International Forces Driving Electricity Deregulation in the Semi-periphery: The Case of Canada

Marjorie Griffin Cohen

Question: How many economists does it take to change a lightbulb?
Answer: None. The invisible hand will do it.

Two main and related policy decisions in the United States are behind major changes in the electricity sector in Canada. One was the regulation that allowed US electricity companies to invest in other electrical utilities throughout the world. The other was the deregulation of the US market that shifted production and distribution from a system of regulated regional monopolies to price-driven system controlled by market mechanisms. Both of these events (which themselves had significant political antecedents) increased the power of large new private players in the US energy sector and gave them strong incentives to pressure Washington to pursue international trade agreements on electricity to meet their investment needs. From the beginning of the deregulation exercise interests of private power producers have had a decisive impact on the regulatory changes that have occurred - not only in the US but also in international regulatory bodies that condition the way electricity markets will work throughout the world.

As a result, Canada, a country that had no compelling economic reasons to deregulate its electricity sector, has been profoundly affected by both the regulatory changes within the US and those that are cemented through international trade agreements like the North American Free Trade Agreement (NAFTA) and the World Trade Organization (WTO). As a 'semi-peripheral' country, it recently played a complex role in shaping international economic regulations, a role that has undermined its historical effort to maintain some measure of economic policy autonomy. Other authors in this book have stressed the leading role the government of Canada plays internationally, on behalf of large-scale business, in aggressively pursuing increased trade liberalization. But it is a particularly critical role primarily because, while negotiating on 'trade', it has consciously and deliberately included for negotiation areas of national and subnational jurisdictions that go far beyond issues of trade and deal with areas currently in the public sector. Canada's geography, history, and objectives differ substantially from the US, and, as a result, it has placed much more emphasis on providing services in the public sector. In the case of electricity, this has worked exceedingly well by most measures. But social and economic success in providing this service is proving to be an insufficient insulator against the radical changes that are pushing the sector towards action mimicking the US experience. This shift is happening despite the dismal record of electricity deregulation in the US.

The transformation of the electricity industry in Canada is an important example of how deep and radical regulatory changes in the dominant country (US) can subvert the public provision of an essential utility in a semi-peripheral country (Canada). This chapter will analyse these transformations and show how the underlying principles informing this shift are being codified in international trade agreements like NAFTA and the WTO's General Agreement on Trade in Services (GATS), and so facilitate the march towards further deregulation and privatization. NAFTA is becoming increasingly significant in this sector because moves towards deregulation in Canada create a situation where the NAFTA rules apply, but the most significant international arena for advancing the neo-liberal agenda for utilities is the current round of negotiations on the GATS. These new negotiations coincide with the United States' drive for an integrated continental energy policy and, should it succeed, will considerably enhance the project of a continental electricity market with full-scale continental pricing.

Changes in the electricity industry

Until recently, electricity experienced very little trade in the sense of producing in one country and selling in another. It has been difficult to trade because it is not storable. Certain technical features about its production and distribution meant that it developed as a natural monopoly.[1] Most of the world still does not engage heavily in electricity trade, and that which occurs is regionally based, because of its non-storability and its reliance on limited transmission networks. It exists primarily between Canada and the USA, Paraguay and Brazil; between Russia and other countries in Eastern Europe; and among Western European nations.[2]

In most countries, electricity has been provided either through the public sector or through a highly regulated private monopoly, which is usually confined to serving customers in specifically defined areas (WTO 1998). The American electricity sector developed as a combination of private, public, and cooperative systems that had specific jurisdictions and did not compete with each other. Prices and market areas were highly regulated with prices set in relationship to costs of production.

In Canada the capital costs involved in providing large-scale vertically integrated hydro systems were larger than private corporations wanted to risk, so the establishment of the modern electrical system was accomplished mainly through publicly owned utilities within each province (Froushauer 1999). The primary mandate of these provincial utilities has been to provide

electricity to people and industries within a provincial boundary: their operations have been characterized by long-term planning for adequate supply, equitable distribution, and low and stable prices. Exports to the US, while often important for provincial revenues, were usually limited to the sale of surplus electricity through long-term contracts with guaranteed pricing.[3] However, as will be seen later in this chapter, the export market and the desire to increase exports to the US have proven to be the critical factor in accelerating the deregulation and privatization of electricity in Canada.

