ONTARIO ENERGY ASSOCIATION

SUBMISSION TO THE ONTARIO JOBS AND RECOVERY COMMITTEE

June 12, 2020

To shape our energy future for a stronger Ontario.

Ontario Energy Association

ABOUT

The Ontario Energy Association (OEA) is the credible and trusted voice of the energy sector. We earn our reputation by being an integral and influential part of energy policy development and decision making in Ontario. We represent Ontario's energy leaders that span the full diversity of the energy industry.

OEA takes a grassroots approach to policy development by combining thorough evidence based research with executive interviews and member polling. This unique approach ensures our policies are not only grounded in rigorous research, but represent the views of the majority of our members. This sound policy foundation allows us to advocate directly with government decision makers to tackle issues of strategic importance to our members.

Together, we are working to build a stronger energy future for Ontario.

The recommendations contained in OEA papers represent the advice of the OEA as an organization. They are not meant to represent the positions or opinions of individual OEA members, OEA Board members, or their organizations. The OEA has a broad range of members, and there may not always be a 100 percent consensus on all positions and recommendations. Accordingly, the positions and opinions of individual members and their organizations may not be reflected in this report.

TABLE OF CONTENTS

INTRODUCTION

On April 9, 2020 the Ontario government launched the Ontario Jobs and Recovery Committee (the Committee) to develop "a plan to stimulate economic growth and job-creation" once the COVID-19 pandemic is contained.

The Ontario Energy Association (OEA) applauds the creation of the Committee and believes it will play a critical role in helping restore the province's prosperity and economic competitiveness after the pandemic is over. Our members look forward to assisting and collaborating with the Committee as it develops an action plan to move Ontario forward.

The OEA believes the Committee should use a framework that reflects the principles of transparency, accountability, integration, and partnership with industry and other levels of government. Further, the Committee should seek cost-effective stimulus options that avoid duplication and customer confusion as much as possible through leveraging existing infrastructure and programs, as well as existing delivery agents.

Our submissions will focus how the energy sector can help Ontario move forward. In these unprecedented times, it is clear the energy sector must play an important role in economic recovery in the sustainment of jobs, but also, more critically, in helping families and businesses manage their energy costs during times of significant financial hardship, as well as improving by reducing the energy intensity of Ontario's businesses to facilitate commercial and industrial recovery and capital attraction.

SUBMISSIONS

The Role of the Energy Sector in Recovery

The energy sector is the foundation of all vital infrastructure for Ontario and across the globe. The US Cybersecurity and Infrastructure Security Agency (CISA) states that:

> "…energy infrastructure fuels the economy of the 21st century. Without a stable energy supply, health and welfare are threatened, and the U.S. economy cannot function. Presidential Policy Directive 21 identifies the Energy Sector as uniquely critical because it provides an "enabling function" across all critical infrastructure sectors […] supplying fuels to the transportation industry, electricity to households and businesses, and other sources of energy that are integral to growth and production across the nation."[1]

The G20 Energy Ministers recently released a statement regarding the pandemic, noting:

> "We agree that ensuring energy market stability and ensuring affordable and secure energy are key in addressing the health, well-being and resilience of all countries throughout the crisis response and recovery phases.
>
> Building on our Leaders' commitment at their Summit on March 26, "to use all available policy tools to…maintain market stability," we commit to ensure that the

[1] https://www.cisa.gov/energy-sector

energy sector continues to make a full, effective contribution to overcoming COVID-19 and powering the subsequent global recovery.[2]

The International Energy Agency (IEA) has stated "The novel coronavirus (COVID-19) pandemic has created an unprecedented global health and economic crisis. The energy sector, as a key enabler of modern life, is uniquely affected by this crisis but is also critical for global and national response and recovery efforts."[3]

Therefore, there is no debate about the key role of the energy sector, as a fundamental input, in assisting Ontario's (and Canada's) people, businesses and government restore the economy. The energy sector is ready to help (1) business customers facing financial hardship keep their business viable and manage energy costs; (2) residential customers, especially vulnerable customers, manage energy costs; (3) leverage the energy sector to retain and create new jobs and capital investment opportunities; and (4) support the Committee with data and analysis on options it is considering or pursuing.

Prices and Costs

Rate Structures and Billing

The OEA supports the government's policy to introduce customer choice with respect to electricity commodity pricing in the fall of 2020 and will participate in the Ontario Energy Board's (OEB) consultation to enable customer choice.[4] However, Ontario's current regulatory system does not give local distribution companies (LDCs) the flexibility to offer choice in distribution rate structure (i.e., fixed vs. volumetric vs. demand charges) to customers based on customer engagement, behaviour, and ability to pay. This regulatory restriction should be reviewed to allow LDCs to offer more choice to customers to lead to greater customer satisfaction.

