The Development of Renewable Electricity Policy in Ontario: Progress and Prospects[*]

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1. Introduction

Electricity systems are, as currently structured, not sustainable. While it is indisputable that they have helped to deliver unprecedented levels of prosperity for numerous people, it is still the case that large, centralised electricity systems, largely powered by fossil-fuels and/or uranium resources, have a variety of economic, environmental and social challenges associated with them.[1] Greater energy conservation, higher levels of energy efficiency and increased use of renewable resources are all required if electricity systems are to become more sustainable.

The province of Ontario is no exception to this general observation. For more than a century, Ontario's electricity grid has developed and helped this province reach significant levels of economic and social development. A range of recent events, however, have focused attention upon the sustainability challenges arising from this structure. More specifically, rising spot market prices for electricity, smog events and voltage reductions during the summer of 2005, in particular, highlighted the economic, environmental and reliability challenges involved.

To promote the sustainability of Ontario's electricity system, increased use of renewable resources is, many argue, required. The purpose of this paper is to examine the debate surrounding the proposed greater use of renewable resources – for example, solar, wind, biomass and water – in the generation of electricity in Ontario. To do this, the paper is divided into seven parts. Following this brief introduction, the context is set by briefly describing the resource, structural and political settings for electricity generation in

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[1] See, for example, John P. Holdren and Kirk Smith, 'Energy, the Environment, and Health', in World Energy Assessment: Energy and the Challenge of Sustainability, New York: United Nations Development Programme, 2000, pp. 61-110.

Ontario. In section 3, the relative role of renewables in Ontario electricity system from the early 1970s – a time at which, many argue, Ontario first had an energy strategy – to the mid 1990s – the proposals of the Rae Government – is reviewed. In section 4, the focus turns to the Conservative Governments of Mike Harris and Ernie Eves, examining the movement from a 'laissez-faire attitude' with respect to renewables (predominant in most of the discussions regarding electricity market restructuring) to support for a renewable portfolio standard (or, more specifically, a 'Green Power Standard') during the latter part of this period. In section 5, the Liberal Government of Dalton McGuinty is considered, with much attention devoted towards the changes in strategies, slowly moving away from a 'renewable portfolio standard' towards a 'long-term contract bidding' system and finally a 'feed-in tariff'. Section 6 begins to reflect upon the possible explanations for why the history of renewable electricity policy in Ontario has unfolded as it has. Finally, section 7 identifies outstanding issues in this policy-area, and offers some tentative conclusions.

2. Context

Ontario is a major 'producer' and 'consumer' of electricity. Figures below, from the Ontario Energy Board, reveal figures at both ends of this spectrum of electricity transformation. Clear from this is that hydropower – usually identified as 'renewable' electricity'; sometimes identified as 'green power' – plays a significant role. Institutionally, the Ministry of Energy, the Ontario Power Authority and the Ontario Energy Board (as regulator) play key roles in the 'management' of the province's grid.

Electricity generation, by resource, 2003		Electricity consumption, by sector, 2003	
Nuclear	41.3%	Commercial	39.1%
Hydro	24.0%	Residential	33.3%
Coal	23.9%	Industrial	29.3%
Natural Gas	9.0%	Transportation	0.3%
Oil	1.0%		
Other	0.8%		
Total electricity output	150.0 TWhr	Total end-use electricity demand	142.9 TWhr

3. Electricity Policy in Ontario: The Early Years Through to the Mid-1990s

Up until the early 1970s, Ontario did not have an 'energy policy', at least not one that was driven by the elected government of the day. Indeed, a 'Ministry of Energy' was not established as an independent portfolio until 1973 – but more about that below. Instead, up until the early 1970s, energy policy in Ontario – more specifically, 'electricity policy' in Ontario – was largely, if not exclusively, determined by Ontario Hydro.

Ontario Hydro was created in 1906, with the establishment of a permanent Ontario Hydro Electric Commission. Under the 'dominating leadership' of Sir Adam Beck, it was

initially designed to construct and operate a 'provincial transmission grid which would deliver power from privately owned hydro electric generators on the Niagara River to various municipally owned distribution systems in Southwestern Ontario'.[2] It soon 'broadened its vision to embrace a province-wide transmission grid and the progressive acquisition of most privately owned generating facilities in the province, as well as the construction of massive new generating facilities on its own'.[3]

Noting the name of the organisation, it is not surprising to observe that renewable resources – in particular, falling water power – was central to its early activities. The powerful organisation (see below) that became Ontario Hydro was built upon hydropower development; this was subsequently augmented by coal (and other fossil fuel resources) and nuclear power.[4]

