Council Direction:

At the Council meeting of February 25th, 2009, Hamilton City Council received correspondence from the City of Toronto respecting Installation of sub-meters in Residential Rental Units and its Impact on Tenant Affordability Units. Council received the correspondence and referred it to the General Manager of Community Services for a report to the Emergency and Community Services Committee.

Information:

The Ontario Energy Board has mandated that all separately metered residential properties be required to be fitted with smart meters by December 31, 2010.

Smart meters allow for the tracking of electrical consumption on an hourly basis. Pairing the hourly rate and time of use pricing, consumers will pay rates closer to the actual cost of producing the power. It is anticipated that consumers will shift their demand for electricity to off peak-periods, when less expensive power is available.

Social Housing providers across the province, the Social Housing Services Corporation (SHSC) and the Ontario Non-Profit Housing Association (ONPHA), have significant concerns with respect to the financial burden smart meters may place on tenants and housing providers.
In 2000, the province passed legislation to devolve social housing to the municipal level. This legislation, the [Social Housing Reform Act, 2000](#), established the Social Housing Services Corporation (SHSC) to administer certain programs province-wide on behalf of service managers and social housing providers. One of the mandates of the SHSC is energy conservation and bulk energy purchasing for social housing providers.

The SHSC commissioned a discussion paper dated August 2006 on the smart meter initiative titled, “Smart meters and social housing: energy conservation and energy poverty issues”.

The following are the concerns outlined in the SHSC report:

- Bulk metered apartment buildings will require extensive and costly rewiring to enable smart metering of individual units. This will come at the same time as requirements for expensive upgrades to older buildings to meet new energy conservation objectives.

- Proposed rent decreases (compensating for requirement to pay for electricity) are greater than the shifted costs, thereby reducing landlord’s revenue, including that of social housing providers.

- There is insufficient recognition of the need for effective education of tenants about the need for energy conservation and the measures to be used to achieve it.

The SHSC has made ten recommendations in the report “Smart Meters and social housing: Energy conversation and energy poverty issues”, dated August 2006, to the Ontario Energy Board (attached as Appendix A to Report CS10046), which outlines steps that should be taken to ensure the least impact on tenants, social housing providers and residential buildings in Ontario as the provincial government moves to increase the use the smart meters.

As well, Ontario Non-Profit Housing Association, at their Annual General Meeting held in November 15, 2009, passed a resolution dealing with smart meters (attached as Appendix B to Report CS10046).

Both the SHSC and the ONPHA support the goal of improved energy efficiency and will continue to advocate on behalf of the tenants, service managers, local housing corporations, and tenants in private rental units to ensure efficiencies in the delivery and consumption of energy.

As a result of consultations with housing providers, recommendations made by the SHSC and the ONPHA, the Ontario Energy Board has imposed a moratorium on the
installation of smart-meters in multi residential buildings pending more study of the issues.
Smart meters and social housing:
Energy conservation and energy poverty issues
August 2006

This ‘smart meter’ example, provided at Hydro One's Web site, can display several items of information including an indication of the price rate in effect and the time of day (both shown here), as well as the current rate of electricity consumption, amounts of electricity consumed across different periods, and the results of diagnostic tests. However, the strength of smart meters lies in their ability to transmit this information automatically, in this case by a wireless link, although it could be across the wires carrying the electric current that is being metered or across a telephone line. Smart meters can be associated with load control devices that can switch individual appliances and other functions off for brief or longer intervals during periods of high electricity demand.
Introduction

Early in 2006, the Social Housing Services Corporation (SHSC)\(^1\) commissioned the production of two discussion papers in response to the Government of Ontario’s direction concerning smart meters.\(^2\) All separately metered residential properties in Ontario are required to be fitted with smart meters by 2010. This is chiefly to enable differential charging for electricity according to time of use. Consumption during periods of peak demand will attract higher prices than at other times. The higher prices are to reflect the higher costs of generating or purchasing electricity during peak periods and to discourage use at these times.

The first discussion paper is entitled *Electricity metering and social housing in Ontario*. It provides a mostly comprehensive overview of the topic, except in respect of issues of affordability. The second discussion paper is entitled *Energy poverty in social housing in Ontario*. It complements the first paper by focussing on issues of affordability, particularly from a tenant perspective. These papers and their recommendations have been endorsed by SHSC. SHSC wishes to thank Richard Gilbert and David Priebe for their assistance in the preparation of these discussion papers.

This executive summary provides an overview of the issues addressed in the two papers and presents SHSC’s recommendations on the matter. These recommendations are directed chiefly to the Government of Ontario and its agencies.

Setting the scene: New legislation

Ontario’s *Energy Conservation Leadership Act, 2006*,\(^3\) when proclaimed, will allow the government to require public agencies to prepare and implement annual energy conservation plans that incorporate prescribed energy conservation targets. The Act covers all energy use, although the likely focus of its implementation will be on electricity because the Ontario government continues to be more involved in the provision of electricity than other fuels. In energy terms, oil products and natural gas are the main fuels used in Ontario, each comprising about a third of total end-use energy consumption; electricity comprises only

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\(^1\) SHSC is a non-profit corporation led by social housing representatives who are committed to providing Ontario housing providers and service managers with bulk purchasing, insurance, investment, and information services that add significant value to their operations.

\(^2\) For information about smart meters, see the front page of this document and the relevant parts of the attached discussion papers, particularly Section 9 of the first paper and Subsections 4.3-4.5 of the second paper.

\(^3\) At http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/06e03_e.htm#BK4.
SMART METERS AND SOCIAL HOUSING

about a fifth of the total.\(^4\) Moreover, oil and natural gas supply present far greater chal­lenges from continental and global perspectives.


In February, SHSC appeared before the Legislature’s Standing Committee on Justice Policy supporting the general direction of the proposed legislation, particularly the desire to create a conservation culture in Ontario. SHSC highlighted the importance of the social housing sector as an energy user and the opportunities the sector provides for energy conservation. The considerable amount of work already done was noted, as well as SHSC’s strong intention to continue to provide energy management services to the social housing sector. The presentation stressed the complexity of the financial arrangements concerning social housing, and the need for ongoing formal consultation with the sector. Additional funding of several kinds would be required to meet the objectives of *Bill 21*.

Also part of the new context for the metering of electricity in social housing units is the *Residential Tenancies Act, 2006*, still to be proclaimed.\(^5\) Most of this *Act* concerns the respective rights and responsibilities of tenants and landlords. Part VIII concerns smart meters; it is discussed in Subsections 4.4 and 4.5 of the second discussion paper. Social housing sector’s concerns with the smart metering initiative include the following:

- Bulk-metered apartment buildings will require extensive and costly rewiring to enable smart metering of individual units. This will come at the same time as requirements for expensive upgrades to older buildings to meet new energy conservation objectives.
- Proposed rent decreases (compensating for requirement to pay for electricity) are greater than the shifted costs, thereby reducing landlords’ revenue, including that of social housing providers.
- There is insufficient recognition of the need for effective education of tenants about the need for energy conservation and the measures to be used to achieve it.

The central position of SHSC is this: the ideals of the conservation culture are strongly supported, but not at all costs.


Issues for housing providers

Some 1,500 housing providers deliver about 250,000 units of social housing in Ontario. Most units are managed by 47 Local Housing Corporations responsible to municipalities. Many units are in cooperatives and other administrative arrangements. The common feature is provision of government funding to the provider of the accommodation. (Places where support is also provided—e.g., many retirement homes—are not considered to be social housing.)

Housing providers manage properties from tenant rents supplemented by municipal subsidies. They have limited capital resources for infrastructure renewal, chiefly because Ontario legislation (the Social Housing Reform Act\(^4\)) prohibits encumbrance of their properties. Moreover, rents and supplements are barely adequate for day-to-day operations. The scope for investment in energy conservation is extremely limited, except where it can be funded through guaranteed savings in energy costs.

Rents and supplements are not keeping pace with rising energy costs, making conservation potentially more attractive. However, the rising energy costs are worsening the financial position of housing providers, making them less inclined to undertake energy conservation measures—including smart metering—that do not provide an early, high rate of return.

Smart metering poses a particular challenge for housing providers. Smart metering reduces peak electricity use and thus electricity costs if the user is exposed to higher peak prices. Most social housing tenants do not pay directly for electricity. They are not exposed to higher peak prices and have no corresponding incentive to reduce peak use. Moreover, social housing tenants may be more inclined to— or have no choice but to— use electricity during peak periods than other users. Thus, time-of-use pricing could result in increased electricity bills that housing providers will have to meet.

The obvious remedy for housing providers is to expose tenants to electricity costs, especially during peak periods, by providing a smart meters for each housing unit. This would be often impracticable and would usually cost more than might ever be recovered from their use.

Moreover, as noted above, the new Residential Tenancies Act, in specifying how units are to become individually metered, provides disadvantageous terms to housing providers.

\(^4\) At http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/00s27_e.htm.
SMART METERS AND SOCIAL HOUSING

Issues for service managers

Service managers are municipalities or other entities responsible for the funding and administration—and in some cases the delivery—of Ontario’s social service programs including Ontario Works, child care, and social housing. Working within guidelines set by the provincial government, they have responsibility for the welfare of Ontario residents who have low incomes. In general, the funds available to service managers, through various provincial and provincial programs, are insufficient in relation to the need for funds.

With adequate funds, service managers could provide relief to housing providers and facilitate the deployment of smart metering and other energy conservation measures. Funds available to service managers for housing purposes have not kept pace with the need for housing assistance, which in the last 15 years has risen more in Ontario than in the other provinces.

Energy poverty

Energy poverty exists when a household is unable to afford heating and electrical services essential for survival. It does not occur when housing providers pay energy costs. A move to individual metering, as may be required by the smart metering initiative, increases the possibility energy poverty, which may already affect low-income tenants who pay energy costs, whether in social housing or in private-sector accommodation.

Low-income households live at the edge of their financial resources, or beyond. Rent and other allowances are generally inadequate. Requirements to pay for heating and electricity are likely to result in reduced use, even to the point of harming health and well-being, unpaid bills, reduction in other essential expenditures, e.g., children’s food, or some combination of these outcomes.

The federal government recently cancelled its EnerGuide program for low-income households, which would have helped 130,000 households. There is no federal assistance that addresses energy poverty. Ontario’s energy relief programs are set up as if low income was a periodic crisis rather than an on-going condition. Charities attempt to bridge the gaps.

In the UK, fuel poverty—as energy poverty is known—is said to occur when a household has to spend more than 10 per cent of its income on fuel. In 1996, there were 6.5 million such households. In 2001, the UK government resolved to eliminate fuel poverty by 2016. By 2004, the number of households in fuel poverty had already been reduced by more than two thirds. Elements of the strategy included income subsidies and incentives for energy conservation by homeowners and landlords.
In the U.S., the federal government provides $3.1 billion annually through the Low-Income Home Energy Assistance Program (LIHEAP) to support state-run programs that help almost five million low-income households. Many state programs provide additional funds for improving energy efficiency of low-income housing and reducing the costs of fuels for lower-income households.

Again, the lack of such assistance in Ontario needs to be emphasized, especially as the need for it could well become much greater as a result of the provincial government’s smart metering directive.

The impacts of smart metering on lower-income households could also be worsened by the way in which electricity is priced. People with low incomes tend to use more electricity in the winter than in the summer. They are more likely to have electric heating and no air conditioning. The present pricing arrangement for households with smart meters has the highest, ‘on-peak’ rate applying for seven hours a day in the winter and only six hours in the summer (even though Ontario’s peak consumption is now in the summer). This could result in their having even higher electricity bills under time-of-use pricing than at present, thus adding to energy poverty. The actual impact of time-of-use pricing will depend on the precise rate structure and on the extent to which a household shifts its electricity use away from periods when the ‘on-peak’ rate applies.

New buildings must be efficient

Much social housing was built using inexpensive materials and construction methods to keep development costs within limited budgets. Operating costs, including energy costs, appear to have been given little consideration. The conservation culture requires a different approach in which up-front expenditures are incurred to avoid later energy costs.

With different funding arrangements, such up-front expenditures can be extremely cost-effective. For example, for new buildings ground-source systems can reduce heating and cooling costs by 70 per cent with a payback period of six years. Providing additional insulation, thermal windows, and energy conserving design features can be more advantageous.

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SHSC's role in energy conservation

SHSC is working with government departments and other organizations to help move social housing in Ontario towards a conservation culture. SHSC is the Conservation Bureau’s designated partner for the social housing component of Ontario’s Low-Income Conservation and Demand Management Program. SHSC has several conservation initiatives in progress and completed. These include the Green Light initiative to help housing providers reduce electricity consumption in units that have been subjected to energy audits in its Energy Management Program.

SHSC surveyed housing providers and found that many support individual metering of social housing units, but worry about its feasibility and costs. SHSC is investigating these matters and the government regulations that will affect deployment and application of smart meters.

Smart metering systems could be beneficial to social housing for reasons other than time-of-use pricing. Load control using smart meters’ communication functions could be managed from a distance by the utility or by a third party, making adjustments to thermostats, temporarily disabling appliances and other functions that would be hardly noticed (e.g., water heaters, clothes driers, and dishwashers), in order to reduce peak demand.
SMART METERS AND SOCIAL HOUSING

Recommendations

1. That SHSC support the introduction of smart meters in social housing, with the proviso that the sector does not become liable for unreasonable installation and other costs, especially in multi-unit buildings, and moreover that:
   (i) SHSC intervene at an appropriate time in the proceeding of the Ontario Energy Board concerning sub-metering, with the objective of ensuring that the social housing sector does not become liable for unreasonable installation and other costs and, if necessary, that there not be mandatory introduction of individual metering or sub-metering in multi-unit buildings.
   (ii) SHSC recommend to the Ontario Energy Board that a local distribution company (electrical utility) not be allowed to install smart meters until it demonstrates that it will recover 50% of their installation and operating costs through savings in distribution costs resulting from the availability of smart meters.
   (iii) SHSC recommend to the Minister of Energy that the implementation of smart metering in social housing should be coordinated with the overall energy management program, to ensure that housing providers and tenants get the best value from both conservation and load management.

2. That SHSC carry out the following:
   (i) Conduct an in-depth study of opportunities for load control in social housing developments.
   (ii) Conduct an in-depth study of opportunities for bulk purchasing of electricity by the social housing sector, including partnership opportunities with an organization such as the Association of Municipalities of Ontario.
   (iii) Develop an information package on electricity pricing and management for social housing providers.

3. That SHSC seek funding from the Ontario Energy Board or from the Ministry of Energy to support the interventions proposed in Recommendations 1 and the work proposed in Recommendation 2.

4. That SHSC urge the federal and/or provincial government to follow the example of the UK by building on SHSC’s comprehensive energy management program to assist low-income households adjust to rising energy costs through both income adjustments and incentives for landlords and owners of low income housing to become more energy efficient.
5. That the Ministries of Energy and Municipal Affairs and Housing together with SHSC form a working group to recommend strategies to create incentives to sustainable energy conservation measures in cognizance of unfunded capital deficits and the cost of new energy conservation requirements.

6. That the regulations developed for Section 137(7) of the Residential Tenancies Act be amended to reflect that requirements for energy efficient appliances apply at time of installation of smart meters, while more substantial energy conservation measures for the unit and the building apply at the time of transferring the cost of electricity.

7. That RTA regulations should clarify that customer billing fees are not included in calculating rent adjustments for the transfer of hydro costs in social housing.

8. That a strong tenant education program needs to be established by the Ontario Power Authority to ensure that tenants in all buildings about to be smart metered understand how best to conserve electricity and minimize their hydro bills.

9. That the Ministry of Municipal Affairs and Housing, together with SHSC, complete a full analysis of the implications of the SHRA's utility charges and allowances, taking into account the RTA's Smart Meter provisions.

10. That the Ministry of Energy direct the Ontario Energy Board to implement a lower electricity rate for social housing, in recognition of the reduced ability of working poor and senior households to pay for their energy costs. In particular, critical peak pricing should not apply to social housing.

11. That, working with sector organizations such as the Association of Municipalities of Ontario, SHSC encourage the Ministry of Community and Social Services to address issues pertaining to RGI and OW/ODSP regulations.

12. That SHSC, the Ontario Energy Board and the Ministry of Community and Social Services form a working group to develop options to prevent energy poverty among all social housing residents, including the working poor and senior citizens.
Electricity metering and social housing in Ontario

April 2006
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1. The challenges addressed by this report

The challenges addressed by this report arise from the Ontario government’s direction that by the end of 2010 each separately metered Ontario home—now about four million in total—be fitted with a ‘smart meter’ that can report on how much electricity is being used and when it is used, and assist in the performance of several other related functions. This appears to be the second or third largest such program in the world after that of Italy, where smart meters are being installed in each of the country’s 27 million homes.\(^1\)

What the Ontario government has done, and why, is set out below in Section 2. Smart meters are described in Section 9.

The challenges are discussed from the perspective of Ontario’s approximately 1,600 providers of social housing and, by extension, the occupants of social housing. Social housing can be loosely defined as non-profit rental or cooperative housing (see Box 1).

There are three issues to be recognized. One concerns the replacement of the present ‘conventional’ meters with smart meters. This is an issue mainly for Local Distribution Companies (LDCs), i.e., the local electrical utilities. As will be explained in Sections 2 and 9, LDCs have been mandated to install smart meters and will be their main beneficiaries. An issue for social housing providers and their tenants is that the cost of installing social housing in Ontario

The best known examples of social housing in Ontario are the 47 Local Housing Corporations (LHCs) occupied mostly by low-income tenants, many of whom receive assistance through the Ontario Works program (OW) or the Ontario Disability Support Program (ODSP). Municipalities own LHCs and supplement their tenants’ rents, which are set according to a provincially determined ‘rent-g geared-to-income’ (RGI) program.

The term social housing also embraces buildings owned and operated by private, not-for-profit corporations, including cooperatives. Many low-income residents of these buildings qualify for the RGI program, but there are also residents who pay ‘market’ rents and thus attract no subsidy. Confusing the definition further is application of the RGI program to some low-income residents of buildings operated on a for-profit basis. Such buildings are not generally regarded as social housing.

\(\text{Box 1. Social housing in Ontario.}\)

\(^1\) Superscript numbers refer to 53 reference and other notes that begin on Page 45.
and maintaining the smart meters will fall on electricity users, as also discussed in Section 9.

The second issue concerns an interpretation that the Ontario government’s directive could lead to smart metering of all Ontario homes. Much of Ontario’s social housing (and some of the other housing stock) is not individually metered. There is one meter for the building—known as a bulk meter—and the cost of electricity is included in the rent. In many cases, individual units could be separately metered only with a large amount of costly rewiring that would likely not be done by LDCs. Social housing providers and occupants are not in a position to bear such a cost. This matter is presently in abeyance but is discussed here in some detail in Section 12.