Additionally, there are many electricity ratepayer households that rely on printed and mailed bills. In 2015, when the OEB mandated that all utilities move to monthly billing (a number were on bi-monthly billing), this doubled billing costs for many LDCs due to the increased printing, handling and mailing costs. These costs are borne by all ratepayers, even if they have signed up for e-billing. The OEA recommends that the provincial government work with LDCs and the OEB to develop a province-wide e-billing strategy that allows LDCs to incentivize much greater e-billing adoption and lower costs for all customers.

Connection Costs

Currently, the OEB's Distribution System Code (DSC) and Transmission System code (TSC) prescribe that a customer pays up front for their connection costs. The OEA recommends that LDCs and transmitters be given the option and flexibility to offer customers alternative connection cost payment choices. For example, this could be done through the

[2] https://www.canada.ca/en/natural-resources-canada/news/2020/04/g20-energy-ministers-statement.html
[3] https://www.iea.org/topics/covid-19
[4] https://news.ontario.ca/opo/en/2020/6/ontario-supports-those-struggling-with-electricity-bills-during-covid-19.html

application of a time bound fixed rate surcharge applicable to only the customer being connected until such time as the equivalent value is recovered with the proviso that utilities can be assured of cost recovery. Removing this prescriptive regulatory requirement would help boost economic activity in Ontario and also increase load, which has the benefit of lowering costs for other customers.

Pricing Policies

The OEA is currently exploring and discussing options for Ontario to maintain and grow demand to help lower electricity system costs. This analysis is necessary because Ontario's current electricity system is largely characterized by costs that are fixed in the short- and medium-term. As a result, when assessing electricity bills and rates in Ontario, attention should be paid to economic growth and associated policies. Economic growth (and recovery) and its associated increase in electricity consumption and demand can help lower rates under specific circumstances. The OEA will keep the Committee informed regarding this research.

Beneficial Electrification (BE)

The IEA specifically notes that "technology replacement programmes can support the manufacturing and rollout of newer technologies such as heat pumps, digital building management systems and electric vehicles. Fleet upgrade programmes focussed on buses, trains, vans or taxis could also drive economic stimulus and energy efficiency."[5] It also notes that "Large-scale infrastructure projects [such as electric vehicle charging] can generate a high number of jobs that leverage both public procurement and local value chains."[6]

Therefore, leveraging Ontario's excess supply of non-emitting electrical energy provides an excellent opportunity to assist in economic recovery and reduced emissions through technology replacement and infrastructure projects by fuel switching from higher emitting fossil fuel powered vehicles and equipment to electrically driven alternatives.

The key factor to making electrification 'beneficial' for Ontario is to avoid an increase in peak demand (MW) and thus increases to system costs. With no/low impact on system costs, adding new off-peak load (MWh) can reduce average system cost ($/unit of energy) and better leverage existing intermittent capacity (wind and solar).

Technologies like Electric Passenger Vehicles can lend themselves well to this model. If well planned, significant load can be added to the system with limited impact on generation, transmission, and distribution systems, while the customer can benefit from offset transport fuel cost savings in the region of $1,000 / year. To ensure customers benefit from EVs as a BE measure, LDCs need to have a role with customers and access to data to be able to do this effectively. They can play a key role in building out a province-wide charging network. Building electrical networks is their core competency, and LDCs have a duty to connect customers to the grid. They can ensure that customers are not left behind because they live in areas less attractive to private capital. Finally, LDCs can create rate structure options could be considered to ensure system benefits are maximized and customers are incentivized with an appreciation of system cost impacts.

[5] Ibid.
[6] Ibid.

Beyond traditional EVs there are a number of other BE opportunities where electric options compete with more expensive and maintenance-heavy diesel/propane equivalents, offering significant potential to achieve both economic stimulus and cost-effective GHG savings by increasing electric uptake. These include transit electrification (bus fleets and passenger trains). There are also non-road equipment categories, including forklifts, golf carts, pushback tractors, tow tractors, belt loaders, airport ground power units, transport refrigeration units (TRUs), truck stop electrification (TSE), electrification of mining equipment, port cranes, and agricultural equipment.

Much of this additional load could be met through off-peak charging. Some of the electrification measures, such as transit during peak hours, must be assessed and planned for more than others to ensure that the electrification is beneficial and does not add to system cost.

Over 50 municipalities and towns in Ontario are at various stages of setting or fulfilling emission reduction targets. The Province can enact regulatory amendments (such as changes to section 71 of the OEB Act and to OEB instruments such as the Affiliate Relationships Code) to allow electric utilities to promote and engage in electrification activities. This would open up synergistic opportunities for utilities and private sector participants to empower customers interested in making the switch to cleaner energy sources. This serves objectives of reducing emissions, using electricity surplus to avoid waste, and reducing total cost of ownership for customers switching from maintenance-heavy, fossil fuel equipment.

