

Summaries of Value-for-money Audits

3.01 Community Care Access Centres—Home Care Program

Ontario's 14 Community Care Access Centres (CCACs) are responsible for providing home-care services to Ontarians who might otherwise need to stay in hospitals or long-term-care homes.

Home care is publicly funded by the Ministry of Health and Long-Term Care (Ministry). In order to be eligible for home-care services, a person must be insured under the Ontario Health Insurance Plan. Referrals for home-care services can be made by hospitals, family physicians, or clients and/or their families. Each CCAC is accountable to one of the province's 14 Local Health Integration Networks (LHINs), which are, in turn, accountable to the Ministry.

In recent years, home-care clients have had increasingly complex medical and social-support needs, due mainly to the fact that, since 2009, Ontario hospitals have been expected to discharge most patients who do not really need to be in acute-care settings. In the year ending March 31, 2015, 60% of home-care clients were aged 65 and over.

CCACs assess people to determine if their health needs qualify them for home-care services, and then develop care plans for those who qualify. CCACs contract with about 160 private-sector, for-profit or not-for-profit service providers to provide home-care services directly to clients.

In the fiscal year ending March 31, 2015, Ontario spent \$2.5 billion to provide home-care

services to 713,500 clients. This represents a 42% increase in funding and 22% increase in the number of clients compared to 2008/09, a year before our last audit of home-care services in 2010.

From 2005/06 to 2014/15, overall CCAC funding (for home care and other services) has increased by 73%, but has remained a relatively constant 4% to 5% of overall provincial health spending. The Ministry has recognized the value of home and community care, and it has issued a number of reports highlighting the importance of strengthening this sector.

Despite these positive efforts, some of the issues we raised in our 2010 audit of the home-care program still exist. For example, clients still face long wait times for personal-support services, and clients whose needs have been similarly assessed still receive different levels of service depending on where in Ontario they live.

We found that a person assessed to receive services by one CCAC might not receive services at another. A number of factors influence this, such as the lack of provincial standards that specify what level of service is warranted for different levels of clients' needs, and the fact that per-client funding varies significantly among CCACs despite reforms to the funding formula that began in April 2012. As a result, to stay within budget, each CCAC exercises its own discretion on the types and levels of services it provides—thereby contributing to significant differences in admission criteria and service levels

between CCACs. Further, because CCACs cannot run deficits, the time of year a client is referred, and their level of need, can also influence whether they receive services or not.

Because the availability of community support services such as assisted living and respite care varies across the province (many community support service agencies were historically set up by volunteers to serve local needs; such agencies are not prevalent in rural and northern areas), some CCACs may be required to provide more services to their clients when no other agencies can provide the necessary additional support.

Until these overarching issues are addressed, clients in Ontario will continue to receive inequitable home-care services. Our specific observations include the following:

- The caseloads of CCAC workers who co-ordinate clients' care vary significantly from one CCAC to another, and within the same CCAC. In two of the CCACs we visited, caseloads did not comply with guidelines developed by the Ontario Association of Community Care Access Centres. For example, one CCAC's care co-ordinators on average carried 30% larger caseloads for chronic clients than recommended.
- For budgetary reasons, CCACs are not able to provide personal support services to the maximum levels allowed by law. Care co-ordinators still, for the most part, assess clients to receive up to 60 hours of personal support services per month versus 90 hours as permitted by law. Furthermore, Ontario's regulation is silent on the minimum amount of services that can be provided. As a result, there is no minimum service level requirement for personal support services that CCACs must provide to their clients—for instance, a specified minimum number of baths per week.
- At the three CCACs we visited, 65% of initial home-care assessments and 32% of reassessments for chronic and complex clients were not conducted within the required time

frames in 2014/15. Some clients were not assessed or reassessed in almost one year, and some beyond a year.

- Not all care co-ordinators maintained their proficiency in, and some were not regularly tested on, the use of assessment tools.
- CCACs do not consistently conduct site visits to ensure that the service providers with whom they have contracted are complying with contract requirements. For example, none of the three CCACs we visited had verified that service providers accurately and completely reported incidents of missed visits.

Our recommendations included that the Ministry explore better ways to apply the funding reform formulas to address the funding inequities; develop standard guidelines for prioritizing clients for services, and monitor for compliance to those guidelines; assess the types of caregiver supports and initiatives available in other jurisdictions, and consider approaches to use in Ontario; require all health-service providers to upload complete assessment information on a common system; and make more CCAC results on performance measures publicly available.

We also recommended that CCACs assess and reassess clients within the required time frames; require that all CCAC care co-ordinators comply with the minimum number of assessments per month and be tested on the use of the assessment tools each year, and monitor compliance to that requirement; reassess and, where necessary, revise current guidelines for care co-ordinator caseload sizes; and develop performance indicators and targets and collect from contracted service providers relevant data that measure client outcomes.

This report contains 14 recommendations, consisting of 31 actions, to address our audit findings.

3.02 Child Protection Services—Children's Aid Societies

Child protection services in Ontario are governed by the *Child and Family Services Act* (Act), the

purpose of which is to promote the best interests, protection and well-being of children. The Ministry of Children and Youth Services (Ministry) administers the Child Protection Services Program, and contracts with 47 local not-for-profit Children's Aid Societies (Societies) that deliver child protection services throughout Ontario.

Ministry transfer payments to Societies to fund their expenditures were \$1.47 billion in the 2014/15 fiscal year. About 40% of Societies' expenditures were for services for children who had been removed from their homes and placed in the care of Societies in foster, group or relatives' homes. Over the last five fiscal years, the number of children in the care of Societies has declined by more than 10%.

Societies are independent legal entities, each governed by an independent volunteer board of directors. By law, each Society is required to provide all mandatory child protection services to all eligible children. In other words, waiting lists are not an option for child protection services. Societies initiate a child protection investigation for any reported concern where there are reasonable and probable grounds that a child may need protection from abuse or mistreatment.

Overall, our audit found that there were differences in the levels of service and support provided by Societies, and that workers at the various Societies had vastly different caseloads. The average number of family service cases per worker ranged from eight to 32 per month. These differences could affect the consistency of care and support received by children and families across the province.

Our significant observations include the following:

- Societies may be closing child protection cases too soon. In more than half the files we reviewed that subsequently were reopened, the circumstances and risk factors that were responsible for the reopening of the case had been present when the case was initially closed.

- Societies did not investigate child protection cases on a timely basis and did not always complete all required investigative steps. None of the child protection investigations we reviewed at the Societies we visited were completed within the required 30 days of the Society receiving the report of child protection concerns. On average, the investigations were completed more than seven months after the Society's receipt of the report. As well, Safety Assessments to identify immediate safety threats to the child were either not conducted or not conducted on time.
- Societies did not always conduct timely home visits and service plan reviews in cases involving children still in the care of their families. In more than half the files we reviewed, case-workers visited the children and their families at home only every three months, instead of every month as required by protection standards.
- Societies did not always complete Plans of Care—designed to address, among other things, a child's health, education and emotional and behavioural development—on a timely basis.
- Societies did not always do child protection history checks on people involved with children. This increases the risk that children are left in the care of people with histories of domestic violence or child abuse.
- The Continued Care and Supports for Youth (CCSY) program is not achieving its objective of preparing youth for transition out of care. In almost half the files we reviewed, there was no evidence the youths were involved in reasonable efforts to prepare to transition to independent living and adulthood.

We recommended that Societies meet all legislative and program requirements when delivering protection services; ensure that protection cases are not closed prematurely; assist youth to transition to independent living and adulthood; develop standard caseload benchmarks; and ensure that

funding is used to appropriately to provide direct services to children and families while identifying opportunities to improve service delivery.

This report contains six recommendations, consisting of eight actions, to address our audit findings.

