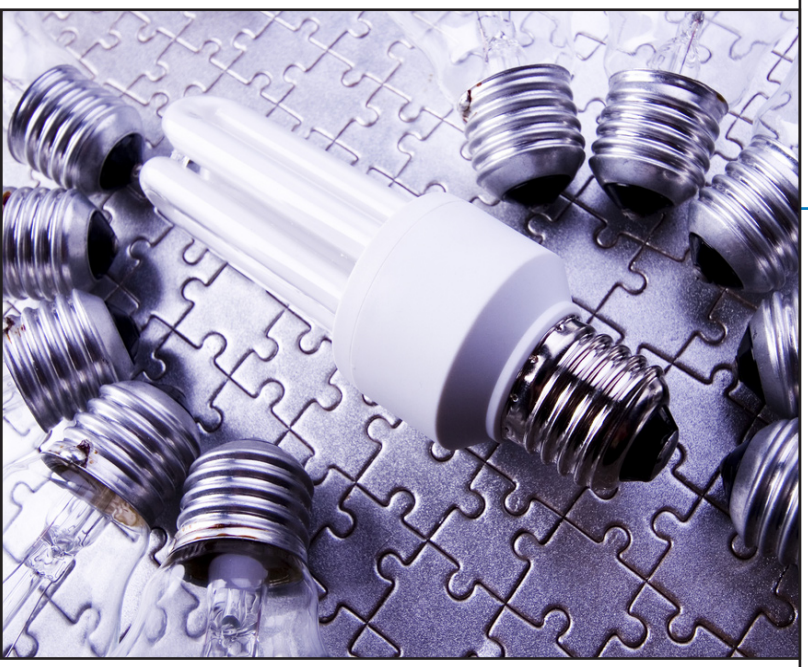

Getting it Right

A Canadian Energy Strategy for a Carbon-Constrained Future

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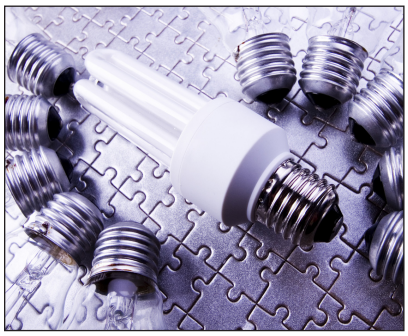
CanadaWest FOUNDATION

Getting it Right Project:
Balancing Climate Change and Energy Policies in Western Canada



Climate change is a global challenge that requires a proactive and creative public policy response by all Canadians. Changing the way we produce and consume energy are critical elements of this response. As a major source of energy resources, western Canada has the opportunity to be the world leader in this area of climate change policy.

The *Getting it Right Project,* of which this report is a part, will bring together stakeholders from western Canada's energy sector to craft a national energy policy strategy for curbing climate change. While both the supply side and the demand side of energy must be addressed, the *Getting it Right Project* is focused on the supply side (i.e., what the energy sector can do to address climate change rather than what the users of energy can do) and on the role that public policy can play.

There are many ways to address climate change—the *Getting it Right Project* is seeking policy options that are principled, regionally balanced, economically viable, and effective over time. By providing a neutral forum in which western Canada's energy sector can map out a plan for curbing climate change, the *Getting it Right Project* will provide a clear and positive signal within the noise that characterizes the current climate change debate.

Funding for the *Getting it Right Project* has been provided by the Max Bell Foundation. The Canada West Foundation expresses its sincere appreciation for this generous support.

For more information about the *Getting it Right Project,* please contact Kari Roberts, Senior Policy Analyst (roberts@cwf.ca).

This paper is intended to provide the context for a wider discussion about energy policy in Canada. In pursuit of this goal, the Canada West Foundation will be hosting a series of consultations across western Canada that will bring together experts and stakeholders from across industry, government, academia and the nonprofit sector to drive toward a comprehensive understanding of what energy policies we need as a country in an era of carbon constraint. This paper is not intended to pre-ordain a direction for energy policy in Canada, but is instead meant to launch a wider discussion on this issue.

This paper was prepared by Canada West Foundation President and CEO Dr. Roger Gibbins. The opinions expressed in this document are those of the author and not necessarily those of the Canada West Foundation's Board of Directors, advisors, or funders.