Natural Gas Fuel Switching

There are two potential measures that can provide economic stimulus (via technology replacement and/or large scale infrastructure) and emission reductions from natural gas fuel switching through the deployment of new technologies (e.g., CHP) and compressed natural gas (CNG) as a fuel alternative to transportation fuel.

Combined Heat & Power (CHP)

CHP is a form of distributed generation that allows customers to generate their own electricity and steam from a combined process. Through this combination, CHP units are more efficient than technology focused on electricity generation alone or from dedicated boilers on-site to generate thermal energy. CHP is a proven technology, widely used to improve the affordability of energy costs and the resilience of electricity supply during grid power outages, typically installed by large customers like industry or hospitals. Until July 2018 'behind-the-meter' gas-fired CHP projects were eligible for incentives through Ontario's CDM programs – but were excluded to 'align the (previous) government's climate change policies'.

Critical to capturing this opportunity will be regulatory enablement, both in terms of enabling a quantified valuation of CHP opportunities at both the specific location at the distribution system and transmission system-level, and in terms of facilitating the grid-connection approvals required for these distributed generation projects.

Transportation Fuel Switching

Despite the momentum of passenger vehicle electrification, not all vehicles are readily electrifiable; for these, natural gas can be a lower emitting cost effective option. For long haul heavy trucking (Class 8), refuse trucks, and transit buses, there are proven technologies available to switch from gasoline and diesel fuels to compressed natural gas (CNG), renewable natural gas (RNG), and liquified natural gas (LNG). Natural gas is a lower-emitting and lower-cost fuel alternative, offering an affordable pathway to emission reductions from this major source of GHGs.

Natural Resources Canada (NRCan) has been supporting deployment of natural gas refueling stations as part of its alternative transportation fuel strategy. By leveraging the NRCan support for alternative fueling stations, over the past few years Ontario has constructed a reliable and convenient CNG fueling network along the major trucking corridors - connecting the province from East to West with stations in Napanee, Mississauga, London, and Windsor. Trucks travelling south along the 403 highway corridor also have a fueling hub conveniently available at the Fort Erie border crossing.

More can be done to further transform the heavy-duty trucking (Class 8) and transit (buses) sectors using proven and available CNG technology.

Red Tape Reductions

Update OEB's Leave-to-Construct Thresholds

Currently, the legislative (Sections 90 (gas) and 92 (electricity) of the OEB Act) and regulatory (Section 6.2 of Ontario Regulation 161/99 (electricity) and Section 3 of Ontario Regulation 328/03 (gas)) thresholds for having a leave-to-construct (LTC) proceeding are based on factors such as projected cost ($2 million), length of transmission line (20 km for gas; 2 km for electricity), pipe size (12") and pressure (operating at over 2,000 kPa).

The current LTC thresholds are approximately 25 years old and have not kept pace with inflation or the complexities of modern infrastructure projects. The OEA recommends an increase of the thresholds to, for example for a gas pipeline, $10 million in cost, line length to 50km, and the pipe size requirement to 16" to reduce the number of regulatory applications required, reducing the regulatory burden on the utilities to construct lines, ratepayers and the OEB. By way of comparison, in B.C., FortisBC (electricity) and FortisBC Energy (natural gas) have thresholds of $15 million and $20 million, respectively.

This could be bolstered by delineating higher thresholds only for "proven operators" with an established track record of safe delivery (e.g., $5 million threshold for operators with $100-$500 million in annual distribution revenues and $10 million threshold for operators with annual distribution revenues above $500 million). These could also be automatically subject to periodic reviews of threshold levels (e.g., every 3-5 years), which could help counteract inflationary pressures over time. The OEB would maintain oversight on all capital projects but smaller projects would be managed on a post construction basis rather than having a public proceeding.

Supporting Ontario's renewable natural gas (RNG) market

Currently an Environmental Compliance Approval (ECA) is required for Ontario-based facilities that upgrade biogas (e.g., from municipal waste) into RNG, including a professional engineer (P.Eng.) certification followed by the MECP ECA review which duplicates the P.Eng. work. The MECP review process can take up to one year even for low-risk, small-scale sites and facility construction is stalled pending the review. Biogas upgrading could be recognized as a low-risk activity. The Environmental Activity and Sector Registry (EASR) process requires P. Eng. certification and offers proponents faster approval timelines. MECP can define "low risk" projects (e.g., by source, size) and requirements for EASR registration. By adopting EASR for small-scale, low-risk biogas facilities we can support investments in the development of Made in Ontario RNG sourced from organic waste.