3.03 Child Protection Services Programs—Ministry

Child protection services in Ontario are governed by the *Child and Family Services Act* (Act), the purpose of which is to promote the best interests, protection and well-being of children. The Ministry of Children and Youth Services (Ministry) administers the Child Protection Services Program, and contracts with 47 local not-for-profit Children's Aid Societies (Societies) that deliver child protection services throughout Ontario. Some of those who receive services are Crown wards (children placed in the care of a Society and living in a group home or foster home, or with next of kin).

Services provided under most other programs administered by ministries are subject to the availability of funding; however, by the law that governs the Child Protection Services Program, each Society is required to provide all mandatory child protection services to all eligible children. In other words, waiting lists are not an option for child protection services.

Ministry transfer payments to Societies to fund their expenditures were \$1.47 billion in the 2014/15 fiscal year. Until 2012/13, transfers to Societies were based on historical funding. As of 2013/14, however, Ministry funding has been calculated using a formula based on the economic situation of the community in which a Society is located and on its volume of cases. However, Societies are not allowed to spend more than they receive in funding, and the new funding model still does not provide funding based on Societies' service needs.

Ontarians expect that the child protection services will ensure that children and their families receive the care and support they need. The

Ministry must have sufficient oversight processes in place to help Societies meet their mandated requirements, so that children and families get suitable protection services when they need them.

We found that the Ministry cannot provide effective oversight of Societies because it does not have enough information about the protection services the Societies are providing to most children they serve. The Ministry has not established targets to allow it to measure the progress of Societies in meeting the performance indicators the Ministry has recently put in place.

The Ministry also needs to better ensure that the pressures Societies face to not exceed their funding allocation, as well as problems associated with implementing the new, centralized Child Protection Information Network system, are not adversely affecting their ability to deliver child protection services.

Additional significant issues include the following:

- The Ministry needs to act on data that shows that young people who have received protection services face significant challenges when transitioning to independent living. For example, a survey by the Ontario Association of Children's Aid Societies found that in 2013, only 46% of youth in the care of Societies earned high school diplomas, compared to the Ontario average of 83%. As well, the Provincial Advocate for Children and Youth has identified that an estimated 43% of homeless youth have previous child protection services involvement, and that youth leaving the care of Societies are over-represented in youth justice, mental health and shelter systems.
- Annual reviews of Crown ward files to assess whether their needs have been addressed have identified concerns that have not been addressed from one year to the next. Issues have included failing to develop a plan of care that identifies the child's strengths, needs and goals and that is updated to reflect the child's progress.

- The Ministry's oversight of non-Crown wards who receive protection services is limited as it does not review the files of non-Crown wards.
- Ministry licensing inspections of children's residences found repeated concerns that were not addressed.
- The Ministry's Child Protection Information Network (CPIN) system is currently not delivering on its promised benefits despite significant investments in time and money. Although the Ministry expected to have CPIN in use by all Societies by the end of the 2014/15 fiscal year at a total cost of \$150 million, as of the end of 2014/15, CPIN has been deployed in just five of the province's 47 Societies. The Ministry's revised plan hopes to have CPIN deployed to the remaining Societies by the end of the 2019/20 fiscal year at an estimated total cost of \$200 million.

In our report, we recommend that the Ministry appropriately monitor and assess the performance of Societies and identify opportunities to improve protection services; consider the feedback they are receiving for extending child protection services to all children under the age of 18; review Societies' files for non-Crown wards in receipt of child protection services; ensure that funding provided to Societies is commensurate with each Society's needs; work with Societies to identify opportunities for improving efficiency of their service delivery; and determine the cost of CPIN implementation to the remaining Societies, the impact of such costs on Societies' ability to deliver mandated child protection services within their budget allocations and how such costs should be funded.

This report contains nine recommendations, consisting of 12 actions, to address our audit findings.

3.04 Economic Development and Employment Programs

To help support economic development and employment, the provincial government provides multi-year grants and interest-free loans to busi-

nesses for projects ranging from expansion to export growth to research and development.

Several ministries deliver these supports, but the funds that focus entirely on existing businesses flow through the Ministry of Economic Development, Employment and Infrastructure (Ministry), formerly the Ministry of Economic Development, Trade and Employment.

From 2004 to May 31, 2015, the Ministry had committed \$2.36 billion—\$1.87 billion in grants and \$489 million in loans—to 374 projects through seven of its funds, each of which has a distinct mandate and focuses on a particular industry or geographic area of the province. Of that amount, the Ministry disbursed \$1.45 billion, and the remaining \$913 million was to be paid out over the next 11 years, as the projects are being completed and if they meet job and investment targets. In the last decade, the Ministry's seven funds have assisted projects involving information and communication technology, clean/green technology, financial services, life sciences, and projects in the automotive, manufacturing, and research and development sectors.

The Ministry generally performed well with respect to the approval process in administering and overseeing its own economic-development and employment-support programs. In addition, the projects have had success in leveraging investments by businesses in Ontario and in creating and/or retaining jobs.

In January 2015, the government announced it would fold many existing programs into a new \$2.7-billion Jobs and Prosperity Fund, with \$2 billion administered by the Ministry and \$700 million by other ministries.

Following are some of our significant observations:

- The Ministry has not attempted to measure whether the almost \$1.5 billion it has provided to Ontario businesses since 2004 has actually strengthened the economy or made recipients of the money more competitive. As well, the Ministry's new Strategic Investment Framework does not include a plan for

measuring outcomes from future economic development and employment supports, including for its new Jobs and Prosperity Fund. Although the Ministry measures actual investment achieved, actual jobs created and retained, total contracted investment leveraged and total cost per job per year, it has not set a goal for minimum GDP growth or unemployment rate reductions, either at the local level or for the overall economy. Other provinces have set such goals to guide their economic development efforts.

- Even though Ontario, like most other provinces, has shown improved economic performance in each of the last four years, the need for the Ministry to ensure its programs benefit the economy is still important. Many expert reports question whether such programs and funding actually achieve any economic benefits.
- While the Ministry recognizes the economic benefits of promoting key regions and establishing industry “clusters”—geographic concentrations of interconnected businesses, suppliers, and associated institutions in a particular field—it is just beginning to develop strategies for its involvement in each region and cluster that identifies key strengths and barriers or weaknesses that it can help to address.
- Expert reports over the last several years have also highlighted the importance of small- and medium-sized businesses, which account for about one-third of Ontario’s GDP. While 40% of the number of projects funded by the Ministry related to existing small- and medium-sized businesses, the dollar value of that support amounted to less than 4% of its total funding. The Ministry has neither assessed how many small- and medium-sized businesses lack access to supports, nor made it clear why its funding is targeted primarily to large businesses.
- The Ministry’s mandate is to support a strong, innovative and competitive economy that provides jobs and prosperity for all Ontarians; however, nine other ministries independently also provide similar funding to businesses. As such, the Ministry does not have the authority to co-ordinate with other ministries, which deliver \$1.8 billion of additional economic development and employment support funding. Although the new Strategic Investment Framework outlined an “all-of-government” approach, each of the other nine ministries still continues to deliver support funding without the overall co-ordination that could ensure the best use of funds. Expert reports have recommended this type of funding be consolidated across ministries to achieve administrative efficiencies and help government target funding to certain sectors or areas of the province.
- There is a need for more transparency in how invitation-based funding is awarded. Since 2010, about 80% of approved funding was committed through non-publicly advertised processes, in which only select businesses were invited to apply. The Ministry determined internally which businesses were to be invited, but it could not provide us with the criteria it used to identify the businesses it invited to apply, or a list of those whose applications were not successful.
- Past funding was often awarded without a proper needs assessment. The Ministry almost never assessed whether businesses needed public funding in order to achieve the proposed project. Furthermore, some projects were approved for funding even though there was evidence they would have proceeded without government help.
- The Ministry does not monitor recipients to see whether jobs that are created or retained during the life of the funding contract continue after the contract expires. Contracts are normally for five years, but the Ministry has

no information on whether the jobs the recipient offered to create or retain during those five years are maintained afterwards.