Market liberalization came more gradually to the electrical industry in the US than to other utilities primarily because of its characteristics as a natural monopoly. The technological advantages of large-scale generation, transmission, and distribution, coupled with a history of public development of the infrastructure, kept this industry firmly under government regulatory control, even when private utilities were significant actors in the sector. The slow, but steady deregulatory process began in 1978 when the Public Utility Regulatory Policy Act required utilities to purchase power from private producers if it could be obtained at costs that were less than those associated with building new facilities (Gilbert and Kahn 1996). This was the initial attempt to introduce competition for electricity supply, a direction that was driven by a US Supreme Court ruling that antitrust laws applied to the electric power industry and that federal regulatory agencies had to take into account the impact of their decisions on competition. At the same time a growing dissatisfaction with nuclear energy heightened the sense that massive public spending on mega-projects to provide energy had not served the public well (Flavin and Lenssen 1994). The monopoly of power utilities, it was argued, had encouraged the huge capital-intensive approaches to supplying electricity, and since costs could be passed on to the consumer, there was little incentive either to seek alternative sources of supply or to develop more efficient facilities. Public policy changes were also influenced by the sharp increases in costs due to the oil crises, the huge cost over-runs from nuclear power generation, and the nuclear disasters associated with Chernobyl and Three Mile Island. The immense cost of maintaining the safety of nuclear facilities made this source of energy particularly unattractive.

Initial regulatory constraints on utilities paved the way for greater private participation in the industry. This 'competition' was greatly accelerated through the Energy Policy Act of 1992, which significantly expanded the number of generating entities that could be exempt from regulatory controls of operations and pricing and created a whole new class of producers called 'exempt wholesale generators' (EWG). These EWGs could be owned by the electric utilities or could be private, independent entities. The 1992 act also accelerated competition by allowing greater access for wholesale transmission (wholesale wheeling) so that any EWG could be assured transmission either to its own utility or to other utilities at distant locations. These changes were further strengthened by regulatory changes in 1996 by the Federal Energy Regulatory Commission (FERCs) under orders 888 and 889, which removed monopoly power from utilities and mandated the separation of transmission from generating and other functions of the utility. These regulatory changes increased competition between utilities and generated a significant supply outside traditional utilities. Utilities have historically not competed with each other, but with the rise in wholesale wheeling, they were encouraged to attempt to increase their market shares at the expense of other utilities. As a result, the relative cost structure of other utilities became more significant to the security of markets that previously had been protected from competition.

Eliminating the natural monopoly aspects of electricity relied heavily on 'unbundling', a concept that emerged when deregulation of telecommunications successfully introduced competition in that industry. Unbundling the formerly integrated aspects of the electricity system requires that the advantages (and efficiencies) of vertical integration be dismantled so that new private suppliers can have access to transmission and distribution networks. The argument used to justify unbundling the three major components of electricity entities (generation, transmission, and distribution) is that existing vertical integration leads to natural monopolies unfairly capturing the electricity market. This train of thought is reinforced by the promise (at least when the concept was initially discussed) that a competitive, deregulated market would elicit more supply, be more efficient, and produce lower prices. However, the attractiveness of the market for private companies relies heavily on the availability of a well-developed and highly regulated infrastructure for transmission and distribution, because new technologies have not changed the natural monopoly of these components of delivering electricity to where it is needed.

The other major factor usually identified as accelerating changes in the industry relates to the technological changes that have occurred in the generation of electricity and that have made investor-owned, relatively small-scale electrical generation more viable (Jess 1997). It is true that the economies of scale that have historically characterized the industry have been undercut by new technologies such as combined cycle gas turbines that make smaller-scale production cheaper and environmentally cleaner (Linden 1995). However, the significance of new technologies as the driving force behind deregulation is grossly overstated since it really applies only to those jurisdictions that have turned away from coal and nuclear energy to gas, such as Great Britain and California. The main significance of technological change lies in providing an important lever for independent power producers to promote a competitive environment.

Once the ability to penetrate the regulated system occurred, the significant factor in accelerating the changing shape of the industry was the spectacular rise in the role of power traders like Enron and Duke Energy and the regulatory change that allowed US owners of electrical utilities to invest in utilities in other countries. The increased trading and investment possibilities that arose from the deregulated system greatly expanded the size of electricity markets within regions and made the interconnectedness of regions more prominent.

Table 10.1 Fuel sources for electricity generation (% of total electricity production)

Fuel Source	USA	Canada
Coal	52	19
Nuclear	20	13
Natural Gas	16	3
Hydropower	7	61
Oil	3	2
Renewables	2	2

Sources: Cheney et al. 2001; OECD/IEA 2001.