The third and what may be the most important immediate issue for social housing providers concerns the main reason for the Ontario government’s directive. It is to allow for the introduction of time-of-use pricing, discussed in Section 8. Exposing users to higher prices at times when electricity is more expensive to produce could cause reductions in use at those times and consequent reduced costs for producers of electricity (and, eventually, consumers), as well as the greater system reliability because peak loads could be less extreme.

Time-of-use pricing could pose numerous problems for social housing providers, whether or not their units are separately metered. One problem to be elaborated in this report is that social housing occupants may be less able than the average person to adapt to time-of-use pricing without potential damage to health and welfare. Another problem is that present arrangements concerning social assistance payments and rent subsidies do not recognize the potential adverse impacts of time-of-use pricing.

An important consideration—elaborated in Sections 6 and 7—is that social housing occupants make almost no contribution to the problem that time-of-use-pricing is designed to solve, namely reducing day-time consumption during summer weekdays, and yet would be among the most strongly affected by the solution.

The present focus of the smart meter exercise is on time-of-use pricing. Smart meters can also facilitate ‘load control’, which is another, perhaps more reliable way of reducing use of electricity during peak periods.
Load control—discussed here in Sections 8 and 10—is where the homeowner, building manager, utility or a third party has the ability to arrange that individual appliances or functions be automatically switched off during peak periods. Peak loads can then be managed by arranging coordinated short interruptions of appliances and other uses that normally cycle on and off (e.g., water heaters and air conditioners). A single load-control system can extend across numerous users, who may be in more than one building. Smart meters can be a key part of a load-control arrangement, in conjunction with a computer and appropriate switching.

The report concludes by bringing together ten recommendations that reflect the analyses and discussions in the report. The first six recommendations concern advice that the Social Housing Services Corporation could give to the provincial government on matters addressed briefly above and more fully later in the report. Three further recommendations concern actions to be taken by SHSC. The final recommendation concerns securing support for implementation of the other recommendations.

The nub of the recommendations is that the Ontario Government’s smart metering initiative should be endorsed, but that associated matters—particularly individual metering and time-of-use pricing of electricity—could be hugely problematic for social housing. Further action on these associated matters should be undertaken only after full assessment of impacts, fine-turning of measures to ensure maximum effectiveness and minimum unintended consequences, and widespread dissemination of relevant information.
2. Provincial direction and Ontario Energy Board action

The Ontario government has directed that by the end of 2010 all separately metered homes in Ontario be fitted with ‘smart meters’ that can report on how much electricity is being used and when it is used, and perform several other related functions. The Ontario Energy Board (see Box 2) was directed to prepare an implementation plan, which was submitted in January 2005. Implementation is to begin on the Minister's approval of the plan, which has not yet been given. The installation is to be done by local distribution companies (LDCs, also known as electricity utilities), with costs to be shared among all their customers.

The stated main reason for installing these meters is to allow time-of-use pricing whereby the charge is to be at least three times higher during ‘peak’ hours of high electricity use than during ‘off-peak’ hours when less electricity is used. Application of such pricing could reduce overall electricity consumption during these peak hours, thereby reducing the need to provide generating capacity or purchase expensive electricity from outside the province, and reducing the risk of ‘brown-outs’ and even ‘blackouts’.

Moreover, the expensive electricity used only during peak periods can be more polluting than electricity generated for ‘base loads’, the latter comprising chiefly electricity from hydroelectric and nuclear sources (see Box 7 on Page 13 below and Box 8 on Page 14).

The Ontario Energy Board has also issued a Regulated Price Plan (RPP). This is the default arrangement for what is known as the ‘power’

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**Box 2.** Provincial agencies concerned with electricity:

The Ontario Energy Board (OEB) is an adjudicative tribunal that regulates the province's electricity and natural gas sectors in the public interest. The Ontario Power Authority (OPA) helps realize an adequate, long-term supply of electricity in Ontario through ensuring investment levels in new supply infrastructure and through supporting the development of a conservation culture. The Independent Electricity System Operator (IESO) manages the competitive wholesale electricity market, balances the supply of and demand for electricity in Ontario, and directs its flow across the province's transmission lines. Ontario Power Generation (OPG) manages approximately 70 per cent of Ontario's electrical generating capacity. Hydro One is Ontario's largest electricity distribution company, selling electricity directly to end users and to local distribution companies. (IESO, OPG, and Hydro One are successor organizations to Ontario Hydro, which ceased operation in 1999. OPA was established in 2004.) The Ontario Ministry of Energy oversees the foregoing, implementing provincial legislation and the policies of the Government of Ontario.
or ‘energy’ part of the electricity bill approved for use by residential customers (and some others) who choose not to contract with an electricity retailer.\(^x\)

For residential customers with conventional electricity meters, the present rate (August 2006) is 5.8 cents for the first 600 kilowatt-hours of energy used each month and 6.7 cents per kWh thereafter. During the period November 1 to April 30, the lower rate will apply to the first 1,000 kWh used each month. (The rates are the same for non-residential customers who are on the RPP, but the threshold is 750 kWh throughout the year.)

There is a separate rate schedule in the RPP for customers with smart meters. This schedule provides for three rates according to the time of day. The different periods and the current prices associated with them (August 2006) are set out in Box 3.\(^x\)

Note from Box 3 that the highest rate (for the on-peak period) is charged for seven hours in the winter (four in the morning and three in the afternoon) but for only six hours in the summer (from 11 a.m. to 5 p.m.). The lowest rate (for the off-peak period) is always charged from 10 p.m. to 7 a.m., and also from 7 a.m. to 10 p.m.—i.e., throughout the day—during weekends and holidays.

Eventually, provision is to be made for ‘critical peak pricing’, to be applied with up to a day’s notice when consumption is expected to be exceptionally high. The rate when critical peak pricing occurs could be more than four times the peak rate and more than 12 times the off-peak rate (i.e., it would be in the order of 45 ¢/kWh). The Ontario Energy Board was to bring forward proposals concerning critical peak pricing in May 2006,\(^x\) but has not yet done so.
3. A note on power demand and energy consumption

It's hard to understand issues of electricity delivery without knowing about the difference between power and energy as they are used in connection with electricity generation and use. This section explains the difference between demand for electric power (expressed in watts or some multiple thereof) and consumption of electric energy (expressed in watt-hours or some multiple thereof).

Electricity is generated or used at a particular power level, usually measured in megawatts of generation or kilowatts of consumption. (A megawatt is 1,000 kilowatts, each of which in turn is 1,000 watts.) Megawatt is usually abbreviated as MW and kilowatt as kW. A generating station may be producing electricity at its rated maximum power output of 500 MW. The homes it serves may be using on average 10 kW of electricity. The generating station would thus be serving about 50,000 homes. (This assumes no line and transmission losses, which in practice could reduce the number of homes that could be served by about 10 per cent.)

When power is being consumed, it is sometimes referred to as demand. Thus the homes referred to in the previous paragraph could be said to have an average electricity demand of 10 kW.

Box 4 shows the individual electricity uses in a home that might contribute to a total power consumption—i.e., demand—of 10 kW at 8 p.m. on a winter evening. If this home had electric space heating, its power use at that time could well be 20 kW rather than 10 kW. The amount of power being used in a home at any particular time can change sharply as appliances are switched on and off, the refrigerator compressor cycles, the thermostat switches the heating units on and off, and so on. Across all the homes in a community, more power is likely to be used at 8 p.m. than some hours later at 3 a.m.

Electricity consumption in homes is billed according to the amount of electrical energy that is used, measured in kilowatt-hours (usually abbreviated as kWh). When items drawing one kW of

<table>
<thead>
<tr>
<th>Use</th>
<th>kW</th>
</tr>
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<tbody>
<tr>
<td>Lights (10 at 100-watt)</td>
<td>1.0</td>
</tr>
<tr>
<td>Television</td>
<td>0.2</td>
</tr>
<tr>
<td>Dishwasher</td>
<td>1.3</td>
</tr>
<tr>
<td>Refrigerator</td>
<td>0.5</td>
</tr>
<tr>
<td>Coffee-maker</td>
<td>1.0</td>
</tr>
<tr>
<td>Microwave</td>
<td>0.8</td>
</tr>
<tr>
<td>Two computers</td>
<td>0.3</td>
</tr>
<tr>
<td>Clothes washer</td>
<td>0.5</td>
</tr>
<tr>
<td>Water heater</td>
<td>3.9</td>
</tr>
<tr>
<td>Furnace fan</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10.0</strong></td>
</tr>
</tbody>
</table>
power (e.g., the 10 lights in Box 4) are on continuously for one hour, 1 kWh of electrical energy is consumed. The 0.5-kW compressor in a refrigerator may be on about a quarter of the time, so across 10 hours it will use about 1.25 kWh (i.e., \(10 \times 0.5 \times 0.25\)).

Box 5 indicates the kind of monthly energy consumption that might result from the items listed in Box 4. The total is 1,000 kilowatt-hours.\(^\text{12}\) If this were the total use by an Ontario household during January 2006, the charge for electric energy would be $50.\(^\text{13}\) The actual bill would be for roughly twice this amount. As well as the charge for electrical energy, the bill would include charges for delivery, administration, retiring the debt of the former Ontario Hydro, paying for the work of the Ontario Energy Board, and other items. Most of these charges vary with the amount of electrical energy used.

<table>
<thead>
<tr>
<th>Use</th>
<th>kWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lights (10 at 100-watt)</td>
<td>100</td>
</tr>
<tr>
<td>Television</td>
<td>50</td>
</tr>
<tr>
<td>Dishwasher</td>
<td>40</td>
</tr>
<tr>
<td>Refrigerator</td>
<td>100</td>
</tr>
<tr>
<td>Coffee-maker</td>
<td>30</td>
</tr>
<tr>
<td>Microwave</td>
<td>10</td>
</tr>
<tr>
<td>Two computers</td>
<td>30</td>
</tr>
<tr>
<td>Clothes washer</td>
<td>20</td>
</tr>
<tr>
<td>Water heater</td>
<td>400</td>
</tr>
<tr>
<td>Furnace fan</td>
<td>220</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,000</strong></td>
</tr>
</tbody>
</table>

If electricity were a visible and tangible fluid like water, power would be the strength of the flow and energy would be the amount of water being pumped. Power—measured, say, in kilowatts—is the instantaneous character of electricity generation or use. Energy—measured, say, in kilowatt-hours—is the longer-term expression of electricity generation or use.

The main challenge posed by electricity as a fuel is that it is hard to store, except in small amounts in batteries and capacitors. For the most part, suppliers have to produce electricity at the moment it is required. Users have difficulty in storing electricity too, and expect near perfection in the reliability and the quality of the supply (as they do for water, but perhaps even more so for electricity).
4. How demand and price vary with time of day

The wholesale price of electricity can vary considerably from hour to hour. Small changes in demand can trigger large changes in price, but the relationship between demand and price is not perfect. The average hourly price of electricity—shown by the solid line against the right-hand scale—was $40-60 per MWh (equal to 4.0-6.0¢ per kWh) for most of the two days shown. In the early evenings, the price was much higher (above $80 on January 24 and above $125 on January 25). Peak consumption—at 6-7 p.m. on each day—was a little higher on the second day (22,404 MW vs. 21,765 MW). Low consumption on each day was between 3-4 a.m. It was 15,329 and 15,402 MW.

On both of these days in January 2006, particularly the first, a Tuesday, the average temperature was higher than is usual on these dates.

The lower part of Box 6 on the next page shows comparable data for a Tuesday and Wednesday six months earlier: July 26 and 27, 2005. Comparing the two 48-hour periods, July vs. January, the lows and the highs were similar, 15,329 and 15,432 MW, and 22,713 and 22,404 MW, as were the mean values, 18,977 and 19,095 MW. However, in the summer, demand tended to reach a peak earlier in the day. Prices were more often above $75/megawatt-hour in the summer. They averaged $68.56 in July, but only $54.70 in January. The first July day was a little above the average temperature for its date; the second was a little below.

Two other things might be noticed in Box 6. One is that quite small changes in demand seem to be able to trigger quite large changes in price. The other is that the relationship between demand and price is not perfect. For example, the highest price on these four days occurred on July 27, 2005, which also had the lowest peak consumption.

Prices rise quite steeply when more is being used because producers use their cheapest sources of electric power first and add in more expensive sources as consumption rises.
Time-of-use pricing is designed to achieve two things, compared with flat-rate pricing. One is fairness, so that users pay something closer to the actual cost of producing electricity at the time it is used, and thus are not subsidized by other users or in another way.

The other is reduction in the peak use of electricity. If some of the peak consumption on each of the four days represented in Box 6 could be...
moved to the late evening or early morning, the call on expensive, extra generating capacity would be reduced, and so might be the need to reduce voltage ('brown-outs') or cut off supply altogether ('black-outs'). If electricity costs more to use when consumption is high, and less when consumption is low, some of the consumption might be shifted away from the periods of high use.
5. Electricity supply and demand in Ontario

Consumption is rising overall in Ontario, and the provincial government is committed to phasing out coal-fired generating plants. Thus, there is an urgent need to add generating capacity or to reduce consumption, particularly during peak periods, or to do both.

The actual situation is represented in Box 7. Generating capacity now just meets requirements, but will not do so when the coal-fired plants are phased out, and even less so as existing nuclear facilities reach the ends of their lives.

The Ontario Power Authority has developed several scenarios for bridging the gap between supply of electricity and demand for it. The scenario providing for the most reliance on conservation and demand management (COM) is shown in Box 8 on the next page. In Box 8, ‘demand response’—the thin slice at the top of each bar from 2008 on—represents the contribution from shifting consumption from peak periods to other periods, to be achieved mostly through time-of-use pricing.

The smallness of the contribution that is expected from shifting consumption away from the peak may be surprising. Specifically, the equivalent of 500 MW of generating capacity is expected to be saved, i.e., about two per cent of the 24,000-MW gap identified in Box 7, and not all of this is to come from the residential sector. Overall, in 2025, time-of-use pricing...
is expected to reduce peak demand from a potential of about 37,500 MW to a potential of about 37,000 MW, i.e., by about 1.3 per cent (see Box 8).
6. Residential consumption of electricity

After rising more steeply than commercial and industrial electricity consumption until 1990, and remaining more or less flat during the 1990s, residential consumption in Ontario may now be beginning to decline and is expected to decline further (even before further conservation and demand management).

This is shown in Box 9, which suggests that none of the increase in Ontario's consumption of electrical energy over the next few decades is to come from the residential sector. Overall, according to the Ontario Power Authority, consumption is expected to increase by 20 per cent between 2005 and 2020, from 143 to 161 terawatt-hours (1 TWh = 1 billion kWh), but residential consumption is set to decline from 41 TWh in 2005 to just under 40 TWh in 2020. The residential sector's share of all electrical energy use is expected to decline from 29 per cent in 2005 to 25 per cent in 2020.

Residential consumption may make an even lower contribution to peak electricity use. Moreover, its contribution is expected to fall more, both absolutely and relatively, than this sector's share of electrical energy consumption (again, even before further conservation and demand management). Box 10 on the next page, also from the Ontario Power Authority, shows that the contribution was 25 per cent of the peak (about 6,000 of 24,000 MW) in 2005 and is expected to be only 20 per cent of the peak (about 5,600 of 28,000 MW) in 2020. These percentages can be com-
Another factor is the nature of the residential electric energy consumption and power demand. Overall annual energy consumption is shown in the left-hand panel of Box 11. Space heating is the major element. Contributions to peak demand are in the right-hand panel. Here, space heating does not figure at all, because the peak demand is more likely to occur in the summer. Air conditioning is the major element, followed by refrigeration and freezing.

The point that Ontario’s peak demand is increasingly likely to occur during the summer should be stressed. Before 1998, annual peak demand occurred in January or February. Since 1998, except in 2000, annual peak demand has occurred in the summer, in July or August. The difference
between the summer peak and the winter peak is expected to increase with the summer peak being substantially higher than the winter peak by 2015.\textsuperscript{22}

The analysis in this section could point to two conclusions. The first is that time-of-use pricing (see Sections 2 and 8) need not be applied to the residential sector because this sector may already be contributing progressively less to overall consumption in general and peak demand in particular. The second conclusion is that if the residential sector is to be exposed to time-of-use pricing, this should be in the summer months only because this is increasingly when peak demand occurs in Ontario. These conclusions become part of this report’s Recommendation 4 in Section 14.
7. Variation in residential consumption with income

Ontario's lowest-income households spend a disproportionate amount of their incomes on electricity. The direst cases are those who live in house-type buildings heated by electricity, illustrated in Box 12. Data from Statistics Canada's Survey of Household Spending 2003 suggest that such an Ontario household in the lowest income quintile (annual household income less than $21,800) spent an average of 15.5 per cent of after-tax income on electricity. Such an Ontario household in the highest income quintile (annual household income more than $90,000) spent 2.6 per cent of after-tax income on electricity. The actual average amounts spent on electricity per year were, respectively, $2,243 and $2,871.

Even low-income households in house-type dwellings that were not electrically heated spent relatively large amounts of their incomes on electricity. Such an Ontario household in the lowest income quintile spent an average of 6.5 per cent of after-tax income on electricity, or $967 in 2002. Such an Ontario household in the highest income quintile spent $1,502, or 1.5 per cent of income.

Apartment dwellers fare better because they use less electricity, but lower-income households still spend much more of their income on electricity than higher-income households. Data from the Survey of Household Spending suggest that low-income households spent 5.0 per cent of their income on electricity, while high-income households spent 1.4 per cent or 0.5 per cent according to whether or not their apartment was electrically heated.

Low-income households have a relatively high share of electric space heating. This is shown in the left-hand panel of Box 13 on the next page, where it can be seen that 31 per cent of households with incomes in the lowest quintile have electric heat, but only 10 per cent of the households in
the highest quintile. Box 13 also shows that Ontario's lowest-income households are much less likely to contribute to peak electricity use, because they are less likely to have air conditioning and freezers.

For comparison, the right-hand panel of Box 13 shows comparable data for the rest of Canada. The same variations with income are evident, although overall there is more use of electric heat outside Ontario and less use of air conditioning.

The striking feature of Box 13 is that households with lower incomes are more likely to use electricity for heating and households with higher incomes are more likely to use it for cooling. Smart meters and time-of-use pricing are being introduced above all to reduce peak demand. As noted in Section 6, peak demand is increasingly a summer phenomenon, with air conditioning being the main contributor. However, as noted in discussion of the Regulated Price Plan on Page 7, the present rate schedule for time-of-use pricing applies the highest charges for a longer period in the winter than in the summer, specifically one hour or 17 per cent longer.

It is in the winter when the lowest-income households dependent on more-or-less continuous availability of electricity for heating are likely to be using electric heat. Thus, the time-of-use part of the present Regulated Price Plan would especially penalize lower-income electricity users, even though it is being introduced to address a problem that—to the extent it is
ELECTRICITY METERING AND SOCIAL HOUSING IN ONTARIO

caused by residential users—is almost entirely caused by higher-income users.