- Over the last 10 years and as recently as January 2015, the government publicly announced almost \$1 billion more in economic-development and employment-support funding projects by re-announcing the same available funding under different fund programs.

Among other things, we recommended that the Ministry develop a comprehensive strategy for economic development and employment that establishes targets by industry sector and geographic region; seek to become the lead ministry responsible for overseeing and achieving a comprehensive provincial strategy for economic development and employment programs; add greater transparency in accepting applications and selecting the qualifying businesses to which it provides funding; and expand performance measures beyond investment and employment results to include whether benefits to the economy continue after project completion.

This report contains nine recommendations, consisting of 17 actions, to address our audit findings.

3.05 Electricity Power System Planning

Electricity power system planning involves managing the long-term demand for electricity, and determining how to meet that demand through generation, transmission, distribution, exporting, importing and conservation of electricity.

In Ontario, entities involved in province-wide power system planning include the Ministry of Energy (Ministry), the Independent Electricity System Operator (IESO), the Ontario Energy Board (OEB), Ontario Power Generation (OPG), Hydro One, four other small licenced transmitters and approximately 70 local distribution companies.

The importance of planning is reflected in provincial legislation: The *Electricity Act, 1998*, was amended in 2004 to require the Ontario Power

Authority, or OPA (which was subsequently merged with the IESO in 2015), to conduct independent planning, prepare a detailed technical plan and submit it to the OEB for review and approval to ensure that it is prudent and cost-effective.

However, no such plan has ever been approved in the last 10 years as required by the legislation to protect consumers' interests. Instead, the Ministry has issued two policy plans in 2010 and 2013 that were not subject to OEB review and approval. While these policy plans provided some technical information, we found that they were not sufficient for addressing Ontario power system's needs and for protecting electricity consumers' interests.

While the checks and balances of the legislated planning process were not followed, the Ministry made a number of decisions about power generation through 93 ministerial directives and directions issued to the OPA from 2004 to 2014. Some of these went against the OPA's technical advice and did not fully consider the state of the electricity market or the long-term effects. These decisions resulted in significant costs to electricity consumers. From 2006 to 2014, the amount that residential and small-business electricity consumers paid for the electricity commodity portion of their bill (including Global Adjustment fees) increased by 70%, from 5.32 cents/kWh to 9.06 cents/kWh. In particular, Global Adjustment fees, which are the excess payments to generators over the market price, amounted to a total of \$37 billion from 2006 to 2014. These payments are projected to cost electricity consumers another \$133 billion from 2015 to 2032.

Among our significant observations:

- We calculated that electricity consumers have had to pay \$9.2 billion more (the IESO calculated this amount to be closer to \$5.3 billion, in order to reflect the time value of money) for renewables over the 20-year contract terms under the Ministry's current guaranteed-price renewable program than they would have paid under the previous procurement program.

- In January 2010, the OPA expressed concerns to the Ministry after the Lower Mattagami hydro project's estimated costs increased by \$1 billion from the initial estimate. The Ministry directed the OPA to proceed in order to meet the Ministry's renewable targets, and to invest in Aboriginal communities and the economy of northern Ontario. The average cost for power from this facility is \$135/MWh while the average cost of electricity produced at two other recent hydro projects outside of the Mattagami River area in Ontario is \$46/MWh.
- The Ministry directed the OPA to convert a Thunder Bay coal plant into a biomass facility despite OPA's advice that the conversion was not cost-effective. The cost of electricity from this facility is \$1,600/MWh—25 times higher than the average cost at other biomass facilities in Ontario.
- The Ministry directed the OPA to cancel contracts for two gas plants planned for the southwest Greater Toronto Area, where the need for them was greatest, and relocate them to Napanee and Lambton. Our 2013 special reports on the Oakville and Mississauga power plants set cancellation costs at \$950 million.
- Ontario currently has an oversupply of electricity, with its available supply exceeding its maximum hourly consumption by an average of 5,160 MW per year from 2009 to 2014—an amount approximately equal to the total existing power generation capacity of the province of Manitoba. Meanwhile, Ontario has spent approximately \$2.3 billion in conservation programs to 2014, and is committed to spend another \$2.6 billion over the next six years. While we recognize that conservation efforts require sustained commitment, investing in conservation during a time of surplus actually contributes to expensive electricity curtailments and exports.
- Due to the excessive surplus, Ontario had to pay generators \$339 million from 2009 to

2014 to reduce the production of 11.9 million MWh of surplus electricity, and \$3.1 billion more to produce 95.1 MWh of exported power in excess of what Ontario received in export revenue. As well, there were almost 2,000 hours in which the hourly Ontario electricity market price was negative, and Ontario paid other exporters a net total of \$32.6 million to take our power.

- We found that the lack of a structured, co-ordinated regional planning process has had ongoing negative effects on the performance of transmission system, including reliability concerns and congestion issues that cost a total of \$407.6 million in payments to generators.

Our audit report recommends, among other things, that the Ministry require full technical plans to be prepared and submitted to the OEB for review and approval; regularly engage with the IESO, OPG, Hydro One, approximately 70 local distribution companies, and other technical experts to consider different scenarios and evaluate cost-effectiveness during the decision making process; assess the effects of conservation and its impact on electricity costs during surplus generation periods; evaluate conservation and demand management programs to ensure they meet cost-effective tests; and work with IESO, Hydro One and other small transmitters to minimize any unnecessary cost to electricity consumers due to transmission reliability concerns and congestion issues.

This report contains five recommendations, consisting of 16 actions, to address our audit findings.

Most of the Ministry's responses to our recommendations refer to recently introduced draft legislation (Bill 135). Our office is not in a position to comment on the merits of this draft legislation; nor can we assess at this point in time whether the changes proposed in the draft legislation would meet the intent of our recommendations.

3.06 Hydro One—Management of Electricity Transmission and Distribution Assets

Hydro One Inc. owns one of the largest electricity delivery systems in North America, operating in three main areas that involve:

- moving electricity from power generators to large industrial customers and to most of Ontario's local distribution companies through an extensive high-voltage transmission network;
- operating, through wholly owned subsidiaries, its own distribution system that serves about 1.4 million residential and business customers; and
- managing a telecommunications system that monitors and remotely operates its transmission equipment.

Hydro One's total revenues were \$6.548 billion in the year ending December 31, 2014, while operating and other costs were \$5.801 billion, for a net income of \$747 million. Hydro One's transmission, distribution and telecommunication net assets were valued at about \$16.2 billion.

The government passed the *Building Ontario Up Act* (Act) in June 2015 to permit the sale of up to 60 per cent of the province's common shares in Hydro One (the province was the sole shareholder), with no other single shareholder allowed to hold more than 10 per cent of the total equity. The province then released an initial public offering of about 15 per cent of the common shares in November 2015.

Effective December 4, 2015, the Act also removed the ability of our Office to conduct and report on value-for-money audits on Hydro One. As a result, this audit of Hydro One's management of electricity transmission and distribution assets, which commenced prior to the tabling of the Act, will be the last value-for-money audit on Hydro One released by this Office.

Hydro One's mandate is to be a safe, reliable and cost-effective transmitter and distributor of

electricity. However, Hydro One's transmission and distribution system reliability is worsening while costs to maintain and improve it are increasing and customers are experiencing more frequent power outages. Hydro One spent over \$1 billion annually from 2012 to 2014 on capital projects to sustain its transmission and distribution systems.

