



# Energy Probe

## **Taking Green Seriously**

A study by

**PROFESSOR MICHAEL TREBILCOCK**

**Professor of Law and Economics**

**University of Toronto**

**Faculty of Law**

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**ENERGY PROBE**

## **ABOUT THE AUTHOR**

Michael Trebilcock, Professor of Law and Economics at the University of Toronto, is a Fellow of the Royal Society of Canada, an Honorary Foreign Fellow of the American Academy of Arts and Sciences, and a past President of the American Law and Economics Association. Among his positions with the Ontario government, he was Research Director of the Panel on the Future Role of Government in Ontario (2002-2004) and Research Director of the Ontario Electricity Market Design Committee (1998). Among his many honours, he is the recipient of the Ontario Premier's Discovery Award for the Social Sciences (2010). Professor Trebilcock, a director of Energy Probe, is a resident of Grey Highlands municipality, site of several planned industrial wind turbine projects.

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Energy Probe is the consumer and energy research team at EPRF, active in the fight against nuclear power, and dedicated to resource conservation, economic efficiency, and effective utility regulation.

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**Billions of dollars have been committed to renewable energy without fully evaluating the impact, trade-offs, or alternatives through a comprehensive business-case analysis.**

## **I. FIRST, THE FISCAL FIASCO**

The Ontario Auditor-General's report of 2011 starkly documents the financial ineptitude of the provincial government in implementing its renewable energy policies under the *Green Energy Act*, and the billions of consumer and taxpayer dollars that have been dissipated as a result. While the Minister of Energy (George Smitherman) at the time of the enactment of the *Green Energy Act* predicted that a typical household's annual electricity bill would increase by about one per cent as a result of green energy policies, the government itself in November of 2010 estimated increases of almost eight per cent annually over the next five years. Other recent estimates run as high as nearly 12 per cent annually over the next five years,<sup>1</sup> transforming Ontario from historically one of the lowest electricity cost jurisdictions in North America to one of the highest in a little more than a decade, with serious consequences for the Ontario economy.

The Auditor-General found that billions of dollars were committed to renewable energy without fully evaluating the impact, trade-offs, or alternatives through a comprehensive business-case analysis. No independent, objective, expert investigation was undertaken to examine the potential effects of renewable energy policies on prices, job creation, and greenhouse gas emissions. No thorough, professional cost/benefit analysis was conducted to identify potentially cleaner, more economically productive, and cost effective alternatives to renewable energy, such as energy imports and increased conservation. A seven billion dollar agreement was entered into with a Korean consortium, led by Samsung, that was sole-sourced and was neither subject to competitive tender nor the subject of a comprehensive and detailed economic analysis or business-case. As documented by the Auditor-General, wind and solar energy proponents received 20-year contracts guaranteeing arbitrarily high feed-in tariffs – often yielding after-tax returns on equity of up to 24 per cent instead of the projected 11 per cent – without any competitive tendering process. The substantial costs of enhancements to the transmission grid to accommodate many small, dispersed, renewable energy projects were also never seriously estimated.

While the Minister of Energy at the time of the enactment of the *Green Energy Act* claimed that renewable energy policies would create 50,000 jobs over the following three years, the Auditor-General estimated that 75 per cent of these jobs would be temporary construction jobs and last only from one to three years, and, moreover, that the Ministry's job projection included new jobs but did not include any estimate of the jobs that would be lost as a result of higher electricity prices in the province. The Auditor-General cited a recent Canadian study estimating that each new job created as a result of renewable energy programs in Ontario would cost taxpayers and/or consumers \$179,000 per year, even taking the Ministry's projections at face value. The Auditor-General noted that the Ministry has not yet quantified how much back-up power will be required from other energy sources to compensate for the intermittent nature of renewable energy, and accordingly has no data on the impact of gas-fired backup power plants on greenhouse gas emissions. In 2010, 86 per cent of wind power was produced on days when Ontario was already in a net export position, and the surplus power was sold to export customers at half the price that consumers in Ontario paid for this power to be generated (a "buy high, sell low" strategy). The Auditor-General estimated that from 2005 to the end of his audit in 2011, Ontario received \$1.8 billion less for its electricity exports than what it actually cost.

