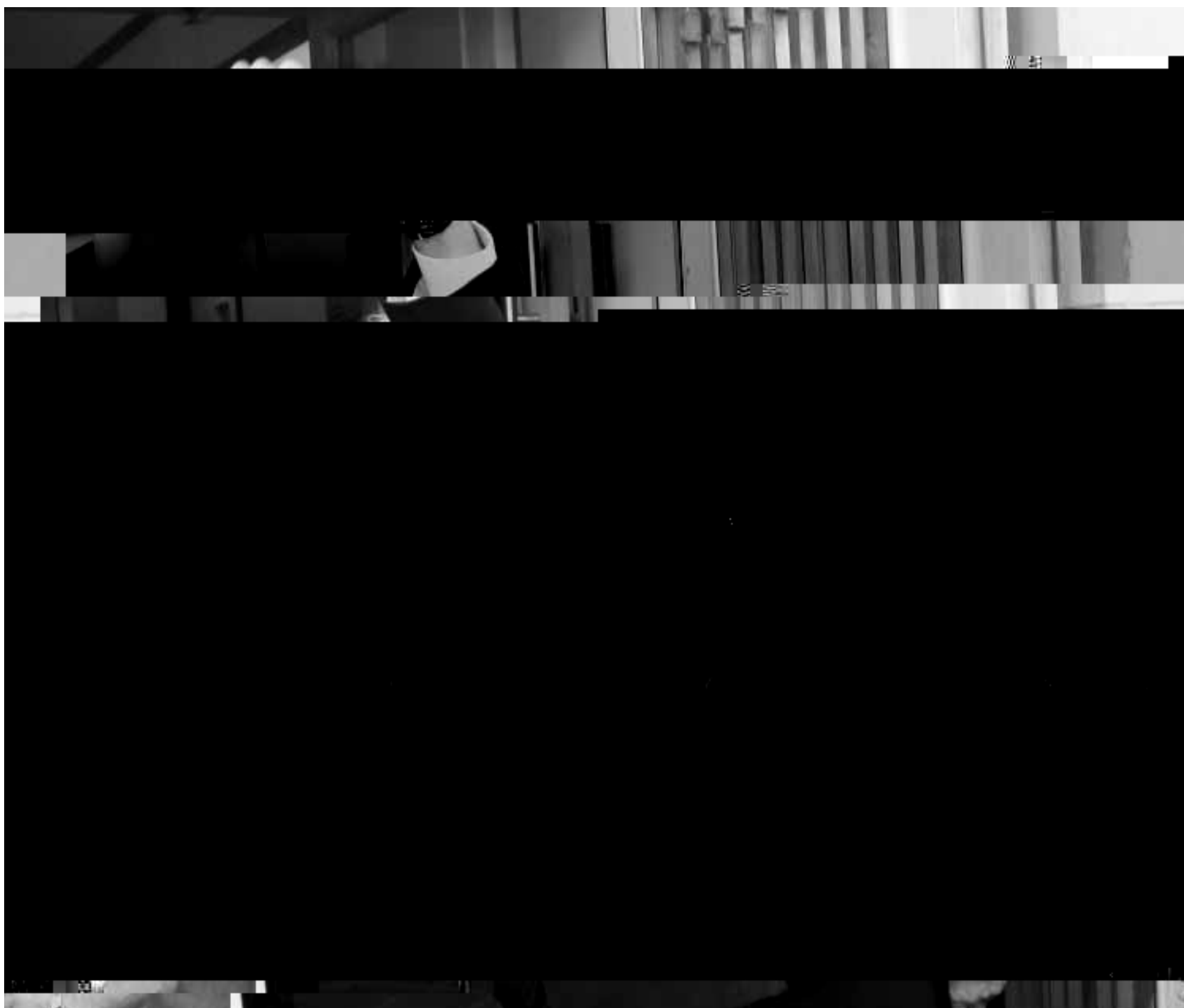


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Is the Martin government up to the challenge of seriously developing more alternative sources of energy now in a world threatened by climate change? The government says yes. Critics say no. Hear what the players have to say. John Efford, Stephen Owen, Stéphane Dion, Bryon Wilfert, Glen Murray, Alexandre Gagnon, Stephen Harper, Jack Layton and Serge Carlin. *Inside*. Pages 13-25



Prime Minister Paul Martin entering the National Press Building on Wellington Street on June 29 in Ottawa at about 2 p.m.