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Synopsis

The emerging Canadian policy debate on climate change will inevitably and quickly slide into a debate on a national energy strategy, for climate change and energy are two sides of the same public policy coin. Given the importance of energy resources to the western Canadian economy, it is essential that western Canadians lead rather than follow this national debate, that they help frame the debate in ways that reflect western Canadian experience, interests and aspirations. This paper therefore sketches in a principled framework for a national energy strategy within a carbon-constrained future.

Setting the Stage

Although climate change is not a new public policy issue,[1] the recent popularity of Nobel Laureate Al Gore's film *An Inconvenient Truth,* international agreements such as the Kyoto Accord and the Sydney Declaration, initiatives such as California's low carbon fuel standard, and the ongoing debate about GHG emission reduction targets and how to meet them, have helped make it one of the most pressing public policy topics of the day. Governments around the world are exploring a wide range of policy responses to growing public concern about climate change,[2] and Canada is no exception to this global trend. Canadians will be operating more and more in a world in which our policy response to climate change and the climate change policies of other jurisdictions will be key determinants of our economic success.

However, while all countries face risks associated with both climate change and political imperatives to respond, the impact of climate change will not play out evenly across countries or across regions within vast transcontinental countries such as Canada. The Prairies, for example, may face exposure to drought conditions that other Canadian regions will not face, whereas climate change in British Columbia could transform timber harvests to a degree that other provinces will not encounter. Northern Canadians face thawing permafrost and wildlife effects that only lightly touch the southern provinces. Thus, while all countries confront climate change policy challenges as a green wave sweeps across the international political landscape, *the Canadian policy debate is greatly complicated by regional diversity.*

This diversity, moreover, goes well beyond differences in physical geography:

- The industrial structure of the Canadian economy varies substantially across regional communities, and as a consequence neither climate change nor climate change policies will play out evenly across the loosely integrated national economy.
- Canada's population and economic growth are unevenly distributed, and therefore the implications of climate change policies on both will also be unevenly distributed.
- Because the effects of climate change vary across regions, we lack unifying national symbols around which popular support for a policy response might be built; there are no Canadian analogues to the melting glaciers in Switzerland, or the pervasive impact of drought in Australia.

These regional differences complicate a *national* policy response to climate change. The policy challenge is then multiplied many times when we layer on regional differences in the distribution and mix of energy resources. Canada may well be an energy super power, and may aspire, in Prime Minister Stephen Harper's words, to be a clean energy super power, but our muscles are not evenly distributed across the national skeleton. The country's immense energy resources, including conventional oil and gas, coal, hydro, uranium, the oil sands and potentially biofuels, bunch up in ways that create dramatic differences in circumstances among the ten provinces and three territories.

1. The Canada West Foundation, for example, released a report on the subject in 1994 entitled *The Climate for Debate: Global Warming and Policy Instruments for Emission Reduction.*

2. The terms *climate change* and *global warming* tend to be used interchangeably in Canadian policy debate. This report adopts the climate change terminology.

The provinces and territories differ greatly in their mix of energy supplies, in the centrality of energy resources to their economies, and in the relative importance of energy exports and imports. Western Canada, which is particularly blessed overall in its energy resources, reflects this diversity, providing a microcosm of the national scene. BC, Alberta and Saskatchewan have abundant supplies of natural gas and coal; Manitoba and BC have extensive hydro developments and, in the former case, huge hydro potential; Saskatchewan has some of the world's largest uranium deposits; Alberta has the oil sands; and biofuels, solar, geothermal and wind power may become a significant part of the energy mix across the region.

But why are these differences in energy resources, supply, and trade, both across and within regions, so important in the context of potential policy responses to climate change? The answer is simple: *all such policy responses entail, in one way or another, moving toward a carbon-constrained future with respect to the production and consumption of energy.* If climate change is the problem, the solution is to be found in how we produce and consume energy. This is the dominant policy interface; everything else is secondary.

Thus when the national debate on climate change slides into a national debate on energy strategies, as it inevitably will, Canadians will face an extraordinarily complex policy challenge given the deep basket of regional differences described above, and given that the ownership of natural resources rests with the provinces. This is not to suggest that coherent and effective national policies will or should be sacrificed on the alter of regional differences, but rather to recognize that regional differences matter, that they matter more with respect to energy and climate change than they do in virtually any other policy domain, and that how these regional differences are handled could have serious consequences for the health of the federation.