Some of the more significant issues we noted related to its transmission system included:

- Overall, Hydro One's transmission system reliability has worsened in the five years from 2010 to 2014, with outages lasting 30% longer and occurring 24% more often. In the same time period, Hydro One's spending to operate the transmission system and replace assets that are old or in poor condition increased by 31%. It should be noted that Hydro One's overall transmission system reliability still compares favourably to other Canadian transmitters, but has worsened in comparison to U.S. transmitters.
- Hydro One's backlog of preventive maintenance orders on its transmission system equipment increased 47% between 2012 and 2014, which has contributed to equipment failures.
- Hydro One failed to replace 14 of the 18 transmission transformers it reported in very poor condition in its 2013–14 rate application to the Ontario Energy Board (OEB). Subsequently, over the same two-year period, it replaced 37 other transformers reported in better condition. We found that two of the transformers rated in very poor condition in the OEB rate application, but not replaced, failed and resulted in outages to customers lasting 200 minutes in 2013 and 220 minutes in 2015.
- The risk of power failures can increase without an effective program for replacing transmission assets that have exceeded their planned useful service life. The number of key transmission assets, such as transformers, circuit breakers, and wood poles, in service beyond their normal replacement date ranged

from 8% to 26%. Replacing these assets will eventually cost Hydro One an estimated \$4.472 billion, or over 600% more than its \$621-million capital sustainment expenditure for 2014.

Some of the more significant issues we noted related to its distribution system included:

- Hydro One's distribution system has consistently been one of the least reliable among large Canadian electricity distributors between 2010 and 2014. The average duration of outages reported by members of the Canadian Electricity Association (CEA) between 2010 and 2014 was about 59% less than Hydro One over the same period, while average frequency of outages among CEA members was 30% lower.
- The principal cause of distribution system outages from 2010 to 2014 was broken power lines caused by fallen trees or tree limbs. Hydro One operates on a 9.5-year vegetation-management cycle, while 14 of its peer utilities operate on an average 3.8-year cycle. Hydro One's own analysis indicated that the vegetation-management work it did in 2014 cost \$84 million more than it would have under a four-year cycle, and customers would have experienced fewer outages caused by trees.
- Hydro One installed 1.2 million smart meters on its distribution system at a cost of \$660 million, but it has not used the related software and capabilities to improve its response times to power outages. Currently, smart meters are used by Hydro One predominantly for billing, and not to remotely identify the location of power outages before a customer calls to report the outage. Such information from smart meters would make dispatching of work crews timelier and more efficient, leading to improved customer service and cost savings.

We recommended that Hydro One should for its transmission system set multi-year targets and

timetables for reducing the frequency and duration of power outages to improve transmission system reliability and availability; eliminate its growing preventive maintenance backlog; target assets for replacement that have the highest risk of failure, especially those rated as being in very poor condition and that have exceeded their planned useful service life; and provide accurate information to the Ontario Energy Board on its asset replacement activities.

For its distribution system, we recommended it establish more ambitious goals, targets and benchmarks for system reliability performance; and lower its costs and improve reliability by shortening its vegetation (forestry) management cycle.

Given that our Office will no longer have jurisdiction over Hydro One as of December 4, 2015, we have requested that the Ontario Energy Board take the observations we have made in this report into consideration during its regulatory processes.

This report contains 17 recommendations to Hydro One, consisting of 37 actions, to address our audit findings.

3.07 Infrastructure Planning

Ontario's portfolio of public infrastructure includes highways, bridges, transit systems, schools, universities, hospitals, government buildings, and a wide variety of other assets. It has a replacement value of close to \$500 billion.

The Ontario government oversees about 40% of these assets, either directly or through broader-public-sector organizations such as school boards and hospitals.

Much of Ontario's current stock of infrastructure was built between the end of the Second World War and the 1970s. Infrastructure spending slowed between 1980 and 2005, but picked up again in the last 10 years.

Many infrastructure assets are older. The average age of hospitals in Ontario, for example, is 45 years, while the average of schools is 38 years. More than half of all hospitals and schools in the province are at least 40 years old.

In the last 10 years, Ontario's largest infrastructure spending has been in the transportation sector, followed by health and education. Over those 10 years, for example, the province spent nearly \$20 billion on transit projects, more than \$23 billion on roads and bridges, nearly \$25 billion on major hospital and other health-care projects, and nearly \$21 billion on schools and post-secondary facilities. Infrastructure spending includes preserving or expanding existing assets, and building new ones.

Proper planning is necessary to ensure infrastructure needs are identified and existing infrastructure is adequately maintained and renewed for public use. Such planning must take into account the benefits of infrastructure investment, the risks to the public when needed facilities are not built or are allowed to deteriorate, and the resources required to meet future demand.

The Treasury Board Secretariat (Secretariat), responsible for reviewing infrastructure funding requests from ministries, generally evaluated each ministry on a stand-alone, historical basis, and did no comparison at an overall provincial level to ensure the most pressing needs receive top priority for funding.

Some of our significant observations include the following:

- Two-thirds of funding is planned to go toward building new assets and one-third to repairs and renewals of existing facilities, even though the province's analyses has determined that it should be the other way around in order to adequately maintain and renew existing public infrastructure.
- There are no guidelines for the desired condition at which facilities should be maintained, and there is no consistency among ministries on how to measure the condition of asset classes such as highways, bridges, schools, and hospitals.
- Ontario lacks a reliable estimate of its infrastructure deficit—the investment needed to rehabilitate existing assets to an “acceptable”

condition—to better inform where spending should be directed.

- An independent assessment calculated that the Ministry of Education needs \$1.4 billion a year to maintain schools in a state of good repair. However, actual annual funding in the last five years has ranged from \$150 million to \$500 million.
- A similar assessment done for the Ministry of Health and Long-term Care identified annual funding needs of \$392 million for the province's hospitals. However, funding since 2010/11 was just \$56 million, and rose to \$125 million in 2014/15.
- Existing funding does not address significant pressures faced by ministries for new projects. For example, there are 100,000 students in temporary accommodations (portables) and about 10% of schools in the province are operating at over 120% capacity. Although portables are needed to provide some flexibility to address changes in school capacity, existing funding is not sufficient to rehabilitate the existing portfolio and to replace these structures with more permanent accommodations in some cases.
- The Secretariat did not know how well individual projects were managed. Our review of reports from the ministries to the Secretariat noted that information is generally reported at a program level only, and not on individual projects within a program. Instead, the Secretariat relies on ministries to monitor individual projects.

Our audit report recommended, among other things, that the Secretariat working with ministries better identify, measure and quantify the province's infrastructure investment needs; ensure that ministries are putting forward viable strategies that address bridging the gap between actual infrastructure needs and available funding; ensure that funding allocations strike an appropriate balance between funding new projects versus funding repair/rehabilitation and replacement of existing

assets to minimize lifecycle costs; and require ministries to report information on project cost overruns and delays to monitor the status of significant infrastructure projects under way in the province.

This report has six recommendations, containing nine actions, to address our audit findings.

3.08 Local Health Integration Networks

Ontario's 14 Local Health Integration Networks (LHINs) were established by the *Local Health System Integration Act, 2006* (Act). LHINs began assuming their role in managing local health services in April 2007, under the responsibility of the Ministry of Health and Long-Term Care (Ministry), replacing the Ministry's seven regional offices and 16 district health councils. By July 2010, LHINs had fully assumed their role over public and private hospitals, long-term care homes, Community Care Access Centres, community mental health and addiction agencies, community support service agencies, and community health centres. In the year ending March 31, 2015, LHINs provided health-care organizations within these six sectors a total of about \$25 billion in funding, which represents slightly more than half of the provincial health-care budget for that year.

Each LHIN is a not-for-profit Crown agency that covers a distinct region of Ontario. The regions vary in size, have different service delivery issues and health-service providers, and their populations have different health profiles. In the fiscal year 2014/15, the operational expenditures of the 14 LHINs totaled \$90 million, or about 0.4% of the Ministry's \$25 billion in LHIN funding, most of which was destined to health-care organizations that LHINs fund.