Removing Barriers for Natural Gas Refueling Stations

Currently the TSSA Ontario Operating Engineers Regulation (O. Reg 291/01) requires an onsite operator at compressed natural gas (CNG) refueling stations, which adds a financial barrier for adoption in Ontario. The regulation requires on-site engineers but does not consider other options like proven safety and technology measures such as sensors, system overrides, and remote monitoring. Ontario is one of the last North American jurisdictions with this requirement. We note that the TSSA can separately maintain oversight on station maintenance programs, including through regular visits and evaluations. CNG can deliver 20 percent less GHG emissions and is up to 40 percent less expensive than diesel, and reducing barriers aligns with a key commitment in the Made-in-Ontario Environment Plan. We recommend *adopting* amendments to O. Reg 291/01 that would give CNG station owners flexibility to employ station-specific safety measures, while remaining under TSSA oversight.

Energy Efficiency

The Role of Energy Efficiency in Economic Stimulus

Energy efficiency measures can facilitate economic recovery in many ways and can be delivered quickly. Energy efficiency measures improve energy intensity of businesses, reduce operating costs and make Ontario more competitive as a destination for capital investment. This is the because energy intensity and sustainability metrics influence capital investment decisions. For example, for multi-nationals deciding where to site operations, energy intensity (energy per unit of output) and supportive government programs are key considerations.

Further, energy efficiency measures can provide bill relief to residential electricity consumers who have seen their energy burden increase during the pandemic. The IESO has noted that average residential consumption increased by up to 14%.[7]

[7] http://ieso.ca/en/Sector-Participants/IESO-News/2020/04/COVID-19-impacts-on-Ontarios-electricity-system

In Ontario, conservation created an estimated $1.8 billion/year in GDP and about 16,000 jobs annually during the 2011-2017 period.[8] Delivering conservation programs creates and sustains a supplier network of predominantly small and medium size contractors and suppliers that are most impacted by the economic fall out of the pandemic. These local businesses provide the expertise needed to support businesses and industry to manage and reduce their utility costs, which will be an important consideration as the Ontario economy recovers from this economic shock. These workers and equipment suppliers are predominately within the region or province.

Importantly, the IEA recently published an article addressing the role of energy efficiency and economic stimulus in relation to the COVID-19 pandemic, noting that "well-designed economic recovery programmes can use the potential of energy efficiency to support the existing jobs, create new ones and boost economic activity in key labour-intensive sectors such as construction and manufacturing."[9] The IEA notes specifically three categories for energy efficiency to focus on: "Stimulus policies targeting the buildings and construction sector often have the greatest macroeconomic impacts," as well as technology replacement, and large infrastructure projects (e.g., transportation fuel-switching).[10]

Legacy Conservation First Framework Projects

Fortunately, Ontario already has policies in place that align with the categories recommended by the IEA. For example, there are a number of legacy Conservation First Framework (CFF) projects (e.g., Process and Systems Upgrades, Retrofit Projects, and High Performance New Construction projects), underway. However, these projects have an IESO set deadline of December 31, 2020 in order to be eligible for funding. Many customers are very concerned that they cannot complete their projects due to their facilities being completely shut down, and/or the unavailability of resources (human and otherwise), because of the COVID-19 pandemic.

As a result, there are hundreds of millions of dollars of CFF incentives at risk for these customers if they cannot complete their projects and have them in-service by the end of this year. These businesses undertook these energy efficiency projects based on receiving these funds, which if not recieved will be a financial burden on the participants that will hinder the ability of their business to recover after the pandemic.

Therefore, the OEA recommends that the IESO's existing deadline of December 31, 2020 for certain legacy CFF projects be extended to June 30, 2021 (and revisited on a case-by-case basis, if necessary, depending on the duration of the pandemic).

Interim Framework

Further, in 2020, the government directed the Independent Electricity System Operator (IESO) to centrally deliver energy-efficiency programs in the province by implementing a new Interim Framework to take effect from April 1, 2019 to December 31, 2020, with in-service required by December 31, 2021. This interim conservation and demand

[8] Calculated using data from Dunsky (2018): http://cleanenergycanada.org/wp-content/uploads/2018/04/TechnicalReport_EnergyEfficiency_20180403_FINAL.pdf
[9] https://www.iea.org/articles/energy-efficiency-and-economic-stimulus
[10] Ibid.

management (CDM) framework consists of a suite of programs to serve business and low-income customers, as well as Indigenous communities. The plan allocates the Interim Framework budget of $353 million (including $27 million for LDC local program funding) over the suite of programs to create a cost-effective portfolio that is expected to achieve 1.4 TWh of electricity savings, and 189 MW of demand savings at a Levelized Unit Energy Cost (LUEC) of two cents per kWh and reducing costs up to $442 million.