If Canada's political history teaches us anything, it is that national policy initiatives that touch upon the provincial ownership of natural resources can be politically charged and highly contentious. Regional fault lines run deep. Here we need only note the impact of the 1980 National Energy Program on the country's political landscape, the inability of the Council of the Federation to agree in August 2007 to even the rough outlines of a national climate change policy response, and the warnings of former Alberta Premier Peter Lougheed about the explosive potential of a constitutional battle over federal environmental legislation impinging upon Alberta's oil sands.[3] The political risks are particularly acute in the West, but they extend beyond the West to the rest of the federation, for how the energy-rich West responds to the policy challenges of climate change is truly of national significance. Therefore both the West and the national community within which it is embedded have an important stake in getting the policy architecture right by addressing climate change in a way that moderates rather than exacerbates regional tensions.

We are faced, then, with a complex policy challenge: *how do we construct an energy strategy for a carbon-constrained future, and how do we do so without exacerbating regional tensions within the federation?* How do we craft, in the short to medium term, a public policy framework to reduce the carbon footprint of conventional energy production, change the mix and use of hydrocarbons (e.g., substituting natural gas for coal), and in the longer term bring renewable energy sources into the country's energy mix? More generally, how do we craft an effective climate change strategy while still meeting the energy needs of a growing regional and national economy?

The stakes are simply too high to muddle through. This paper therefore sets out to chart a path by creating a principled point of departure for a national energy strategy, recognizing that any truly *national* strategy will necessarily be a complex amalgam of federal, provincial, territorial and big city frameworks. Our focus is on the energy side of the climate change/energy policy coin. More specifically yet, our focus is on public policies relating to energy supply; policy incentives or regulations to reduce the demand for energy, while important in their own right, fall beyond the pale of this work.

But why should this policy debate begin in the West, indeed why *must* it begin in the West? The reason is simple: it is in the West that the rubber of any national energy strategy will first hit the road. Any national energy strategy will be of direct and immediate consequence to the resource-based regional economy; western Canadians have more at stake, more "skin in the game," than any other regional community, and they also have more expertise and experience to bring to the policy discussions. If there was ever a time and a need for an effective and articulate western Canadian voice in national policy development, it is now. This is no time for western Canadians to pull back, to react to proposals from others regions; western Canadians should lead rather than follow the national debate.

3. In an August 14, 2007 Calgary address to the annual meeting of the Canadian Bar Association, former Alberta Premier Peter Lougheed argued that pressure on the federal government for strong environmental legislation to reduce green-house gas emissions could threaten Canadian unity. *Calgary Herald,* "Alberta ground zero for green battle," August 15, 2007, A1.

In summary, the climate change/energy policy interface and how it is addressed by the federal and provincial governments are critically important to western Canada's long-term economic prosperity and quality of life. It is therefore imperative that western Canadians provide constructive national leadership for the emerging debate on a national energy strategy. How, then, can we move forward?

Ten Principles for a National Energy Strategy

If the objective is to foster a constructive national policy debate and to infuse that debate with western Canadian interests and experience, how do we get off on the right foot? The approach taken here is to propose a set of broad public policy principles to frame the more detailed and technical discussions to come, to set the terms for the national policy debate by providing a principled point of departure. To this end, the Canada West Foundation proposes ten public policy principles around which a national energy strategy might be constructed. (Note that our focus is on public policy, and not on individual or market responses to climate change.) If we can get these bold strokes right, and right at the outset, then the path forward becomes much easier.

1. Act strategically

The sheer magnitude of the climate change challenge means that neither behavioural change by individuals—turning down our thermostats, buying low-energy appliances—nor market responses by the corporate sector, or both together, will take us where we need to go. There needs to be an overarching public policy framework within which individual and corporate decisions are taken, a framework that pulls together incentives, regulations, investments and targets. This strategic framework must also recognize the importance of energy as the motor for the national economy, the importance of energy exports for national economic well-being, and the concerns that Canadians have about energy security in an unstable world. In short, there is a need to think big, to realize that an energy strategy will leave few parts of our lives and economy untouched.

The question then becomes, how big? What is the appropriate scale on which to construct an energy strategy? The old mantra, "think globally and act locally," is reflected in local action across the country, and virtually all provincial and territorial governments have energy policies in place. However, the mantra has also been turned on its head by initiatives such as the Kyoto Accord and the Sydney Declaration that seek to drive action up to the international level. What is missing in Canada are regional and national frameworks that bridge local and provincial action to international agreements and objectives. This is the hole that needs to be filled by an over-arching strategic vision that is tailored to regional realities within Canada.