The US experience demonstrates that relatively minor initial regulatory changes can have far-reaching repercussions throughout the entire system. The initial changes that only applied to wholesale wheeling did not appear as threatening as would total competition and complete deregulation of the market. But the small initial steps constituted an important first stage towards introducing competition at both the wholesale and retail levels. Competition at the retail level was mandated through the Comprehensive Electricity Competition Act (2001), which allows all customers in the US to choose their electricity supplier.[4]

The movement towards competition in the industry in Canada was even slower than in the US and was driven in most jurisdictions primarily by the perceived need to conform to US regulations in order to export into that market.[5] Most provincial utilities in Canada did not experience the same problems of inadequate supply and high prices as had their US counterparts. This was mainly because Canadian utilities are considerably more water-based than are those in the US, and hydro-based systems are much more cost-effective than are thermal-based and nuclear systems (Kwoka 1995). Most of the electricity in the US comes from nuclear fission or steam from burning fossil fuels, while in Canada it is primarily hydro-generated (see Table 10.1). Once a hydroelectric system is in place, it is much cheaper and cleaner than other sources of large-scale electricity production.[6] Three of the four main electricity-exporting provinces in Canada - BC Hydro, Hydro Quebec, and Manitoba Hydro - all rely primarily on waterpower.[7]

Table 10.2 Comparative electricity prices in North America (Canadian cents/kWh)

Cities	Residential	Medium power	Large power
Canada			
Winnipeg	5.89	4.44	2.96
Montreal	6.03	6.10	3.83
Vancouver	6.12	4.56	3.36
Ottawa	7.36	6.88	5.78
Edmonton	7.51	5.81	5.30
Toronto	8.32	7.31	6.24
St John's	8.37	6.22	3.49
USA			
Seattle	6.75	5.28	4.92
Miami	10.22	7.79	5.77
Chicago	12.26	10.98	7.09
Detroit	14.63	10.53	7.39
Boston	16.82	14.76	11.96
New York	21.24	17.52	12.63
San Francisco	17.18	12.76	7.33
Average	10.62	8.64	6.29
Power (kW)		1,000	50,000
Consumption (kWh)	1,000	400,000	30,600,000

Note: Average prices on 1 May 2000. This was before deregulation in Ontario and Alberta. Since then prices have increased considerably in these provinces.
Sources: Hydro Quebec 2001; National Energy Board 2001; Toronto Hydro Electric System 2001.

As a result of the abundance of low-cost electricity (see Table 10.2), Canadian utilities were not experiencing the serious problems encountered by many US utilities. Internal pressure for deregulation has come from the private sector's desire to gain entry to a market from which it has been excluded. The American deregulatory model and the increased pressure from US regulators on Canada's exporting provinces to conform to US regulations, have reinforced this trend. This has meant shifting a closed, vertically integrated system to an open system where private access to transmission lines, if not actual generation itself, is permitted. All exporting provinces in Canada have opened their transmission systems for wholesale access, although only Ontario had planned for a fully deregulated market. Most provinces (with the exception of Alberta) have pursued a cautious route, and even Ontario, an exporting province that had planned to deregulate fully, is proceeding slowly.

US drive for energy

The drive for secure sources of supply is a critical feature of US energy policy. The major report prepared by Vice President Dick Cheney, Secretary of State Colin Powell, and others of the National Energy Policy Development Group (NEPD) in May 2001 documented not only the dire shortages the US faces – 'a fundamental imbalance between supply and demand defines our nation's energy crisis' – but also the relationship with foreign energy suppliers required to meet future needs (Cheney et al. 2001). The document describes, in dramatic words, how 'millions of Americans find themselves dealing with rolling blackouts or brownouts', employers who 'must layoff workers or curtail production to absorb the rising cost of energy', and of the families who 'face energy bills two to three times higher than they were a year ago' (Cheney et al. 2001: viii).

The critical situation is accentuated by the estimate that US electricity demand will increase by about 45 per cent within the next twenty years. This will require between 1,300 and 1,900 new electricity generation plants, which would mean bringing into production about one new plant a week over the next two decades (Cheney et al. 2001: 5-6). This ratcheting up of supply is something that even the most optimistic supporters of a deregulated market think unlikely. Despite its perceived failure, deregulation remains the cornerstone of US electricity policy. On the belief that in a completely deregulated market private companies will assume the requisite financial burden of increasing electricity supplies, there is no deliberate public planning for expanding future electricity supply. In the face of recent market responses to deregulated markets, this assumption seems curiously optimistic. Although twenty-five states have opened their retail electricity markets to competition, very little new generating capacity has come on-line. The NEPD says new capacity is expected to come into production before 2005, but the clear message of the US policy report is that there will be a mismatch between generation of electricity and demand where it is needed. At present, the major problem areas for electricity are California, New York, and New England, all areas that could dramatically increase their supply from Canada.