Under the Act, LHINs are responsible for “[achieving] an integrated health system and [enabling] local communities to make decisions about their local health systems.” The Act sets out the LHINs' obligation to plan, fund and integrate local health systems.

Our audit found that the Ministry has not clearly determined what would constitute an integrated health system, or by when it should be achieved. As well, the Ministry has not developed ways to measure how effectively LHINs are performing as planners, funders and integrators of health care.

If achieving their mandate to provide the right care at the right time consistently throughout the health system means that LHINs should have met all expected performance levels that are measured, then they have not succeeded. While province-wide performance in six of the 15 areas measured has improved from when the LHINs were created to 2015, in the remaining nine areas, performance has either stayed relatively consistent or has deteriorated since 2010 or earlier. For instance, a greater percentage of hospital days were used by patients who no longer needed acute care in a hospital setting for the year ending March 31, 2015, compared to 2007.

Most LHINs performed below expected levels in fiscal 2014/15; on average, LHINs achieved their respective local targets in only six of 15 performance areas. The best met local targets in 10 areas and four LHINs met only four. Provincial results that include all 14 LHINs show that only four of 11 provincial targets that measure long-term goals were met.

Other significant observations included the following:

- Due to inconsistent and variable practices that still persist across the province, patients face inequities in accessing certain health services. These variances mean that depending on where they live, some people experienced better access to better integrated health care than others, and some people were not receiving health care in the setting that best meets their health needs and, sometimes, at a much higher cost than necessary.
- The Ministry takes little action to hold LHINs accountable when they do not meet targets. This has contributed to performance issues persisting for years. For instance, one of the

four LHINs we visited did not meet the wait-time target for MRI scans in six of the eight years leading up to March 31, 2015. Another did not meet its hip-replacement wait-time target in seven of the last eight years. When an expected performance was not achieved in one year, the Ministry made the target more lax for the following year for some LHINs; yet, for other LHINs, the Ministry kept the target the same or made it more stringent.

- The performance gap among LHINs has widened over time in 10 of the 15 performance areas. For instance, patients in the worst performing LHIN waited 194 days to receive semi-urgent cataract surgery in 2012, which was five times that of the best-performing LHINs. Three years later, this performance gap widened from five times to 31 times. The Ministry needs to better understand the reasons for the widening gap and implement changes to narrow that gap if it wants to achieve the goal of ensuring health service levels do not vary significantly across the province.
- LHINs must better monitor health-service providers' performance. At the four LHINs we visited, we found that the quality of health service was not consistently monitored, performance information submitted by health-service providers (some of which contained errors) is not verified, and providers who did not perform well were not consistently dealt with in accordance with Ministry guidelines.
- Tracking of patient complaints lacks rigour and there is no common complaint-management process across LHINs, and LHINs did not always ensure that patient complaints are appropriately resolved. Across the province, three LHINs did not track complaints at all in 2014, or only partially tracked them.
- LHINs could not demonstrate that they have maximized economic efficiencies because the use of group purchasing and back-office integration differed across the LHINs we visited.

In our report, we recommended that the Ministry establish a clear picture of what a fully integrated health system looks like; analyze the reasons for the widening gap in the performance of LHINs in key performance areas; require LHINs to establish reasonable timelines to address performance gaps and monitor their progress; clarify with the LHINs what authority they have to reallocate funding among health service providers; and finalize the annual funding each health service provider will receive before the fiscal year begins or as early in the current fiscal year as possible.

We also recommended the LHINs take appropriate remedial action according to the severity and persistence of performance issues identified at health service providers; establish a common complaint-management process; and develop and implement action plans with timelines to address the service gaps identified in all health services in their regions.

This report contains 20 recommendations, consisting of 37 actions, to address our audit findings.

3.09 Long-term-care Home Quality Inspection Program

There are about 630 long-term-care homes in Ontario, and they provide accommodation and care to adults who are unable to live independently and/or who require round-the-clock nursing care in a secure setting. The homes provide care to approximately 77,600 residents, most of whom are over 65 years old.

The Ministry of Health and Long-Term Care (Ministry) funds, licenses and regulates Ontario's long-term-care homes. Homes can be either for profit or not-for-profit. In the 2014/15 fiscal year, ministry funding to long-term-care homes through the province's Local Health Integration Networks totalled \$3.6 billion.

The Long-Term Care Homes Quality Inspection Program (Program) is designed to protect and safeguard residents' rights, safety and security, as well as ensure that long-term-care homes comply with

legislation and regulations. Under the *Long-Term Care Homes Act* (Act), the Ministry may conduct inspections at any time without having to alert the homes beforehand. Inspectors who find that a home is not in compliance with the Act shall take formal enforcement action, including issuing a compliance order.

There are four types of inspections: comprehensive inspections, which assess residents' satisfaction and the homes' compliance with the law; complaint inspections, in response to complaints from residents, their families or the public; critical-incident inspections, following such incidents as fire, sudden death, missing residents, and reports of abuse, neglect, improper care or unlawful conduct; and follow-up inspections of homes issued with orders to comply with legislation.

Since 2013, the Ministry has focused attention and resources on completing comprehensive inspections of the 630 long-term-care homes by the end of 2014 and every year after that. However, the Program has had to deal with a growing workload in other areas, including more complaints and critical incidents at homes, and more follow-ups of non-compliance issues. As such, the Ministry needs to strengthen its oversight of the Program to address the significant variations in inspectors' workloads, the number of compliance orders issued, and inspection and reporting timeliness across the province.

Other significant observations include the following:

- While the Ministry made good on its commitment to do comprehensive inspections of all 630 homes (completed in January 2015), the backlog of inspections triggered by complaints and critical incidents more than doubled—from about 1,300 as of December 2013 to 2,800 as of March 2015. We found that 40% of high-risk complaints and critical incidents that should have triggered immediate inspections took longer than three days to act on. Over a quarter of these cases took between one and nine months for inspection. Sixty

per cent of our sample of medium-risk cases that should have been inspected within 30 days took an average of 62 days. Delays in complaint inspections and critical-incident inspections can place residents of long-term-care homes at risk.

- The Ministry did not prioritize comprehensive inspections based on the risk levels of homes in terms of their compliance with legislation or regulations. For example, only a few homes that were considered high- or medium-risk had earlier comprehensive inspections from June to December 2013.
- Homes are given inconsistent timelines to rectify issues identified by inspectors. The Ministry does not provide clear guidance on how long homes should be given to comply with orders. For example, in 2014, inspectors in one region gave homes an average of 34 days to comply with orders relating to key risk areas (such as carrying out a resident's plan of care, protecting residents from abuse and neglect, and providing a safe, secure, and clean home), while inspectors in another region gave homes an average of 77 days to comply with similar orders.
- The Ministry does not have an effective process for monitoring compliance orders that require follow-up. About 380 compliance orders, or two-thirds of those due to be completed in 2014, had not been followed up within the Ministry's informal 30-day target.
- The Ministry has not taken sufficient action against long-term-care homes that have repeatedly failed to comply with orders to fix deficiencies. We noted that homes in one region did not comply with almost 40% of the compliance orders issued by the Ministry in 2014, while homes in another region did not comply with about 17% of orders. The Ministry did not know why the homes repeatedly failed to correct certain deficiencies.
- Ontario does not legislate a minimum front-line staff-to-resident ratio at long-term-care

homes. Home administrators told us that insufficient staffing and training were the main reasons they failed to achieve full compliance.

- As of March 2013, approximately 200 long-term-care homes (accommodating over 20,000 residents) did not have automatic sprinkler systems. The Ministry did not have more recent information on whether any of these homes had been retrofitted with automatic sprinkler systems. The current law does not require this to be done until 2025.