As well, as illustrated in Box 12, electricity bills can take up a large part of the disposable income of household in the lowest income quintile. Thus, having to pay higher prices for an essential service such as space heating could be especially burdensome.

It’s possible that time-of-use pricing in itself will not result in higher prices overall. This could happen if the lower cost of consumption during the lower-rate off-peak period more or less offsets the higher cost during the on-peak period, so that the time-of-use rate schedule is ‘price-neutral’ to the typical user; and, moreover, system savings are somehow realized that offset the investment in smart meters and the administrative arrangements required for time-of-use pricing (a matter discussed below in Section 9).

Then it would still be possible that people with the lowest incomes would be the most adversely affected. Although data are not available on this point, it may be reasonable to suppose that people with the lowest incomes may be more likely to be home during peak periods, because of disability, retirement or other factors. They would thus be more exposed to the highest prices for electricity.

Many of Ontario’s lowest-income households live in social housing managed by clients of the Social Housing Services Corporation. Large numbers of these occupants pay their own electricity bills and large numbers live in electrically heated units. In other cases, the cost of electricity is included in rent and providers will be exposed to higher costs resulting from time-of-use pricing. These matters are discussed fully in Sections 12 and 13 below, preceded by consideration of the effectiveness of time-of-use pricing (Section 8), further discussion of smart meters (Section 9) and load control (Section 10), and a report on a survey of social housing providers conducted by SHSC (Section 11).

The analysis in this section leads to the conclusion that if the residential sector cannot be exempted from time-of-use-pricing, at least in the winter, as proposed in Section 6, then the social housing sector should seek an exemption. This conclusion is reflected in Recommendation 4 in Section 14.
8. Is time-of-use metering effective?

This section is rather more technical than most of the rest of this report. Readers may want to skip to the bolded concluding paragraph on Page 24.

The discussion in connection with Box 8 on Page 14 above noted that time-of-use pricing is expected to contribute in the order of two per cent of the expected gap between available generating capacity and demand for electricity. The anticipated impact on the residential sector is unclear. If it is assumed that two thirds of the peak-reduction impact of time-of-use pricing will be on the residential sector, and the residential sector accounts for 20 per cent of peak demand (see Box 10), a reasonable conclusion could be that time-of-use pricing is expected to reduce peak demand in the residential sector in 2025 by about 4.4 per cent.25

It's difficult to determine the basis for this anticipated impact. It is consistent with the "reduction in demand of 2-5 per cent" spoken of in the Ontario Energy Board's Smart Meter Implementation Plan.26 However, no analysis of the likely impact of the proposal for time-of-use pricing in Ontario appears to be available.

Indeed, few analyses of the impacts of time-of-use pricing on residential peak demand and overall consumption are available. Also, some of these are misleading. They have reported resulting reductions in peak demand of as much as 21 per cent, but from volunteer participants, who are known to be more responsive to time-of-use pricing than participants in mandatory programs.27

A more valid procedure, involving 'opt-out' rather than 'opt-in' volunteers, was used in a major study of time-of-use pricing for residential customers in Ontario in the 1980s.28 Opt-out volunteers are selected according to requirements for sample construction and then given the opportunity to opt out of the program. They are thought to be more similar to the general population than opt-in volunteers. The study examined numerous household types and rate conditions. It found reductions in peak demand as high as 21.4 per cent, but values were typically below 5.0 per cent. Generally, reductions in the summer were a little larger than those in the winter. Reductions for 'all-electric' households were a little larger than for those that did not have electric heating. "For participants with a peak to off-peak price ratio of 3.9, changes in winter peak demand

Time-of-use pricing is expected to reduce peak demand in the residential sector in 2025 by about 4.4 per cent.
Perhaps the most authoritative recent assessment of the impact of time-of-use pricing has been the California Statewide Pricing Pilot Study, conducted for three California utilities and two regulatory commissions and assessed by Charles River Associates. The effect of a time-of-use schedule comparable to but less differentiated than that in Ontario's Regulated Rate Plan (see Section 2 on Page 5) was compared with two varieties of critical peak pricing (CPP) imposed on a baseline of time-of-use pricing. In both varieties, CPP was invoked only when demand was expected to be exceptionally high, with notice given on the previous day. In both, the CPP rate was about five times higher than the mid-peak rate and six times higher than the off-peak rate. It was thus a less extreme critical peak price difference than is being discussed for Ontario (see Section 2). In CPP-F, the period of application of the especially high price was fixed; in CPP-V the period was variable, although its duration was part of the previous day's notification.

As well, in the CPP-V condition, electricity users were able to have devices installed at no cost to them that allowed remote control of some of their appliances and other equipment.

Participants in the study were volunteers although unlike the programs noted above they were ‘opt-out’ rather than ‘opt-in’ volunteers, i.e., they

![Diagram](image)

**Box 14.** Results of the California Statewide Pricing Pilot Study: impacts of pricing and other regimes on participating households (details of regimes are in the text)

<table>
<thead>
<tr>
<th>Time of Use</th>
<th>CPP-F</th>
<th>CPP-V</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOU</td>
<td>4.1%</td>
<td></td>
</tr>
<tr>
<td>Critical Peak Fixed</td>
<td>12.5%</td>
<td></td>
</tr>
<tr>
<td>Critical Peak Variable With Automated Controls</td>
<td>34.5%</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** California Energy Board
were selected according to the requirements of a random sample and then given the opportunity to opt out.

Some of the results of the study are illustrated in Box 14, which shows the reduction in the peak load under some of the pricing conditions.

Box 14 shows that the time-of-use (TOU) rate schedule alone produced a 4.1-per-cent reduction in the peak load, and the CPP-F condition produced a larger reduction: 12.5 per cent. The time-of-use part of Ontario’s Regulated Price Plan (RPP) might be expected to produce a result between the two but nearer the 4.1 per cent. Thus the expected reduction from application of the time-of-use part of the RPP is in line with the results of the California study.

This study also showed that larger differentials between peak rates and other rates produce larger reductions in peak load. This may be gained from the comparison of TOU and CPP-F conditions in Box 14.

The most significant finding of the study concerned the impact of load control, which was applied separately and in conjunction with the CPP-V condition. Load control refers to the remote—usually automated—

![Graph showing the behavior of three groups in the California pilot study](image-url)
switching off and on of certain electricity uses in order to moderate peak demand. It is discussed more fully in Section 10 below.

Box 14 shows that large reductions in peak load could be achieved when load control was combined with critical peak pricing, and with larger reductions on truly exceptional days. Load control chiefly comprised automatic control of air conditioning thermostats, which could be overridden by participants.

Box 15 shows what happened to three of the pilot study groups on a hot day in August 2003 (the peak temperature was 31.4°C). The group with the lowest use during the critical pricing period (CPP) had both very high prices and load control. The intermediate group had load control only (which could be overridden by customers) and the highest-use group had neither. The combination of load control and critical peak pricing was especially effective, as already noted in Box 14.

The reasonable conclusion from the California study (and others noted here) is that time-of-use pricing doesn’t have much of an impact. Critical period pricing does—with its very high differentials and 24-hour warnings—and so does load control. Combination of the last two measures is especially effective.

The conclusion that time-of-use pricing, if introduced for the residential sector, should apply only during the summer has already been drawn in this report (see Section 6). Confining it to critical peak periods—which will likely always be in the summer—would be a logical refinement of this argument, which is reflected in Recommendation 4 in Section 14. There is also a recommendation concerning load control (Recommendation 7) a topic considered in more detail below in Section 10.
9. Smart meters: advantages and disadvantages

The Ontario government’s direction concerning smart meters has been discussed so far chiefly in respect of their role of supporting time-of-use pricing, which the Ontario Energy Board has already begun to implement (see Section 2). Smart meters can do much more, as this section sets out. First, the other functions of smart meters are discussed, together with their advantages. Then some of smart meters’ disadvantages are noted.

Smart meters can usually do many more things than allow for time-of-use pricing. Their essential feature is that they are able to provide information to a remote computer about the amount of electricity consumed and when it is consumed, by radio signals, via a telephone or cable link, or along the wire carrying the current. Thus, as well as allowing time-of-use pricing, smart meters also make it possible for meters to be read remotely, thereby obviating the need for meter readers to visit users.

Other advantages of smart meters can be realized when they are designed to be the interface point for two-way communication between a building’s electrical system and the outside world. The meters being mandated by the Ontario Energy Board are so designed (see Box 16 on the next page). With additional equipment and programming, these smart meters can provide the electrical utility or a third party with a wealth of details about electricity use within a building, even about use of particular appliances. This information, in turn, can be provided to the household or the building manager, or both.

Being able to track consumption can be a necessary requirement for the development of strategies to reduce both peak demand and consumption. This ability may also contribute directly to reduced electricity consumption. A recent overview of several studies suggested that when users had daily feedback on their consumption, rather than the more usual monthly or bimonthly feedback, overall consumption fell by an average of 11 per cent. The impact on peak demand was not given.

As important is the enhanced information available to the utility. As well as allowing time-of-use pricing, it can also facilitate billing for irregular periods, as when occupants move in and out. Indeed the communications system could be arranged so that customers could provide themselves, over the Web, with printed bills for any period.
A more important consequence of enhanced information could be the utility's ability to pinpoint power outages, line irregularities, and meter malfunctions. When each building's electrical system is an interactive part of a large open network, the possibilities for automatic or ad hoc error or fault detection are numerous. Moreover, with precise geographic identification of loads and changes in load, utilities can focus preventive engineering work with increased accuracy.

Load management may be the most important function offered by interactive smart meters. In its grossest form this could comprise remote disconnection of a user from the distribution system, as in the case of vacant premises, persistent non-payment or a fault condition on the user's side of the meter that poses a threat to the system.

More constructive forms of load management could involve remote adjustments to thermostats and remote disabling of appliances and other functions for which brief interruptions would be hardly noticed (e.g., water heaters, clothes dryers, and dishwashers), all to reduce peak demand. Such load control could be managed from a distance by the utility or by a third party contracted to manage electricity use. Load control is discussed in more detail in Section 10.
What should be noted from the above account of smart meter functions and advantages is that most of them accrue to the electrical utilities (local distribution companies) than directly to their customers. This is reinforced by the listing in Box 17, produced by a French consultancy concerned to promote installation of smart meters. (Box 17 also shows reported savings in respect of each of these advantages, a matter considered below.)

Ultimately, prices for electricity reflect the utilities' costs. Thus, if smart meters allow utilities to realize net savings—through reduced billing costs, improved fault detection, and reduced need to provide electricity during periods of peak demand—consumers will benefit. Conversely, if utilities install smart meters and cannot achieve savings sufficient to cover installation costs, the result will be an additional burden on electricity users.

Cost is the most evident disadvantage of smart meters. The Ontario Energy Board has suggested that the total cost of installing the required four million or so smart meters—and the associated communications systems—will be in the order of one billion dollars, i.e., about $250 per me-
The direct benefits of smart meters to utilities will not produce savings that cover their costs, which will be born by consumers. There will also be an annual net operating cost of about $50 million, i.e., about $12 per customer. The OEB has concluded that “when the project is complete, the cumulative costs might require a monthly charge of between $3 and $4 to cover capital and operating costs”. The OEB's estimate provides for an annual operating benefit valued at only one tenth of smart metering's annual capital and operating costs. Thus, the financial costs of installing and operating smart meters are expected to far exceed the financial benefits to be gained.

The OEB's view of the expected benefits of smart metering is consistent with the low ends of the ranges of the estimates reported in Box 17. However, even if they were consistent with the high ends of the ranges, they would still not cover the estimated costs to the local distribution company of installing and operating them. Justification for smart meters would have to come from other savings, such as savings in construction of new generating capacity, to be used during peak periods only, from reductions in peak demand resulting from application of time-of-use pricing and critical peak pricing. In Sections 5 and 8, the reductions from time-of-use pricing were shown to be quite small.

The second potential disadvantage lies in the complexity of smart meters and their associated equipment. Hardware and software are enormously more sophisticated and reliable than even a decade ago, but expectations of a continuously available supply of electricity remain very high. Moreover, wrong signals—e.g., to change thermostats in the wrong direction or even to disconnect a whole property—could be dangerous. Opportunities for contested billing could increase with smart meter deployment, aggravating consumers and burdening local utilities. Smart meters themselves could be inherently more reliable than conventional meters, because the former are digital and the latter electromechanical, but the complex associated systems could be more problematic.

The third potential disadvantage of the use of smart meters concerns the increased availability of information about behaviour that may be regarded as private. A household’s unusual cooking practices could become evident to a utility. There may be no conceivable use for this information, but mere availability of it could be a cause for concern. Police and other agencies concerned with law enforcement might welcome the opportunity for further monitoring of behaviour. Smart meters and associated equipment could, for example, aid in the detection of indoor marijuana production by pinpointing the time and place of unusually high levels of electricity consumption.
Nevertheless, smart meters appear to confer advantages to utilities and the Government of Ontario’s direction will help ensure orderly and consistent installation of them. However, unless electricity utilities reap more of the benefits than has been suggested by the Ontario Energy Board, the added cost to consumers may be large. It would be reasonable for utilities to be required to demonstrate cost savings through the deployment of smart meters—other than through imposition of time-of-use pricing—that will cover at least half of the costs of installation and implementation (thereby bringing the increased monthly cost to an average of less than two dollars per customer). These conclusions are carried forward here as Recommendations 1 and 2 in Section 14.
10. Load control: a complement or alternative to time-of-use pricing

Load control refers to arrangements by the homeowner, building manager, utility or a third party whereby individual appliances or functions are automatically switched off during peak periods, thereby reducing peak demand.

Load control in homes is not a new concept. In the UK in the 1950s, electricity utilities provided for the use of electric storage heaters on separate circuits that were energized only during off-peak periods but could release heat throughout the day. For many decades until forbidden to do so by Ontario’s Energy Competition Act 1998, Toronto Hydro rented water heaters that could be switched off during peak periods by a signal down the power wire. Toronto Hydro is now reintroducing such a program, focussing on central air conditioners that are to be remotely controlled by added wireless switches. Other Ontario utilities had water-heater programs before 1998 and are now introducing new load-control programs similar to that of Toronto Hydro.

Load control can be arranged by the homeowner or building operator without intervention by the utility. Devices are available that facilitate remote control of appliances and functions. These can be managed by a special-purpose demand controller located in the building or by a home or other computer. These systems can reduce load during peak periods even if they are not linked to the utility, if the peak period is known and can be programmed into the system. They can also be linked to the utility, usually via the Web, so that the home or building can be part of a larger load-control arrangement.

The advantage of linkage to a larger arrangement is that the ‘off’ periods required of any one appliance or function can be fewer or shorter, or both, while achieving the same overall reduction in peak demand.

For the homeowner or building owner to install a demand controller or computer-based system there has to be an incentive. Time-of-use pricing could provide such an incentive, although the pay-back period with the presently proposed schedule could be many years.

The load control could be managed by a third party. A company specializing in such management could contract with several building owners to...
achieve a specified level of load reduction, and thus a particular level of savings in energy costs (assuming time-of-use pricing), while maintaining specified levels of comfort and amenity. Through the Web, the company would be able to manage appliances and equipment in numerous buildings, even buildings in different cities.

Such companies are not in existence now because there is no means of paying them. Moreover, savings when time-of-use pricing is in effect may well not be sufficient to ensure commercial realization of such third-party activity.

The reductions in peak load that can be achieved through load control are considerable. The discussion in Section 8, in connection with Box 14 and Box 15, suggested that load control could reduce household peak demand by at least 20 per cent. The cost of installing load control could compare favourably with the cost of constructing and using the equivalent peak generating capacity. Accordingly, it may be more reasonable for load control to be funded by utilities as an alternative to power purchases rather than by home or building owners in response to time-of-use pricing.

The discussion in Section 8 also noted that load control in conjunction with time-of-use pricing produced larger reductions in peak load than load control alone (see Box 15). This likely happened in part because occupants had some ability to override automatic load controls. Evidently there could be merit in considering load control—funded by utilities—as a supplement to time-of-use pricing. This conclusion is carried forward as Recommendation 7 in Section 14.
11. Survey of social housing providers

In preparation for this report, SHSC conducted a survey of Ontario’s social service providers, asking questions about the properties, how they were heated, who pays fuel bills, and the availability of individual meters, and also about anticipated ease of installing individual meters and receptivity to individual metering. A total of approximately 1,200 questionnaires were distributed. Usable responses were received from 311 providers, who appeared to be mostly representative of all providers (see below).

Responses in respect of house-type units are in Box 18. Separate columns show responses from co-operatives, other providers except Toronto Community Housing Corporation (TCHC), and TCHC. Co-ops were separated out because their occupants are not strictly tenants, and thus could have responded differently to questions involving devolution of payment responsibility to unit occupants. TCHC was separated out because of its size, and also because of the low shares of apartment units with electric heat and the low numbers of all occupants paying their own electricity bills.

<table>
<thead>
<tr>
<th></th>
<th>Co-ops</th>
<th>Others except TCHC</th>
<th>TCHC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total providers</td>
<td>124</td>
<td>186</td>
<td>1</td>
</tr>
<tr>
<td>Providers with house-type units</td>
<td>79</td>
<td>97</td>
<td>1</td>
</tr>
<tr>
<td>Total house-type units</td>
<td>4,483</td>
<td>12,309</td>
<td>6,876</td>
</tr>
<tr>
<td>Units per provider:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;10</td>
<td>1</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>10-29</td>
<td>15</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>30-49</td>
<td>22</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>50-74</td>
<td>21</td>
<td>21</td>
<td>0</td>
</tr>
<tr>
<td>75-199</td>
<td>19</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>200-999</td>
<td>1</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>&gt;999</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>% units with social assistance</td>
<td>23%</td>
<td>42%</td>
<td>33%</td>
</tr>
<tr>
<td>% other RGI units</td>
<td>33%</td>
<td>39%</td>
<td>49%</td>
</tr>
<tr>
<td>% units with electric heat</td>
<td>22%</td>
<td>23%</td>
<td>37%</td>
</tr>
<tr>
<td>% units paying own bills</td>
<td>83%</td>
<td>71%</td>
<td>7%</td>
</tr>
<tr>
<td>% not paying, but have own meters</td>
<td>8%</td>
<td>15%</td>
<td>0%</td>
</tr>
</tbody>
</table>
In Box 18—and also in Box 19, which concerns households in apartment-type units—"% units with social assistance" refers to shares of all households in receipt of support from the Ontario Works program (OW) or the Ontario Disability Support Program (ODSP). These households make payments for accommodation according to their income. Shares of other households also having accommodation payments related to income are shown in the rows titled "% other RGI units", where RGI refers to support received through municipally funded ‘rent-geared-to-income’ programs. As might be expected, the majority of units are subsidized: 57 per cent of represented co-op units, 91 per cent of TCHC units, and 83 per cent of other represented units.