However, similar to legacy CFF projects, due to the COVID-19 crisis, many programs and projects have paused and are not proceeding. Therefore, to (1) ensure business customers facing financial hardship in keeping their businesses viable and trying to manage energy costs and using energy efficiency as a means of staying in business; (2) provide lower energy bills to low-income customers, as well as Indigenous communities; and (3) maintain continuity in employment to suppliers and contractors as well as program delivery to participating businesses, the OEA recommends that the existing Interim Framework intake period (including LDC local programs) be extended to December 31, 2021, with the in-service deadline extended to December 31, 2022.

Natural Gas Conservation

The Government of Ontario's Made-in-Ontario Environment Plan states the government will work with the OEB and natural gas utilities to increase the cost-effective conservation of natural gas to simultaneously reduce emissions and lower energy bills.[11] To ensure continuity of DSM programming beyond 2020, it would be extremely beneficial for the OEB to make a timely decision on Enbridge's 2021 DSM Plan and on issuing the next generation DSM Framework. Currently, there is no approved gas utility budget or conservation plan for beyond 2020, which may jeopardize conservation projects that consumers wish to undertake in the future.

"Shovel-ready" Projects

The OEA membership has prepared a list (see Appendix A) of "shovel ready" or "near shovel ready" ideas that will assist Ontario with economic recovery from the COVID-19 crisis. The OEA believes that many of these projects can and should be coordinated with funding from the Federal Government.

These ideas and opportunities are illustrative of programs that, in the assessment of our members, may be deployed expeditiously at scale, while also yielding economic benefits, carbon reductions and energy savings during this COVID-19 period.

As we have noted, our members look forward to assisting and collaborating with the Committee as it develops an action plan to move Ontario forward and are prepared to provide policy making resources and time to develop a robust, coordinated and thoughtful economic recovery plan for Ontario.

[11] https://prod-environmental-registry.s3.amazonaws.com/2018-11/EnvironmentPlan.pdf

Appendix A: Specific Ideas to Support Economic Recovery

Natural Gas Expansion Projects

What: Natural gas expansion support programs will greatly increase jobs, lower home and business heating bills while allowing the areas to grow into the projects. Residential customers that switch from propane, electric heat or oil to natural gas would be able to save on average up to $2,200 a year while small and large businesses can save up to 30 percent on space and water heating per year. A great success story from the first phase for community expansion is the Chatham-Kent Rural Pipeline Expansion Project, which is now in service and is estimated to support 1,400 jobs in the region's fast-growing greenhouse industry. The provincial government should continue with Phase 2 and expand investments in natural gas projects that will help to bring these economic benefits to more communities throughout Ontario.

Why: Community Expansion allows businesses and Ontarians the ability to lower the home & business heating bills while also creating jobs and positive economic spin offs to the communities selected for these projects.

How: Incremental funding focused on expanding the natural gas support program will bring the previously mentioned benefits to more communities during a time when it is needed most.

Cost: While phase 2 of community expansion has a budget of approximately $130 million in ratepayer funded financial support to be made available for new projects that can reasonably be expected to commence construction between 2021 and 2023, incremental funding would support the connection of many more communities and/or businesses (e.g. agriculture, commercial, industrial) interested in the program as well as support job creation and Ontario's economic recovery.

Supporting the growth of Ontario's renewable natural gas industry

What: The provincial and federal governments should support the development and expansion of the renewable natural gas (RNG) sector in Ontario. Jurisdictions are increasingly focused on the opportunities afforded by RNG as it can be used to fuel transportation, provide energy needs for homes and businesses and create new revenue streams and jobs for local economies. RNG effectively lowers greenhouse gas emissions and results in a smaller carbon footprint while also being fully compatible with existing natural gas infrastructure, making it easily accessible to residential and commercial customers.

Why: RNG production can be an opportunity for municipal governments, farmers and various industries to turn their organic waste into new revenue streams. Once the current application to the Ontario Energy Board is approved, RNG will provide customers in Ontario an option to blend a portion of RNG into their existing natural gas supply at a lower cost than peak electricity. Industry is also working with several Ontario municipalities to develop a public-private proposal to blend RNG into the compressed natural gas

(CNG) fuel supply for transit. In the U.S., municipalities, refuse, and transport companies have realized RNG-fueled vehicles are the most immediate and cost-effective heavy-duty option when seeking to combat climate change. This puts RNG to its optimal use by displacing dirty and expensive gasoline/diesel. As noted in NGVAmerica's report "Decarbonize Transportation with Renewable Natural Gas", 39% of all on-road fuel used in natural gas vehicles in 2019 was RNG. The pathway to RNG in vehicles is achieved by first replacing gasoline/diesel fueled fleet vehicles with Compressed Natural Gas.