Our claim, above, that Ontario electricity policy was largely determined by Ontario Hydro is supported by the observation, made by many, that there were extremely close links among government and senior Hydro executives. Swift and Stewart, for example, report that:

> Ever since the days of Adam Beck, the manufacturer and power broker who early in the century drove the establishment of the Hydro-Electric Power Commission of Ontario, the Crown corporation had become a behemoth, seemingly unaccountable to its government owners. But in truth Hydro, the business establishment, and the ruling Tories were bound together with close and strong ties. Between the 1950s and 1970s Robert Macaulay, once known as Mr. Energy, was variously Hydro's vice-chair, a Tory cabinet minister, and counsel for the Association of Major Power Consumers of Ontario (AMPCO), the industry lobby that ensured that the more power a company bought, the cheaper the power. Macaulay's father Leopold had been Tory leader prior to the beginning of the dynasty that governed Ontario from 1943 until 1985. His brother Hugh served as chair of Ontario Hydro after occupying the same post for the Progressive Conservative Party itself.[5]

Solomon recalls another telling example: in the early 1970s, Donald C. MacDonald, the first leader of the Ontario NDP, asked the new energy minister, Darcy McKeough, a series of hypothetical questions about whether the Minister of Energy or the Ontario Energy Board could tell Ontario Hydro that it should change its plans. MacDonald

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[2] Ronald J. Daniels and Michael J. Trebilcock, 'The Future of Ontario Hydro: A Review of Structural and Regulatory Options', in Ronald J. Daniels (ed), Ontario Hydro at the Millennium: Has Monopoly's Moment Passed?, Montreal, QC: McGill-Queen's University Press, 1996, p. 1.

[3] Ibid., p. 1.

[4] For a history, see Neil B. Freeman, The Politics of Power: Ontario Hydro and Its Government, 1906-1995, Toronto, ON: University of Toronto Press, 1996.

[5] Jamie Swift and Keith Stewart, Hydro: The Decline and Fall of Ontario's Electric Empire, Toronto, ON: Between the Lines, 2004, p. 14.

asked: 'Hydro can, in effect, do as it pleases … ?' The answer from McKeough was to the point. 'I think that what the member ... has pointed out is quite correct.'[6]

Similarly, Globe and Mail columnist Eric Reguly argues that Ontario Hydro 'was a law unto itself'. He continues: 'The government had no legal right to tell it what prices it could charge even though it was the sole shareholder. The bulk of its capital expenditures were unregulated too. Ontario Hydro took advantage of this by evolving into Canada's biggest construction company.'[7] Thus, many maintain that before 1973 – and, as we shall see below, in many instances, 'after 1973' as well – Ontario Hydro was in effective control of electricity policy in Ontario.

But 1973 was remarkable, for a Ministry of Energy was created in Ontario for the first time. It was not, however, until April 1977 that the Ministry first published a formal policy document – entitled *Ontario's Energy Future*, it addressed general energy policy matters. This was quickly followed, in 1979, by another policy document, entitled *Energy Security for the Eighties: A Policy for Ontario*. Prior to these documents, Hooker et al argue that 'an understanding of Ontario's energy policies had to be pieced together from reading a wide range of ministerial speeches, government documents, and the observation of behaviour'.[8]

If these two documents can be taken to be Ontario Government policy during the later 1970s, then one might conclude that there was growing interest in renewable resources during this short period. More specifically, the 1977 document appears to take a 'resigned approach' to renewable resources (discussed in the document under a section entitled 'Energy from Non-Conventional Sources'). Opinions and predictions from a variety of other agencies (Canadian and international) all seem to point to the same conclusion: although renewable energy might be desirable – particularly for reasons of energy self-sufficiency – it does not seem to be part of the near- or medium-term (that is, up to the year 2000) future for Ontario. Nevertheless, it is declared in this document that 'efforts to achieve economy in the production of energy from renewable sources must be intensified',[9] though specific recommendations for action are not forthcoming. Indeed, Hooker et al argue that, in this document, 'renewable energy technologies, such as solar and biomass technology, are either completely ignored or written off as irrelevant in a fifty-year time horizon; indeed, the document lists hydraulic and uranium derived energy as the province's only indigenous resources!'[10]

The document two years later places greater emphasis upon renewables. It calls, for example, for a 'significant acceleration in investment in renewable and recoverable energy', which translates into a $16 billion investment between 1980 and 1995. Indeed,

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[6] Quoted in Lawrence Solomon, Breaking Up Ontario Hydro's Monopoly, Energy Probe 1, Energy Probe Research Foundation, September 1982, p. 8.

[7] Eric Reguly, 'Regulatory Power Real Issue in Electricity Deregulation', The Globe and Mail, 14 February 2002.