Comparing Box 18 and Box 19, it can be seen that, except for TCHC units, many more apartment-type than house-type units represented in the survey responses have electric heat. Also except for TCHC, many more occupants of represented house-type units are responsible for paying their own bills.

Comparison of the results of this survey on these matters with Ontario results from Statistics Canada’s Survey of Household Spending, already discussed in Section 7, could help assess whether the results of the SHSC

<table>
<thead>
<tr>
<th></th>
<th>Co-ops</th>
<th>Others except TCHC</th>
<th>TCHC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total providers</td>
<td>124</td>
<td>166</td>
<td>1</td>
</tr>
<tr>
<td>Providers with apartment-type units</td>
<td>68</td>
<td>145</td>
<td>1</td>
</tr>
<tr>
<td>Total apartment-type units</td>
<td>4,851</td>
<td>20,825</td>
<td>50,606</td>
</tr>
<tr>
<td>Units per provider:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;10</td>
<td>3</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>10-29</td>
<td>10</td>
<td>27</td>
<td>0</td>
</tr>
<tr>
<td>30-49</td>
<td>13</td>
<td>27</td>
<td>0</td>
</tr>
<tr>
<td>50-74</td>
<td>15</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>75-199</td>
<td>25</td>
<td>44</td>
<td>0</td>
</tr>
<tr>
<td>200-999</td>
<td>2</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>&gt;999</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>% units with social assistance</td>
<td>29%</td>
<td>33%</td>
<td>30%</td>
</tr>
<tr>
<td>% other RGI units</td>
<td>29%</td>
<td>48%</td>
<td>63%</td>
</tr>
<tr>
<td>% units with electric heat</td>
<td>44%</td>
<td>65%</td>
<td>7%</td>
</tr>
<tr>
<td>% units paying own bills</td>
<td>33%</td>
<td>12%</td>
<td>5%</td>
</tr>
<tr>
<td>% not paying, but have own meters</td>
<td>6%</td>
<td>3%</td>
<td>0%</td>
</tr>
</tbody>
</table>

House-type units are less likely than apartment-type buildings to have electric heat; their occupants are more likely to be paying their own electricity bills.

Comparison of the results of this survey on these matters with Ontario results from Statistics Canada’s Survey of Household Spending, already discussed in Section 7, could help assess whether the results of the SHSC
The results of the survey of social housing providers may be representative of all providers, except TCHC in some respects.

The similarities among these percentages suggests that the results of the survey of social housing providers may be representative of all providers, that between a third and a half of social housing units are heated by electricity, that electric heating is much more likely in apartment-type units than in house-type units, and that about a third of households in social housing units pay their own electricity bills, more in house-type than in apartment-type units (with TCHC being a significant exception in several respects).

The survey of social housing providers also asked whether they expected it would be easy or difficult to equip all units with individual meters, and whether they would welcome such an arrangement. Responses by provid-
ERS to these two questions are in Box 21. Considerable support for individual metering of social housing (SH) units is evident, as is considerable doubt as to how readily it might be achieved.

To give the flavour of some of the response to these two questions, sample answers are provided in Box 22 on the next page. These have been chosen primarily for their representativeness of opinions expressed, but also for their brevity.

Evident from these responses is considerable understanding of the challenges that could be involved in widespread individual metering. There was also concern that housing allowances are inadequate and not necessarily geared to a regime of time-of-use pricing. These matters are addressed in the following sections.

However, as well as the understanding indicated in Box 22 there is the considerable uncertainty displayed in Box 21, particularly with regard to the ease or otherwise of installing individual meters. This points to the need for an education program that could be conducted at the right time by SHSC. This is reflected in Recommendation 9 in Section 14.
Difficult to install individual meters

➢ The project is an older building with extremely limited space.
➢ We would have to install separate metering systems for 1,064 units.
➢ Seniors apartment building and they are not likely open to change.
➢ Some electrical circuits feed two or three units. Some electrical circuits feed units and common areas.
➢ Cost, time to coordinate work with contractor and residents, interference with tenants.
➢ Difficult because at construction of apartment buildings, design was bulk metered.

Easy to install individual meters

➢ They have already been installed but were disconnected due to Hydro pricing.
➢ The individual wiring for each unit comes into one electrical panel separate from the common areas.
➢ Each unit has its own breaker panel within the unit.
➢ Original, individual meters are in place, but, disconnected in 1979.
➢ Sub-distribution panel in hall closet on every second floor distributing power to individual units.
➢ Lots of room in corridor electrical closets.

In favour of individual metering of units

➢ Keeps costs to landlords down – especially if tenants are not observing conservation strategies.
➢ People should pay their fair share and this helps prevent abuse of the system. However, the provincial utility scales desperately need to be updated to more accurately reflect actual costs!
➢ Can identify highest users and know if there are physical (building) problems.
➢ It makes sense, but service manager might have their say on allowance structure system.
➢ Equal treatment which would ensure fairness, awareness, and promote conservation. Government subsidies would be required.

Opposed to individual metering of units

➢ Does not make sense for a building that has over 75% of the members on assistance.
➢ Cost to housing provider will be enormous; would rather see more financial assistance to lower dependency on electricity via energy management upgrades, etc.
➢ Administration costs per bill with 41 bills per month would be too costly. All units are different, more outside walls, face north, etc., which will cause marketing problems.
➢ We have a seniors building; seniors usually don't abuse on the electricity.
➢ In social housing many tenants are at home during the day during peak business hours.
➢ Not fair to members living on ground floor who would have high bills. Members on upper floors would have lower bills as heat rises in each house.
12. Individual metering and sub-metering

As can be gathered from responses to the survey (see Section 11), occupants of most social housing units are not billed directly for electricity. Often direct billing would be presently impossible because there are not separate meters for each unit. In some—perhaps many—cases, the units are not separately wired, which would make the introduction of individual metering of units particularly challenging. Nevertheless, the Government of Ontario appears to want all Ontario households be fitted with smart meters by 2010 (see Section 2 on Page 6 and Note 2 on Page 45).

In most multi-unit buildings in the social housing sector—and in many in the private rental sector—there is *bulk metering* of electricity, i.e., just one meter for the whole building, even for more than one building. Unless they have a contract with an electricity retailer, providers pay local utilities for electricity according to the Regulated Price Plan (see Section 2), with a provision that allows them to allow each unit to contribute towards raising the consumption level at which the higher price level is in effect. 46

Metering of each unit in a multi-unit building can be achieved in two general ways. One is to have *individual metering* whereby each household becomes a customer of the local utility (and perhaps also an electricity retailer). A housing provider that was previously responsible for all electricity purchases would now be responsible only for electricity used in common areas.

Individual metering could be a preferred approach where each unit is wired separately, even if the unit is not presently being separately metered. As can be noted from the survey responses, some units were designed to have individual meters, and may have even had them at one time, but are now part of a bulk-metering arrangement (see Box 22). Installation of smart meters could involve no more than replacing existing meters, adding meters where there once were meters, or adding meters to the power lines serving each unit.

The other way in which consumption in each unit can be metered is through *sub-metering*. Here, the bulk meter is retained, and the housing provider is the only customer of the electrical utility. However, consumption at each unit is metered by the housing provider, who may distribute the costs of electricity accordingly. The provider may use the information
from sub-meters only to identify heavy users, who may be asked to use less, and to help locate faults in the building’s electrical system.

Both individual meters and sub-meters can be smart meters or conventional meters.

The Ontario Energy Board began a proceeding in April 2005 to address issues related to sub-metering. In June, the OEB adjourned the proceeding “until there is greater certainty with respect to the implementation of smart meters in Ontario”.

The question of how the Ontario Government’s smart metering objective is to apply to multi-unit buildings and other complexes that are presently bulk metered is thus unanswered. There are two cases.

One is where the units in the bulk-metered building are ready for individual meters (perhaps because they once had them). For these units there are three options: (i) install individual meters; (ii) install sub-meters; and (iii) do nothing. For the second and third options, bulk metering would continue, with the present conventional meter being replaced in due course by a smart meter. Which of these options can be pursued will depend on the Ontario Energy Board. The OEB may direct, for example, that only the first option can be pursued, with the local utility covering all costs as it would for units that are already individually metered.

The OEB could direct that the third option cannot be followed, but that sub-meters can be installed rather than individual meters. The most favourable strategy for housing providers could well depend on the OEB’s direction regarding cost arrangements. If the local utility is to pay for sub-metering, as it would pay for individual metering, then sub-metering could be a reasonable strategy to pursue both for the utility, which would still have only one customer, and the housing provider, which would have more information about consumption and the option of apportioning costs.

The more challenging case—for almost everyone involved, but particularly for housing providers—could be where the units in a bulk-metered building are not ready for individual meters or sub-meters. Only modest adjustments may be required, but there would still be the question as to who should pay. At the other extreme, complete and very costly rewiring of the entire building may be necessary. Such rewiring could well be beyond the means of the housing provider, and it may be an unreasonable
expense for the local utility. It may not be feasible to implement fully the Ontario Government's smart meter directive, if indeed it carries the intention that all individual residences have smart meters by 2010.

Housing providers would still be left with a major challenge. Their conventional bulk meters will be replaced by smart meters. If present plans continue, time-of-day pricing will apply as soon as the smart meters are installed. Housing providers will then be vulnerable to aspects of the application of time-of-day pricing that could adversely impact social housing, as discussed above and returned to in the next section.

This report is being written chiefly from the perspective of social housing providers. It is nevertheless salutary to note that there is considerable opposition to sub-metering from advocacy organizations concerned with low-income tenants. At the time the Ontario Energy Board's proceeding on sub-metering was ongoing (see above), the Low-Income Energy Network (LIEN) issued a report arguing that requiring sub-metering of multi-unit buildings is a flawed conservation strategy. It said that "Sub-metering shifts the incentive to conserve from the landlord to the tenant. This shift shields the landlord from the responsibility to provide an energy-efficient building and appliances for the use of tenants, and represents a lost conservation opportunity." LIEN proposed too that if metering of separate units proceeds, the units should have individual meters and not sub-meters.

These arguments and the above-mentioned potential concerns about the costs of separate metering concerns suggest that the social housing sector should pay close attention to a possible resumption of the OEB proceeding concerning sub-metering, and take protective action. This direction is reflected in Recommendation 3 in Section 14.
13. Challenges and solutions for social housing providers

Social housing providers face two kinds of challenge. The first is that they could be required to contribute towards the cost of installing sub-meters and towards the cost of rewiring necessary for the installation of individual meters or sub-meters. This is discussed in Section 12 above. The exact nature of this challenge cannot presently be determined as the matter is under consideration by the Ontario Energy Board and not likely to be resolved in the near future. Thus, it’s hard to propose a particular course of action other than timely representation to the OEB. The purpose of such representation should be avoidance of direct costs to the social housing sector that cannot readily be recouped in reductions in the costs of electricity to the social housing sector. (See Recommendation 3 in Section 14.)

In respect of this kind of challenge, the social housing sector shares interests with the rental housing sector, and there could be useful collaboration between the sectors.

The second kind of challenge is that time-of-use pricing could result in especially large increases in electricity costs for providers or for residents, accordingly to who pays for electricity. This could happen for the reasons given in Section 7. They are chiefly that the proposed highest time-of-use rate will apply more during the winter than the summer (even though it is being introduced to address a summer problem), and that social housing residents use unusually large amounts of electricity in the winter because they are unusually dependent on electric space heating. Also, social housing residents may be more inclined than average to be at home during on-peak periods and thus to use electricity at those times.\(^5\)

In the social housing sector, most electricity bills are paid by providers. Limited action can be taken by providers to reduce electricity use overall, but the means to target peak periods are limited. The fundamental problem posed for social housing providers is that use of electricity during peak periods rather than at other periods is to a considerable degree a matter of the behaviour of social housing residents, over which providers usually have little control.

Many social housing providers favour moving responsibility for meeting electricity bills to residents. However, even where this is possible, it poses a new set of challenges to providers. Chief among them is the real possi-
bility that residents will not be able to meet increased costs of electricity and that providers will still be expected to pay. Even though the formal responsibility for payment would now lie with residents, providers may be perceived as having continued responsibility and may indeed reinforce that perception. Social housing is not a business but a service provided to society by providers and others.

Time-of-use pricing is being introduced to expose users more strongly to the consequences of use during peak periods. Social housing residents could be usually unresponsive because they will remain unexposed to the consequences. Where they are exposed, they will have little scope for appropriate action chiefly because this action will largely comprise reducing use of air conditioning (see Section 6 above), which they use relatively little.

What may be the most appropriate action on behalf of the social services sector is opposition to some part or all of time-of-use pricing for the residential sector. This would not obviate the value of the Ontario Government’s directive concerning smart meters, which have many uses other than allowing for time-of-use pricing.

Because residential consumption of electricity may not be increasing, and may be contributing a declining part of peak demand (see Section 6), a case could be made for exempting the residential sector altogether from time-of-use pricing.

If the residential sector cannot be exempted altogether, a case could be made for exempting it during the winter months. Peak loads occur increasingly during the summer, as it also noted in Section 6. Even better might be exposure to critical peak pricing only.

If the whole of the residential sector cannot be exempted from time-of-use pricing altogether or during the winter months, a case could be made for exempting the social housing sector throughout the year, or at least during the winter months. The social housing sector makes a minimal contribution to the summer peak loads, but stands to be severely impacted by the application of time-of-use pricing during the winter months.

If introduction of time-of-use pricing for the social housing sector during winter months cannot be avoided, there should be at least a three-year interval between deployment of smart meters and application of time-of-use pricing so as to provide an adequate information base that can be used.
to develop strategies to shift demand for electricity away from on-peak periods.

The social housing sector should nevertheless be making a fair contribution to the quest for more rational use of electricity in Ontario, taking advantage of the enhanced communications and control that widespread deployment of smart meters will make possible.

Opportunities for load control seem especially advantageous. The discussion in Section 10 suggests they could provide a better return than investment in generating capacity, although this needs to be explored and confirmed. The social housing sector could want to collaborate fully in ventures to use load control to offset peak demand, not the least because they promise reduced electricity consumption and reduced costs overall.

Another possible strategy for the social housing sector would be to purchase electricity from an electricity retailer rather than from a local distribution company, with providers acting separately or in groups, or even as a whole sector under the auspices of SHSC. A variant of this could be for SHSC to establish itself as a retailer or to partner with an appropriate organization that is doing or might do this. The plans of the Association of Municipalities of Ontario's Local Authority Services seem to be especially relevant.53

The above discussion points to several recommendations in Section 14, notably Recommendations 4 and 5 concerning the position the social housing sector might take with respect to time-of-use pricing, Recommendation 6 concerning social assistance regulations, Recommendation 7 concerning load control, and Recommendation 9 concerning the need for the sector to have better information about all the matters discussed in this report.
14. Recommendations

1. SHSC support the provincial government’s move to increase the use of ‘smart meters’ in residential buildings in Ontario, including social housing units. [see Section 9]

2. SHSC recommend to the Ontario Energy Board that a local distribution company (electrical utility) not be allowed to install smart meters until it demonstrates that it will recover half of their installation and operating cost through savings in distribution costs resulting from the availability of smart meters. [see Section 9]

3. SHSC intervene at an appropriate time in the proceeding of the Ontario Energy Board concerning sub-metering, with the objective of ensuring that the social housing sector does not become liable for unreasonable installation and other costs and, if necessary, that there not be mandatory introduction of individual metering or sub-metering in multi-unit buildings. [see Sections, 6, 7, 8, and 13]

4. SHSC intervene at appropriate hearings of the Ontario Energy Board to oppose the introduction of time-of-use pricing for the residential sector as a whole, or for application during the winter months, or for the social housing sector in particular, whichever is the most appropriate strategy. [see Section 13]

5. In the event that winter application of time-of-use pricing cannot be avoided, SHSC seek at the Ontario Energy Board to secure a three-year interval between deployment of smart meters and introduction of time-of-use pricing, for the residential sector as a whole or for social housing in particular, in order to provide for informed development of strategies to shift demand for electricity away from on-peak periods. [see Section 13]

6. If occupants of social housing are to be exposed directly to time-of-use pricing for electricity, SHSC seek changes to the RGI and OW/ODSP regulations such that: (i) tenants can benefit financially from shifting their electricity use away from peak periods; and (ii) allowances for electricity use reflect the users’ costs of exposure to time-of-use pricing. [see Sections 8 and 13]

7. SHSC conduct an in-depth study of opportunities for load control in social housing developments. [see Section 10 and 13]
8. SHSC conduct an in-depth study of opportunities for bulk purchasing of electricity by the social housing sector, including partnership opportunities with an organization such as the Association of Municipalities of Ontario.

9. SHSC develop an information package on electricity pricing and management for social housing providers. [see Section 13]

10. SHSC seek funding from the Ontario Energy Board or from the Ministry of Energy to support the interventions proposed in Recommendations 2-6 and the work proposed in Recommendations 7-9.
According to the February 2006 consultation document *Domestic Metering Innovation*, produced by the UK’s Office of Gas and Electricity Markets (available at http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/13745_2006.pdf), Enel, which distributes all residential and most other electricity in Italy, had installed of 24.6 million of a total of 30 million smart meters by July 2005, and has continued to install them at the rate of 40,000 per day. The document reviews Ontario’s plans, and notes that the three major utilities in California, responsible for about 15 million customers, propose state-wide installation of advanced metering infrastructure for all small commercial and residential customers by mid-2006. (This probably means that the plan is to begin the roll-out in 2006.)

The directive of the Minister of Energy to the Ontario Energy Board is at http://www.oeb.gov.on.ca/documents/cases/RP-2004-0196/smartmeters_directiveJuly14_190704.pdf. The directive concerns installation of smart meters by or for “all Ontario customers”, not just residential customers. It does not specify that “all homes” be fitted with smart meters. Two considerations suggest that the intention may be to include all homes in the smart metering project. One arises from the presently stated main purpose of the project, which is to introduce time-of-use pricing (see Note 6 below). It makes little sense to apply such pricing where users are not exposed to the price differences, and unless users have smart meters they cannot be exposed. The second consideration is a comment in Appendix C-2 (Page 119) to the Ontario Energy Board’s *Smart Meter Implementation Plan* (see Notes 4 and 37 below) to the effect that about 1.7 million consumers of electricity are bulk metered, and it may be desirable to include them in the smart metering project. (Bulk metering is where an electrical utility provides one meter for a multi-unit building. Unless there is sub-metering of individual units—see Section 12 of this report—occupants of the individual units cannot be charged for electricity according to how much they use.)

The Web sites for the six agencies listed in Box 2 are:
Ontario Energy Board: http://www.oeb.gov.on.ca
Ontario Power Authority: http://www.powerauthority.on.ca
Independent Electricity System Operator: http://www.theimo.com
Ontario Power Generation: http://www.opg.com
Hydro One: http://www.hydroone.com


This is a feature of the Ontario Energy Board’s *Implementation Plan*. (see Page 8 of the document detailed in Note 4.)