## II. NOW, THE ENVIRONMENTAL LEGACY

This is a sorry and sobering story of how a combination of unreflective environmental fundamentalism, a massive feeding-frenzy by corporate rent-seekers, and political hubris has the makings of an economic disaster for a province already in serious fiscal difficulties.

Unfortunately, this sorry story does not end here. The environmental assessment processes put in place under the *Green Energy Act* to review industrial wind turbine projects located in many rural communities throughout Ontario reflects similar administrative deficiencies and is inflicting substantial environmental costs and health risks on these communities without effective evaluation. The balance of this paper documents these deficiencies.

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**Regulation can be designed in such a fashion as to serve the broader public interest, and not the narrow economic self-interest of concentrated interest groups to the detriment of the broader public.**

### **a. Theories of Regulation**

There are a number of major classes of theories that attempt to explain the functioning of regulatory regimes and the regulatory outcomes that they generate. These are usefully summarized in a seminal paper by Professor Steven Croley of the University of Michigan Law School:

Very briefly, the public choice theory challenges the idea that agencies' work-products genuinely respond to market failures. The public choice account holds, much to the contrary, that agencies deliver regulatory benefits to well-organized political interest groups, which profit at the expense of the general, unorganized public. The neopluralist theory also takes organized interest groups to be central to understanding regulation. On the neopluralist view, however, many interest groups with opposing interests compete for favourable regulation, and that competition is less lopsided than the public choice view contemplates. Because the result of interest-group competition often crudely reflects general interests, the neopluralist theory is less critical of the regulatory state than is the public choice theory. Like the neopluralist view, the public interest theory is also ambivalent toward regulatory outcomes. Whereas the neo-pluralist focuses on interest-group competition, however, the public interest theorist concentrates on the general public's ability to monitor regulatory decision makers. Where regulatory decision makers operate under conditions of significant public scrutiny, the public interest theory holds that regulatory outcomes tend to reflect general interest. Where, on the other hand, the relevant decision makers operate without any oversight, they tend to deliver regulatory benefits to well-organized interest groups at the public's expense. Finally, the civic republican theory provides a picture of regulation rather different from all three of its counterparts. According to it, agency decisions, at least potentially, embody the polity's judgments about how competing regulatory values such as highway safety versus traveler convenience, for example, are to be balanced. On this view, regulation provides occasion for collective deliberation about regulatory means and ends.<sup>2</sup>

In a subsequent book,<sup>3</sup> Croley expands on his explication and critical evaluations of these theories, with a particular focus on what he regards as the most influential theory in recent decades, the ‘public choice’ or ‘capture’ theory of regulation, or as he characterizes it, “the cynical view of regulation”.

On this view, regulation is often demanded and perpetuated by concentrated self-serving interest groups who enjoy substantial organizational advantages in both the legislative and regulatory processes over diffuse and heterogeneous interest groups (e.g., consumer or environmental groups), who face major information and collective action problems in mobilizing themselves to be effective participants in legislative and regulatory processes. Public choice theory owes its origins to seminal works by Anthony Downs,<sup>4</sup> Mancur Olson,<sup>5</sup> James Buchanan and Gordon Tulloch,<sup>6</sup> and George Stigler.<sup>7</sup>

In a Canadian context, this public choice perspective on regulation was extensively developed by myself and my co-authors Douglas Hartle, Robert Prichard, and Donald Dewees in a study for the Economic Council of Canada in 1982.<sup>8</sup> The 21<sup>st</sup> anniversary of the publication of this study was in part the occasion for a conference held at McGill University in 2003, leading to the publication of a collection of essays<sup>9</sup> to which I contributed a retrospective essay that acknowledges some caveats and qualifications to the austere public choice or capture theory of regulation in certain contexts.<sup>10</sup>

Many of these caveats and qualifications (and others) are developed insightfully by Croley in his recent widely cited book, where he argues for the possibility of good regulatory government, and hence a more optimistic view that regulation and its administration can be designed in such a fashion as to serve the broader public interest, and not the narrow economic self-interest of concentrated interest groups to the detriment of the broader public. In particular, he argues that most of the major theories of regulation, including the public choice or capture theory of regulation, discount, or at least attach too little weight to, the specific processes by which regulatory outcomes are generated.