[8] C.A. Hooker, R. MacDonald, R. Van Hulst and P. Victor, Energy and the Quality of Life: Understanding Energy Policy, Toronto, ON: University of Toronto Press, 1981, p. 50.

[9] Ontario's Energy Future, Toronto, ON: Ontario Ministry of Energy, April 1977, p. 30.

[10] Hooker et al, op. cit., pp. 61-62.

one set of observers argues that a reading of this document – along with the Ontario Energy Review of June 1979 –

> does introduce stronger themes of conservation and provincial self-reliance: it calls for a zero growth in provincial demand for oil by 1985, and an over-all growth rate of 2 per cent on average in total energy consumption by 1995, and at least 5 per cent of provincial energy needs in that year to be met from non-hydraulic, renewable indigenous energy sources. .... and at the same time no detailed program has yet appeared on how the target of 5 per cent renewable-resource energy supplies by 1995 might be reached.[11]

The pre-occupation, at least as revealed in the 'specific initiatives' articulated at the end of the document, appears to be upon replacing refined oil products in the transportation sector, rather than a detailed plan for increasing the use of renewables in electricity supply.[12]

Also remarkable during the 1970s was the establishment in 1975 of the Royal Commission on Electric Power Planning. Largely in response to the growing controversy about Ontario Hydro's expansive, and expensive, generation plans, the Ontario Government appointed Dr. Arthur Porter to head up this five-person Royal Commission. For five years, it held hearings, commissioned studies and produced reports regarding a broad range of electricity system operations. Its 88 recommendations – published in 1980 – were, in retrospect, somewhat ahead of their time. Hampton argues that the final report of the Royal Commission 'was replete with concrete expressions of a completely new approach to energy development and use'.[13] It concluded against nuclear power, but instead highlighted the importance of demand management. Moreover, it also gave due attention to 'smaller-scale additions to generation capacity'.[14] Within this, the emphasis was, in particular (and reflective of broader debates of the day), upon solar power: An 'issue paper' produced by the Commission in 1977, for example, identified 'solar energy' as the predominant 'alternate generation technology'; 'heat pumps, biomass energy, wind power, fusion power and magneto-hydrodynamics' are all presented in a secondary position.[15] Its results were most closely in tune with the discussions about 'soft path' approaches then emerging internationally,[16] and the work of the Science Council of Canada on a 'conserver society'.[17]

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[11] Ibid., p. 62.

[12] Ontario Ministry of Energy, Energy Security for the Eighties: A Policy for Ontario, September 1979, pp. 12, 14 and 16. There is also the mention of the need to establish a 'renewable energy development organization, in cooperation with the private sector and Ontario Hydro', though this is not further elaborated (p. 10).

[13] Howard Hampton, Public Power: The Fight for Publicly Owned Electricity, Toronto, ON: Insomniac Press, 2003, p. 130.

[14] Freeman, op. cit., p. 165.

[15] Royal Commission on Electric Power Planning, 'Conventional and Alternate Generation Technology', Issue Paper # 3, January 1977.

[16] Amory Lovins, 'Energy Strategy: The Road Not Taken?', Foreign Affairs, October 1976.

[17] Science Council of Canada, Canada as a Conserver Society: Resource Uncertainties and the Need for New Technologies, Report No. 27, Ottawa, ON: Science Council of Canada, 1977.

The other key arm of electricity policy-making in Ontario, however, was taking a different tack. As Hooker and colleagues note: 'The contradictions between provincial energy policy and Ontario Hydro planning emerge in a comparison of the former's *Energy Security for the Eighties* and the latter's 1980 proposals for a generation expansion program'.[18] More specifically, Ontario Hydro was continuing to focus upon its nuclear power priorities during this time (see, for example, its 1977 long-range forecast (LRF48A Plan)), and other resources – particularly non-hydraulic renewables – were receiving virtually no attention. Indeed, 'Solomon has argued that the way Hydro responded to these capital limits demonstrated just how great was its commitment to the nuclear option. Solomon pointed out that the board had decided in 1977 to build seventeen hydraulic stations, which had cost advantages over nuclear, yet they were cancelled in order to preserve the nuclear construction program'.[19] Indeed, Hooker et al argue that because of Ontario Hydro's preoccupation with large, centralised generating stations, they had actually closed 'a large number of small [hydropower] installations' during the 1960s and 1970s.[20]

Premier William Davis, a strong supporter of nuclear power, generally allowed Ontario Hydro to continue with its plans during the first part of the 1980s. With his resignation from the position of premier in 1985, and the subsequent appointment of the new Liberal government (with NDP support), there was the opportunity for a reconsideration of electricity policy in Ontario.