We recommended, among other things, that the Ministry identify the reasons for the significant fluctuation in the number of complaints and critical incidents; collect and analyze the information needed to develop a detailed resource plan and distribute resources accordingly; track, monitor and prioritize complaints, critical incidents and orders that are overdue for inspection; prioritize comprehensive inspections based on long-term-care homes' compliance history and other risk factors; establish a clear policy for inspectors to use in determining an appropriate time frame for homes to comply with orders addressing similar risk; strengthen its enforcement processes to promptly address homes with repeated non-compliance issues; and establish a formal protocol with the Office of the Fire Marshal and Emergency Management and municipal fire departments to regularly share information on homes' non-compliance with fire safety regulations.

This report contains 13 recommendations, consisting of 30 actions, to address our audit findings.

3.10 Management of Contaminated Sites

Governments are responsible for cleaning up certain sites in their jurisdictions that have been contaminated by chemicals or other materials that are hazardous to the environment or to human health.

In Ontario, a number of provincial statutes deal with environmental protection and contamination, with the most comprehensive being the *Environ-*

mental Protection Act. If contamination in an area for which the province is responsible causes or may cause an adverse effect on the environment or human health, the government must clean it up. Several ministries and agencies share responsibility for the province's contaminated sites.

To fulfill the responsibility of cleaning up contaminated sites, governments need robust systems for identifying the sites in their jurisdictions, assessing the nature and extent of the contamination, implementing programs to mitigate the risks posed by these sites to the public and the environment, and remediating these sites for future use.

Our audit found weaknesses in the government's processes for identifying, measuring, and reporting on its contaminated sites. While we were satisfied with the government's efforts to identify all contaminated sites for which it is financially responsible, we would like to see a continued focus on improving the government's estimate of its \$1.8 billion financial liability for these sites in the future.

As well, the government has no overall plan or funding strategy in place for cleaning up its contaminated sites. Although it has identified its high-risk contaminated sites, it lacks a central leader (such as the contemplated Contaminated Sites Project Office) to manage the cleanup process from a government-wide perspective.

Additional significant observations include the following:

- Overall, we found that there was no centralized oversight of the various ministries' processes for managing their contaminated sites and estimating their liabilities in this area.
- The government needs a centralized inventory of contaminated sites. Without one, it is hard to get a complete picture of the government's contaminated sites or track the progress of managing them. We found a few instances where more than one ministry reported being responsible for the same contaminated site.
- The province needs a government-wide process for prioritizing high-risk contaminated

sites for remediation. Without a model that captures and prioritizes all contaminated sites, the government risks funding remediation of lower-priority sites and neglecting sites that have a greater impact on the health and safety of the public.

- Without clear direction, ministries may make errors in accounting for and reporting the liabilities associated with their contaminated sites. The Provincial Controller's Office provided guidance to ministries on implementing a new accounting standard in this regard. While this guidance was helpful, the Provincial Controller's Office should provide ministries with additional formal guidance in several areas, including clarifying the types of costs that should be included in the liability calculation, clarifying when and how present value accounting techniques should be applied, and providing approaches to estimating a liability in the absence of an environmental site assessment.
- We found there was poor documentation to support the calculation of the liabilities associated with contaminated sites. Without adequate documentation, there is a risk that the number of contaminated sites for which the government is responsible and/or the costs associated with cleaning them up could be misstated. There is also the risk that critical information could be lost if staff who have knowledge in these areas leave government.
- The government has no policies or processes for updating financial liability estimates for remediating contaminated sites. Ministries need to monitor their sites and review them annually to determine if environmental site assessments require updating or if liability estimates need to be revised to reflect changes in technology, site conditions, environmental standards, inflation or other factors.

We recommended that the government designate a central unit or ministry group with overall responsibility for managing contaminated sites. We

also recommended that the stakeholder ministries ensure the development and implementation of a centralized database inventory of all contaminated sites; finalize the risk prioritization model that will be used to assess all remediation funding proposals; co-ordinate the development of a long-term plan for remediating the province's contaminated sites that includes both an annual and a long-term funding strategy; periodically report to Treasury Board, on a consolidated basis, their progress in remediating contaminated sites; improve documentation maintained on their contaminated sites liability estimates that includes periodic reviews of low risk sites to ensure the classification remains valid; and annually review their liability estimates. We also recommended the Office of the Provincial Controller Division provide formal guidance to ministries on how to account for and measure these liabilities.

This report contains seven recommendations, consisting of 12 actions, to address our audit findings.

3.11 Mines and Minerals Program

The Ministry of Northern Development and Mines (Ministry) is responsible for overseeing the province's minerals sector, in accordance with the *Mining Act* (Act). Ontario is the largest mineral producer in Canada, accounting for a quarter of the country's mineral production. The Act and its regulations are intended to encourage development of mineral resources in a way that recognizes existing Aboriginal and treaty rights, and minimizes adverse effects on public health and safety, and the environment.

The responsibilities under the Act are carried out by the Ministry's Mines and Minerals Division, and its Ring of Fire Secretariat, which is responsible for overseeing the development of the Ring of Fire mineral deposit in northern Ontario. In the 2014/15 fiscal year, the Ministry had more than 270 full-time employees and spent \$41 million.

Our audit highlighted that the Ministry has not been effective in encouraging timely mineral

development in the province. A 2014 edition of a Fraser Institute annual survey of mining and exploration companies ranked Ontario ninth among Canada's provinces and territories in investment attractiveness in mineral exploration, even though it has one of the lowest mining tax rates in the country. As of September 2015, Ontario's effective tax rate was only 5.6%, considerably lower than the national average of 8.6%. However, the amount of mining taxes and royalties collected from mining companies over the last 20 years has averaged less than 2% of the value of minerals extracted. Ontario has collected very little in royalties from its only diamond mine. We also noted that the Ministry lacks adequate processes to manage mine closure plans and the rehabilitation of abandoned mines.

In 2010, the government established the Ring of Fire Secretariat to work and consult with Aboriginal Peoples, northern Ontarians and the mining community to encourage the sustainable development of the Ring of Fire. The Secretariat has 19 full-time staff in Sudbury, Thunder Bay and Toronto. Since it was established, the Secretariat has incurred over \$13.2 million in operating expenses.

The Ring of Fire, located in the James Bay lowlands, about 500 kilometres northeast of Thunder Bay, is approximately 5,000 square kilometres, with most mineral discoveries to date located in a 20-kilometre-long strip. In 2001, significant deposits of nickel, copper, zinc and platinum were identified. However, it was the discovery of North America's first commercial quantity of chromite in 2008 that attracted more intense interest to the area. Chromite is a mineral used to make ferrochrome, an alloy essential to making stainless steel, which is in demand worldwide. The chromite deposit is estimated to be at least 220 million tonnes, which would make it one of the richest deposits in the world. The chromite and nickel deposits alone in the region are estimated to have a potential value of \$60 billion. The Ring of Fire discovery is one of the province's greatest mining opportunities. However, the area is still not close to being ready for production and the Ministry has no detailed plan or timeline for developing the region.

Our other significant observations included the following:

- The Ministry's marketing strategies may be ineffective, and it is slow to make geosciences information available to the mining industry. Mapping projects expected to be completed by 2014 were behind an average of 19 months. As well, over 1,250 geological assessments dating back to 2013 had not yet been made publicly available online through a searchable database. As a result, this technical information was not easily accessible to potential developers to help them identify opportunities for mineral exploration and development.
- Lack of clarity on duty to consult with Aboriginal communities slows investment.
- The Ministry has not estimated the total cost of rehabilitating the 4,400 abandoned mine sites in Ontario since 1993 and therefore does not know the current cost for doing so. As well, it does not have a long-term plan for rehabilitating these abandoned mine sites. The Ministry recently determined rehabilitation costs for the 56 highest-risk contaminated sites alone to be \$372 million. However, it has no plans to carry out a detailed cost estimate for the remaining sites where potential rehabilitation costs could range from \$163 million to \$782 million.
- The Ministry conducts minimal inspection and follow-ups on abandoned mines, and has inspected only 6% (248) of abandoned mines to ensure that they do not pose a risk to public health and the environment. Of 362 mines that are considered high-risk, only 142 have been inspected.
- The remoteness of the Ring of Fire requires significant infrastructure investment to open access to it and to encourage development in the region. In 2014, the provincial government committed \$1 billion to infrastructure in the region, contingent on matching funds from the federal government. However, the federal government did not commit to match

the funds due to the lack of detailed plans for development. The province's commitment alone will not be enough to meet the region's infrastructure needs.