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He seeks to establish the centrality of the administrative process to any theory of regulation:

Because the administrative process constitutes the legal-institutional channel through which virtually all ground-level regulatory decisions are developed and implemented, fully understanding how regulation works will require far more attention than existing theories have given to the actual administrative procedures through which particular regulatory policies take shape. Moreover, focusing on the administrative process reveals that procedural reforms of the regulatory state's decision making apparatus may very well go far to answer criticisms about the inevitability of regulatory failure.<sup>11</sup>

**For more optimistic theories of regulation, it is crucial that administrative decision makers truly enjoy some substantial degree of legal and political decision-making autonomy as well as autonomy from the interests they regulate.**

According to Croley, the administrative process theory entails the following core claims:

- i) The behaviour of administrative regulators often reflects commitment to some conception of the public interest.
- ii) The legal process rules prescribing the mechanics of regulatory decision making by agencies promote agency autonomy from the legislature more than they advance legislative control.
- iii) Extra-legislative influences on agency decision making, such as judicial review, further promote agency autonomy more than they advance legislative control.
- iv) To some degree, administrative decision making processes level the field of interest group competition by providing less powerful interests with the means to compete with more powerful interests.
- v) Administrative decision making processes allow agencies to identify socially desirable regulatory outcomes by generating information that reveals the costs and benefits of alternative regulatory outcomes, thereby allowing agencies under the right circumstances to choose socially beneficial regulation.

He emphasizes that on this more optimistic theory of regulation, it is crucial that administrative decision makers truly enjoy some substantial degree of legal and political decision-making autonomy as well as autonomy from the interests they regulate. Crucially, Croley acknowledges that “if agencies’ decision making processes render administrators wholly dependent on factual information supplied from certain types of interest groups and not others, then regulatory outcomes would be skewed in favour of the interests that controlled the flow of information.”<sup>12</sup>

In addition, “agencies [must be] equipped to assess information about regulatory ends and means, and in particular to do so with informational independence from those interests with the biggest stake in regulatory outcomes. Otherwise, even administrators who seek to promote public interests and who have the legal autonomy to do so will be unable to identify socially desirable regulatory outcomes. In short, agencies require not only autonomy and authority but also the resources to gather, to evaluate, and to make use of complex scientific and economic information.”<sup>13</sup> He goes on, in the balance of the book, to elaborate in considerable detail these preconditions for effective regulation in the public (rather than private) interest.

## **b. Theories of Regulation and the Environmental Review Process for Renewable Energy Projects in Ontario**

### **1. Absence of Public Hearings**

First, there is no hearing process within the Ministry of the Environment for any renewable energy project. While there is a right of appeal to the Environmental Review Tribunal on limited grounds, many projects that were initiated before the *Green Energy Act* came into force are governed by transitional rules that deny even this option, seriously undermining precepts of transparency and accountability.

In analyzing the more general “no hearing” trend in environmental assessments in Ontario, the Minister of the Environment’s Environmental Assessment Advisory Panel in 2005 found that “the ongoing absence of hearings under the *EA Act* both ironic and perplexing.”<sup>14</sup> The Environmental Commissioner for Ontario has also criticized the diminishing role of public hearings under the EAA:

With the virtual elimination of hearings since 1996, the important role of reviewing the sufficiency of EA studies by the Board [now Environmental Review Tribunal] was lost. The responsibility for quality control for EA studies has come to rest overwhelmingly with MOE, but MOE’s reviews of EA studies submitted by proponents often seem to rely on a checklist approach, with little guidance or critical oversight. As a result, EA studies remain prone to weak methodology, and are a source of frustration to stakeholders.<sup>15</sup>

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## **2. Empty Discretion to Order Elevated Assessments**

Second, even within the Ministry of Energy (MOE), where the Director and Minister have statutory discretion to order elevated or individual environmental assessments in the case of Class Environmental Assessments, this discretion, to the best of my knowledge, has never been exercised in the case of wind turbine projects. As of a September 3, 2009, The London Free Press reported that Ontario residents and community groups had requested elevations to full environmental assessments for 31 industrial wind turbine projects but, in every case, either the Director or the Minister had rejected these requests.

In a recent scholarly review of the environmental assessment process in Ontario,<sup>16</sup> Richard Lindgren and Burgandy Dunn cite the Environmental Commissioner of Ontario's Annual Report for 2007-2008 reporting that despite the 60 to 70 requests for elevated environmental assessments in a typical year for various Class EA projects, to the best of his knowledge, the Ministry has not granted one such request,<sup>17</sup> suggesting that the existence of this discretion is largely a dead letter.

