditions will improve further. Whether solar is used to make hot water or electricity, existing storage options can also ensure coverage for days when there is limited sunlight.

MYTH: Climate change is not caused by human activity.

FACT: The international scientific consensus is that we are approaching an era in history where our energy use is increasing the planet’s temperature to dangerous levels. As atmospheric temperature continues to rise, we will see shifts in weather patterns (such as droughts or rainstorms), and risks to human health from increased pollution and the displacement of populations due to rising sea levels.

MYTH: It’s too late to reverse the effects of climate change.

FACT: By altering our behaviour, focusing on conservation and embracing greener technologies, we can slow down the warming of the Earth.





“Nuclear power results in up to 25 times more carbon emissions than wind energy, when reactor construction and uranium refining and transport are considered.” – *Scientific American*

because large amounts of traditional fossil fuels are required to mine and refine the uranium needed to run nuclear power reactors, to construct the massive concrete reactor buildings, and to transport and store the toxic radioactive waste created by the nuclear process.”

In fact, Dr. Caldicott argues that as the world runs out of high-grade uranium ores the nuclear industry will become even more fossil-fuel intensive: “Within ten to twenty years, nuclear reactors will produce no net energy because of the massive amounts of fossil fuel that will be necessary to mine and to enrich the remaining poor grades of uranium.”

Some may argue, of course, that even renewable energy technologies, such as wind, require fossil fuel for their construction. After all, wind turbines are produced in factories that consume oil or gas, directly or indirectly. But even taking this into account, wind power inflicts far less climate damage than nuclear does. A study published recently in *Scientific American* (November, 2009) states: “Nuclear power results in up to 25 times more carbon emissions than wind energy, when reactor construction and uranium refining and transport are considered.”

The verdict: a society that’s serious about tackling climate change will phase-out fossil and nuclear fuels and instead embrace renewables.

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inherently harmful about setting up a windmill, or a few solar panels, to produce energy.

Sure, some individuals may disagree with a field of solar panels on an aesthetic level. Others may get annoyed with the sounds from a local wind farm. However, with the province of Ontario’s regulation, which demands a minimum 550 metre set-back for the installation of wind turbines, these annoyances can generally be avoided. In time, renewable energy

devices will become a welcomed part of our landscape, just as we’ve become accustomed to seeing telephone poles along our roads and transmission lines in country fields.

Cancer prevention is in our power. It’s in the kind of power we choose to light and heat our homes; play our stereos and recharge our cell phones. In fact, the choice of embracing renewable technology is a must if we’re serious about fighting cancer.

Canadian Association of Physicians for the Environment

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