For time-of-use-pricing as the main reason for introducing smart meters, see http://www.energy.gov.on.ca/index.cfm?fuseaction=electricity.smartmeters.

The OEB also regulates other charges that utilities may make in connection with distribution of electricity. Chief of these is the delivery charge touched on here in Section 3 and in Note 36.

Box 3 is based on information provided in the sources detailed in Note 7.

For more information about critical peak pricing, see http://www.oeb.gov.on.ca/documents/rpp_proposal_071204.pdf.


1,000 kWh is also one megawatt-hour.

This assumes the household buys electricity from a local distribution company according the Regulated Price Plan (see Note 6).

Box 6 is based on data from Ontario’s Independent Electricity System Operator, specifically on data downloaded from ‘Hourly demands’ and ‘Hourly Ontario Energy Price (HOEP)’ at http://www.ieso.ca/imoweb/marketdata/marketSummary.asp. For more about the HOEP, see Note 15. The prices shown in Box 6 are the average hourly prices paid by wholesale customers. (See Note 15.)

The price is actually set in advance of the consumption. The Independent Electricity System Operator describes the setting of the HOEP (see Note 14) in this way: “Suppliers submit offers to sell electricity and wholesale buyers submit bids to buy electricity. The IESO then uses these offers and bids to match electricity supply with demand, and establishes the Hourly Ontario Energy Price, or HOEP.” (From http://www.ieso.ca/imoweb/mktOverview/mktOverview.asp.)

Box 7 is Figure 1.1.2 of the Ontario Power Authority’s Supply Mix Advice (Volume I, Part 1-1, Page 2, December 9, 2005). It is available at http://www.energy.gov.on.ca/english/pdf/electricity/Part%201-1%20Supply%20Mix%20Summary.pdf.

Box 8 is Figure 1.2.19 of the Ontario Power Authority’s Supply Mix Advice (Volume I, Part 1-2, Page 46, December 9, 2005). It is available at http://www.powerauthority.on.ca/Storage/18/1339_Part_1-2_Supply_Mix_Advice_and_Recommendations.pdf.
The 500-MW estimate is from Table 1.2.7 of the Ontario Power Authority’s *Supply Mix Advice* (Volume 2, Part 1-2, Page 40, December 9, 2005). It is available at http://www.powerauthority.on.ca/Storage/18/1339_Part_1-2_Supply_Mix_Advice_and_Recommendations.pdf.

Box 9 is Figure 2.6.7 of the Ontario Power Authority’s *Supply Mix Advice* (Volume 2, Part 2-6, Page 155, December 9, 2005). It is available at http://www.powerauthority.on.ca/Storage/18/1350_Part_2-6_Methodologies_and_Assumptions_Adopted.pdf. This report notes that several projections of electricity consumption were reviewed. The projection used was that of ICF consulting based on work by the Independent Electricity System Operator, as modified by Ontario Power Authority. This projection, which is generally lower than the other reviewed projections, may be the most plausible even if only because it is the one that is the most consistent with consumption patterns since 1990. In particular, this projection suggests that residential consumption will *decline*, whereas the other projections suggest it will increase. OPA supports the argument for a decline in baseline residential consumption.

Box 10 is based on Figures 2.6.8 and 2.6.9 of the Ontario Power Authority’s *Supply Mix Advice* (Volume 2, Part 2-6, Page 156, December 9, 2005). It is available at http://www.powerauthority.on.ca/Storage/18/1350_Part_2-6_Methodologies_and_Assumptions_Adopted.pdf.

Box 11 is Figure 2.6.10 of the Ontario Power Authority’s *Supply Mix Advice* (Volume 2, Part 2-6, Page 157, December 9, 2005). It is available at http://www.powerauthority.on.ca/Storage/18/1350_Part_2-6_Methodologies_and_Assumptions_Adopted.pdf.


Box 13 is based on data from Statistics Canada’s *Survey of Household Spending 2003*, detailed in Note 23.

This estimate assumes a reduction in residential sector demand of 333 MW (i.e., two thirds of the total noted in Box 8) and a total residential demand potential of 7,500 MW (i.e., 20% of that noted in Box 8). 333 MW is 4.4% of 7,500 MW.

The quote is from Page 26 of the source detailed in Note 4.
The two-year time-of-use pricing experiment by the Pacific Gas & Electric Company showed an overall reduction in peak demand by volunteer participants of 21%. Midwest Power Systems of Iowa demonstrated a 13.6% reduction in peak demand in a similar program. Both concluded that volunteers have a greater-than-average ability to shift usage. Details of both programs are in a presentation by Schlumberger Electricity Inc. available at the Web site of the Ontario Energy Board at http://www.oeb.gov.on.ca/documents/directive_dsm_schlumberger.301003.pdf.


This is because the relative increase in the RPP is higher than in the California TOU but not as high as in the CPP-F. On the other hand, electricity prices in California are generally higher than in Ontario, which may soften the impact of increases, and the high CPP-F rate came with a day’s notice.

The smart meter does not literally have to be the interface point, which could be a nearby computer or processor that interacts with the meter.

Box 16 is from a presentation used by the Ontario Ministry of Energy during consultation sessions held in November and December 2005 primarily for local distribution companies (LDCs) and vendors of advanced metering infrastructure. The presentation is available at http://www.energy.gov.on.ca/index.cfm?fuseaction=electricity.smmeters_sessions.


The estimates and the quotation are from Page vii of the Smart Meter Implementation Plan, detailed in Note 3. The paragraph following the one in which the quotation appears suggests that the cost of the meters will be included in the distribution component of the charges for electricity. This component varies with use, but would not vary with time of use. Each local electricity
has its own distribution rate approved by the Ontario Energy Board. It is part of what is billed as the ‘delivery charge’. Presently it varies between about 1.3 and 1.8 cents per kilowatt-hour. For a consumer billed for 1,000 kWh per month, the smart metering supplement could add about 25% to the distribution rate.

37 The estimated amortized capital cost per month is $2.47; operating cost is $1.42; operating savings are $0.39. These matters are set out at the beginning of Appendix C to the Smart Meter Implementation Plan. The Plan itself is detailed in Note 4. The Appendix is available at http://www.oeb.gov.on.ca/documents/communications/pressreleases/2005/press_release_sm_app_endices_260105.pdf. Table I in the Appendix lists “smart metering benefits and their operating savings”. The stated benefits are similar to those set out in Box 17.

38 According to the document detailed in Note 35, the information in Box 17 is based on “Interviews conducted by Capgemini with North American Utilities having deployed AMR pilot projects. Calculation based on the assumption that AMR is fully integrated and utilized”.

39 Information about Toronto Hydro’s peakSAVER program is at http://www.torontohydro.com/electricsystem/powerwise/peaksaver/faq/index.cfm?q14. Participating households are given $25 on signing up, and the chance to win prizes, but receive no other direct benefit.

40 An example of a stand-alone demand controller is described at http://www.brayden.com/demandcontroller.html.

41 An example of a computer-based home system—being tested by Enersource Hydro Mississauga—is at http://www.cleanair.web.ca/media/may904.html.

42 A Swedish study estimated that the cost per home of a demand-control system could be in the order of $1,500 per home (see Juozas Abaravičius, Load Management in Residential Buildings, thesis, Lund University, December 2004, at http://www.vok.lth.se/~eep/files/pdf/lic7024JA.pdf). If it is assumed that (i) typical on-peak use is 40% of the annual 10,000 kilowatt-hours, (ii) 10% of this is shifted to mid-peak and 10% to off-peak periods, and (iii) the OEB’s Regulated Price Plan applies (see Section 2), annual savings would be $93. At 6% interest, the savings would cover the investment in 59 years, assuming no operating costs. If the installation cost were $750 rather than $1,500, the savings would cover the investment in 11 years.

43 A proper comparison of the costs of installing and managing load control and constructing and using peak generating capacity is beyond the scope of this paper. A preliminary comparison suggests that installing load control may be advantageous. Assuming (i) the $1,500 per home mentioned in Note 42, (ii) average peak demand of 15 kW, (iii) a reduction in the peak by 20% due to load control (i.e., 4.5 kW), and (iv) line and transmission losses of 10%, the cost per avoided megawatt is $300,000. Present estimates of the construction cost of a natural gas plant are about $600,000 per MW (e.g., see http://www.webpronews.com/business/topbusiness/wpn-54-20050413CalpineandMitsuiEnterCleanEnergySupplyContractWithOPA.html), so there is already an indication that the load control option could be favourable. However, there is no evident revenue from avoided demand, whereas there would be from a new generating station. A better would take into account the cost of peak generation, which can frequently be in excess of
ELECTRICITY METERING AND SOCIAL HOUSING IN ONTARIO

$75/MWh (see Box 6). If the avoided megawatts are amortized over 20 years, at 6.0% the annual value is the equivalent of 350 megawatt-hours at $75/MWh, or about one such hour per day.

Questions were also asked about providers’ costs for electricity and other fuels, but many responses to these questions were found to have inconsistencies and the results were not further analyzed.

Considerable caution should be exercised before relying on these comparisons, in part because of the small numbers of relevant responses in the Survey of Household Spending 2003. Of 1,944 usable Ontario records in this survey, only 116 were in respect of households in subsidized housing, 37 were in house-type units and 79 were in apartment-type units. According to Statistics Canada’s weighting factors, these records represented, respectively, 268,091, 93,646, and 174,445 households. The total of 268,091 happens to be extraordinarily close (within 0.08%) to the total number of social housing units in Ontario—267,888 as reported by the Ontario Non-Profit Housing Association at http://www.onpha.on.ca/about_non_profit_housing/default.asp?load=important_statistics. However, this may be a coincidence because not all social housing units are subsidized, and not all households benefiting from a housing subsidy are in social housing.

The Regulated Price Plan currently provides for a residential rate of 5.8 cents per kWh for the first 600 kWh and 6.7 ¢/kWh thereafter. A bulk-metered, residential building with 50 units would pay the lower rate for the first 30,000 kWh.


That is, unless the customer has a contract with an independent electricity retailer. In Toronto, the most favourable five-year contract presently available from such a retailer would be for a flat rate of 8.99 cents per kilowatt-hour (see http://www.energysnapshot.com/es/prices/ON/eleON.cfm?ldc_id=293&). This would seem to be less advantageous than the Regulated Price Plan (see Section 2).

The timing was possibly a coincidence. The LIEN report makes no mention of the OEB proceeding. It begins with the following: “The Government of Ontario is proposing to amend the Tenant Protection Act ... to allow landlords, without the consent of the tenants, to install electrical sub-meters in existing multi-residential buildings and make electricity a separate charge in the rent.


Specifically, the following Web site should be monitored to remain current with the Ontario Energy Board’s plans concerning sub-metering: http://www.oeb.gov.on.ca/html/en/industryrelations/ongoingprojects_submetering.htm.

Note added in August 2006: Somewhat contradicting this argument is the result of an unpublished preliminary analysis performed by Milton Hydro on three market-rent, electrically heated apartment buildings, with 131, 81, and 82 units. Actual electricity use was priced across a calen-
dar year (2005) according to the regular and time-of-use rates in effect in mid-2006. For the six winter months, the total charge with time-of-use pricing would have been respectively 2.2% below, 1.1% below, and 0.2% above regular pricing. For the six summer months, the total charge with time-of-use pricing would have been respectively 2.6% below, 1.6% below, and 0.6% above regular pricing. Thus, on balance, the time-of-use regime would have resulted in a lower charge overall, more so in the winter. Note that the relative cost is quite sensitive to the actual rates charged. Thus, for the third building (82 units) if the on-peak rate had been 11¢/kWh rather than 10.5¢/kWh, with everything else the same, the time-of-use pricing would have resulted in a 2.0% higher charge during the winter months (compared with 0.2% higher) and a 2.1% higher charge in the summer months (compared with 0.6% higher). Note too that only the regular rates were actually charged; there was no opportunity for usage to be influenced by differential charging according to time of use.

Information about the AMO/LAS plan is in the document Electrical Services and Procurement Program at http://www.amo.on.ca/AM/Template.cfm?Section=About_Us1&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=39372.
Energy poverty in social housing in Ontario

June 2006
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For most consumers, the era of cheap electricity represented a wasteful liberty, a time when hydro power could be used like water. Now, as the government of Ontario considers the $40 billion in investments required to meet future electricity requirements, it is mandating that “smart meters” be installed in all residential properties by 2010. Smart meters, essentially electricity meters with a clock, allows for time of use pricing to increase costs for electricity during peak periods of demand. Consequently, consumers need to consider their response to the certainty of steadily increasing prices. We all require electricity; most of us could reduce our use, some of us cannot afford to pay for it.

This chapter looks at the situation of the poorest among us. The Ontario climate is one of extreme cold and heat, with serious health consequences for those not sheltered from the extremes. Already facing bleak choices over how to stretch limited incomes among food, clothing, medical and/or school supplies, our poorest citizens lack the means to pay high energy bills and even less ability to invest in energy conserving appliances. They can turn off all the lights and the TV, but they still need to make meals, do the laundry and provide heat. To conserve heat, they may endanger their safety through the unsafe use of fireplaces, stoves and portable heaters, risking fire or carbon monoxide poisoning. Some have special needs if they rely on power wheelchairs or other medical appliances to engage in life’s broader activities.

Electricity is a vital service in all of our day to day lives. When unable to pay for even minimal amounts of hydro, families and individuals face what a number of observers and governments have started calling energy poverty.

This paper, released by the Social Housing Service Corporation, contrasts the responses of the U.S. and U.K. to energy poverty with the withdrawal from the policy field by the federal government in Ottawa. It assesses the current state of energy and housing policies within Ontario, particularly their impact on the social housing sector. It advances a number of recommendations for action to prevent the further spread of energy poverty.
2. Social housing and the poor

Social housing is an important component in the social and physical infrastructure of the Province. Provided by over 1,200 Housing Providers in 455 municipalities and districts across Ontario, social housing is administered by 47 service managers, who collectively administer some 250,000 social housing units, with over 700,000 residents. The residents of the housing that our members provide are among the most vulnerable of all persons in our society, comprised of the disabled, the elderly, the working poor and those on social assistance. In other words, the tenants occupying the housing stock provided by SHSC’s members will be deeply affected by rising energy prices. As such, SHSC has an obligation to ensure that the discussion of energy poverty considers all options and all impacts from the perspective of social housing.

The SHSC perspective on energy poverty is shaped by the financial constraints faced by Service Managers and Housing Providers. Housing Providers manage their operations within a very restricted budget. Overall, two-thirds of the rent comes from residents with the lowest income levels, and the remaining one-third from fixed subsidies from local municipalities. Social housing providers face the problem of having insufficient capital reserves to address their infrastructure renewal needs, including replacing energy inefficient equipment, or engaging in efficiency projects which would also capture capital renewal requirements. They are prohibited by the Social Housing Reform Act (SHRA) from re-financing or encumbering their key asset, the property. These restrictions distinguish social housing from their private sector counterparts who have greater access to capital financing, tax treatments, and a larger revenue stream in the form of rents paid by tenants. In short, the major stakeholders in social housing – the service managers, the non-profit housing providers, and tenants receiving rent geared-to-income (RGI) have few alternatives to face rising energy costs.

Electricity costs increased by 10% in Ontario in 2006. Future increases are anticipated to be of the same magnitude. If nothing is done to insulate the poorest Ontarians from the shock of high costs, energy poverty will worsen. Social housing, with the highest concentration of the poor, is the canary in the mineshaft – serving as the leading indicator of what is happening to low income households throughout Ontario society.
3. Energy poverty in the U.K., U.S. and Canada

In many respects, Canada reflects the political traditions of the U.K., while enjoying the benefits of economic integration with the U.S. This view of Canadian affairs, as being somewhere “in the middle”, is not supported by a review of how the three jurisdictions approach energy poverty. Among the three federal or national governments, Canada is the laggard in coming to terms with energy poverty.

3.1. The U.K.: a comprehensive approach

Energy poverty first came to the mind of the public in the United Kingdom in 1991 when Brenda Boardman, raised concerns about rising fuel price increases upon the already increasing rates of poverty in her book, *Fuel Poverty: from cold homes to affordable warmth*. Electricity and fuel were undergoing a period of “liberalization”, and while rates were decreasing in England itself, higher rates were forecast for Northern Ireland.

Fuel poverty, as it is called in the U.K., occurs when a household is forced to spend more than 10% of its income for adequate warmth. There were an estimated 6.5 million households facing fuel poverty in 1996, and of these, 5 million were vulnerable households (those with children, elderly, sick or disabled members).

In 2001, the U.K. government established the Fuel Poverty Strategy with the goal of eliminating fuel poverty among vulnerable households by 2010, and for all households by 2016. The strategy recognises that the best way to tackle fuel poverty is through a partnership approach, which entails working with organisations that have an influence on income, fuel costs, energy provision and efficiency and with organisations from the voluntary and community sector. The multi-stakeholder approach resulted in a multi-pronged initiative, encompassing income subsidies to the lowest incomes, incentives for energy conservation among homeowners and landlords, extension of gas mains to formerly unserved areas, revisions to billing practices, etc.

† Superscript numbers refer to 15 reference and other notes that begin on Page 29.
Despite rising energy costs, the government is well on the way to meeting its goal. The just released 2006 report states that by 2004 the number of households in fuel poverty had been reduced to two million, with one and a half million of those in the vulnerable category.

The U.K. achievement is remarkable, especially as it occurred in an era of reduced expectations about governments' ability to deal with intractable problems such as poverty. Put another way, the U.K. is an example of what can happen when political will is focused on social objectives.

3.2. The U.S.: a partial response

It is difficult to get a good picture of public policy responses to energy poverty in the U.S. as it remains largely a state-led response, supported by block funding from the federal government. What can be said is that the U.S. government provides $3.1B (US) in funding through the Low-Income Home Energy Assistance Program (LIHEAP) to help almost 5 million low income households. Individual states are able to design their own program, providing it gives relief to low income households for their energy costs. Table 1 shows the great variety of benefits and number of clients.

<table>
<thead>
<tr>
<th>State</th>
<th>Income Limit</th>
<th>Benefits</th>
<th>Clients served</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alaska</td>
<td>150% of federal poverty line</td>
<td>$170 minimum to $2975 maximum</td>
<td>8,700</td>
</tr>
<tr>
<td>Massachsetts</td>
<td>200% of federal poverty line</td>
<td>$359 minimum to $527 maximum</td>
<td>134,756</td>
</tr>
<tr>
<td>Michigan</td>
<td>110% of federal poverty line</td>
<td>$972 maximum, $178 average</td>
<td>381,580</td>
</tr>
<tr>
<td>Minnesota</td>
<td>50% of state median income</td>
<td>$100 minimum to $1,200 maximum; $400 average</td>
<td>117,500</td>
</tr>
<tr>
<td>New York</td>
<td>60% of state median income</td>
<td>$150 minimum to $400 maximum; average of $330</td>
<td>804,640</td>
</tr>
<tr>
<td>Ohio</td>
<td>175% of federal poverty line</td>
<td>Heat - $57 to 344 Cooling - $175</td>
<td>257,170</td>
</tr>
<tr>
<td>Vermont</td>
<td>125% of federal poverty line</td>
<td>$1,500 maximum, average of $902</td>
<td>19,327</td>
</tr>
</tbody>
</table>

One important characteristic of LIHEAP is that once funds have been expended, no more clients can be served. Households typically must re-apply for each subsequent year and there is no guarantee that they will
receive a benefit or that the benefit will deal with all of their heating expenses.