Shortly after taking office, the new government of Premier David Peterson struck a Select Committee on Energy. This Committee's first task was to consider the state of the Darlington Nuclear Station, then under construction (and already wrapped in significant controversy). Following that (and they decided, given the 'sunk costs', to continue with the construction of the facility), they turned their attention (in early 1986) to review demand and supply options more broadly and how Ontario Hydro chooses from amongst these different options. As is suggested by the title of their final report – that is, Toward a Balanced Electricity System – the members of the Committee encouraged greater diversity in supply, primarily for reasons of energy security. 'Parallel sources' – in particular, cogeneration, small hydro and municipal solid waste [21]– are encouraged. Moreover, Recommendation 14 states that:

> The Ministry of Energy should develop and publish detailed plans for parallel generation options including:
> - Specific targets
> - Financial and contractual arrangements
> - The role of Ontario Hydro in promoting parallel generation
> - Additional research, development and demonstration pnrograms needed

[18] Hooker et al, op. cit., p. 54.
[19] Aynsley Kellow, Transforming Power: The Politics of Electricity Planning, Cambridge: Cambridge University Press, 1996, p. 111.
[20] Hooker et al, op. cit., p. 54.
[21] Select Committee on Energy, Final Report on Toward a Balanced Electricity System, 2nd Session, Thirty Third Parliament, 35 Elizabeth II, July 1986, p. 85.

- Information and marketing efforts.

The Government must direct Ontario Hydro to incorporate these plans into its own annual resource plans.[22]

In 1989, the Select Committee on Energy released a report reviewing Ontario Hydro's strategy for demand and supply planning. In its 'priority strategic directions', Ontairo Hydro had argued that it would purchase power from private developers. They would be 'particularly encouraging renewable generation such as small hydro and wood waste'.[23] Interestingly, there are extensive discussions about the relative merits of 'standard contracts' – set prices, etc. – but these do not seem to apply to renewable energy in particular, for cogeneration is thought to be a potentially big supplier in this regard.[24]

The renewable that continues to get most attention from Ontario Hydro is hydropower. In subsequent documents, Ontario Hydro estimated the potential of different kinds of renewable electricity by the year 2000 as follows: 'small hydro 200-400 MW; municipal solid waste, 150 MW; wood wastes, 50 MW; cogeneration, 700-1000 MW'.[25] Generally, possibilities beyond this were not seen to be economic by Ontario Hydro, and therefore did not enter the planning options for the organisation[26] – a view supported by others (like Chalk River Technicians and the Federation of Engineering and Scientific Associations), while disputed by others (like Solcan Ltd.).[27] Towards the end of the Liberal Government at this time (more specifically, in 1989), there was an amendment to the Power Corporation Act which opened the door to private generation in the province and therefore made it potentially easier for renewables to get access to the grid.

Nineteen-ninety saw a change in government: the NDP and Bob Rae won a majority in the election and were in power for the next five years. At Ontario Hydro, most noteworthy was the appointment, in October 1992, of Canadian diplomat and entrepreneur Maurice Strong as the new Chairman and Chief Executive Officer. Attempting to 'shake up' the organisation, Strong stopped the development of nuclear power in the province, brought business-like measures to the various units of Ontario Hydro and placed significant emphasis upon electricity conservation. While there was no explicit policy regarding renewable electricity during this period, other groups worked to keep it on the agenda. The Independent Power Producers' Society of Ontario, for example, published a report that examined the resource potential (and price) of a variety of electricity generation options, including renewables. [28]

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[22] Ibid., p. 66.

[23] reprinted in Select Committee on Energy, Report on Ontario Hydro Draft Demand/Supply Planning Strategy, Volume 1, 1st Session, Thirty Fourth Parliament, 37 Elizabeth II, January 1989.

[24] Ibid., p. 18.

[25] Ontario Hydro, Presentation 114B, Non-utility generation, H Palmer, p. 57 of Select Committee on Energy, Report on Ontario Hydro Draft Demand/Supplly Planning Strategy, Volume II, 1st Session, Thirty Fourth Parliament, 37 Elizabeth II,

[26] See, for example, Ontario Hydro, Presentation 115F, Alternative Generating Systems, W. Penn, p. 77 of Vol II.

[27] Ibid., p. 78.

[28] Independent Power Producers Society of Ontario, 'Ontario Non-Utility Generation Synthesis Report', 1993, quoted in Christine Elwell and Edan Rotenberg, 'Green Power Opportunities for Ontario', Toronto, ON: Canadian Institute for Environmental Law and Policy, 2002.