As was amply demonstrated in California, the major problem with the electricity shortages in the US is that prices can fairly easily be manipulated through the deregulation process. While new domestic sources of electricity could come on-line if prices escalate very rapidly, this is a politically unsettling solution to what is clearly a serious problem. As the Chair of the Western Governors' Energy Committee noted at a 2001 conference in Whistler, BC, 'the best way to drive prices down is to increase supply'. As he observed, the heavy reliance on Canada by the US can create conflicts, particularly if Canadian companies gouge US customers. (This was a clear reference to the allegation that BC Hydro gouged California during the disastrous deregulation exercise.) But, as this official noted, these kinds of problems with price spikes can be averted if Canada assures adequate supply through an 'energy policy for the Americas' (Skelton 2001).

Developing a continental market for electricity to make sure resources are available from Canada and Mexico is clearly the goal of the National Energy Policy. The Cheney document stresses that 'energy security must be a priority of US trade and foreign policy', and makes clear that this security will be achieved by supporting a 'North American Energy Framework to expand and accelerate cross-border energy investment, oil and gas pipelines, and electricity grid connections' (Cheney et al. 2001: xv).

Canadian and Mexican resources are to be the US energy storehouses, and policies that increase these storehouse supplies are seen as crucial to US domestic security. Promoting the liberalization of the global energy sector means not only securing access to supply but also promoting US energy investments in other countries. To this end the NEPD recommends that the US focus on meeting energy objectives through international trade agreements. This can be done, the document argues, by supporting 'American energy firms competing in markets abroad and us[ing] our membership in multilateral organizations ... and our bilateral relationships to implement a system of clear, open, and transparent rules and procedures governing foreign investment; to level the playing field for US companies overseas; and to reduce barriers to trade and investment' (Cheney et al. 2001: 8/6).

The outlines of US energy policy are eminently clear – the objective is not simply to secure adequate trade in energy resources, but also to secure the right of US energy investors' capacity to exploit the resources of other countries. It is particularly important that the NEPD has targeted the opportunities to ensure this through the trade agreements: it specifically refers to the opportunities at the WTO to open markets 'for private participation in the entire range of energy services, from exploration to the final customer' (Cheney et al. 2001: 8/7).[8]

Electricity trade

Canada exports between 5 per cent and 10 per cent of its electrical generation, levels that are highly dependent on weather conditions and water levels in dams. Between 1988 and 1996 only 6 per cent of total production was exported to the US on average. Export sales are primarily to the New England states, New York state, the upper Midwest, the Pacific Northwest, and California. But despite the small share of total production that is sold across the border, export markets are a significant factor in the future because of the revenues these sales have generated for provincial governments in recent years. For example, in British Columbia revenues of the crown corporation BC Hydro changed considerably in a very short period: in the 1990s, revenues from exports were normally between 6 and 8 per cent of total revenues; however, by 2000, exports represented 32 per cent of total revenues and rose to 69 per cent of total revenues the following year. While the huge revenues in 2001, which were generated by the California deregulation debacle, are unlikely to be repeated, the anticipation that export revenues will continue to be substantial raises the incentive to meeting US demands for regulatory changes.

For all exporting provinces, US trade is more important than interprovincial trade (see Table 10.3). The Canadian electricity system is oddly structured, reflecting the historical peculiarities of federal/ provincial jurisdictions and competition between the provinces. Rather than developing a national grid system, or even substantial regional grids, to take advantage of efficiencies and low-cost production capacity of some provinces, the bickering between provinces at crucial times prevented the development of a mechanism that could have encouraged and regulated the transmission of electricity across provincial boundaries. Instead, each province developed electricity for distribution within its borders and, when the opportunity arose, preferred exporting electricity to the US rather than to other provinces. The result is that north/south inter-ties are considerably more developed than those between the provinces (Frouschauer 1999).[9] This has produced unfortunate results, such as Ontario developing nuclear power rather than importing significant amounts of hydroelectric power from Quebec, and Alberta relying on coal rather than importing much hydroelectric power from British Columbia or Manitoba. Most exports of British Columbia, Manitoba, New Brunswick and Quebec, all very low-cost producers, go to the USA.