- No minerals have been extracted yet from the Ring of Fire. In 2013, an international mining company that held the rights to develop the chromite deposits pulled out and sold most of those rights to a Canadian junior mining company. The Canadian company has no current plans to develop the chromite holdings. Other potential investors cannot mine most of the chromite in the region unless the Canadian company agrees to sell its rights.

In our report, we recommend that the Ministry evaluate its current investment-marketing activities and determine if new, more appropriate strategies should be implemented; ensure that requirements surrounding its Aboriginal consultation process are clarified and can easily be understood by potential investors; establish a detailed plan for the development of the Ring of Fire with measurable outcomes, and regularly assess and report on progress in achieving them; inspect all high-risk abandoned mines that have not been inspected in the last five years to determine if these sites pose risks to public safety; and review and update where necessary the province's mining fees, taxes and royalty regimes to ensure that Ontarians receive a fair share of the province's mineral resources.

This report contains 13 recommendations, consisting of 28 actions, to address our audit findings.

3.12 Social Assistance Management System

Approximately 900,000 Ontarians in need receive social assistance because they are unemployed and/or have disabilities. Social assistance provides financial aid, health benefits, access to basic education, and job counselling and training to some of the most vulnerable people in society, with an objective of helping them become as self-sufficient as possible.

Intending to help improve and modernize the administration and delivery of social assistance, the Ministry of Community and Social Services (Ministry) decided to replace its old information technology system. In 2009, Curam Case Management System (now IBM) won the competition and the government approved a project budget of \$202.3 million. An initial deadline of November 2013 was set for the launch of SAMS.

Data issues, defects and delays derailed the well-intentioned efforts of the Ministry to modernize social-assistance delivery with a new high-performing information-management system. The launch date was changed several times because of delays and issues that arose. The Ministry finally launched SAMS in November 2014, a year later than planned and about \$40 million over budget. At its launch, SAMS had a number of serious defects that caused numerous errors.

In March 2015, at an additional expense, the Ministry hired consultants to conduct a review of SAMS to then put in place an integrated transition and business recovery plan. The Ministry also committed to working with municipal delivery partners on the ongoing improvement of SAMS. As the Ministry does not anticipate SAMS will become fully stable until spring 2016, the final cost of SAMS will remain unknown until that time.

About 11,000 ministry and municipal personnel have to rely on SAMS to help them determine an applicant's eligibility for social assistance; calculate and distribute about \$6.6 billion in annual benefit payments; generate letters to inform people about their eligibility or changes to their benefits; and generate reports with information that the Ministry and municipalities need to manage social assistance programs.

So far, the consequences of launching a defective system include the fact that SAMS has generated about \$140 million in benefit calculation errors—\$89 million in potential overpayments and \$51 million in potential underpayments. As well, SAMS has generated many letters and tax slips containing incorrect information. Some of these errors

may never be resolved. At the time of our audit, SAMS was still not functioning properly requiring caseworkers to use time-consuming workarounds to deal with problems.

Our other significant concerns included the following:

- Prior to launch, SAMS was not fully tested, and those tests that were done yielded results that were poor. SAMS was also not piloted with data converted from the previous system because of delays. At launch there were about 114,000 errors in client data that caused SAMS to generate incorrect results for client eligibility and benefit payments.
- Only some of the government-mandated payment testing was conducted, and many serious payment-related defects were found after launch. According to the Office of the Provincial Controller, SAMS is the only computer system ever connected to the government's accounting system without passing the government-mandated payment testing.
- The Executive Committee overseeing the development of SAMS assumed significant risk when it decided to launch the system because it knew that SAMS did not meet the launch criteria developed by the Ministry. The Ministry launched anyway because it considered the risks of delaying to be greater than the risks of launching a system that was not fully ready.
- While the Executive Committee knowingly assumed some risks by launching SAMS, it was not made aware of key information, including that there were more serious defects than reported, and that some crucial tests had produced results poorer than reported.
- In the six months before launch, the testing team began reporting to the business project director instead of the technical project director, as it had been doing. However, the business project director had no IT background, nor the required technical expertise.
- Ontario's Internal Audit Division proposed an audit of SAMS' readiness four months before launch. However, Internal Audit and SAMS' project leads could not agree on the scope of the audit and it was not performed.
- The Ministry did not properly oversee the external consultants; instead consultants oversaw other consultants through most of SAMS' development. The vagueness in consultants' time reporting, and the lack of independent oversight during much of the project, made it difficult to assess how efficiently consultants were working.
- Training provided by the Ministry to caseworkers prior to launch, on how to use SAMS, was inadequate.
- As of July 31, 2015, there were still 771 serious defects in SAMS that had been identified but not fixed. Our audit found that Ministry resources were not sufficiently dedicated to fixing defects. Also, there are likely additional defects that have not been identified because the Ministry had a backlog of complaints and problems that caseworkers had reported.
- Until defects are dealt with, problems will persist. SAMS will remain difficult to use, continue to generate incorrect eligibility determinations and benefit payments, and continue to generate inaccurate reports that the Ministry and municipalities need to properly manage Ontario Works and the Ontario Disability Support Program. In addition, caseworkers will continue to have to use time-consuming "workarounds" to deal with these problems, taking away time from providing the full range of case-management services to clients.

In our report, we recommended that the Ministry review the backlog of information related to potential defects so that defects can be prioritized for fixing; reconcile all benefit payment errors generated by SAMS to the eligible amounts clients should have received; ensure that consultants' work is assessed for efficiency and effectiveness; establish

a knowledge transfer strategy for ministry staff; and ensure that SAMS undergoes and passes all government-mandated payment testing.

This report contains five recommendations, consisting of 12 actions, to address our audit findings.

3.13 Student Transportation

In the 2013/14 school year, over 830,000 Ontario students were transported daily to and from publicly funded schools on approximately 19,000 school vehicles. More than 70% of the children transported were in kindergarten or elementary school.

The *Education Act* does not explicitly require school boards to provide transportation services, but every board provides some level of transportation services to students. Transportation grants for the 2014/15 school year were estimated to be \$880 million. Almost all student transportation in Ontario is provided through contracts with school bus operators.

Five parties are involved in student transportation:

1. The Ministry of Education provides funding to the 72 school boards and conducts an annual survey of the boards. The Ministry gives the boards authority for overall decisions, including policies and eligibility criteria.
2. Thirty-three transportation consortia formed by the school boards plan transportation services and contract with school bus operators, manage their contracts and monitor performance.
3. School boards oversee the consortia and provide them with key information about their schools and students. The boards determine which groups of students they transport and spend their funding on (based largely on the distance between home and school).
4. School bus operators are contracted by consortia to transport students. They are required to ensure their vehicles and drivers meet legislated safety requirements, and to comply with

contract provisions such as safety training for drivers and students, and background checks for drivers.

5. The Ministry of Transportation (MTO) enforces federal and provincial laws and regulations for the design and mechanical condition of vehicles, licensing of drivers and safe operation of vehicles.