4. The Conservative Government, 1995-2003: Electricity Industry Restructuring and Green Power Standards

In November 1995 – soon after the Conservatives, under Mike Harris, captured a majority during the Ontario election – the new Minister of Environment and Energy, Brenda Elliott, convened the Advisory Committee on Competition in Ontario's Electricity System, chaired by Donald S. Macdonald. Looking for advice regarding the development of the province's electricity system, the Committee published its report, entitled, 'A Framework for Competition', in June 1996. Not surprisingly (given the ideology of the new government), its membership was largely business-oriented, though one member was Sylvia Sutherland, a former mayor of Peterborough, was said to have 'excellent mainstream environmental credentials'.[29] Of the more than 50 recommendations that emerged from the Committee, there was nothing of substance regarding renewable electricity – only a desire that there should be 'consideration of the most appropriate regulations or other instruments … to support … the introduction of renewable energy technologies'.[30] Because, however, the Macdonald Committee Report did not endorse full-tilt privatisation – perhaps as its political masters may have wished – its recommendations ended up not having relatively limited influence.

Following the publication of the Macdonald Committee Report, the Government released its White Paper on the subject, entitled 'Direction for Change', in November 1997. The blueprint for the way in which the Conservative Government wanted the electricity system to unfold, renewables (and the environment, more generally) received relatively little attention. In the White Paper, it was basically argued that if customers wanted green energy (that is, electricity generated by renewable resources), then they would choose it in the new, more open market: 'A market would also allow consumers to choose more environmentally sound sources of supply'.[31]

The legislation that followed the White Paper was consistent with this theme. Notwithstanding the fact that one of the stated purposes of the Energy Competition Act (Bill 35) was 'to facilitate energy efficiency and the use of cleaner, more environmentally benign energy sources in a manner consistent with the policies of the Government of Ontario', little explicit attention was given to environmental issues of various kinds. The Energy Competition Act received Royal Assent on 30 October 1998.

The Ontario Market Design Committee (MDC) was charged with advising the Ontario Government as to how its new electricity system should be developed – that is, in taking the general principles of the Act and translating them into an electricity system that would reflect those values and priorities. Consisting of 17 members from across a

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[29] Hampton, op. cit., p. 191.

[30] A Framework for Competition: The Report of the Advisory Committee on Competition in Ontario's Electricity System to the Ontario Minister of Environment and Energy, p. vi.

[31] Ontario Ministry of Energy, Science and Technology, Direction for Change: Charting a Course for Competitive Electricity and Jobs in Ontario, Toronto, ON: Ministry of Energy, Science and Technology, November 1997, p. 12.

variety of constituencies, the members produced a remarkable volume of work during the second half of 1998. Noteworthy for our consideration of renewable electricity, there was much debate regarding the appropriate role of environmental goals in the work of the Committee.

There were two views in the MDC with respect to how environmental problems exacerbated by the existing electricity system should be addressed. On the one hand, a number of members argued that the environmental problems – be they emissions of pollutants like sulphur dioxide or other pollutants – should be addressed head-on through some kind of emission restrictions at the power plants. On the other hand, a number of other members also argued that renewable resources for electricity generation should explicitly be encouraged through a renewable portfolio standard – that is, through the setting aside of a part of the electricity market, to be exclusively reserved for renewable resources. There was much debate in this regard, and the MDC's own report notes that the two camps were about equally divided.

In the end, however, the White Paper – by not signalling 'interest' in RPSs (see the comments above quoting from the White Paper) – made it necessary for 'significant support' for RPS to be in place before the MDC would endorse it. Although there was some support, it could not pass this threshold value. It was believed, by many members of the MDC, that the increased cost of an RPS was not justifiable, and that, given the emphasis that was being placed upon low cost for electricity, an RPS should not be pursued. While it is not widely known which members of the MDC populated which side of this divide, Swift and Stewart report that: 'Oddly enough, it was the ostensible environmental representative on Ontario's Market Design Committee who led the opposition to Renewable Portfolio Standards in Ontario. Tom Adams of Energy Probe, appointed to the committee by Energy Minister Jim Wilson, argued that it was an unwarranted government intervention in the marketplace.'[32] Swift and Stewart also note: 'Adams also wrote, in a Jan. 11, 2002, posting to the on-line <cdn-nucl-l> discussion list: "Government subsidies to solar and wind power production (as distinct from research), whether in the form of net billing for transmission and distribution services, renewable portfolio standards (RPS), production tax credits, production bounties, non-fossil fuels obligations, or any other such schemes, should be cut off immediately. Such subsidies discourage success."'[33]

Instead, the MDC did little to divert the Government from their already-developed strategy – that is, wind, solar and the like will be encouraged through individual customers' willingness-to-pay for renewable energy. As Swift and Stewart state: 'In essence, the Tories were saying that if you wanted clean air or no nukes, then put your money where you mouth is and fork over an extra 50 per cent on your electricity bill.'[34] This is evidenced, for example, by the Ministry of Energy, Science and Technology's website at the time, which responded to its self-declared question 'Are there any