Table 10.3 North American world electricity trade (billion kWh, 1999)

Country	Exports	Imports
Canada	42.91	12.95
Mexico	0.01	1.00
United States	14.00	42.92
North American Total	56.92	56.87

Source: USEIA 2001.

Since the electricity industry developed primarily within provincial boundaries, most of its regulation is under provincial control. Until recently all provincial governments either directly owned the major electrical utilities or, in a few minor cases, asserted strong regulatory control over private monopolies. This meant that the security of supply and prices was firmly in the public sphere. The federal government regulated the export of electricity to the US and regulatory approval was needed from the National Energy Board (NEB) for any export agreement. Export agreements were subject to public scrutiny through hearings to determine the effect on various groups and the environment. This federal control and public scrutiny began to change, however, with the gradual opening of the market to comply with Federal Energy Regulatory Commission (FERC) demands and the signing of the Free Trade Agreement and NAFTA.

The oversight of the NEB diminished considerably with changes to the NEB Act that removed the necessity to consult the public about the economic and social significance of proposed exports. Now export permits are allowed to proceed in a more routine way without public hearings and in most cases without any federal scrutiny. In response to changes in the market, and in particular with the rise of power trading and the increase of Canadian utilities' actions on spot markets, blanket export permits are issued to exporting companies. As a result, virtually no control or oversight exists over Canadian exports of electricity. This is especially important because changes in the entire industry are being made as a result of US policy directives, rather than from an assessment of the best interests of Canadians. When relatively small amounts of electricity are exported, the lack of federal review did not appear to place the security of electricity supply in jeopardy. However, the relative size of the export market is much less significant than the fact that the export market is the stimulus for an 'open access' policy that itself triggered increasing demands from US electricity companies and power traders to have access to the Canadian market. Since Canada is blessed with such a huge supply of the basic materials for generating electricity, few could imagine a decade ago that international trade would

threaten domestic consumption. The difference now is that the powerful trade agreements that support an export-centred energy strategy can compel markets to open in ways that will jeopardize the stability of both supply and pricing that Canadians take for granted.

The major risk for Canadians in a deregulated market is that the new private producers, who will have access to the transmission grid, will focus on exporting to the more lucrative market in the US. Since public utilities would no longer plan for future supply, but rely on the private sector's investments, and since prices would no longer be regulated to reflect the cost of production, Canadians would be forced to compete with customers in the US for access to their own domestically generated electricity.

NAFTA and the GATS

While trade liberalization is not itself the primary cause of changes under way in the industry, the existence of NAFTA has contributed to the restructuring and ensures that any changes towards deregulation are permanent. This section will examine how NAFTA rules affect the electricity sector, but will also show how, despite the strength of these rules, NAFTA has limited power. The fact that NAFTA powers are limited is extremely important because it means Canadian provinces could maintain public monopolies in electricity, should they choose to defy US pressure to deregulate and privatize markets. It also means that because the deregulation of electricity is in a rather precarious situation and NAFTA rules are unable fully to achieve US objectives, Washington has had to pursue much more dramatic rule changes through the WTO. This is occurring in the negotiations on the General Agreement on Trade in Services (GATS). If the US proposal for energy in GATS succeeds, it would support complete electricity deregulation, privatization of electrical generation, and full-scale continental pricing.

NAFTA and electricity

According to the NAFTA Commission for Environmental Cooperation (CEC), NAFTA rules will be increasingly significant for the electricity sector, even though the trade agreement itself includes only a few provisions directly referring to trade in electricity. This is because NAFTA reinforces the market pressures for a competitive market in North America and because it continues to 'expand on the institutional frameworks within which the economic integration of the Canadian, US and Mexican electricity markets may take place' (CEC 1999: 288).

Several sections of NAFTA contain provisions that can affect the electricity market. The most important of these include the chapter specifically on energy (Chapter 6), all provisions dealing with investment (Chapter II), and the sections dealing with monopolies and competition policy (Chapter 15). As the CEC notes, the rules on energy specifically aim to reduce the capacity of government regulators to involve themselves in cross-border energy sales by removing restrictions on exports and preventing the creation of new restrictions (CEC 1999: 289). In addition, regulatory measures of all governments are subject to 'national treatment' (see below).