The federal program is supported by many state initiatives to provide supplementary benefits, improve energy efficiency of low-income housing, or establish lower fuel rates for lower income households.

Vermont, for example, has developed several programs to deal with energy costs. The Weatherization Trust Fund, established in 1990, is funded by a 0.5 percent gross receipts tax on regulated utilities and all fuels except wood. The trust fund has raised about $3 million annually to supplement the Vermont Weatherization Assistance Program.

A unique “energy efficiency utility” called Efficiency Vermont was created by the Vermont legislature and Vermont Public Service Board to provide energy efficiency services to low-income and other customers. The Low-Income Single Family Program provides electric efficiency improvements to eligible customers of Vermont’s electric utilities. Measures include energy efficiency lighting, refrigerator replacement, and water heater efficiency measures. It also provides energy efficiency measures to owners, managers and developers of multi-family housing units. (for more information, go to: www.efficiencyvermont.com.)

Roger Colton’s paper for the Low-Income Energy Network (LIEN) reports that U.S. states also mandate cheaper fuel costs to low income households. These programs are funded through the general rate structure, meaning that other users contribute to low income subsidies, no matter what their income level. Like the federal energy subsidy, eligibility requirements and benefit levels vary by individual utility companies. Some observers, e.g. the Low Income Energy Network, the Toronto Environmental Alliance, among others, advocate for a similar rate structure funded program, despite possible regressive impacts (i.e. all low to moderate income consumers pay for the benefits going to some low income beneficiaries).

An additional layer of assistance is provided by community or charitable organizations. For example, Citizens Energy Corporation, a non-profit corporation, in Boston, provides one-time delivery of heating oil, at up to 40% off the regular price, to low income Americans who have used up their LIHEAP funds or are ineligible for its benefits.
Inflexible program limits mean that many Americans must turn to community or charitable agencies to meet their energy requirements. The U.S., like the U.K. recognizes the problems of energy poverty, however the lack of national standards and inflexible budget limits means that many Americans must turn to community or charitable agencies to meet their energy requirements. Nonetheless, the U.S. model of federally-funded fuel cost assistance matched by energy conservation initiatives at the state level, provides another example of what Canada could do.

3.3. Canada: a ‘made-in-Canada’ solution?

Despite its greater per capita use of energy, Canada lags behind both the U.K. and the U.S. in responding to the needs of low income energy consumers. There is no national level program to assist households with high heating or energy costs. Moreover, the federal government recently cancelled at least 14 global climate change-related programs, including the EnerGuide for Low Income Households (EGLIH). This five year program, announced only last year, was designed to assist 130,000 households in reducing their energy consumption.

While the federal government promises a “made-in-Canada” solution to issues of climate change, there is no indication of how low income Canadians will be assisted in making the transition. This is not to suggest that the federal government will do nothing – in fact, the opposite may hold true. Now, while the federal government is considering its policy framework, is an opportune moment to advance suggestions on how best to deal with energy policy. The U.K. and U.S. experience shows that dealing with energy affordability problems among low income households requires a comprehensive and sustainable approach by the senior levels of government. What is needed is a clear statement of provincial and federal government roles.

**Recommendation 1:** That SHSC urge the federal and/or provincial government to follow the example of the U.K. by building on SHSC’s comprehensive energy management program, to assist low income households to adjust to rising energy costs through both income adjustments and incentives for landlords and owners of low income housing to become more energy efficient.
4. **Ontario: a conservation culture**

The withdrawal by the federal government from energy conservation leaves the responsibility to individual provincial governments. As will be seen in the Ontario example, the provinces can mount only modest programs, reflecting their more restricted fiscal capacity. Ontario has two programs to help low income households deal with energy affordability, while its Smart Meter initiative is intended to ensure that households pay for electricity at its production cost at the time of use.

### 4.1. Energy relief programs

Ontarians facing difficulties in meeting utility bills have three sources to help them.

The Emergency Energy Fund was started in 2004 to assist social assistance recipients and other low income households pay for utility arrears, security deposits and reconnection costs. From June 2004 to June 2005, 2,700 households received benefits averaging $467. In April, 2006 the provincial government announced a doubling in funding to $4.2 million. Notably, this program is intended to provide one time assistance, except from exceptional cases.

In June, 2006, the Ontario Legislature passed Bill 117, the Ontario Home Electricity Relief (OHER) program, which enables the provincial government to provide one-time payments of up to $120 per family ($60 for singles) to cover increased electricity costs for the 2006 calendar year. Persons need not apply for this payment separately as it will be assessed for individuals completing the Property and Sales Tax Credit for their Ontario Income Tax. The Ministry of Finance anticipates that the program will cost $100M to serve 1.5 million eligible families and individuals.  

OHER is effective for one year only – the legislation specifies that it will not continue past 2006. It is not well-targeted, as it provides benefits to low income households, whether they pay for electricity or not. Social housing tenants, most of whom do not pay directly for electricity, are eligible for this benefit, while housing providers who pay for electricity are not eligible to these benefits. On the other hand, the benefits are relatively modest and not worth the higher administrative costs of a more
screened approach. As well, under the SHRA regulations, tax credits are not counted as income for determining RGI benefits.

The third source is a variety of programs offered by charities or by community organizations. Throughout Ontario, for example, local United Ways offer a Winter Warmth Fund, providing one-time assistance for households unable to pay their utility bills. These programs are supported by Enbridge Gas and local hydro utilities.

A major condition of these energy relief programs is that a household can only make use of it once – as if inadequate income was a periodic crisis rather than an on-going condition. The one-time nature seems to suggest that low income households are expected to reduce their electrical consumption, despite the fact that, apart from electric heat, they already use less than those with greater income.

4.2: Energy Conservation and Social Housing

The Conservation Bureau's Low-Income Conservation and Demand Management Program (Low-Income CDM Program) is a province-wide energy conservation initiative with a goal to reduce electricity consumption in this sector by 100 megawatts (MW), the amount used by about 33,000 homes. The program is targeting 750,000 low-income units across the province, including social housing, private low-income rental housing, privately owned low-income residences, and First Nations communities.

SHSC is the designated partner with the Conservation Bureau for the social housing component of the Low-Income CDM Program. Through its Green Light initiative, SHSC is assisting non-profit housing providers to reduce their electricity consumption in all areas of the province. The initial phase will be available to the 5,000 units who have undertaken an energy audit in summer 2005 through SHSC Energy Management Program. It is intended that Green Light will be expanded to include many more social housing units across the province.

The initial phase, costing about $9M, will focus on end-use products such as energy-efficient lighting and appliance replacement upgrades. The next phase of the Low-Income CDM Program will be rolled out in mid 2006 and will focus on building envelope improvements.
The program expects to deliver a 10MW reduction in energy consumption by the end of 2006. Educational outreach programs will be developed to promote energy conservation among building managers and residents alike and will be a critical component in the program implementation.

The program will be expanded to other low-income households and First Nations communities across the province. The entire program is targeted to bring about a 100MW reduction in energy consumption by the end of 2007, a reduction that will be sustainable in the long term.

4.3. Smart meters

The Province of Ontario has also initiated programs to reduce electricity consumption among low income households. The sustainability of energy conservation is well-proven in the residential area. The residential sector has actually experienced a decrease in demand for electricity, largely due to the replacement of older refrigerators and air conditioners with the latest energy efficient models.

Recognizing that low income renters lack the means to influence appliance replacement by their landlords, the Ontario Power Authority has developed incentives for landlords. In addition, the Ministry of Energy has mandated the introduction of Smart Meters to all hydro customers by 2010. This initiative has been facilitated by the recent passage of Bill 109, the Residential Tenancies Act, which contains provisions to introduce Smart Meters to the rental sector, including social housing.

4.4. Smart meters and social housing

The Province of Ontario has committed to a plan to have all Ontario electricity customers on Smart Meters by December 31, 2010. Smart meters allow for the tracking of electrical consumption on an hourly basis. When paired with time-of-use pricing, consumers will pay rates closer to the actual cost of producing that power. By creating price incentives, it is anticipated that consumers will shift their demand for electricity to off-peak periods, when less expensive power is available.

Replacing all existing meters will cost about $1 billion dollars, an expense to be borne by local utility rates. The cost of installing an individual Smart Meter is about $250 which, when amortized over its
ENERGY POVERTY IN SOCIAL HOUSING IN ONTARIO

lifetime, will add $3 to $4 on the monthly bill. The Ontario Energy Board’s implementation plan identifies the residential sector as the fifth of six priorities, meaning that smart metering of social housing will not come soon.

Despite this somewhat lengthy timeframe, the Ontario government used the introduction of new landlord and tenant legislation to establish the framework for facilitating Smart Meters in the rental sector. Bill 109, the Residential Tenancies Act (RTA), was passed by the legislature in June, receiving Royal Assent June 22, 2006. The RTA will be proclaimed in stages, in league with the development of regulations. The provisions for Smart Metering are expected to be one of the last parts of the RTA to be proclaimed.

Part VIII of the RTA sets out that landlords do not need tenant approval in order to install a Smart Meter. Tenants must be informed about the installation of a Smart Meter and can expect only a small interruption in hydro service. In order to install a smart meter, s.137(7)(a), the landlord is required to ensure that any appliances supplied meet prescribed electricity conservation standards. Other sections require that the rental unit and the rental building meet conservation standards. In short, as a condition to smart meter, the government reserves the right to impose energy conservation standards that start with appliances and reach the building envelope itself.

Once a smart meter is installed in a tenant’s unit, the tenant would pay electricity bills based on electricity use, but not until the smart meter had been in place for one year (s.137(4)). Under s.137(3)(b) the ministry will develop regulations that specify how rents are to be decreased accounting for electrical consumption and “related costs”, i.e. billing or administration fees assumed by the tenant. Tenants would have the ability to apply to the Landlord and Tenant Board if the tenant’s landlord did not have appliances and buildings that conserved electricity. The LTB has the power to order the landlord to undertake energy conservation measures within a specified period of time. Landlords would be required to inform potential new tenants about a rental unit’s usual electricity costs.

4.5. SHSC concerns with smart meters

SHSC appeared before the legislature committee to state its concerns about Bill 109. First and foremost, SHSC stated that conservation
requirements without adequate funding means no smart metering: Bulk metered buildings may require complete rewiring of each rental unit in order to install separate meters. Moreover, buildings, constructed 30 or 40 years ago require extensive investment to meet current or projected energy conservation standards. Housing providers cannot hope to meet new electricity conservation standards in the numbers needed by the Province without greater financial support from the provincial level.

Recommendation 2: That the Ministries of Energy and Municipal Affairs and Housing together with SHSC form a working group to recommend strategies to create incentives to sustainable energy conservation measures in cognizance of unfunded capital deficits and the cost of new energy conservation requirements.

Recommendation 3: That SHSC supports the introduction of smart meters in the social housing sector, with the proviso that the social housing sector does not become liable for unreasonable installation and other costs, especially in multi-unit buildings.

The situation is complicated by the peculiarity of the RTA’s Smart Meter provisions requiring that the landlord’s electricity conservation obligations must be met at the installation of smart meters rather than at the point when the costs are transferred. Possibly, the government believes that forcing the conservation obligations on installation of smart meters leverages greater energy conservation investments. Housing providers would argue that it reduces their flexibility to respond to energy management issues.

For example, it is well known that households use less energy once they receive information about their electricity consumption, whether they pay for electricity or not. For some providers, individual metering without transferring the cost, may be the most cost effective means currently at their disposal. This legislation removes the choice to conserve energy by smart metering now and investing in energy conservation later, as public funds become available. The better means of meeting diverse needs in the social housing sector is to require that substantial energy conservation measures become applicable when costs are transferred.

Recommendation 4: That the regulations developed for Section137(7) of the RTA be amended to reflect that requirements for energy efficient appliances apply at time of installation of smart meters, while more
substantial energy conservation measures for the unit and the building apply at the time of transferring the cost of electricity.

Another concern with Smart Metering is that rent decreases are greater than the shifted costs. The rent reduction is equal to the shifted cost of the electricity plus any “related costs”, which may include administration fees paid by tenants. This may make it revenue neutral for tenants, but the landlord experiences a revenue reduction equal to the cost of all those administrative fees.

For the 80% of social housing units with no individual metering, tenants pay the housing provider separate utility charges for a base load of lighting, cooking and any laundry facilities. The utility charge for lights and cooking, excluding laundry facilities, ranges from $30 monthly for a bachelor or one bedroom unit, up to $53 per month for a unit with four or more bedrooms. (See Appendix A, Standard Extra Charges for details.).

In the example provided in Table 2, the monthly hydro cost for an average household is calculated using current rates charged by Toronto Hydro. In this particular case, the cost of electricity is $57.30, which compares favourably to the $53 utility charge prescribed by the Social Housing Reform Act. Where the difference lies is in the customer fee of $12.34. In other words, individually-metered electricity costs over $12 more per month than the equivalent amount of bulk metered power.

<table>
<thead>
<tr>
<th>Appliance</th>
<th>Average hourly usage per month</th>
<th>Monthly kWh</th>
<th>Monthly cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric stove</td>
<td>100</td>
<td>500</td>
<td>50.00</td>
</tr>
<tr>
<td>Lights</td>
<td>100</td>
<td>18</td>
<td>1.80</td>
</tr>
<tr>
<td>TV</td>
<td>200</td>
<td>20</td>
<td>2.00</td>
</tr>
<tr>
<td>Portable fan</td>
<td>200</td>
<td>23</td>
<td>2.30</td>
</tr>
<tr>
<td>Ceiling fans</td>
<td>200</td>
<td>12</td>
<td>1.20</td>
</tr>
<tr>
<td>Electricity cost*</td>
<td>0.10/kwh</td>
<td></td>
<td>57.30</td>
</tr>
<tr>
<td>Customer fee</td>
<td></td>
<td></td>
<td>12.34</td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td></td>
<td>69.64</td>
</tr>
<tr>
<td>GST (7%)</td>
<td></td>
<td></td>
<td>4.87</td>
</tr>
<tr>
<td>Monthly bill</td>
<td></td>
<td></td>
<td>74.51</td>
</tr>
</tbody>
</table>

* Includes transmission, distribution, and delivery costs.
Requiring non-profit housing providers to absorb the cost of the customer fee is a significant burden and obstacle to the introduction of smart meters in social housing. For a provider with 100 units, the annual cost of covering tenants' customer fee would amount to just under $15,000. If all of the 200,000 social housing tenants, now not paying directly for their hydro, were smart metered, the social housing sector would face a pressure of just under $30 million per year, on an on-going basis. To some extent, this would be offset by any energy savings realized.

The RTA establishes a perverse incentive structure for the introduction of smart meters in social housing. First, non-profit providers must invest in significant energy conservation measures in order to smart meter. Second, having reduced the cost of electricity, they must then absorb the customer billing fees in order to transfer the cost. It makes more sense for social housing providers to share some of the benefits of energy conservation.

SHSC is cognizant of the financial burden this potentially large billing fee might have on housing providers. One trade-off is that tenants would absorb the billing fee as part of the reduced electricity bill. This approach would not result in abating energy poverty for tenants. On balance, if the billing fees were to be a part of the tenants' overall electricity bill, SHSC would propose that this billing fee for social housing tenants be phased-in by Local Distribution Companies.

**Recommendation 5:** That RTA regulations should clarify that customer billing fees are not included in calculating rent adjustments for the transfer of hydro costs in social housing.

A related concern is that tenants need to be brought into the process to better understand how they can reduce their electricity consumption even before they assume the costs. Tenant education is important to ensuring that energy investments continue to realize their maximum return. Tenants need to inform their landlords when door seals need replacing. They need to understand that replacing compact fluorescent bulbs with cheap incandescent ones is a false economy.

**Recommendation 6:** That a strong tenant education program needs to be established by the Ontario Power Authority to ensure that tenants in all buildings about to be smart metered understand how best to conserve electricity and minimize their hydro bills.
ENERGY POVERTY IN SOCIAL HOUSING IN ONTARIO

5. Provincial rules create energy poverty

The RTA treatment of rent adjustments for the cost shift of electricity does not match the SHRA’s treatment of utility charges and allowances. The RTA starts from actual consumption whereas the SHRA uses prescribed tables setting up amounts subtracted from or added to Rent Geared to Income (RGI) rents (see appendices for tables taken from the SHRA O.Reg. 298(01)).

Integrating the separate RTA and SHRA energy treatments require very careful assessment. Low income households in social housing pay 30% of their income for their housing, which includes heat and hot water. In 80% of social housing units, electricity is not separately billed, and occupants pay an additional utility charge for electricity used in lighting, cooking and laundry. If the tenant is required to pay for heat or hot water directly, they receive an allowance intended to offset such costs.

5.1. Inadequate heating allowances create energy poverty

Table 3 compares estimates to heat a 1,000 square foot house with the heating allowances prescribed by the SHRA for Northern and Southern Regions. Regulations set out the allowances received for differing fuel types (see Appendix C: Heating allowances by fuel types).

<table>
<thead>
<tr>
<th>Cost vs. allowances</th>
<th>Northern Ontario</th>
<th>Southern Ontario</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Oil (hi/low)</td>
<td>Gas (hi/low)</td>
</tr>
<tr>
<td></td>
<td>Oil (hi/low)</td>
<td>Gas (hi/low)</td>
</tr>
<tr>
<td>Cost for 1000 sq. ft. house*</td>
<td>1,241-1,356</td>
<td>915-1,025</td>
</tr>
<tr>
<td>Heating allowance (row house)</td>
<td>1224</td>
<td>672</td>
</tr>
<tr>
<td>Net cost to tenant**</td>
<td>$17</td>
<td>$243</td>
</tr>
</tbody>
</table>

Table 3. Heating costs vs. heating allowances in social housing

* 1000 square feet is roughly the same size as a 3-bedroom apartment or a townhouse.
** Housing allowance subtracted from minimum heat estimate.

This demonstrates that electricity remains the most costly way of supplying heat in the North, while oil heat is the most expensive in the Southern region. For all fuel types, the cost of heat is larger than the offsetting allowance.
This analysis confirms what housing providers have been hearing for years -- that social housing tenants who pay for electric or gas heat face energy poverty as a result of inadequate provincially-regulated allowances. Current allowances fall short of meeting heating requirements by up to $708 a year. The worst case is realized in electrically-heated units in the Northern region, however gas and electric allowances fall substantially short in the South as well.