How: Ontario should allow streamlined regulatory approvals for small-scale, low-risk biogas facilities, in order to support investments in the development of Made in Ontario RNG sourced from organic waste. Additionally, Enbridge is working with several municipalities to develop a public-private proposal to blend RNG into the CNG fuel supply of its Municipal CNG Transit Program. This program proposes the replacement of 1,500 buses by using an RNG/CNG fuel blend. We believe that this scalable 'made-in-Ontario' solution can rapidly and cost-effectively create jobs and deliver 30 percent of the Federal mandate of 5,000 zero-emission buses within five years.

Jobs: In aggregate, these projects would create an estimated 350 jobs.

Residential Sector "Retrofit Readiness"

Energy Efficiency Smart Home Program

What: The Energy Efficiency Smart Home Program is an innovative new smart home project, which takes a holistic approach to energy efficiency and aims to reduce electricity and gas consumption, and peak demand in the residential sector while offering affordable payment plans. The solution uses occupancy sensors and routines to better schedule the energy use of homeowners. It includes two-way communicating smart thermostats, smart lights, smart outlets while focusing on ease of use with mobile controls (Android and iOS application), and voice commands (smart speakers). This program can be deployed at a low cost while providing valuable services to the local and provincial electricity infrastructure.

Why: Most smart home products are offered as Do It Yourself options with varying reliability and levels of service. The smart home device market is very fragmented, and the upfront costs of smart home systems create considerable barriers to entry for the average household looking for energy efficiency solutions.

How: This project represents an ideal setup for the wide adoption of smart home technologies. Major smart home industry barriers are addressed through careful product selection, professional installation and one-on-one support, all provided with no money down under affordable monthly payment plans (for a period of 5 years).

Cost: Loan financing only, repaid in full within 5 years.

Jobs: 2000

Increased support for current low-income programs and expand to include moderate income households

What: Expand eligibility to currently available low-income programs to help newly displaced workers or impacted moderate income households. For example, Ontario's Home Assistance Program (HAP) offers free home energy audits and energy efficiency upgrades such as free LED bulbs, energy star appliances, home insulation, smart thermostats. In addition, the Affordable Trust Fund (AFT) Program offers similar upgrades to customers who do not qualify for low-income conservation programs. Increasing the distribution of energy kits to residential customers and/or increase funding for moderate income level families (L2/L3 level engagements) is recommended as more households will need support after we come out of this crisis.

Why: Increases direct support for our most vulnerable citizens and those hit hardest by the pandemic by decreasing their energy burden. In addition, this will create jobs creation for auditors, trades, etc. See above for recommendations on virtual home audits and certified auditor training.

How: Expand existing low-income program offers available by Province; consider joint multi-fuel offer made available to all customers (regardless of fuel type including, gas, electric, oil and propane customers). This reduces the administrative costs, enhances the speed to market and improves the customer experience

Cost: TBD

Jobs: TBD

Increased support for Indigenous Communities

What: Provide a fund based on the LC3 Program structure specific to Indigenous community development organizations to allow for renewable energy (RE) and storage (S) projects to be rapidly constructed and deployed in order to address energy poverty, substandard energy reliability and the many resulting public health challenges.

Follow the precedent of the Anwaatin/Hydro One projects. Mandate indigenous training and leadership and ongoing employment related to the RE and S projects. Similar to low- and moderate-income approach, but specific focus on community engagement, hiring community champions, and tailored measures for both road access and non-road access First Nation Communities.

Why: Indigenous communities are most vulnerable to COVID-19, in part as a result of living conditions and energy poverty. This presents a short-term solution to terrible energy reliability conditions and a long-term sustainable energy solution with employment benefits for the indigenous communities.

How: Leverage the Hydro One/Anwaatin model to facilitate solar and storage to be implemented as an electricity transmission/distribution or diesel alternative. Provide a federal mandate to all energy regulators to facilitate the regulatory conditions for the development and implementation of such systems.

Cost: Current costs of a RE/S project in indigenous communities are approximately $8M per project and are expected to decline steeply with replication.

Jobs: Temporary assessment and construction jobs (TBD) plus long-term indigenous jobs to operate and monitor the RE/S systems (TBD)

New Tax Incentives

What: Create new tax credits to incent investment to beneficial electrification (and other potential energy projects), including energy efficiency.

Why: Tax incentives are key inputs into business cases supporting investments. As such, they can be powerful in stimulating private investment.

How: The Province currently offers tax credits on residential energy costs for Northern Ontario and other Ontarians based on income thresholds. Through regulatory change, the Province could enact a similar credit for businesses to stimulate energy investments that improve their productivity and investment potential as viewed through the new sustainability lens of capital markets.

Commercial & Industrial Retrofit Readiness

Small and Medium Enterprise ("SME") Solutions

Distributed Model Installation of Energy Efficient Products within SMEs

What: The direct installation of incentivized (80%+) energy efficient equipment in SMEs across the country to reduce operating costs, energy use, and GHG emissions.