While the federal government had few regulatory powers over electricity production in Canada, when NAFTA was signed it was heavily involved in controls over exports. As was noted earlier, all exports from utilities required permits from the National Energy Board, which had the authority to make decisions to grant or deny permits based upon several legal criteria. These criteria included consideration of the effects of the proposed exports on the environment and whether Canadian customers had equal access to the purchase of electricity under the same terms (Howse and Heckman 1996: 127). Since the signing of NAFTA, the federal government's oversight over exports has become much more flexible and much less rigorous. Blanket long-term export permits are routinely granted both to public utilities and to private corporations which have not yet entered the international market. For example, when Duke Energy purchased the Canadian gas company West Coast Energy, it applied for and received a long-term electricity-exporting permit, even though it is not yet in the electricity-producing business.

While it is clear that Canada could retain the right to monitor and regulate electricity exports under the NAFTA regime, it would need to make a case that this control was necessary in order, for example, to protect the reliability of the system or to prevent a critical shortage of electrical power (Howse and Heckman 1996: 127). But it is equally clear that Canada has not chosen to exercise its power under NAFTA and has voluntarily relinquished, at least in practice, a good deal of its regulatory control over electricity trade.

A similar self-censoring type of action seems to be occurring with regard to the interpretations of 'national treatment'. National treatment means that granting market access to domestic producers requires the same kind of access be given to foreign corporations as well.[10] But the situation is less satisfactory for the US in a deregulating climate where US deregulation is proceeding at a much more rapid rate than it is for most of Canada. The Canadian electricity exporting provinces that have not fully deregulated (which is most of them) have greater access to US markets than American firms have to Canadian markets, creating what the US perceives to be highly asymmetrical circumstances. Canadian producers (including public utilities) are able to sell into the deregulated US market, but national treatment only allows US producers access to the Canadian market to the extent that Canadian private producers are allowed to participate. This means that as long as the Canadian market remains

primarily in the public sphere, the level of private participation is limited. Consequently, US producers are demanding 'reciprocity' for both trade and investment rights. That is, they demand the same kind of access to produce, distribute, and trade in Canada that they (and Canadian utilities) have in the US.

Under NAFTA no country is required to provide reciprocity: the standard to be upheld is 'national treatment', and as long as a province treats domestic and foreign firms in the same way – that is, as long as they are both denied access to the market of a public monopoly – they are not contravening NAFTA (CEC 1999: 290). However, some utilities, such as BC Hydro, have voluntarily agreed to reciprocity, and all exporting provinces, even those who do not intend ever to deregulate fully (like Quebec), have opened their markets to wholesale wheeling. This means that when the public utilities buy power from independent power producers, they will have to give equal consideration to US producers.[11]

Once Canadian provinces begin the process of deregulation, very powerful NAFTA requirements come into play that considerably enhance the ability of private power producers to curtail the power of public utilities. So, for example, when some measure of competition begins in the generation of electricity, the public utility will be forced to abide by the rules laid out under NAFTA Chapter 15 dealing with competition policy, monopolies, and state enterprises. This requires that state enterprises must act 'solely in accordance with commercial considerations in its purchase or sale of the monopoly good or service in the relevant market, including with regard to price, quality, availability, marketability, transportation and other terms and conditions of purchase or sale' (NAFTA: 1501, 3, b). For a public utility, this could fundamentally undermine the very basis for its existence – that is, to meet needs that are defined more widely than those pertaining to commercial considerations.

While NAFTA has powerful tools to accelerate the deregulation of electricity in Canada, it cannot demand that either deregulation or privatization occurs. The main force compelling Canadian electricity utilities to deregulate is their desire to have access to the US export market and their reluctance to demand this right through NAFTA. Instead, Canadian utilities have entered into the regional transmission grids governed by FERC in the US and understand their interests to lie in conforming to FERC requirements. The Canadian federal government has been inactive in pursuing the interests of public utilities by creating specific rules to protect the Canadian system. According to some analysts, this 'combination of American regulatory activism, Canadian regulatory inertia, international trade law rules and Canadian interest in continued access to American market: may bring about an integrated Canada/US market' (Howse and Heckman 1996: 134).

The GATS: current negotiating issues

Under the existing GATS agreement, Canada has relatively few commitments to liberalized markets in electricity. Those that exist pertain to construction work on power facilities.[12] However, this is changing through the current negotiations on GATS, particularly considering both the US government's negotiating issues, and the way that very large electricity traders are aggressively pursuing comprehensive coverage for energy in the GATS (Irwin 2000).