## **3. Pro Forma Public Consultation Processes**

Third, the public consultations prescribed by the *Environmental Assessment Act* that proponents of projects such as wind turbine projects are required to engage in have proven unsuccessful in stimulating substantive debate and dialogue. These consultations typically consist of a "show-and-tell" format where members of the public are invited to ask questions of the proponents' representatives or consultants at various display stalls in a public meeting hall, but no effort is made to elicit reactions or concerns from the public in a general public discussion. The formats of these "public consultation programs" are designed by the proponents themselves without prescriptions or oversight from the Ministry; as a result, they effectively serve as one-way information flows from proponents to members of the public.

The Environmental Assessment Advisory Panel, appointed by the Minister of the Environment in 2004, in its two-volume report released in 2005, noted the daunting problems often encountered by persons attempting to participate in EA processes in Ontario. Various stakeholders claimed that “the comments periods are too short, relevant documents are too inaccessible, and consultation efforts are too superficial and with no real purpose other than to enable a proponent to report to the EAAB that it has fulfilled its statutory obligation to consult. In addition, concern has been raised that public consultation rights are illusory at best if participants lack sufficient resources to retain the technical, scientific or legal assistance necessary to meaningfully participate in the EA process.”<sup>18</sup>

Similarly, while proponents are required to consult with municipal governments with respect to projects falling within their jurisdiction, little or no guidance has been provided by the MOE as to the nature of the consultations: when they should occur, what form they should take, what issues should be addressed, and what weight should be attached to municipal governments’ views on these issues?

#### **4. Extreme Dependence on Information Provided by Proponents**

Fourth, the MOE’s Guide to Environmental Assessment Requirements for Electricity Projects posted on the Ministry’s web site states, “The environmental screening processes are a proponent-driven, self-assessment process.” The guidelines further state that “because the environmental screening process is a self-assessment process, reports that proponents prepare under the environmental screening process are not approved by the MOE”<sup>19</sup>

Concerns raised by citizens with MOE staff are simply referred to the project proponents for their reactions, which are often not made public or communicated to the citizens concerned, but treated as *ex parte* communications between proponents and MOE officials.

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Because of the almost complete dependence by the MOE on information provided by proponents, as noted above by the Environmental Commissioner for Ontario, the MOE's reviews of EA studies submitted often seem to rely on a checklist approach, with little guidance or critical oversight. The Environmental Commissioner also noted in his Annual Report for 2007-2008 that "MOE does not have sufficient resources to properly monitor the large number of Class EA approvals being issued under the EAA, and MOE staff need better training and information about the nuances of the MCEA [Municipal Class Environmental Assessment] and other Class EAs."<sup>20</sup>

These concerns are exacerbated by the government's lack of capacity to manage the application process effectively. According to a wire service report by SNL Financial, the government has been overwhelmed with roughly 500 applications, with more pending, and a moratorium has been instituted to ensure that the government has in place the process required to handle this number of applications.<sup>21</sup>

Concerns that arise in this context include the following: a) How many professional staff within the MOE are dedicated to the environmental assessment process with respect to wind turbine projects? b) What are their professional qualifications? c) How many person hours are committed to each request for an elevation? d) What sorts of evidence or information are considered, other than that provided by wind project proponents, and what efforts are made to undertake independent evaluation or verification of information provided by the proponents? e) Do staff ever make site visits to the locations of these projects to evaluate localized and cumulative impacts?<sup>22</sup>

As the Environmental Commissioner for Ontario noted in his Annual Report 2007-20008, under the current EA program, "no is rarely an option and the EA process seems to lead inexorably towards the approval to projects due to several entrenched barriers."<sup>23</sup>

In his 2006-2007 Annual Report, the Environmental Commissioner of Ontario (ECO) was critical of the 2006 EA reforms announced by the Minister:

MOE's own language promises a faster yes or a faster no for applicants while completely protecting the environment. The changes unveiled thus far seem weighted towards delivering the faster yes. The ability of the system to deliver a faster no – or indeed, any no at all – remains so far unclear. Unfortunately, it does not appear that MOE's reform initiatives will address a number of the ongoing weaknesses described in recent ECO Annual Reports, including inadequate transparency and public consultation provided under the Class EA process and the need for better enforcement of the EAA.<sup>24</sup>