[32] p. 136 of Jamie Swift and Keith Stewart, Hydro: The Decline and Fall of Ontario's Electric Empire (Toronto, ON: Between The Lines, 2004).
[33] Swift and Stewart, op. cit., p. 227.
[34] Ibid., p. 136.

provisions in the legislation to support energy conservation and renewables' in the following manner: 'The move to a competitive market will create more options for encouraging cleaner, more environmental friendly green technologies, energy conservation and "green power". ... As the competitive market develops, we expect that some customers will demonstrate their preferences to buy environmentally-sustainable energy, which will create opportunities for the renewable energy sector'.[35]

While this approach continued to be the Government policy – in spite of all the other challenges and changes associated with electricity industry restructuring during the late 1990s and early 2000s – another interesting development occurred during the start of the new decade.

More specifically, the Select Committee on Alternative Fuel Sources, an all-party Committee of the Ontario Legislature, was appointed on 28 June 2001, with a mandate 'to investigate, report and recommend ways of supporting the development and application of environmentally sustainable alternatives to our existing fossil [carbon-based] fuel sources'.[36] Interestingly, the Select Committee itself observed that 'Ontario has never had an overall strategy for the promotion and use of alternative fuels and energy'.[37]

Also interestingly, although the name of the select committee suggests that it was going to be concerned with energy use in transportation, primarily, much of its attention was instead with respect to 'fuel' for electricity generation. After hearing from numerous stakeholders during a period of months, the Select Committee released its report in early 2002. Although it recommended a variety of strategies to advance the increased use of renewable resources in electricity generation, it appeared to 'privilege' one in particular, arguing that the 'Committee supports an RPS [renewable portfolio standard] for Ontario to apply to new renewable power, and believes that the opening of the electricity market to competition and a clear commitment to an RPS for Ontario will cause a range of renewable power producers to come forward to meet market demand'.[38] This was to be in place by 30 June 2003. A 'systems benefits charge' of 0.1 cents per kilowatt-hour should also be applied to electricity bills, with the revenue being used 'to fund an Ontario renewable energy trust to support renewable electrical energy programs and projects'.[39]

Nevertheless, the Government was still, it appeared, content to leave the development of renewable electricity to market forces. In the 2002 Ontario Throne Speech, for example, the Eves Government, on 9 May 2002, laid out 'four important objectives' for the

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[35] Ontario Ministry of Energy, Science and Technology, 'About the Ministry, Frequently Asked Questions, Electricity Restructuring and Bill 35, the *Energy Competition Act, 1988*', accessed on 28 May 2000. See, also, Ontario Ministry of Energy, Science and Technology, 'Keeping Ontario Green', 28 May 2000, in which it is observed that 'Your Choice Makes a Difference'.

[36] Select Committee on Alternative Fuel Sources, Final Report, Legislative Assembly of Ontario, 3rd Session, 37th Parliament, 51 Elizabeth II, June 2002, p. 1.

[37] Ibid., p. 2.

[38] Ibid, p. 15.

[39] Ibid, p. 16.

prvoince's electricity system – not one, however, was related to renewables, let alone environment or sustainability.

Things changed, however, and towards the end of 2002 (1 October, in particular) – on that day, the Government stated, in the Ontario legislature, that they would be pursuing an RPS.[40] This was more formally announced in the 30 April 2003 Speech from the Throne, when the Eves Government said that they would be developing an RPS. And, on 3 July 2003, the Ontario government announced that they would introduce a 'Green Power Standard', which would 'require Ontario's electricity system to secure an additional one per cent of its electricity needs from renewable sources in each of eight years, starting in 2006.'[41] Of course, the Conservative Government was not able to deliver on that promise, for it lost the provincial election less than three months later.

5. The Liberal Government, 2003-2006: A Variety of Approaches

Soon after their election victory, the new Liberal Government of Dalton McGuinty was receiving a number of proposals for the development of renewable electricity in the province. On 30 October 2003, for example, the Renewable Energy Task Team (representing a variety of renewable energy industries) called for a Request for Proposals (RfP) for renewable resources. That tack was the initial means by which the Government would serve to meet its goal of developing 1,350 MW of renewable electricity capacity (approximately 5 per cent of the total system demand).