Photograph by Jake Wright, *The Hill Times*

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Harper says Liberals' dithering prevents Canada from making meaningful progress in alternative energy sector

Conservative Party Leader Stephen Harper says Liberal government "dithering and delay" are getting in the way of any meaningful progress in the advancement of alternative energy technologies in the country.

Moreover, Mr. Harper (Calgary South-west, Alta.), who acknowledges that Canada must curb its greenhouse gas emissions, says the federal Liberals are "directionless" on alternative energy, adding that they're good at spending billions of dollars but can't be trusted to carry through on their Kyoto Plan promises.

"How can the government responsible for the gun registry and the HRDC billion-dollar boondoggle be trusted to develop and monitor environmental projects in China and Russia? Twelve years of Liberal neglect have jeopardized Canada's environment. The Kyoto plan they have hatched will only serve to compound the damage and further endanger the legacy to which all Canadians are entitled—the legacy of clean air, clean water, and clean land."

For his part, Mr. Harper says if he were Prime Minister his Conservative government would create a transition plan to move Canada's heavy reliance on fossil fuels to more alternative sources of energy, including natural gas, ethanol and biodiesel.

Mr. Harper, who's trying to pump up his political support across the country this summer, conducted an email interview with *The Hill Times* last week on the current political leadership, or the lack thereof, on Canada's alternative energy sector.

"I think that it's important to take a balanced and objective approach to meeting the challenges of a carbon-restrained economy and the reality that non-renewable energy sources are going to comprise a smaller and smaller share of our energy mix. A Conservative government would initiate a plan to transition from fossil fuels in a way that stimulates economic growth and that taps into the vast talent of our scientific research and development communities. This plan will include natu-

ral gas, ethanol, and bio-diesel, as the integration of these fuels into our energy mix is currently both practical and realizable. Wind and solar are also alternative energy sources that show enormous potential right now, and will contribute significantly to our energy mix in the very near future. Hydrogen fuel cell technology is very promising, and will likely play a significant role in our future energy mix. It's also important to remember that any successful energy plan must focus on conservation and improving energy efficiency and also on the development of carbon dioxide capture and sequestration technologies."

"When I'm Prime Minister, I think the most important contribution I can make to this process is to facilitate the creation of an environment where innovation and imagination can flourish and where good ideas never get crushed under the weight of burdensome government bureaucracy. I feel very strongly that we cannot provide Canadians with a secure, stable, affordable, and environmentally-friendly energy framework if we don't support Canadian innovation and ingenuity."

"This directionless government is very talented at spending billions of dollars without achieving its objectives. There are some valuable programs which do encourage research and innovation, but without visionary leadership and a coherent plan, no amount of money will get us closer to producing marketable and viable energy alternatives which will help us improve our environmental integrity and reduce greenhouse gas emissions. A Conservative government will not only continue and even enhance many of these programs, we will also augment our plan with tax incentives, and even more importantly, we will exhibit the leadership and vision that is needed to fully utilize Canadian research and development talent and expertise. The Kyoto plan, or lack thereof, is an excellent example of how the Liberal government has managed to spend billions of dollars, yet greenhouse gas emissions continue to climb."

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"Well, as I indicated in my previous response, I think this plan is seriously lacking and will not meet the unrealistic Kyoto emission reduction targets. Worse than that, however, it appears that \$10-bil-

lion is just a down-payment on the future billions that the Liberals will spend if they attempt to fully implement this incoherent and ill-fated plan. Canada must curb its greenhouse gas emissions, but I think it is foolhardy and naïve to think that buying foreign hot air credits will in any way achieve that end. How can the government responsible for the gun registry and the HRDC billion-dollar boondoggle be trusted to develop and monitor environmental projects in China and Russia? Twelve years of Liberal neglect have jeopardized Canada's environment. The Kyoto plan they have hatched will only serve to compound the damage and further endanger the legacy to which all Canadians are entitled—the legacy of clean air, clean water, and clean land."