2. Share the load

The climate change challenge and a national energy strategy response present an insidious temptation for big chunks of the Canadian electorate. Why, they might ask, do we not use this opportunity to redistribute some of the energy wealth that has been building up in the West? Under the guise of addressing climate change, might we also shift the regional distribution of costs and benefits? Could we, for example, craft a national policy response that would have Albertans bear the bulk of the cost? After all, one might argue, Albertans are not only responsible for a disproportionate share of Canada's GHG emissions, but can afford the remediation.

This temptation must be resisted at all costs. It is essential to keep our eye on the climate change policy ball, and focus efforts where they will do the most good for meeting climate change objectives. The goal must be to meet the climate change challenge, and *not* to redistribute wealth and economic opportunities. Should we choose to do the latter, we have other policy tools. If a national energy strategy is driven by concerns that Canadians share about climate change and global warming, then Canadians at large, both consumers and producers, should be prepared to shoulder some of the burden. Sharing the load also means being balanced across sectors, not focusing on a single industry or source of emissions, and taking into account both production and consumption as sources of GHGs.

We run several risks if the policy architecture for Canada as a clean energy super power blends into a policy framework for the redistribution of wealth. First, pursuit of the second goal may limit success in pursuing the first. We might impair behavioural adjustments in some parts of the country by shifting the costs to other parts of the country; we might, for example, and for example only, retain low fuel prices and thus current consumption patterns in Ontario by training our national guns on the Alberta oil sands. Second, and of even greater importance, is the risk to the federation. Perceptions that a national energy strategy is redistributive in design or effect will produce stiff resistance in some regions despite a common desire to address climate change. Here Peter Lougheed's warning, noted above, and the legacy of the National Energy Program spring immediately to mind. The bottom line is that policy effectiveness demands attentiveness to the delicate balance of regional interests and aspirations.

3. Recognize the need for public investment

It is tempting to believe that a regulatory approach will be sufficient to meet the challenge of climate change, to assume that if we prohibit or limit what firms and individuals can do, then success will be at hand. It is likely, however, that a successful national energy strategy will require extensive and perhaps even massive public investment. For example, if we want to create technological breakthroughs with respect to carbon capture and sequestration, if we want to reconfigure urban transportation systems or provide incentives for more climate-friendly consumer behaviour, public investment will be required. We will not meet climate change objectives on the cheap with new regulations here and prohibitions there. Or, to the extent that we do meet those objectives, we will not have realized the transformative opportunities discussed below that a national energy strategy might create.

If we accept that public investment will be an essential part of a national energy strategy, then two additional questions arise. The first is how best to assemble the necessary funds. For example, we might consider a dedicated carbon tax whose revenues would flow into clean energy investments rather than into general revenues. The second question relates to the distribution of such funds. Would that distribution be on a per capita basis, or would it be allocated to those sectors and parts of the country where the greatest traction could be obtained with respect to climate change objectives? These questions in turn take us back to considerations of regional equity and the need to ensure that climate change policy objectives are not sacrificed to redistribute wealth.

4. Build on strength

The world's energy future, and for that matter Canada's energy future, will undoubtedly feature a more diverse mix of energy sources than we see today; solar, wind, and geothermal power will all play a larger role, along with technological innovations yet to come. Ideally, Canadians will contribute to technological and policy leadership across this spectrum of energy futures. However, our foreseeable future will be dominated by more conventional energy sources—hydro, oil, natural gas, the oil sands, coal and nuclear. Changes in this energy mix will occur, but they will be changes at the margins. Our primary policy focus should therefore be on reducing the carbon output of the current energy mix.

This leads to a second policy direction. If Canadians want to use a national energy strategy to make a global contribution through technological innovation, it makes sense to concentrate on those energy sources that continue to underpin the national economy. Canada's climate precludes world leadership with respect to solar energy, and other countries are already much further down the road when it comes to wind power. Where we can make a difference, and a global contribution, comes through research and development on such fronts as carbon capture and sequestration, biofuels, and improving the extraction of energy from the oil sands. If we can make progress on these fronts, then we can not only strengthen the national economy, but also make a significant contribution to the global challenges of climate change. We lack the demographic weight to have a global impact through changes in our patterns of energy consumption, but we can have a global impact through changes in our patterns of energy production.