According to a leaked document from the US government, 'the United States requests full access to markets for energy services, including those provided to a public entity and used by the public entity to provide a service for commercial sale but not for use for governmental purposes.'[13] Considering that virtually all activities relating to electricity production and distribution can be considered a service, this is an extremely sweeping objective. It is also one that would require the dismantling of public utilities were it to be met.

As can be seen from Appendix I (the list of US market reform objectives and the types of GATS instruments that are useful in achieving these aims), those specific areas that the US wants covered are extremely inclusive.[14] These objectives correspond to the official negotiating objectives of the US, as defined in a WTO document submitted to the Council for Trade in Services which specifically calls for a comprehensive energy section to make it easier to open energy markets for both trade and investment (WTO 2000). The most important objectives relate to the classification of energy services, very broad market access, national treatment, and commitments that address national regulations.

The official statement of the US objective, which is to 'negotiate the broadest possible market access and national treatment commitments' for energy services, expressed the desire to eliminate the 'barriers' US firms face, such as the lack of a 'right of establishment' and an 'inability to provide cross-border services' (WTO 2000). Since in Canada these 'barriers' are constituted by the public sector's existence, it is clearly the public sector that is the target. The US document also discusses the elimination of discriminatory treatment between foreign and domestic service providers, but, significantly, it signals that merely achieving the lack of discrimination between the WTO is not sufficient to give access to markets. It specifically wants to see regulatory reform because without it 'market access and national treatment commitments, while necessary, may not be sufficient to assure liberalization for energy services'. This would address the US aim to achieve 'reciprocity', in contrast to the existing requirement in all international trade agreements that equal treatment ('national treatment') is the test of appropriate domestic regulation.

All of these objectives of the US, should they eventually become part of GATS, would substantially change the regulation and operations of most electricity utilities in Canada – even those that have already begun to open markets to private providers of electricity. Most certainly these changes would threaten the security of domestic consumption at differential prices – that is, at

prices that currently relate to the cost of production of electricity, rather than the price established on the market. Also, at a time when power traders are increasingly active in electricity markets, open and non-discriminatory access to transmission systems would have to be accorded not only to those who want to sell to domestic customers but also to foreign traders who may prefer to export electricity. The result would be either less supply for Canadian consumers, or increased prices driven up by export markets.

Conclusions

Electricity market reform in most provinces has proceeded with little consideration for the repercussions of international trade agreements. While many provincial governments have tried to limit their exposure to deregulation and do not intend to submit people to the vagaries of the electricity market, they may have little choice if Canada continues to encourage measures that further liberalize energy markets through international trade agreements. The federal government so far has been silent about its position on how electricity should be treated in the GATS, but, considering its long-standing policy of extending the reach of the trade agreements as quickly as possible, it is likely that it will give in to US pressure on energy issues.

Shifting to a competitive deregulated market for electricity presents considerable dangers to all jurisdictions where the public provision of electricity has provided efficient, low-cost, and highly reliable electricity. While those proposing a competitive market assure the public that it can be achieved while protecting the social objectives of a public system, the experience in the US with competition is not reassuring. [15]

Canadian governments have recklessly let the relatively small export market set the agenda for the future of the country's electricity market. Currently 90 per cent of Canadian electricity production goes to people and industries within the country while only 10 per cent is exported, yet both the security of supply and low prices are at risk through deregulation measures designed, for the most part, to accommodate existing and future exports. When electricity was firmly within government control through integrated monopolies, and when exports proceeded through long-term contracts, international trade agreements could not affect the ways that the public resources were used. Under this type of regime, governments could insist on planning for adequate supply in the future, environmental protection, and ensuring a price to domestic consumers that was based on the cost of production. The process of deregulation has exposed this rational use of resources to the chaotic chance of the market.

Notes

I. A natural monopoly occurs when a single large firm would have the lowest cost of production and could prevent other firms from entering the industry because set-up costs are high and the 'natural monopoly' can sell at relatively low prices.

2. In Europe the major exporter is France (due to its huge nuclear industry), while Germany, Italy, Netherlands, and Spain are net importers (USEIA 2001).

3. This needs to be qualified by the recognition that mega-projects such as Churchill Falls and much of the Quebec and BC Hydro systems had an export objective.

4. This is modified for states that feel a regulated monopoly is more advantageous.

5. The exception to this was deregulation in Alberta, which was driven more by ideological issues than regulatory ones. Since Alberta is not an electricity exporting province, the regulatory changes in the US had little impact on its decisions to deregulate and privatize the industry.