Why: As of January 2019, 98% of businesses were considered SMEs[12]. Arguably SMEs have been hit hardest by the pandemic-associated recession with limited safety net, and few resources to draw upon, if they re-open their business is likely to be tenuous at best in the coming months. Due to limited resources (human and capital), they are least likely to have installed efficient measures, making them less productive and higher users of energy (natural gas and electric) and associated emissions than their larger counterparts. This program would utilize contractors (many of whom are themselves considered a SME), to install retrofits that would ultimately make the SMEs more productive, lower operating costs, with more operating capital, and a lower carbon footprint.

How: Utilizing distributors across the province and, where circumstances warrant, partnering distributors with third party delivery agents, to mobilize contractors to install products and submit the appropriate administrative filing to track and report on progress.

[12] Key Small Business Statistics – January 2019, from the Government of Canada. 2019. https://www.ic.gc.ca/eic/site/061.nsf/eng/h_03090.html

When: Operational within 2-4 weeks, building upon existing networks of distributors and contractors.

Cost: TBD

Jobs: TBD

Virtual Commissioning (VCx™) Program

What: The Virtual Commissioning (VCx™) Program offered by Power TakeOff targets low to no-cost commissioning based on operational savings, not behavioral for Small and Midsized Enterprises (SMEs). This is a data driven approach to energy efficiency engagement that meets the unique needs of both businesses and public facilities alike with substantial and immediate cash flow from average annual electric savings of 13% or 70,000 kWh. As a result, this program will act as an economic stimulus project that will kick-start the recovery of these small and medium sized businesses as they look for ways to reduce their expenses, increasing their cash flow during this time of need.

Why: Historically, SME customers have been the most difficult to engage. In addition, these SMEs have been the hardest hit with the recent COVID-19 pandemic. The proposed VCx™ Program has overcome these SME obstacles through personalized and targeted messaging by merging data analytics and virtual consulting.

SME classified meters are particularly exceptional candidates for the proposed VCx™ Program because they 1) often lease their facility and thus prefer low to no-cost operational savings to prescriptive equipment investments, 2) do not have a dedicated energy engineer or consultant to assist in energy efficiency representing a gap filled by the VCx™ Program, and 3) the program's personalized approach fits with SMEs stated needs as 42% of SMEs, "…see products and services personalized to their business needs and preferences as their prime satisfaction factor," accordingly to Accenture's New Energy Consumer Research Report.[13]

Public institutions (e.g. schools and government facilities) are also exceptional candidates for the program based on their limited capital funding available for prescriptive measures. As evidence of program fit, 46% of the 8.1 GWh savings achieved through the VCx™ Program for ComEd in 2018 were from public institutions. As a result of closed businesses and lost tax revenue from COVID-19, many schools and municipalities are facing budget cuts. This program will help to lessen budget cut impact from cost.

How: The VCx™ Program design process solves the unique SME challenges of engagement and energy efficiency participation that stem from 1) lack of time, 2) lack of energy or energy efficiency knowledge and thus incentive to login into software, 3) lack of interest in prescriptive due to leasing or capital constraints, 4) uncertainty projected savings will actually occur, and 5) uncertainty of login information and/or access

[13] https://www.accenture.com/gb-en/insights/utilities/serving-small-medium-size-businesses

(particularly for multi-site organizations where Accounts Payable has utility login access, but not facility managers).

This market is also difficult to solve due to the sheer number of SME classified accounts and vast geographic distribution across an entire province that is impossible to comprehensively reach in-person. This program is delivered remotely and does not discriminate based on location (urban or rural).

By removing program enrollment forms, software access, setup costs, and on-site visits, the VCx™ Program design immediately eliminates most of these barriers. Remaining barriers of energy efficiency knowledge and ability to invest in prescriptive recommendations are overcome through the use of Energy Advisors. In an Account Manager type approach, Energy Advisors directly engage targeted businesses (based on pre-screened data analysis) with one or two direct and easy non-capital recommendations. Examples include lowering thermostat set points or scheduling lights to shut off when the last employee leaves. These simple operational measures are 1) trusted to achieve estimated savings because they have been pre-screened by an 'expert Energy Advisor' who shares actual historical usage data to support the recommendation, and 2) are within the capability of individuals with no energy knowledge to implement through guidance from an Energy Advisor.

When: The proposed Program implementation timeline is typically 60-90 days; access to interval meter data varies by utility.

Costs: TBD

Jobs: TBD

Industrial Retrofit Solutions

Improve Industrial Efficiency and Competitiveness

What: Co-funding of retrofits in industrial buildings such as manufacturing, resource development, technology R&D, laboratories, etc. Retrofits in this sector will drive energy conservation, energy efficiency, carbon reduction, productivity improvements. Activity here will ultimately lead to significant energy and carbon intensity reductions in short order and persist well beyond 2030. Projects will range from LED lighting to heating & cooling to process improvements. Electricity, natural gas and fuel oil consumption will be reduced for 10 to 20+ years.