In April 2004, the McGuinty Government initiated a call for proposals for 300 MW of new renewable energy supply.[42] This was followed, on 24 June 2004, by the formal issuing of the Request for Proposals (RfP) for 300 MW of renewable energy capacity (to be available by 2007, at the latest). In all, 41 proposals – representing approximately 1,100 MW of capacity from wind, biomass and waterpower – were offered. With selection based primarily upon cost considerations, 10 projects – totalling 395 MW of capacity – were selected, with the announcement being made on 24 November 2004. Half of the projects, in terms of simple 'number of projects', were wind-powered. Turning the measure to capacity, the share that was wind was much higher: almost 90% of the capacity was wind-powered, with much smaller contributions from biomass and small-scale hydroelectric power.

The RfP approach continued in 2005, with a second call issued in the early part of that year. Looking for almost 1,000 MW of capacity, nine projects were selected later that same year. The predominance of wind was even greater this time: eight of the nine projects were wind power, with more than 97% of the capacity being wind-powered; the sole exception was a 20 MW hydroelectric power project.

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[40] Note that the opposition Liberals announced, on 10 September 2002 that they would be pursuing a more aggressive phase-out of coal-fired power stations. That the Conservative change of policy was less than three weeks later is probably more than simple coincidence.

[41] Ministry of Energy, 'Ernie Eves Government Introduces Standard to Increase Green Energy' (Toronto, ON: Ministry of Energy, News Release, 3 July 2003).

[42] All information regarding the RfPs is taken from the website: www.powerauthority.on.ca/GP/

While a third RfP has been initiated – looking for up to 200 MW of renewable energy supply to be provided through smaller-scale generating facilities (with a rated capacity between 250 kW and 19.99 MW, inclusive) – the process appears to presently be 'on hold'.

One of the reasons why it is on hold may be that the Ontario Government's renewable electricity strategy has taken an additional direction during the past few months. To review the emergence of so-called 'feed-in tariffs' as a policy to encourage increased use of renewable electricity, it is necessary to look back more than two years.

In February 2004, the Ontario Sustainable Energy Association (OSEA) hired a California wind-expert, Paul Gipe, as its interim Executive Director (to replace an individual who had gone on maternity leave). With that appointment, OSEA launched its campaign for Advanced Renewable Energy Tariffs (also known as 'feed-in tariffs' in some parts of the debate). In contrast to an RPS, instead of fixing the quantity of renewable electricity to enter a particular electricity market and thus not knowing the price in advance, the method involves fixing the price in advance and thus letting the market determine the quantity to be delivered.[43] Largely unknown on this side of the Atlantic Ocean at the time (where it was generally assumed that RPS would continue to dominate North American discussions),[44] OSEA was effectively introducing a new concept into the debate.

Actively engaging a range of constituencies, Gipe's message found fertile ground in southwestern Ontario. More specifically, the farmers' association became key allies in the development of renewable electricity legislation in Ontario. A meeting in Stratford, Ontario in early 2004 unexpectedly attracted almost 250 people.[45] The message – instead of having to work with middle-men through an RfP, you could work directly in the market were feed-in laws to be in place – was well-received, and a key set of supporters for the policy proposal was found. Indeed, Gipe – writing in The Toronto Star[46] -- worked hard to ensure that his message reached far and wide.

OSEA continued its campaign, liaising with government, other NGOs and trade associations. Presentations were made – for example one to the Ontario government's Conservation Action Team at the request of Donna Cansfield, MPP, and Parliamentary Assistant to the Minister of Energy[47] -- and documents developed. The OSEA campaign was beginning to be supported by other nongovernmental organisations as well, for the

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[43] Frede Hvelplund, 'Renewable Energy: Political Prices or Political Quantities', in Volkmar Lauber (ed), Switching to Renewable Power: A Framework for the 21st Century, London: Earthscan, pp. 228-45.

[44] Ian H. Rowlands, 'Envisaging Feed-in Tariffs for Photovoltaic Electricity: European Lessons for Canada', Renewable & Sustainable Energy Reviews, Vol. 9, No. 1, February 2005, pp. 51-68.

[45] See, for example, Donal O'Connor, 'Wind-power Meeting Draws 250 to Stratford', Farm Market, 10 April 2004; and Marc Hulet, 'Wind Power Meeting Draws Large Crowd', The Mitchell Advocate, 7 April 2004.

[46] Paul Gipe, 'Farming for Electricity', The Toronto Star, 26 April 2004, p. A17.

[47] Paul Gipe, 'Trends Toward & Development of Renewable Energy Tariffs (Electricity Feed Laws) in North America' (www.wind-works.org/FeedLaws/ARTsTrendsinNorthAmerica.html)

David Suzuki, in its 2004 report OPG report entitled Smart Generation called for REMs (Renewable Energy Mechanisms).