School vehicles are generally considered a safe mode of transportation based on the number of collisions in relation to the number of passengers transported and kilometres travelled. MTO reported that over the last five years, school vehicles have been involved in 5,600 collisions that have resulted in property damage, personal injuries and fatalities.

Overall, in Ontario, the risk of personal injury from collisions involving school vehicles is lower than for other types of vehicles, and the risk of fatalities is similar to that for all other types of vehicles. However, in 2013, the latest year for which information is available, Ontario's school vehicles were involved in more collisions proportionately than automobiles and trucks, but fewer than other types of buses, based on total number of vehicles by type. Police determined that the school bus driver was at fault in 40% of cases.

Nevertheless, the potential of risk to students being transported makes it important that the Ministry of Education, school boards and transportation consortia, and MTO continue to consider and minimize risk factors in three key areas that impact the safe transport of students: bus driver competence, vehicle condition and student behaviour.

Based on our audit, we concluded that a better oversight of bus operators and their drivers, better processes for ensuring the safe operation of school vehicles, better training for students in bus safety, and better tracking and analysis of collisions and incidents may even further reduce risks to students.

Our specific observations regarding the safe transport of students include the following:

- Better oversight and monitoring are needed by the consortia to ensure school bus driver competence.
- The Ministry of Education has not set guidelines for the reporting of school vehicle collisions and incidents. Only limited information is being tracked by consortia on incidents impacting students, such as late buses and mechanical breakdowns of vehicles, that could be used to identify the causes and develop strategies to prevent them. With the limited information available to us during our audit, we noted a 67% increase in such incidents between 2012/13 and 2013/14 from almost 35,000 incidents to nearly 58,000 incidents.
- Improvements are needed by consortia and MTO in ensuring school vehicles are in good condition. For example, MTO inspections did not target those vehicles most at risk for safety violations, were not always done on time, and did not always ensure that defects were fixed.
- There is little oversight of school bus operators, who are allowed to certify their own buses for mechanical fitness.
- The Ministry of Education has not mandated bus safety training for students. Only 16 of the 33 consortia had mandatory general school bus safety training.

Ontario has no provincial standard for busing. We found that busing is not available on an equal basis to students across the province or even in schools within the same board. We also saw differences in how consortia operated and managed busing services. The degree to which school boards are willing to integrate these services is also a factor.

Our specific observations in the area of efficient transportation of students include the following:

- Funding for school transportation is not based on need, but instead on each board's 1997 spending level, with annual adjustments. The Ministry of Education's funding formula does not take into account local factors that significantly influence transportation costs.

- The Ministry of Education has not determined if the wide variances among boards in the cost of transporting students are justified.
- Reliable bus utilization data is not available. Consortia we visited did not typically track the number of riders. As well, each set its own capacity for a bus and used different methods to calculate the utilization rate.
- Consortia are contracting for more bus services than they need.

In our report we recommended that the Ministry of Education clarify the roles and responsibilities of school boards and consortia; set standards on eligibility for transportation services; revisit its current funding formula; and set standards for the utilization of school vehicles.

We also recommended that the transportation consortia, among other things, develop and conduct consistent and effective oversight processes for school bus operators; and track data on driver turnover and accidents and incidents to determine whether there is a link between bus driver turnover and safety risks.

In addition, we recommended that MTO update and maintain complete and accurate information on the location of operators' terminals and school vehicles at each terminal; and focus inspections on school buses considered to be high risk and those not inspected recently.

This report contains 15 recommendations, consisting of 31 actions, to address our audit findings.

3.14 University Intellectual Property

Our audit focused on whether the Ministry of Research and Innovation had co-ordinated and put effective processes in place to provide research funding to universities, monitor the use of research funding, and assess the benefits to Ontarians. This audit also looked at how select universities manage intellectual property generated from university research, including identifying, protecting, assessing and commercializing intellectual property.

Ministry of Research and Innovation

The province provides research grants to post-secondary institutions, research hospitals and not-for profit research institutions. Under Ontario's Innovation Agenda of 2008, the Ministry of Research and Innovation (Ministry) is responsible for extracting "more value from all provincial investments in research and innovation." The Ministry's commercialization programs are intended to provide services such as access to capital, business acceleration services, mentoring, training and networking to companies, entrepreneurs and researchers. The Ministry provides funding to a network of organizations, including the Ontario Centres of Excellence, MaRS, regional innovation centres and sector innovation centres, which in turn fund and/or provide these services.

We estimated that in the last five years, the province has provided at least \$1.9 billion for university research, excluding funding for service delivery agents (such as MaRS and regional innovation centres) and tax incentives for private companies.

Our audit noted that the Ministry does not coordinate or track all of the province's investments in research and innovation, and has not measured the value created from these investments. As a result, it is difficult for the government to determine whether it is getting value for money from its significant investment in university research.

Some of our significant observations relating to the Ministry include the following:

- The Ministry needs to develop an implementation plan to monitor whether it is getting value for money from its investments in research and innovation in accordance with the strategic direction outlined in its 2008 Innovation Agenda.
- The Ministry has a comprehensive selection process for awarding university grants, and is generally following its guidelines for awarding these grants, but does not confirm that research outcomes align with those identified in grant proposals.

- In order to address barriers to commercialization, the Ministry needs to develop a strategy and action plans with timelines to monitor progress.
- The provincial government has virtually no rights to intellectual property resulting from the research it funds. Unlike Ontario, we noted that U.S. federal government agencies can use intellectual property made with government funding royalty-free for its own non-commercial purposes.

Universities

Inventions and scientific discoveries made at universities could spur economic growth and enhance Ontarians' quality of life if they are commercialized. This requires universities to protect their rights to the intellectual property in their discoveries, and to bring their discoveries to market for the benefit of Ontarians.

Each university in Ontario has a vice-president of research responsible for managing and co-ordinating the university's research and commercialization activities. University technology transfer offices share their expertise and industry connections with inventors, in exchange for which inventors may agree to give up some or all of their intellectual property rights, in accordance with the universities' policies.

We further found that technology transfer offices we visited had experience with assessing the commercialization potential of inventions, but could make some improvements. Specifically:

- While universities do track key commercialization indicators and results of their technology transfer offices, they do not yet measure the socio-economic impact of their research activities and commercialization efforts. It may be time to take on this challenge to further confirm value for money is being achieved.

- Universities may not always be taking out patent protection in time to prevent others from obtaining patents on their inventions.
- None of the technology transfer offices we visited highlighted revenue generation as a driving force.
- None of the technology transfer offices we visited had formal guidelines or policies on managing costs associated with commercialization. In a number of cases there were delays in collecting revenues from intellectual property revenue-generating agreements.
- From our review of files in technology transfer offices, documentation was not available to confirm that formal processes were used to assess the feasibility of commercialization and track decisions/actions being taken.

In our report, we recommended that the Ministry establish processes to track and monitor the total direct and indirect provincial funding for research and innovation, and the new technologies and inventions resulting from the funding; develop a strategy and action plan on addressing barriers to commercialization and monitor its progress; collaborate with stakeholders to collectively develop useful performance measures that assess the socio-

economic benefits to Ontarians; and revisit and assess the pros and cons of including provisions in selective research funding agreements that would allow the province to share in future income and/or have the non-exclusive right to use intellectual property royalty-free for non-commercial internal purposes.

We also recommended that universities review their performance measures and identify opportunities to report more detailed information in their annual research reports and in reports going to senior management; develop guidelines to help faculties assess whether university resources were used in the creation of intellectual property; formally track and review how long it takes to complete assessments on whether or not to commercialize disclosures and address any delays; file for patent protection as earlier as possible; develop case management documentation guidelines and ensure commercialization decisions and actions are clearly and consistently documented; implement policies and guidelines regarding cost management and track costs incurred by type for each disclosure; and improve revenue collection efforts.

This report contains 15 recommendations, consisting of 27 actions, to address our audit findings.