What makes this situation urgent is that the RTA's Smart Meter protections for tenants will not be in place for some time, perhaps not until 2010 or even later. In the interim, tenants who face transferred electric heating costs will join the ranks of the energy poor. Worse, the disincentives for landlords of the future Smart Metering provisions make it all the more likely that electricity costs will be transferred before the provisions are proclaimed.

A further point needs to be made about energy poverty. Once electricity costs have been transferred to tenants, they are responsible for their consumption levels and future price increases. In some cases the amount paid for electricity will rival their RGI rent. While RGI is based on household income, electricity bills are not. Over time, one can anticipate that the problems of paying ever higher bills will multiply, as more and more tenants face a new form of deprivation, energy poverty.

**Recommendation 7:** That the Ministry of Municipal Affairs and Housing, together with SHSC, complete a full analysis of the implications of the SHRA's utility charges and allowances, taking into account the RTA's Smart Meter provisions.

**Recommendation 8:** That the Ministry of Energy direct the Ontario Energy Board to implement a lower electricity rate for social housing projects, in recognition of the reduced ability of working poor and senior households to pay for their energy costs. In particular, critical peak pricing should not apply to social housing.

5.2: Social assistance households in RGI: a special case

The preceding analysis looked at the raw impact of increased electricity and heating costs upon RGI households. Working poor and senior households are particularly vulnerable to increased energy costs, as they
have no where to turn but their own resources. The situation is very
different for social housing residents who receive social assistance.

Households dependent on Ontario’s social assistance programs, Ontario
Works (OW) or the Ontario Disability Support Program (ODSP) receive a
monthly cheque to cover a basic needs allowance and a shelter
component. Most households on social assistance live in private sector
rental accommodation and pay rents in excess of the shelter ceiling. This
means that any increases in energy costs they experience must be met out
of their basic needs allowances – funds meant for food, education, public
transportation, etc.

Social assistance clients living in RGI housing are insulated from these
pressures by virtue of an agreement between MCSS and MMAH that
results in very low rents. These low rents leave plenty of room for any
utility charges they face.

What Table 4 demonstrates is that social assistance clients living in social
housing could handle increased energy costs of up to $367 per month,
without experiencing an impact on their basic needs amounts, as Ontario
Works or OSDP would cover the increased expense.

The implication is that housing providers would benefit from transferring
costs for electricity and heating to social assistance clients as these
households would pass on these costs to MCSS. In other words, the
provincial government is as exposed to increased energy costs in social
housing as are its working poor and senior households.

Pending a federal response on broader issues of energy poverty, the
Province of Ontario could mitigate the impacts of rising electricity costs
on the social housing sector by directing the Ontario Energy Board to
provide for a reduction in the electricity rate for social housing. While a
rate reduction is a rather blunt instrument, it does have the advantage that it benefits low income housing, reduces the incentives to shift costs and reduces pressure while a more comprehensive strategy is developed.

Recommendation 9: That, working with sector organizations such as the Association of Municipalities in Ontario, SHSC should encourage Ministry of Community and Social Services (MCSS) to address issues pertaining to RGI and OW/ODSP regulations.

Recommendation 10: That SHSC, the Ontario Energy Board and MCSS should form a working group to develop options to prevent energy poverty among all social housing residents, including the working poor and senior citizens.
6. Ontario’s worsening housing crisis

The preceding parts of this chapter documented the impacts of rising energy costs upon social housing residents. It is considerably worse for low income households living in private rental accommodation or owner-occupied housing.

Ontario has experienced the largest increase in both the absolute numbers and percentage of low income households requiring housing assistance of all provinces. The Federal government’s housing agency, CMHC, estimates that the number of households in “core need” had increased by almost 50% over the 1991 to 2001 period, to almost 600,000 households. Census data shows that in 2001 more than 266,000 households paid greater than 50 percent of their income for rent.

The situation has not gotten better since 2001. Rising costs for electricity, gas and oil have outstripped income growth while minimum wage and social assistance rates have fallen behind the CPI. While this problem has been largely invisible to the media and public debate, municipalities are swamped by families and individuals looking to pay their utility bills.

Service Managers face these difficult circumstances in their day-to-day operations because they are mandated to be providers of provincial services, including social housing, social assistance, emergency energy funds, and rent banks. SHSC surveyed a number of Service Managers to determine what pressures they face among working poor, seniors, and social assistance recipients not living in social housing.

Ever since the provincial government cut social assistance by 22% in 1995, Service Managers report that virtually all families and individuals relying on Ontario Works pay more than the shelter maximums. Increases to energy prices exert a punishing blow to family budgets. Municipal service managers report extensive use of “Discretionary Benefits” and Community Start Up Benefits available through OW to deal with threatened utility cutoffs or rent arrears caused by high energy bills. However, both funding sources are quite limited and must be used for a variety of other purposes. Once again, we see that discretionary and emergency funds are used regularly by Service Managers, because the basic amounts available to social assistance recipients fails to meet their actual living costs.
Other low income households, such as the working poor and senior citizens also face a patchwork of programs to help them stay in their housing and cover the heating and electricity costs. If they've paid their rent but are at risk of being shut-off from their utilities, municipal staff can provide assistance through the Emergency Energy Fund. If they've paid the energy bills but have fallen behind in their rent, they may get help from the Rent Bank.

One municipal staffer noted that the Emergency Energy Fund runs out in her municipality by September or October - just before the heating season - as households must deal with the final adjustments to their equal billing plans. When municipal funds are emptied or when the household is not eligible, the only choice is to find a local charity.

Staff from a large municipality observed that the lack of a policy basis behind these varied programs results in ad hoc decisions. Moreover, not everyone is equally equipped to deal with the assistance that is available. While social assistance recipients have case workers to help navigate the system, working poor households have no such allies and are likely unaware of the resources at their disposal.

Most service managers do the best they can with the tools available. But they know first-hand that the resources made available by the provincial or federal governments are disjointed, inadequate, and frequently unavailable. As energy prices continue to rise, and particularly as the Province allows electricity costs to increase, Ontario's low income households are left to fend for themselves, unless the Province steps in to protect them from electricity costs.

The federal government also has a significant role to play in this emerging crisis. While provinces control resource policy, they differ greatly in the amount of resources within their borders. For example, Quebec has surplus electricity while Alberta is rich in oil. Most of the regions in Canada do not have such resources to rely on. In an era of world-priced oil and gas and unsubsidized electricity, the national government has the greatest ability to support its poorest citizens.
7. Consolidated recommendations

1. That SHSC urge the federal and/or provincial government to follow the example of the U.K. by building on SHSC’s comprehensive energy management program, to assist low income households to adjust to rising energy costs through both income adjustments and incentives for landlords and owners of low income housing to become more energy efficient.

2. That the Ministries of Energy and Municipal Affairs and Housing together with SHSC form a working group to recommend strategies to create incentives to sustainable energy conservation measures in cognizance of unfunded capital deficits and the cost of new energy conservation requirements.

3. That SHSC supports the introduction of smart meters in the social housing sector, with the proviso that the social housing sector does not become liable for unreasonable installation and other costs, especially in multi-unit buildings.

4. That the regulations developed for Section137(7) of the RTA be amended to reflect that requirements for energy efficient appliances apply at time of installation of smart meters, while more substantial energy conservation measures for the unit and the building apply at the time of transferring the cost of electricity.

5. That RTA regulations should clarify that customer billing fees are not included in calculating rent adjustments for the transfer of hydro costs in social housing.

6. That a strong tenant education program needs to be established by the Ontario Power Authority to ensure that tenants in all buildings about to be smart metered understand how best to conserve electricity and minimize their hydro bills.

7. That the Ministry of Municipal Affairs and Housing, together with SHSC, complete a full analysis of the implications of the SHRA’s utility charges and allowances, taking into account the RTA’s Smart Meter provisions.

8. That the Ministry of Energy should direct the Ontario Energy Board to implement a lower electricity rate for social housing, in
recognition of the reduced ability of working poor and senior households to pay for their energy costs. In particular, critical peak pricing should not apply to social housing.

9. That, working with sector organizations such as the Association of Municipalities in Ontario, SHSC should encourage the Ministry of Community and Social Services (MCSS) to address issues pertaining to RGI and OW/ODSP regulations.

10. That SHSC, the Ontario Energy Board and MCSS should form a working group to develop options to prevent energy poverty among all social housing residents, including the working poor and senior citizens.
Appendix A. Standard extra charges

Where tenants do not pay for their own hydro use, they are charged set amounts over and above the RGI charge for specific services, as established by Table 6, O. Reg. 298/01, Social Housing Reform Act, 2000

<table>
<thead>
<tr>
<th>Item</th>
<th>Service or Utility</th>
<th>Type of Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hostel bed, bachelor or one-bedroom unit</td>
<td>Two-bedroom unit</td>
</tr>
<tr>
<td>1.</td>
<td>Electricity, other than: (a) electricity provided for heating the unit, (b) electricity provided for heating the water supplied to the unit, (c) electricity provided as power for cooking facilities in the unit, or (d) electricity provided as power to operate a clothes dryer in the unit.</td>
<td>$24</td>
</tr>
<tr>
<td>2.</td>
<td>Power for cooking facilities in the unit.</td>
<td>6</td>
</tr>
<tr>
<td>3.</td>
<td>Laundry facilities, other than coin-operated laundry facilities, in the housing project.</td>
<td>6</td>
</tr>
<tr>
<td>4.</td>
<td>Power to operate a clothes dryer in the unit.</td>
<td>6</td>
</tr>
<tr>
<td>5.</td>
<td>A washing machine, other than a coin-operated washing machine, in the unit.*</td>
<td>2</td>
</tr>
<tr>
<td>6.</td>
<td>A clothes dryer, other than a coin-operated clothes dryer, in the unit.*</td>
<td>2</td>
</tr>
</tbody>
</table>

* Reflects an imputed rent charge for the appliance itself, separate from the power.
 ENERGY POVERTY IN SOCIAL HOUSING IN ONTARIO

Appendix B. Allowances for water and appliances

Where residents pay separately for hot water heating or water, or where they supply their own fridge and stove, they receive allowances, as provided for in Table 7, O. Reg. 298/01, Social Housing Reform Act.

<table>
<thead>
<tr>
<th>Item</th>
<th>Service or Utility</th>
<th>Bachelor or one-bedroom unit</th>
<th>Two-bedroom unit</th>
<th>Three-bedroom unit</th>
<th>Four or more-bedroom unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Oil used to operate a hot water heater, where the household does not pay a rental fee for the heater</td>
<td>$28</td>
<td>$34</td>
<td>$39</td>
<td>$47</td>
</tr>
<tr>
<td>2.</td>
<td>Oil used to operate a hot water heater, where the household pays a rental fee for the heater</td>
<td>34</td>
<td>41</td>
<td>46</td>
<td>56</td>
</tr>
<tr>
<td>3.</td>
<td>Gas used to operate a hot water heater, where the household does not pay a rental fee for the heater</td>
<td>15</td>
<td>21</td>
<td>26</td>
<td>32</td>
</tr>
<tr>
<td>4.</td>
<td>Gas used to operate a hot water heater, where the household pays a rental fee for the heater</td>
<td>29</td>
<td>40</td>
<td>47</td>
<td>54</td>
</tr>
<tr>
<td>5.</td>
<td>Electricity used to operate a hot water heater, where the household does not pay a rental fee for the heater</td>
<td>23</td>
<td>28</td>
<td>32</td>
<td>39</td>
</tr>
<tr>
<td>6.</td>
<td>Electricity used to operate a hot water heater, where the household pays a rental fee for the heater</td>
<td>28</td>
<td>34</td>
<td>38</td>
<td>46</td>
</tr>
<tr>
<td>7.</td>
<td>Water, other than hot water</td>
<td>8</td>
<td>15</td>
<td>18</td>
<td>20</td>
</tr>
<tr>
<td>8.</td>
<td>Refrigerator</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>9.</td>
<td>Stove</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
Appendix C. Heating allowances by fuel type

Where residents pay for their own heat, they receive an off-setting allowance. These three tables set out the allowances received for different fuel types.

### OIL

<table>
<thead>
<tr>
<th>Item</th>
<th>Type of Unit</th>
<th>Region of Ontario</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Southern</td>
</tr>
<tr>
<td>1.</td>
<td>Apartment — Bachelor or one bedroom</td>
<td>$49</td>
</tr>
<tr>
<td>2.</td>
<td>Apartment — Two bedrooms</td>
<td>51</td>
</tr>
<tr>
<td>3.</td>
<td>Apartment — Three or more bedrooms</td>
<td>64</td>
</tr>
<tr>
<td>4.</td>
<td>Row house</td>
<td>68</td>
</tr>
<tr>
<td>5.</td>
<td>Semi-detached house</td>
<td>92</td>
</tr>
<tr>
<td>6.</td>
<td>Single detached house</td>
<td>136</td>
</tr>
</tbody>
</table>

### NATURAL GAS

<table>
<thead>
<tr>
<th>Item</th>
<th>Type of Unit</th>
<th>Region of Ontario</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Southern</td>
</tr>
<tr>
<td>1.</td>
<td>Apartment — Bachelor or one bedroom</td>
<td>$21</td>
</tr>
<tr>
<td>2.</td>
<td>Apartment — Two bedrooms</td>
<td>24</td>
</tr>
<tr>
<td>3.</td>
<td>Apartment — Three or more bedrooms</td>
<td>25</td>
</tr>
<tr>
<td>4.</td>
<td>Row house</td>
<td>28</td>
</tr>
<tr>
<td>5.</td>
<td>Semi-detached house</td>
<td>39</td>
</tr>
<tr>
<td>6.</td>
<td>Single detached house</td>
<td>56</td>
</tr>
</tbody>
</table>

### ELECTRICITY

<table>
<thead>
<tr>
<th>Item</th>
<th>Type of Unit</th>
<th>Region of Ontario</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Southern</td>
</tr>
<tr>
<td>1.</td>
<td>Apartment — Bachelor or one bedroom</td>
<td>$40</td>
</tr>
<tr>
<td>2.</td>
<td>Apartment — Two bedrooms</td>
<td>42</td>
</tr>
<tr>
<td>3.</td>
<td>Apartment — Three or more bedrooms</td>
<td>53</td>
</tr>
<tr>
<td>4.</td>
<td>Row house</td>
<td>56</td>
</tr>
<tr>
<td>5.</td>
<td>Semi-detached house</td>
<td>76</td>
</tr>
<tr>
<td>6.</td>
<td>Single detached house</td>
<td>112</td>
</tr>
</tbody>
</table>
Appendix D. Rent scales

Ontario Works rent scale for a benefit unit consisting of a recipient with no spouse but with one or more other dependants (O. Reg. 452/01, s. 6, Table 3).

<table>
<thead>
<tr>
<th>Benefit unit size (number of individuals)</th>
<th>Rent attributable to benefit unit (monthly)</th>
<th>Non-benefit income limit (monthly)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>$191</td>
<td>$791</td>
</tr>
<tr>
<td>3</td>
<td>226</td>
<td>907</td>
</tr>
<tr>
<td>4</td>
<td>269</td>
<td>1,051</td>
</tr>
<tr>
<td>5</td>
<td>311</td>
<td>1,191</td>
</tr>
<tr>
<td>6</td>
<td>353</td>
<td>1,331</td>
</tr>
<tr>
<td>7</td>
<td>396</td>
<td>1,474</td>
</tr>
<tr>
<td>8</td>
<td>438</td>
<td>1,614</td>
</tr>
<tr>
<td>9</td>
<td>480</td>
<td>1,754</td>
</tr>
<tr>
<td>10</td>
<td>523</td>
<td>1,897</td>
</tr>
<tr>
<td>11</td>
<td>565</td>
<td>2,037</td>
</tr>
<tr>
<td>12 or more</td>
<td>607</td>
<td>2,117</td>
</tr>
</tbody>
</table>

Ontario Works rent scale for a benefit unit consisting of (a) a recipient with no spouse and no other dependants, (b) a recipient with a spouse but no other dependants, or (c) a recipient with a spouse and one or more other dependants (O. Reg. 298/01, Table 4).

<table>
<thead>
<tr>
<th>Benefit unit size (number of individuals)</th>
<th>Rent attributable to benefit unit (monthly)</th>
<th>Non-benefit income limit (monthly)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>$85</td>
<td>$360</td>
</tr>
<tr>
<td>3</td>
<td>175</td>
<td>737</td>
</tr>
<tr>
<td>4</td>
<td>212</td>
<td>861</td>
</tr>
<tr>
<td>5</td>
<td>254</td>
<td>1,001</td>
</tr>
<tr>
<td>6</td>
<td>296</td>
<td>1,141</td>
</tr>
<tr>
<td>7</td>
<td>339</td>
<td>1,284</td>
</tr>
<tr>
<td>8</td>
<td>381</td>
<td>1,424</td>
</tr>
<tr>
<td>9</td>
<td>423</td>
<td>1,564</td>
</tr>
<tr>
<td>10</td>
<td>466</td>
<td>1,707</td>
</tr>
<tr>
<td>11</td>
<td>508</td>
<td>1,847</td>
</tr>
<tr>
<td>12 or more</td>
<td>550</td>
<td>1,987</td>
</tr>
</tbody>
</table>
Ontario Disability Support Program rent scale (O. Reg. 298/01, Table 5)

<table>
<thead>
<tr>
<th>Benefit unit size (number of individuals)</th>
<th>Rent attributable to benefit unit (monthly)</th>
<th>Non-benefit income limit (monthly)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>$109</td>
<td>$440</td>
</tr>
<tr>
<td>3</td>
<td>199</td>
<td>817</td>
</tr>
<tr>
<td>4</td>
<td>236</td>
<td>941</td>
</tr>
<tr>
<td>5</td>
<td>278</td>
<td>1,081</td>
</tr>
<tr>
<td>6</td>
<td>321</td>
<td>1,224</td>
</tr>
<tr>
<td>7</td>
<td>363</td>
<td>1,364</td>
</tr>
<tr>
<td>8</td>
<td>405</td>
<td>1,504</td>
</tr>
<tr>
<td>9</td>
<td>448</td>
<td>1,647</td>
</tr>
<tr>
<td>10</td>
<td>490</td>
<td>1,787</td>
</tr>
<tr>
<td>11</td>
<td>532</td>
<td>1,927</td>
</tr>
<tr>
<td>12 or more</td>
<td>575</td>
<td>2,071</td>
</tr>
</tbody>
</table>
ENERGY POVERTY IN SOCIAL HOUSING IN ONTARIO

Notes


3 For more information, go to http://www.liheap.ncat.org/profiles


5 This has caused some consternation for officials in the Bush administration, as Citizens Energy Corporation, headed by Joseph Kennedy II, has partnered with CITGO, the American subsidiary of the Venezuelan state oil company, to fill the gaps in meeting energy needs of low income Americans. There is a certain irony for the world’s largest economy to rely on assistance from a Third World country.