In short, an energy strategy for Canada should play to our strengths. This does not preclude changes to the way in which we consume energy, it does not preclude energy conservation, and it does not preclude the possibility that technological breakthroughs on less conventional energy fronts will be made in Canadian laboratories. And, in this last respect, breakthroughs in BC with respect to fuel cells and tidal power provide but two examples. This would suggest that we not put all our public investment eggs in the conventional

energy basket. Nonetheless, our comparative international advantage in research and development will be found in the country's conventional energy base. To use the old phrase, we have little choice but "to dance with the one that brung us."

5. Acknowledge continental realities

For better or for worse, Canadians are thoroughly embedded within a continental economy, and this generalization applies with particular force to the energy sector. Canada alone among the OECD countries is a net exporter of energy, and our exports flow south into American markets. Energy exports to the US, including hydro electricity from Quebec and natural gas from Saskatchewan, Alberta and British Columbia make a huge contribution to the Canadian economy. Furthermore, Canadian energy policy is constrained to a degree by the North American Free Trade Agreement, and by the need to consider matters of energy security within a continental environment. Finally, Canadian energy policies will inevitably be influenced by energy policies adopted by American states and the American federal government; what Governor Arnold Schwarzenegger does in California will ripple through the public policy landscape in Canada.

None of this is to suggest that Canadian energy policies are captive to those adopted south of the border, that we have no scope for independent action, or that policy convergence is inevitable. However, policy design that fails to take our continental location into account will fail. We may become a clean energy superpower, but our reach will be primarily continental rather than global.

6. Strengthen our competitive position in the global economy

The potential impacts of climate change are indeed troubling, and in this context some may argue that California Governor Arnold Schwarzenegger has gone over the top in describing climate change as the next gold rush opportunity, or green rush opportunity, for his state. Quite appropriately, perhaps, Canadians see climate change in more dour, even alarmist terms. However, Schwarzenegger has also identified an important economic truth; efforts to address the effects of climate change and reduce human contributions to global warming will create huge economic opportunities. It is essential, therefore, that a national energy strategy identify such opportunities and, where possible, open international markets for Canadian technological innovation. A strategic response to climate change will recognize that new or improved forms of energy production can not only enhance productivity at home but also foster direct export opportunities. If we're smart, a national energy strategy could well strengthen our competitive position in the global economy.

7. Address both GHG emissions and the effects of climate change

A national energy strategy must address the reduction of GHG emissions and security of supply. Indeed, it is the former that other countries will use as the measuring rod to assess Canada's international performance, and that many Canadians will use as the standard to assess the performance of their governments. This is the new political reality. However, Canada's global contribution to the reduction of GHGs will necessarily be modest; even if we went cold turkey today and eliminated our GHG emissions, the result would be to reduce global emissions by about 2%. This is not an excuse for inaction, but it highlights an important policy issue: while Canada's impact upon global warming will be very modest, the potential impact of global warming upon Canada may not be modest at all.

Here we have some tentative markers, including the spread of the pine beetle in BC and north-western Alberta, the structural complications for northern infrastructure as permafrost becomes less perma, changes in the composition of agricultural crops, and near drought conditions on parts of the Prairies. Therefore a comprehensive climate change strategy, of which a national energy strategy is an integral part, should not lose sight of climate change *effects.*

8. Maximize the role of markets

Over time, Canadians have come to rely more and more on markets to address energy supply issues, and on the whole we have been well-served by those markets. Even public sector energy players such as Saskpower and BC Hydro have increasingly fit their

operations within a market system, and indeed within a continental market system. It is essential, therefore, to maximize the role of markets while also recognizing the constructive and equally important role to be played by public policy. Markets alone will not take us where we need to go, but policy frameworks that fail to harness the power of markets will also fail.

9. Be realistic

Any coherent and successful national energy strategy must be constructed from realistic building blocks. For example, while there is no doubt that solar energy, wind power and geothermal heating will all be part of our future energy mix, it is also clear that they will not replace existing energy sources in the short haul. Even in the long haul, they will be part of the mix, but not the entire mix.