### 5. Failure to Consider Cumulative Effects

Fifth, many rural residents of Ontario are concerned about the lack of consideration of cumulative effects of multiple projects in their communities on view-sheds, flora and fauna, and the general scenic and recreational amenities and character of the community. In a March 28, 2008 letter to the Lake Ontario Waterkeeper, the Acting Director of the Approvals Branch of the MOE took the position that the *Environmental Assessment Act* does not require consideration of cumulative effects.<sup>25</sup>

However, the MOE's Statement of Environment Values under the Environmental Bill of Rights commits the Ministry to a number of important principles, including the ecosystem approach and explicit consideration of cumulative environmental effects.<sup>26</sup> Moreover, the broad definition of the environment in the *Environmental Assessment Act* – which includes bio-physical, socio-economic and cultural considerations and the inter-relationships between them – requires consideration of the cumulative effects of multiple projects concentrated in a given community.

In its EA guide on Electricity Projects, MOE notes that “Negative environmental effects may also include the displacement, impairment, conflict or interference with existing land uses, approved land use plans, businesses or economic enterprises, recreational uses or activities, cultural pursuits, social conditions or economic structure.”<sup>27</sup>

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**No account is taken of cumulative impacts between or among projects over time as a result of the piecemeal consideration of individual projects in isolation from one another.**

The cumulative effects of turbines are recognized by the MOE to the extent that larger setbacks are required for larger concentrations of turbines in a single project, but no account is taken of cumulative impacts between or among projects over time as a result of the piecemeal consideration of individual projects in isolation from one another.

The importance of location-specific factors is already recognized by recent decisions by the Ministry of the Environment first to impose five-kilometre setbacks for offshore turbines, compared to 550-metre setbacks for onshore turbines in rural areas, and then to impose a moratorium on offshore turbines altogether. Brad Duguid, Minister of Energy for Ontario, is quoted as saying with respect to the first decision: “I think it sets to rest the concerns of some moderate people, who are concerned that if they go to the beach, they can be looking up at a huge wind turbine.”<sup>28</sup> With respect to the government’s more recent moratorium regarding off-shore wind turbines, a different justification was offered – a need to better study the environmental impacts of these projects.<sup>29</sup> Similar considerations should apply to locating major wind turbine installations in rural communities, especially those with high scenic and recreational amenity values whose socio-economic base rests heavily on tourism, weekenders, vacationers, retirees, and related activities such as skiing, boating, hiking, fishing, and hunting. The fact that they do not is arbitrary and inconsistent, and violates core tenets of any rational land use planning process.

These issues are highlighted by Professor Jatin Nathwani, Ontario Research Chair in Public Policy for Sustainable Energy Management at the University of Waterloo, who states:

Ontario sorely needs a plan for the electricity sector guided by a rational but balanced approach that can sustain the transformation to a cleaner energy future without a social rebellion. What is beginning to be well understood is that the Green Energy Act, through the tariffs, will embed large costs into the future mix if not modified. What is less well known is a contradiction at the heart of green energy technologies – namely, the large environmental footprint associated with resources such as wind, solar and biomass.

The cruel laws of physics dictate how low power densities and low efficiency of conversion of renewable resources inevitably lead to a much larger environmental footprint. Mismatch between available useful energy from renewable resources and relatively high power densities of modern final energy use means that large-scale diffusion of energy from renewable resources will require anywhere from 100 to 10,000 times the land area compared to conventional resources. Such an expansion of land-use requirements, in relation to the useful unit of energy output, does not rule them out, but they do raise a red flag about “green” assertions.