7 It is interesting to note that the math works out to an average of $67 per applicant.

8 http://www.conservationbureau.on.ca/Page.asp?PageID=122&ContentID=1579

9 To access SHSC’s full paper, Implications of Bill 109, the Residential Tenancies Act, go to: http://www.shscorp.ca/4cos0j55xbexccm01vmhf2f1/Allnews.aspx?A=156

10 This is a fairly modest level of consumption for a larger family. It excludes any use of room-sized air conditioners, which Toronto Hydro estimates would cost $105 for 300 hours of use.

11 Estimated cost of $29.6 million = 200,000 tenants x $12.34 monthly fee x 12 months

12 As estimated by Union Gas, April 2006, www.uniongas.com/home/ngforhome/costcomparisons

13 See Ontario regulation 134/98 for schedule of basic needs allowances for clients receiving benefits on the Ontario Works Act, 1997. The Ontario Disability Support program provides higher amounts for basic needs and shelter allowances.

14 Core Need is defined as a household unable to afford adequate housing without paying more than 30% of income for shelter costs. (see Canadian Housing Observer at http://www.cmhc.ca/en/corp/about/cahoob/upload/Table19_.pdf)

15 The rare exception are those households fortunate to reside in social housing.
Resolutions Passed at the November 15, 2009
ONPHA Annual General Meeting

1. Social Housing Renovation and Retrofit Program Funding
2. The Accessibility for Ontarians with Disabilities Act
3. Harmonization of Provincial and Federal Sales Taxes
4. Sub-Metering Social Housing Units
5. Improving the Social Housing Agreement
6. Reducing the Impact of Insect Pests on Social and Public Housing
2009-01
Social Housing Renovation and Retrofit Program Funding

MOVER: Michael Copas, Parry Sound Municipal Non-Profit Housing Corp.
SECONDED: Keith Ward, Wisma Mega Indah Inc.

We Resolve that:

1) The Ontario Non-Profit Housing Association congratulate the Governments of Canada and Ontario for creating the Social Housing Renovation and Retrofit Program (SHRRP).

2) ONPHA call on the Government of Canada and Ontario to extend the eligibility deadline for work to be funded under SHRRP.

Our reasons for making this resolution are:

a) ONPHA is grateful that the senior governments recognize that many providers need additional assistance beyond their capital reserve funds to keep their buildings in good condition. On the other hand, the time constraints on the program are a cause for concern.

b) SHRRP is a two-year program that ends on March 31, 2011. Under the program, the Governments of Canada and Ontario have committed a total of $704 million to repair existing social housing units and make them more energy-efficient. Funding under SHRRP will be provided for each of two program years (Year 1: May 2009 to March 31, 2010 and Year 2: April 1, 2010 to March 31, 2011) and is offered on a strict “use it or lose it” basis. Funding that is uncommitted by each fiscal year-end will lapse. Therefore, funding approved during Year 1 and Year 2 will need to be committed (i.e. a funding agreement signed) by March 31st of each year. Projects that receive funding under SHRRP must start repairs within three months of the funding agreement date. The Ministry of Municipal Affairs and Housing, which administers SHRRP, has reserved the right to reallocate any funding from housing providers who cannot meet these timelines.

c) It may not be physically possible to plan and carry out $704 million worth of work within two one-year periods as defined by the Province. Given a dramatically abbreviated Year 1 period caused by a delay in releasing the SHRRP program guidelines, the amount of lead time to design the work, gain the necessary permits, organize the work with contractors and obtain the requisite materials will mean that a substantial portion of the first year will see no work done at all. Also, the volume of work may be beyond the capacity of
the limited number of architectural, engineering and construction firms familiar with social housing to carry out within the permitted time. This could mean that smaller providers, who do not have the in-house expertise to do this work and who therefore rely on consultants, may not have access to the services they need in order to plan, supervise and carry out the work.

d) Committing such a large amount of funding over such a short time period may push up prices unnecessarily as demand exceeds supply.

e) Many providers will be required to make improvements to their buildings in the next few years to conform to the Accessibility for Ontarians with Disabilities Act. The Government of Ontario has not yet issued regulations on exactly which changes will be required under the Act, so providers would not be able to take advantage of SHRRP funding to do this work unless the SHRRP deadline is extended.
2009-02
The Accessibility for Ontarians with Disabilities Act

MOVER: Hugh Lawson, Toronto Community Housing Corp.
SECONDED: Brigitte Witkowski, Mainstay Housing

We Resolve that:

1) The Ontario Non-Profit Housing Association support the principle that society as a whole should eliminate barriers that restrict people with disabilities from participating fully in their communities.

2) ONPHA agrees with the position that the construction of accessible and easily adaptable housing will improve access, allow increased participation by individuals with disabilities and afford them greater opportunity to live independently as they age in place.

3) ONPHA make representations to the Government of Ontario about providers’ concerns about the implications of the proposed new “Accessible Built Environment Standard.”

4) ONPHA call on the Government of Ontario to consult with municipal Service Managers and housing providers about the financial impact of making the necessary modifications to social housing buildings. In addition, if housing providers are to meet the proposed new accessibility requirements, then a consultation must take place as mandated under the Memorandum of Understanding between the Province and the Association of Municipalities of Ontario whenever changes to Provincial legislation will have a municipal financial impact.

Our reasons for making this resolution are:

a) The Ontario Legislature passed the Accessibility for Ontarians with Disabilities Act in 2005 as the Government’s way of addressing systemic discrimination and barriers that have restricted disabled persons’ ability to participate fully in their communities. The Act called for the development, implementation, and enforcement of standards in a number of areas, with the intended result being a fully accessible Ontario by 2025. The standard most relevant to housing providers and tenants is called the “Accessible Built Environment Standard.” The Government published a draft of this standard in the summer of 2009.
b) Improving the accessibility of the housing social stock is a worthy social goal – one that ONPHA supports. At the same time, if the public deems the time is right for this initiative, then the public must share the cost of accomplishing it.

c) The new standard would require that providers develop compliance plans for their properties. This will increase providers’ costs since most will not have in-house expertise and so will have to hire consultants to carry out this work.

d) The Standard will create “scope creep” and thus increased costs over time. For example, where an adapted building element can only be reached via a non-compliant building element, the latter must be made compliant either immediately or within a specific (often short) timeline. To date the meaning of “the route to” the changed building element has not been defined, so there is great potential for increased cost.

e) Providers do not have the funds needed for the renovation work visualized in the Standard. There will have to be additional money paid by Service Managers or the Government of Ontario will have to bear the cost. This issue requires further discussion between providers, Service Managers and the Province.

f) Setting a definite date for completing required retrofits, regardless of the useful life remaining to the building elements to be upgraded, means that many building elements will be discarded prematurely. An alternative to be considered is to permit the application of the new standard when the existing building element is due to be replaced anyway.

g) Carrying out retrofits will in some cases reduce the number of units in a building. Providers will likely need ongoing financial assistance in this case to remain solvent.

h) New construction to the Standard will require increased government funding. Under existing affordable-housing programs, providers are already required to take on the maximum debt that can be managed under the project’s cash flow. Increased capital costs can only be offset by government funding.

i) The cost study commissioned in June 2009 by the government’s own AODA-Built Standard Development Committee and conducted by the IBI Group concluded that there will be additional cost impacts for new construction in the order of an additional 4% and cost impacts associated with all retrofits.
2009-03
Harmonization of Provincial and Federal Sales Taxes

MOVER: Hugh Lawson, Toronto Community Housing Corp.
SECONDED: Othello Inniss, Wesley Community Homes Inc.

We Resolve that:

1) ONPHA press the Government of Ontario to guarantee and ensure that non-profit housing providers and their tenants do not experience financial hardship as a result of the harmonization of provincial Retail Sales Tax with the federal Goods and Services Tax.

2) ONPHA work with Service Managers, Ministry of Health and Long-Term Care, and Ministry of Community and Social Services to ensure that any increases to housing providers’ operational and capital repair costs arising from the harmonization of sales taxes be equaled by increases to subsidies.

3) ONPHA work with other stakeholders in the construction industry to press for revisions to rules to ensure that the total tax burden on the construction of new social housing does not increase as the result of the harmonization of provincial and federal sales taxes.

4) ONPHA press the Government to develop transitional rules to ensure providers with a project whose construction period crosses the July 1 date of implementation of the new harmonization rules do not suffer unbudgeted increases in their sales taxes.

Our reasons for making this resolution are:

a) The Ontario Government has introduced a plan to harmonize the calculation and collection of retail sales taxes with the federal GST system so that individuals and corporations (including non-profits) will pay a single tax of 13% on most goods and services. This new tax rate would apply to many items that are currently only GST-taxable at a rate of 5%, such as natural gas, hydro and labour (including professional fees like lawyers and auditors as well as construction and repair contractors).

b) Proponents of the new system claim it will eventually bring down the cost of many goods, but since these goods make up a very small portion of providers’
budgets compared with utilities, contracted labour and professional services, providers can expect their overall expenses to go up.

c) Current tax rules allow non-profits and co-ops to claim a tax rebate according to an eligibility system administered by the Canada Revenue Agency, under which a provider may have “municipal”, “charitable”, “qualifying non-profit” status, or combination of these. The qualification is determined according to a complicated formula related to the percentage of a provider’s budget that it receives in annual subsidies from government. Where provider’s subsidy payment received falls below the CRA eligibility requirement, for example, in cases where operating agreements expire or interest rates drop at mortgage rollover, providers face losing their eligibility for rebates.

d) Provincial officials claim the Government of Ontario will have significant input to CRA in revising and updating the eligibility rules. This would be a good opportunity for ONPHA to ensure the government is aware of providers’ concerns. The Province should make sure the CRA amends these rules to accommodate the variety of possible subsidy arrangements between providers and funders so that every non-profit housing provider is eligible for an adequate rebate of sales taxes.

e) Non-profits and co-ops that develop new housing may also face cost increases if the rebate system does not fully offset the increased taxes.

f) Increases to sales taxes will increase pressure on housing providers’ budgets, and so would probably mean an increase in subsidy from Service Managers, in effect shifting the cost burden from senior government to local government and requiring municipalities to further tap the already limited property tax base.

g) Tenants of social housing who pay their own gas or hydro bills will see their costs increase, since they would pay a future tax rate of 13% instead of 5%, and they cannot get any rebates at all. The government has promised three lump-sum payments to help individuals offset the costs of the transition to the new system, but these payments will not equal the total future tax increases on gas and hydro.

h) ONPHA has common ground with Service Managers and the construction industry to argue to the Province for better relief for social housing, and should act quickly since the new system would take effect on July 1, 2010.
Sub-Metering Social Housing Units

We Resolve that:

1) The Ontario Non-Profit support the goal of improved energy efficiency in social housing.

2) ONPHA call on the Government of Ontario to carry out a comprehensive review of the desirability of using smart sub-metering as the way to optimize energy efficiency in multi-residential buildings.

3) ONPHA press the provincial government to take measures to ensure that smart sub-metering, should it be permitted in Ontario and widely adopted by landlords, does not have a negative overall financial impact on tenants.

4) ONPHA work with other stakeholders, including SHSC, the Co-operative Housing Federation of Canada, the Federation of Rental-Housing Providers of Ontario, the Advocacy Centre for Tenants (Ontario) and Service Managers to press the provincial government and the Ontario Energy Board for an energy policy that both stresses conservation and allocates the costs and benefits of such a policy fairly between housing providers and tenants.

5) ONPHA review any impact sub-metering will have on the Social Housing Reform Act and in particular the manner in which RGI is calculated.

Our reasons for making this resolution are:

a) The Government of Ontario has implemented a policy to install smart meters in households across the Province. Since the production cost of electricity varies widely depending on demand, and since the building of new power plants is based on estimates of peak demand, it makes overall sense to try to use less power when demand is highest (and most expensive), either through conservation or by shifting consumption patterns to times (e.g. during the night) when demand and prices are lower. Smart meters measure not only the total amount of electricity used, but also the time of day it was consumed, so they are potentially a valuable tool for encouraging shifts in consumption since they allow for the billing of electricity on a differential scale.
b) Smart sub-meters extend this principle to multi-unit buildings since they track the distribution of power to each individual residential unit, allowing a utility to charge individual tenants directly for power actually consumed. In turn, if a landlord and tenant agree that the rent would exclude electricity, then the rent would go down. The tenant would see an overall cost saving if the household consumption of electricity was less than the average amount used in the building before the transition to smart sub-metering.

c) Many building operators support, in principle, the use of this technology since it protects them from the risk that energy costs rise faster than the amounts they can recover in rents. On the other hand, many tenants and advocates of low-income tenants (including some social housing providers) recognize that this approach to electricity billing has unequal effects on different tenants. For example, energy consumption may depend on a unit's location in the building and be largely independent of a resident's commitment to conservation. Another concern with the approach is that it tends to reduce the building owner's incentive to spend capital dollars on weather-stripping, insulation and more efficient appliances, since the benefits would accrue to tenants who pay for their own electricity. On the other hand, tenants generally cannot effectively improve the energy efficiency of buildings.

d) The Ontario Energy Board has imposed a moratorium on the installation of smart sub-meters in multi-residential rental buildings pending more study of the issue. However, the Ministry of Energy and Infrastructure still appears committed over the long term to smart metering.

e) A fundamental problem is that the costs and benefits of initiatives to reduce consumption are easily de-linked, thus simultaneously reducing the incentive to take conservation measures and unfairly distributing the benefits. Smart sub-metering could be a valuable tool in promoting conservation, but the concern remains that it is not a "one-size-fits-all" solution and could end up increasing the costs of low-income tenants, the people least able to afford it.
2009-05
Improving the Social Housing Agreement

MOVER: Mark Aston, Fred Victor Centre
SECONDED: Nick Volk, VincentPaul Family Homes Corp.

We Resolve that:

1) The Ontario Non-Profit Housing Association work for improvements to the Social Housing Agreement (SHA) between the Government of Canada and the province of Ontario.

2) The improvements ONPHA should seek include:
   
   i. a commitment by the Government of Canada that it will re-invest in affordable housing any funds withdrawn upon the expiry of existing operating agreements with non-profits and co-ops and of subsidy agreements for public housing, and

   ii. a review of the regulations of the SHA that allowed the Government of Ontario to download the cost of housing onto the municipal sector, an action not repeated in any other parts of Canada.

3) To the extent that the SHA in Ontario has similar counterpart agreements in other provinces and territories throughout Canada, ONPHA should work in conjunction with the Canadian Housing and Renewal Association (CHRA) to:
   
   iii. coordinate a working group of representatives of the non-profit and cooperative housing sectors from the provinces and territories to review the existing Social Housing Agreement and develop a list of suggested improvements to the SHA, and

   iv. work with other stakeholders - including Service Managers in Ontario - to develop and implement a plan to persuade the federal government to review the SHA.

Our reasons for making this resolution are:

a) The Governments of Canada and Ontario signed the SHA 10 years ago, but there was not sufficient input by the social housing sector into the terms of this agreement, especially since at the time ONPHA was focusing on the Ontario Government’s proposal to download housing to the municipal sector.
b) Since the signing of the SHA, the subsidy to many public housing developments has expired at the time of the retirement of debentures associated with that housing. However, since the amount of federal funding withdrawn exceeds the reduction in the cost associated with the retirement of the debentures, there has been a net increase in cost to Service Managers and public housing operators.

c) Despite the fact that one of the goals of the SHA was to streamline administration of housing, there have been cases (such as meeting the requirements for Ministerial Consent to sever land for new housing) where the administrative work for housing providers has increased.

d) Because the Agreements between the federal government and the various provincial and territorial governments were negotiated and signed over a number of years, there is a provision that any improvement to the agreement from the point of view of any provincial or territorial government signing on after any others, then those improvements would be retroactively applied to earlier agreements. However, there has been no systematic review of any differences in the various agreements, how they would affect social housing providers or whether any “improvements” were actually implemented retroactively.

e) When the SHA was signed, The Government of Canada gave the Government of Ontario a lump sum of money in addition to the cost to the federal government of various housing programs. One of the provisos attached to that funding was that Ontario would use that funding for housing. However, the Government of Ontario has never put to rest the suspicion that it diverted some funds away to non-housing uses. A review of the SHA would help bring clarity to that issue.

f) The SHA imposed a burden on Ontario to reimburse the federal government and save it harmless from all costs and expenses related to loan and mortgage defaults, thus creating for the Province, a contingent liability. This contingent liability, in turn, had created a vast set of complex and unnecessarily protracted requirements on the part of housing providers to obtain ministerial consents under the current Social Housing Reforms Act when it comes to, for example, leveraging assets, refinancing exiting mortgages or undertaking new construction additions to existing projects.
Reducing the Impact of Insect Pests on Social and Public Housing

MOVER: Steve Garrison, Cambridge Non-Profit Housing Corp.
SECONDED: Barb Moss, Marconi Non-Profit Housing Corp.

We Resolve that:

1) ONPHA advocate a provincial pest-management strategy. Such a strategy would require and provide provincial funding for community-based or municipal programs to assist vulnerable households prepare units for treatment.

2) ONPHA call on Service Managers, Ministry of Health and Long-Term Care, and Ministry of Community and Social Services either to benchmark pest management costs separately in housing provider budgets or make an increase to existing maintenance or operations benchmarks to reflect this growing cost.

Our reasons for making this resolution are:

a) Because of the spread of bed bug infestations and the presence of cockroaches in many residential buildings, many people believe either the federal or provincial government should declare these insects “invasive species” and so direct their efforts and funding towards solutions. However, these creatures are defined as “pests” and so the responsibility for managing and/or enforcing management falls to municipalities under broad “health promotion” or “health protection” mandates. As a result, municipal responses to pest-based problems have varied.

b) Bed bugs do not appear just in the homes of the poor, but their prevalence is greater there. Experience has shown that many people cannot deal with the problem on their own, but require the help of a broad-based approach that includes inspection, preparation of units for effective treatment, the actual treatment and then education in ways to reduce the likelihood of re-infestation. For this reason, The Toronto Board of Health has also advocated for the inclusion of funding for bed bug control initiatives for vulnerable populations as part of the Province’s Poverty Reduction Strategy.

c) Experience has also shown that an “integrated pest management” approach is the most effective one that housing providers can take. The cost of this approach will vary widely, however, depending on the seriousness of the infestation, the
amount of preparatory work required and the number of return visits involved, among other factors.

d) Because of changes to provincial legislation and municipal by-laws governing the use of pesticides, the recent resurgence in bed bug infestations will likely remain an on-going and growing cost to housing providers. This is particularly the case in multi-residential buildings, where the effort to eliminate pest infestations is compounded by pests' ability to migrate between units.

e) Non-profit housing staff are increasingly being called upon to help tenants prepare their units or to assist in the coordination of community-based supports. Many small providers do not have the in-house capacity to carry out these tasks, so increased operating budgets would allow them to contract with specialists for this work. Another help would be increased accessibility of community-based supports.