Perhaps above all else, we need realistic timelines. Technological innovations need time to gain traction, although well-designed public policies can shorten this time to a degree. There is a tremendous amount of capital stock involved in the production and consumption of energy, and that stock is slow to turn over. Whether we are talking about large coal-fired plants for the production of energy, the cars we drive, the hot water heaters in our homes, or for that matter our homes themselves, we are talking about capital stock that will take years and in some cases generations to replace. It is important, therefore, to have energy policies that align with the turn-over of capital stock. Given the importance of energy to the Canadian economy, it is more important to get the policy framework right than it is to rush to the head of the global pack. Canadian circumstances are unique in many ways, and our public policies should reflect that uniqueness.

10. Be bold

Although the climate change debate is by no means new, there is no question that its intensity and scope have caught many Canadians by surprise. In many respects, our political system has been playing catch-up as parties and governments adjust to a rapidly changing international environment, and then adjust again.

Given this very fluid situation, there is a danger that we will be too cautious, too incremental in our policy response, that we will settle for a small home insulation program here, a small research initiative there. However, if we are not bold in our response, the spoils identified by Governor Schwarzenegger's "new gold rush" analogy will go to others. This does not mean, it should be stressed, that we should take undue risks with our economic well-being, for here making haste would truly be making waste. However, we can be bold on many technological fronts. For example, and for example only, a well-funded research and development initiative on carbon capture and sequestration could well lead to truly global contributions along with the attraction of expertise and employment to Canada.

Being bold means seizing the opportunity for leadership, not across the board but in areas of existing strength and potential contribution. To an unfortunate degree, our international reputation to this point has been that of a country that talks the talk but fails to walk the walk (and to be fair, in some cases not even talk the talk). We can do better, and we can find the balance between being bold and being realistic. They are, in effect, the ying and yang of an effective energy strategy.

Conclusions

The design of a national energy strategy will be a long and difficult task. But, to use the old cliché, a journey of 100 miles begins with one step. In this case, however, we suggest two steps. The first step is to establish a principled point of departure, a set of broad policy guidelines within which the detailed policy work can take place and through which the Canadian public can begin to come to grips with the policy complexities. The second step is to assert western Canadian leadership, to begin the national debate in the West where policy outcomes will have the most direct and immediate effects, and where the pool of energy experience and expertise is the deepest. To this end, the Canada West Foundation will host a series of provincial roundtables in early 2008 with the objective of sketching in the rudiments of a national energy strategy.

A principled point of departure:

1. *Act strategically*
2. *Share the load*
3. *Recognize the need for public investment*
4. *Build on strength*
5. *Acknowledge continental realities*
6. *Strengthen our competitive position in the global economy*
7. *Address both GHG emissions and the effects of climate change*
8. *Maximize the role of markets*
9. *Be realistic*
10. *Be bold*

This opportunity for national policy leadership from the West is too important to pass up. The region's resource-based and export-based economy brings into focus the critically important relationship between climate change and energy policies. Western Canadians, moreover, have not only the relevant policy expertise and front-line energy experience, but also a compelling self-interest in ensuring that policies promote rather than impair sustainable economic prosperity in western Canada. In short, there is no better place to frame a constructive national debate.

Western Canadians, of course, do not have a natural right to determine the national energy strategy, nor do they have the demographic or political weight to impose one. However, we can lead through the power of our ideas. Moreover, we have an obligation to lead the policy debate, an obligation to the region and to Canada. To sit on our hands, to sit on our minds, would not only be risky; it would also be an abdication of our responsibility to the rest of the country, and to generations to come. CWF

About the Canada West Foundation

Our Vision
A dynamic and prosperous West in a strong Canada.

Our Mission
A leading source of strategic insight, conducting and communicating non-partisan economic and public policy research of importance to the four western provinces and all Canadians.

Canada West Foundation is a registered Canadian charitable organization incorporated under federal charter (#11882 8698 RR 0001).

In 1970, the One Prairie Province Conference was held in Lethbridge, Alberta. Sponsored by the University of Lethbridge and the Lethbridge Herald, the conference received considerable attention from concerned citizens and community leaders. The consensus at the time was that research on the West (including BC and the Canadian North) should be expanded by a new organization. To fill this need, the Canada West Foundation was created under letters patent on December 31, 1970. Since that time, the Canada West Foundation has established itself as one of Canada's premier research institutes. Non-partisan, accessible research and active citizen engagement are hallmarks of the Foundation's past, present and future endeavours. These efforts are rooted in the belief that a strong West makes for a strong Canada.

More information can be found at www.cwf.ca.

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