The unexamined proposition has been that if it is declared to be green, it deserves no further scrutiny or analysis. The large land footprint of renewable sources of generation often collides with other purposes for use of land. This will set in motion a dynamic of social friction with unintended, unpredictable consequences.<sup>30</sup>

#### **6. Failure to Consider Impacts of Industrial Wind Turbine Projects on Local Property Values**

Sixth, the Director of the Approvals Branch of the MOE apparently takes the view that the impact of such projects on local property values of adjacent landowners is not relevant to the environmental assessment process. In correspondence in relation to the Flesherton Wind Farm project the MOE states that "concerns relating to local property values are a municipal issue and are best addressed by the municipality."<sup>31</sup>

This is despite the broad definition of the environment in the *Environmental Assessment Act*, which includes bio-physical, socio-economic, and cultural – considerations and the inter-relationships between them – and the Statement of Environmental Values, which states that the Ministry considers the cumulative effects on the environment; the inter-dependence of air, land, water, and living organisms, and the relationship among the environment, the economy and society. Presumably, impacts on local property values are likely to be significantly influenced by the natural environment and scenic and recreational amenities of the community and are thus an important proxy for adverse effects on these amenities.

**Impacts on local property values are likely to be significantly influenced by the natural environment and scenic and recreational amenities of the community and are thus an important proxy for adverse effects on these amenities.**

**One might usefully ask whether the environmental assessment process as it in fact operates today in Ontario in relation to industrial wind turbine projects more strongly supports more cynical (public choice or capture) theories of regulation, or more optimistic theories of regulation.**

### **7. Failure to Consider Potential Adverse Health Effects of Wind Turbines on Adjacent Residents**

Seventh, considerable uncertainty surrounds the health effects of sustained exposure to low frequency noise on residents living proximate to wind turbine projects,<sup>32</sup> as reflected by the MOE's recent commissioning of further studies of better methodologies for evaluating these effects and as reflected in the recent announcement by Health Canada of the initiation of a major new study of these effects. Yet approval of projects until these uncertainties are resolved or mitigated would seem to violate the precautionary principle set out in the MOE's Statement of Environmental Values, which notes that "The Ministry uses a precautionary, science-based approach in its decision-making to protect human health and the environment."

### **III. CONCLUSIONS**

To return to the synopsis of the most prominent theories of regulation set out at the beginning of this paper, one might usefully ask whether the environmental assessment process as it in fact operates today in Ontario in relation to industrial wind turbine projects more strongly supports more cynical (public choice or capture) theories of regulation, or more optimistic theories of regulation of the kind developed by Croley. The latter critically depend on the observance of various procedural preconditions including: a) political decision-making autonomy; b) autonomy from the interests that the MOE regulates; c) lack of dependence on factual information supplied from certain kinds of interest groups (i.e., proponents) and not others; d) the capacity and resources for independent collection and evaluation of complex scientific and economic information; and e) an open, inclusive, and transparent process that levels the field of interest group competition by providing less powerful interests with the means to compete with more powerful interests.

The environmental assessment process for industrial wind turbine projects fails to meet all of these preconditions and hence justifies, with little or no qualification, the cynical view of the regulatory process. Only the role of the courts in policing administrative due process in this context remains to be tested.

By way of summary characterization of the environmental assessment process in Ontario, I can do no better than cite the following passage from the 2007-2008 Annual Report of the Environmental Commissioner for Ontario under the title: “Environmental Assessment: A Vision Lost?”:

Unfortunately, Ontario has been long burdened with an EA (environmental assessment) system where the hard questions are not being asked, and the most important decisions aren’t being made – or at least are not being made in a transparent, integrated way. The province has increasingly stepped away from some key EA decision making responsibilities, and the Ministry of the Environment (MOE) is not adequately meeting its vital procedural oversight role. As a result, the EA process retains little credibility with those members of the public who have had to tangle with its complexities.

The ECO is contacted regularly by individuals and groups frustrated by their EA misadventures. It would not be too forceful to say that Ontario’s EA process is broken.<sup>33</sup>

**The environmental assessment process for industrial wind turbine projects fails to satisfy all the preconditions for public interested regulation and hence justifies, with little or no qualification, the cynical view of the regulatory process.**