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"It is difficult to estimate these things. Look at the sharp rise in oil prices and it's even harder to construct a definitive timeline. That being said, business realities and market forces have a way of focusing research and development initiatives. If we, as a nation, put the full force of our research talent and skill toward realizing commercially viable alternative fuel technologies, I believe we can significantly shorten that timeline. Biofuel production presents Canada with a two-fold opportunity—the prospect of affording those who work in the agricultural and natural resource-based sectors a viable and stable economic future while developing technologies that reduce our dependence on fossil fuels. Ethanol and bio-diesel production not only serve to help us meet major environmental challenges, but they also have the added benefit of helping to support rural economies and preserve the rural communities that are essential to the fabric of Canada."

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"Although government leadership in this area is essential, we can never forget that Canada's economy is market-driven and subject to consumer preference and demand. Environmental and price concerns influence the choices that people make and the direction that energy producers and suppliers will take. I believe it is a welcome market reality that energy consumers—whether on an individual level, or at the industrial level—are mak-

ing choices that reflect their concern for the environment and the desire to responsibly develop a sustainable economy.

"Unfortunately, the Liberal government has not shown the leadership necessary to encourage swift creation of the favourable conditions needed for these technologies to develop. Liberal government indecision and ambiguity in developing a Kyoto plan has created a climate of uncertainty and speculation that has left industry players trying to guess how government policy may affect their interests—not the ideal environment for investment in research and development. Liberal government dithering and delay has been a considerable impediment to meaningful progress in the advancement of alternative energy technologies.

"I have great confidence that strategic investments in promising technologies, coupled with Canadian ingenuity, will result in advances in the development of all manners of alternative energy sources and energy efficient technologies, perhaps some that we haven't even conceived of yet. A Conservative government will make those strategic investments and will support Canadian research and technology into alternative energy. I believe that this



Going with the wind

Electrical and Computer Engineering professors Reza Iravani (r) and Peter Lehn (centre), pictured with a Windshare co-op turbine, are designing the circuitry that will ultimately convert and coordinate wind power into usable and reliable energy, while Mechanical Engineering professor Pierre Sullivan (l) is looking at optimal design of the turbine system itself.

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Governments have to make decisions about large-scale technologies in face of disagreements among scientists

unforeseen—social, political and cultural implications. Scientific research, in other words, offers only part of the answer.

Social sciences and humanities research begins where the narrowly scientific leaves off in order to probe the complex impacts of technological changes on individuals, communities, and economic and political systems. Pollution-free hydrogen may one day fuel our cars, heat our homes and power our factories, but what will be the consequences for our economic and social structures, for the international geopolitical system, even for personal relations?

Take the example of the internal-combustion engine. The introduction of the automobile had huge and largely unforeseen effects all over the world. It moved urban populations out to the suburbs, created gigantic oil corporations that rival nation-states in power and influence, led to a reconfiguration of the geo-political map, and contributed to environmental destruction on a scale unprecedented in human history. Not to mention making 50,000 auto-related deaths a year an unremarkable feature of the North American social landscape.

In order for a hydrogen-based economy to deliver on its apparent promise, our best political, economic, legal, philosophical and sociological minds must carefully examine its human and environmental implications. We must be sufficiently prepared to be able

As electricity providers threaten rolling blackouts and air quality advisories tell our children to play indoors, it seems more and more obvious that Canada—and the world—needs clean, reliable and renewable sources of energy.

Hydrogen fuel may be one of the answers. By combining hydrogen gas with the oxygen we breathe, scientists are able to create electricity, literally, out of thin air. And the only by-product is pure water. It seems like the perfect cure for our addiction to energy sources, such as fossil fuels, nuclear and hydro-electric power, that are finite, or produce dangerous chemicals, or damage the environment—or all three.

Canada, in particular, seems poised to reap great benefits from a hydrogen fuel future. Canadian scientists and engineers already lead the world in developing this new technology. And the federal government is so confident about the potential of hydrogen that it has invested \$130-million in its Hydrogen Economy Initiative. But while hydrogen may indeed have the potential to lead the way to a clean fuel future, the society-wide adaptation of a new technology always has important—and usually

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Liberals don't have will to move quickly on alternative fuel technologies, says Bloc Québécois energy critic Cardin

P Prime Minister Paul Martin's government

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