6. Hydro-based systems are not without problems. The initial creation of large reservoirs and transmissions system results in damage to wildlife, terrain, local communities, and the socio-economic way of life of many aboriginal people. But once the systems are in place, they provide a secure, reliable supply of inexpensive and clean electricity.

7. New Brunswick is an exporter that relies primarily on thermal sources to generate electricity.

8. That the US is extremely serious in this objective is evident from the section in the National Energy Policy that recommends a comprehensive review of the use of 'economic sanctions' so that energy security can be included in US policy (Cheney et al. 2001: 8/6).

9. Inter-ties are the very large transmission lines between electricity systems.

10. 'Foreign' in this case refers to the national corporations of the signatories of NAFTA.

11. For all intents this is an issue between Canada and the US because Mexico has such a small export market. However, the NAFTA and GATS rules could have very significant implications for the ownership structure and the future development of electricity in Mexico.

12. For a more comprehensive discussion of the GATS and electricity, see Cohen 2001: 1–79.

13. This is a 2002 document that indicated that it was not yet intended for distribution outside the US government and the US Trade Representative.

14. The area identified as 'other' refers to specific language that would need to be written into the agreement in order to meet a specific objective.

15. For an example of this position, see Jaccard 2002.

References

Cheney, Dick, Colin L. Powell, et al. (2001) *National Energy Policy: Report of the National Energy Policy Development Group,* Washington, DC: US Government Printing Office.

Cohen, Marjorie Griffin (2001) 'From Public Good to Private Exploitation: GATS and the Restructuring of Canadian Electrical Utilities', *Canadian-American Public Policy* 48, December: 1– 79.

Commission for Environmental Cooperation (CEC) (1999) 'Electricity in North America: Some Environmental Implications of the North American Free Trade Agreement (NAFTA)', Issue Study 3, Montreal: NAFTA/CEC, March.

Flavin, Christopher and Nicholas Lenssen (1994) *Powering the Future: Blueprint or a Sustainable Electricity Industry,* Washington, D.C.: Worldwatch.

Froushauer, Karl (1999) *White Gold: Hydroelectric Power in Canada,* Vancouver: University of British Columbia Press.

Gilbert, Richard J. and Edward P. Kahn (1996) 'Competition and Institutional Change in US Electric Power Regulation', in Richard J. Gilbert and Edward P. Kahn (eds) *International Comparisons of Electricity Regulation,* New York: Cambridge University Press: 179-230.

Howse, Robert and Gerald Heckman (1996) 'The Regulation of Trade in Electricity: A Canadian Perspective', in Ronald J. Daniels (ed.) *Ontario Hydro at the Millennium,* Montreal and Kingston: McGill-Queen's Press: 103-55.

Hydro Quebec (2001) *Comparison* if *Electricity Prices in Major North American Cities,* Montreal: Hydro Quebec.

Irwin, John R. (2000) press release, Oil and Gas Drillers Group, 3 May.

Jaccard, Mark (2002) *California Shorts a Circuit,* Toronto: C.D. Howe Institute.

Jess, Margaret (1997) 'Restructuring Energy Industries: Lessons from Natural Gas', *Natural Gas Monthly Special Report,* May.

Kwoka, John E. (1995) 'Public vs. Private Ownership and Economic Performance: Evidence from the US Electric Power Industry', Discussion Paper no. 1712, Cambridge, MA: Harvard Institute of Economic Research, February.

Linden, Harry R. (1995) 'Technology as an Enabling Force in the Global Restructuring of the Electric Power Industry', *The Electricity Journal,* vol. 18, no. 10: 54-64.

OECD/IEA (2001) *Electricity Information 2001,* Paris: OECD.

National Energy Board (2000) *Canadian Electricity: Trends and Issues,* May, Ottawa: National Energy Board.

Skelton, Chad (2001) 'US Delegation in Whistler Clear: BC's Energy Resources in Sights', *Vancouver Sun,* 27 July: *D7/I3.*

Toronto Hydro Electric System (2000) *Important Information about Rates,* Toronto: Toronto Hydro Electric System.

USEIA (US Energy Information Administration) (2001) 'International Energy Database', January.

WTO (World Trade Organization) (1998) *Energy Services: Background Note by the Secretariat,* Council for Trade in Services, 9 September.

WTO (2000) 'Communication from the United States: Energy Services', 18 December, S/CSS/W /24.