## ENDNOTES

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- <sup>2</sup> Steven Croley, "Theories of Regulation: Incorporating the Administrative Process," (1998) 98 *Columbia Law Review* 1 at p. 5.
- <sup>3</sup> Steven Croley, *Regulation and Public Interests: The Possibility of Good Regulatory Government* (Princeton University Press, 2008).
- <sup>4</sup> Anthony Downs, *An Economic Theory of Democracy* (New York: Harper and Row 1957).
- <sup>5</sup> Mancur Olsen, *The Logic of Collective Action* (Cambridge: Harvard University Press, 1965).
- <sup>6</sup> James Buchanan and Gordon Tulloch, *The Calculus of Consent* (Ann Arbor: University of Michigan Press, 1962).
- <sup>7</sup> George Stigler, "The Theory of Economic Regulation," *The Citizen and the State: Essays on Regulation* (Chicago: University of Chicago Press, 1975).
- <sup>8</sup> Michael Trebilcock, Douglas Hartle, Robert Prichard, and Donald Dewees, *The Choice of Governing Instrument*, (Economic Council of Canada, 1982), especially chapters 2 and 7.
- <sup>9</sup> Pearl Eliadis, Margaret Hill, and Michael Howlett (eds.), *Designing Government: From Instruments to Governance* (McGill-Queen's University Press, 2005).
- <sup>10</sup> See Michael Trebilcock, "The Choice of Governing Instrument: A Retrospective," *Ibid.*
- <sup>11</sup> Steven Croley, *Regulation and Public Interests: The Possibility of Good Regulatory Government* (Princeton University Press, 2008), at page 69.
- <sup>12</sup> *Ibid.*, at page 70.
- <sup>13</sup> *Ibid.*, at pages 75 and 76.
- <sup>14</sup> Environmental Minister's Environmental Assessment Advisory Panel – Executive Group, *Improving Environmental Assessment in Ontario: A Framework for Reform* (March 2005), page 82.
- <sup>15</sup> Environmental Commissioner for Ontario, *Annual Report 2007-2008*, pages 44-45.
- <sup>16</sup> Richard Lindgren and Burgundy Dunn, "Environmental Assessment in Ontario: Rhetoric versus Reality," (2010) 21 *Journal of Environmental Law and Practice*, 279.
- <sup>17</sup> Environmental Commissioner of Ontario, *Annual Report 2007-2008*, pages 30-42.
- <sup>18</sup> Environmental Assessment Advisory Panel Report (2004), page 71.
- <sup>19</sup> Ministry of the Environment, *Guide to Environmental Assessment Requirements for Electricity Projects*, pages 17-18.
- <sup>20</sup> Environmental Commissioner for Ontario, *Annual Report 2008-2009*, pages 36-37.
- <sup>21</sup> SNL Financial, "Overwhelmed: Ontario Declares Halt to Wind Project Applications," October 23, 2009.
- <sup>22</sup> See Environmental Commissioner of Ontario, "Doing Less with Less," April 2007, page XX.
- <sup>23</sup> Environmental Commissioner of Ontario, *Annual Report 2007-2008*, page 41.
- <sup>24</sup> Environmental Commissioner of Ontario, *Annual Report 2006-2007*, pages 94-95 (emphasis added).
- <sup>25</sup> R. Lindgren and B. Dunn, "Environmental Assessment in Ontario: Rhetoric versus Reality," (2010) 21 *Journal of Environmental Law and Practice*, pages 297-298.
- <sup>26</sup> The Bill of Rights States that, "The Ministry considers the cumulative effects on the environment, the interdependence of air, land, water and living organisms, and the relationship among the environment, the economy and society."
- <sup>27</sup> Ministry of the Environment, *The Guide to Environmental Assessment Requirements for Electricity Projects*, page 3.
- <sup>28</sup> Lorrie Goldstein, "Dalton's Green Dance," *Toronto Sun*, July 4, 2010.
- <sup>29</sup> Ministry of the Environment Press Release, February 11, 2011.
- <sup>30</sup> Jatin Nathwani, "Red Flags on Green Energy," *Globe and Mail* op-ed, February 6, 2011; See also David J.C. Mackay, *Sustainable Energy – Without the Hot Air* (Cambridge: UIT Cambridge Ltd., 2009); Michael Trebilcock and James Wilson, "The Perils of Picking Technological Winners in Renewable Energy Policy," (Energy Probe Research Study, March 5, 2010), at p. 10.
- <sup>31</sup> Letter from the Director of Environmental Assessment and Approvals Branch of the MOE, Agatha Garcia-Wright to Donna and Lawrence Close of Grey Highlands, dated April 23, 2010.
- <sup>32</sup> See "Wind Turbine Noise Seems to Affect Health Adversely and an Independent Review of Evidence is Needed," *British Medical Journal*, March 8, 2012.

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<sup>33</sup> Environmental Commissioner of Ontario, Annual Report 2007-2008, page 28.