Why: Industrial users are experiencing market disruptions that will have a lasting impact on their competitiveness and survival. Actions to improve productivity and reduce energy use, GHGs, and operating costs will have an immediate economic benefit with quantifiable and cost-effective carbon reductions contributing to Canada's 2030 commitments and beyond. Industrial users have been paying a price on carbon with very few options to access the funding for carbon reductions. Achievable cost-effective potential has been studied, projects are shovel ready, financial support is scalable, and will have a significant impact in all provinces and industrial sub-sectors. The unprecedented slow-down in economic activity and slowed production as a result of social

distancing provides a window to perform upgrades in emptier / idle facilities with staff that would normally be too busy.

How: Provide funds through the existing program delivery infrastructure at the provincial level.

When: Operational within 2 weeks, taking advantage of buildings with reduced occupancy.

Cost: TBD

Jobs: TBD

Support Training Programs

The provincial (and federal) government could assist in promoting and subsidizing educational programs to increase the capacity of EE Trades, Practitioners and Professionals in the construction, renovation and operation of commercial and Industrial facilities.

The Canadian Institute for Energy Training (CIET) delivers a suite of energy-related programs for professionals and practitioners. Many of these programs are eligible for IESO rebates. They are also the official delivery agent for NRCan's Commercial, Institutional and Residential educational programs (Dollars to $ense, RETscreen Professional, NRCan Foundation Level, etc.). They traditionally offered class-room training, but with recent events, they are transitioning to on-line learning.[14]

Other similar reputable programs are being delivered by other agencies and colleges. BOMA, for example, in some areas offers Energy Training for Building Operators which can be delivered in a classroom or on-line.[15]

The CaGBC, HRAI and many more associations and institutions have well established learning programs in the fields of energy management, conservation and GHG reduction.

What: Energy training for Trades, Practitioners and Professionals in the construction, renovation and operation of commercial and Industrial facilities.

How: Subsidize existing programs and delivery agents.

Cost: TBD

Jobs: TBD

Energy Efficiency Platform

Energy efficiency touches several market segments across Ontario. Online marketplaces/platforms for energy efficiency products are an increasingly popular tool to unify, engage, activate, and support various energy management efforts across Canada. Such a platform administered by a trusted advisor would connect energy efficiency

[14] https://cietcanada.com/energy-efficiency-training-programs/
[15] http://www.bomalearning.com/home2 or https://bomaottawa.org/professional-development

customers with products, retailers, installers, comprehensive applicable review of rebates/incentives. All the programs and concepts listed below could be housed on an online platform making customer access simple and information readily available.

Green Button Connect My Data

The GBCMD is a North American technical standard (NAESB REQ.21) for exchanging energy-related data. The implementation of GBCMD, will lead to energy innovation for customers and assist in the implementation of energy efficiency programs. Cost-effective energy management tools such as smartphone "apps" and optimized Internet-of-Things devices in homes and buildings can use energy usage data to reduce electricity and natural gas consumption. The key to unlocking energy innovation is widespread, uniform implementation of permission-based, standardized, zero-marginal cost data access.

More specifically, the benefits of a GBCMD approach include:

- Consumer benefits of improved energy data access are substantial (6% - 18% energy savings are possible according to numerous studies)
- Cost effective utility bill savings can be achieved
- Innovation to the utility sector:
    - Innovation to residential consumers: smartphones apps, internet-of-things devices, smart thermostats
    - Innovation for commercial users: managing energy benchmarking scores, public reporting of benchmarking scores, energy management applications

"Off-the-shelf" Green Button software is available that could speed up the implementation and reduce the costs as LDCs would not have to develop their own solution.

Retail Instant Savings or Online Rebates Programs

What: These programs reduce greenhouse gas emissions and increase energy efficiency in homes and businesses by incenting the purchase of energy efficient products from Ontario Retailers (through their bricks and mortar locations or online stores). Common products with rebates include smart thermostats, high efficiency windows, appliances, ceiling fans, heat pumps, tankless hot water heaters, weather stripping, low flow faucets etc.

Why: It would stimulate consumer spending at Ontario retailers (who are one of the hardest hit sectors.) It also leads to immediate and measurable utility bill savings for residents while leveraging existing programs and infrastructure.

How: Re-introduce previous shovel-ready programs; and/or partner with federal government to complement and augment existing programs by stacking increased incentive amounts or adding to product selection.

Cost: TBD

Jobs: TBD

energyontario.ca

CONTACT

121 Richmond Street West
Suite 202
Toronto, Ontario M5H 2K1
416.961.2339
oea@energyontario.ca
@energyontario
energyontario.ca

Ontario Energy Association

Let's unravel complex energy challenges, together.