In October 2004, OSEA held a forum on ARTs in Toronto. Inviting renowned renewable energy advocate and German politician Hermann Scheer to speak lent international credibility to the campaign. Highlighting the role of Prince Edward Island – and its work to become a key 'renewable energy hub' in Canada – set up intra-provincial rivalries, and the Parliamentary Secretary to the Minister of Energy stayed for the duration of the meeting. In the same month, the Premier's Office signalled an interest in a 'mechanism other than a RFP' for distributed wind energy projects in Ontario.[48] Also, 'Ontario's Renewable Energy Task Team drafts policy on Standard Offer Contracts in response to government's request for "new mechanism" for developing renewable energy.'

OSEA's efforts continued during the subsequent months, and the Ontario Ministry of Energy commissioned, in early 2005, the Association to prepare a report on feed-in tariffs, since re-named 'Standard Offer Contracts'. In May 2005, OSEA delivered this final report to the Ontario Ministry of Energy, in which they proposed a pilot program using 'advanced renewable tariffs' for projects less than 10 MW. This was subsequently made public in August 2005, with standard offers of 13.3 cents per kilowatt-hour for wind, small hydro and biomass and 83 cents per kilowatt-hour for solar-photovoltaic. It was reported at that time that Energy Minister Dwight Duncan had 'instructed the Ontario Power Authority to investigate a workable pricing scheme and the Ontario Energy Board to look at necessary connection-policy changes that would ensure non-discriminatory access to the grid.'[49] After additional deliberation and negotiation among the Ministry of Energy, the Ontario Energy Board, the Ontario Power Authority and various stakeholders, the policy was announced officially by the Ontario Government in March 2006. It is anticipated that the final details will be forthcoming this Fall.

6. Explaining the Development of Renewable Electricity Policy in Ontario

Why has renewable electricity policy unfolded in the way that it has? In particular, the post-1995 period can be characterised by four periods – two distinct and two partially overlapping. The first, from 1995-2002, is the 'laissez-faire' period, during which a policy of 'leaving the market' to promote renewable electricity was consistent with the Government's ideological predilections. This was also consistent with the desires of the Government's major supporters – business – for there was concern that any other means of support for renewable electricity might make 'conventional electricity' more expensive and thus affect competitiveness.

The second period, from 2002-2003, is the Progressive Conservative Government's era of the 'Green Power Standard'. It is a period that was cut short and thus never really 'got off the ground'. Nevertheless, the question remains: 'Why did the Government change tack so dramatically?' Clearly the experience of the Select Committee on Alternative

[48] Ibid.

[49] Tyler Hamilton, 'Ontario to Open Floodgates to Clean Power Plan Would Boost Wind, Solar, Hydro', The Toronto Star, 22 August 2005, p. C01.

Fuels (2001-02) was a lesson in renewable electricity education for all parties. Moreover, with numerous stakeholders lining up to make representations to the Committee, it was suggestive that there was great interest in the topic in the province. Conscious, therefore, that the Government could not be 'left behind' in the wake of Liberal and NDP position changes, this was probably a response to a perceived shift in the public mood.

The third period, from 2004-2006 (and perhaps ongoing) is the period of 'RfPs' for 'long-term contracts for large-scale renewables'. The adoption of this policy can, in many ways, be traced back to the Liberal Party's decision to bring forward the coal phase-out date to 2007. This, in turn, can be attributed in many ways to the work of the coalition of environmental and other interests called the Ontario Clean Air Alliance (OCAA, working under the leadership of Jack Gibbons). The OCAA's singular focus upon phasing out coal was effective, and this, in turn, not only encouraged greater attention to the environmental impacts of the electricity system generally (which thus encourages increased consideration of renewables) but also galvanised interest in any supply resources that could meet the 'gap' that would result from the coal phase-out. Why, in turn, an RfP strategy was chosen rather than an RPS strategy is probably a function of the desire to get something done 'quickly'. With over 100 municipal electric utilities in existence in Ontario at the time, it could have proved very difficult were all obliged to ensure that x per cent of their supply were sourced from renewable sources. Instead, an RfP strategy fit with what provincial bureaucracies were experienced with.

Finally, the fourth period, from 2005-2006 (and ongoing) is the period of 'advanced renewable tariffs'. Paul Gipe, the Executive Director of OSEA, was clearly a policy entrepreneur at this time, effectively engaging non-traditional constituencies for renewable electricity (like farmers) to generate widespread support. His actions also fell on 'fertile ground', in the sense that the ruling Liberal party were receptive for innovative ideas that would 'set them apart' in some way.

7. Conclusions and Prospects

The purpose of this paper has been to review the development of renewable electricity in Ontario. By examining the development of policy between 1973 and 2006, with a particular emphasis upon the post-1995 period, both the different approaches used and the different influences upon policy-making were revealed. The development of such policy in Ontario is, of course, by no means 'finished', for those advocating the development of a sustainable electricity system see much work still to be done.