

December 11, 2013

To: Power Advisory LLC Clients and Contacts

From: Jason Chee-Aloy, Power Advisory LLC

RE: Summary and Commentary on Ontario's Long-Term Energy Plan, *Achieving Balance* (2013)

On December 2, 2013 the Ontario Government released an updated Long-Term Energy Plan (LTEP or "Plan"), *Achieving Balance*, which effectively replaces the first LTEP released in 2010.

Our summary and commentary is divided into two sections. First, the key elements of the Plan are listed along with Power Advisory LLC (Power Advisory) commentary. Second, we draw conclusions on the LTEP and its key elements.

KEY ELEMENTS TO THE LONG-TERM ENERGY PLAN AND COMMENTARY

The Ontario Government generally states that the LTEP aims to take a pragmatic approach considering that Ontario is presently in a surplus supply situation and many factors may influence electricity demand in the future, and the Plan requires a sufficient amount of flexibility.

The LTEP attempts to balance these five principles:

- cost effectiveness;
- reliability;
- clean energy;
- community engagement; and
- emphasis on conservation and demand management (CDM) before building new generation.

The key elements of the LTEP are listed below and are grouped by the twelve main sections in the LTEP.

1. Conservation First

- The Ministry of Energy will work with the agencies (e.g., Ontario Power Authority (OPA), Independent Electricity System Operator (IESO)) to ensure they put CDM first in their planning, approval and procurement processes. The Ministry will also work with the Ontario Energy Board (OEB) to incorporate the policy of CDM first into planning processes for both electricity and natural gas distribution utilities.
- The Province expects to offset almost all of the growth in electricity demand to 2032 by using CDM programs and improved codes and standards, therefore lessening the need for

new supply. The long-term CDM target of 30 TWh in 2032 represents a 16% reduction in the forecast gross demand for electricity (which is larger than the 2010 LTEP).

- Ontario is aiming to use demand-response (DR) to meet 10% of peak demand by 2025, equivalent to approximately 2,400 MW under forecast conditions. To encourage further development of DR, the IESO will evolve existing DR programs and introduce new DR initiatives.
- The IESO will continue to examine and consult on the potential benefits and development of a capacity market, where different generation and demand resources compete to address capacity needs.
- The Government is committed to promoting a coordinated approach to CDM and will encourage collaboration on CDM efforts among electricity and natural gas utilities.
- The Government will work to make new financing tools available to consumers starting in 2015, including on-bill financing for energy efficient retrofits.
- To help consumers choose the most efficient products for their homes and businesses, Ontario will provide information and incentives; it will also continue to show leadership in establishing minimum efficiency requirements for products such as water heaters, clothes dryers, televisions, fluorescent lamps, motors and boilers.
- The Green Button Initiative will give consumers access to their energy data and the ability to connect to mobile and web-based applications so they can analyze and manage their energy use.
- Social benchmarking can increase awareness of energy use and promote CDM. A social benchmarking pilot program is underway, led by the OPA to test different approaches that enable consumers to compare their energy consumption with other similar consumers. Pending the success of the pilot program, the Government will explore expanding social benchmarking and include other sectors.
- The Government is also working with Ontario EcoSchools to bring more resources about CDM to the curriculum for students and teachers.

Power Advisory LLC Commentary

The LTEP calls for CDM to offset demand growth to 2032 and DR to meet 10% of peak demand by 2025. These goals represent aggressive targets and therefore need to be monitored closely. The annual Ontario Energy Reports should provide clear and quantitative metrics in determining the efficacy of CDM and DR and should also assess the cost-benefit of CDM and DR programs. This will help ensure net benefits are being realized through positive impacts on the power system and lessening costs to ratepayers.

It is interesting to note that the potential for a capacity market is listed as a key element within the Conservation First section despite the fact that existing capacity markets have mainly been a mechanism for additional revenues to generators. However, the positioning of this key element may be explained by looking to some U.S. jurisdictions (e.g., PJM and New England) that have touted the success of capacity markets in incentivizing new DR programs. Any development of an Ontario capacity market will need to be clear in its purpose, and may need to address how contracted generation facilities, rate-regulated generation facilities, and contracted DR resources could all participate on a level playing field. Power Advisory believes that if the design of an Ontario capacity market were to include all generation under long-term contracts and that are rate-regulated, the consultation and design will be very controversial with many stakeholders.

In general, it is plausible to utilize CDM resources first where proven to be effective in meeting respective goals. Therefore, it is essential that development of a new Conservation and Demand Framework (effective January 2015) clearly specify the roles and responsibilities of local distribution companies (LDCs), OPA, IESO, OEB and all classes of electricity customers in their respective administration, oversight and participation across all CDM programs within reasonable timelines to meet respective CDM targets.

2. Annual Reporting

- An annual Ontario Energy Report will be issued to update the public on changing supply and demand conditions, and to outline the progress to date on the LTEP.

Power Advisory LLC Commentary

Annual Ontario Energy Reports are essential. While meeting the policy goals within respective LTEPs, Ontario Energy Reports must provide the quantitative discipline of Integrated Resource Plans (IRP) in determining electricity demand forecasts, efficacy of CDM and DR resources, availability and performance of generation, availability and performance of transmission, identification of the need for CDM, DR, generation, and transmission upgrades and/or expansion, along with effective integration of innovative technologies (e.g., storage, etc.).

The scope of the Ontario Energy Report requires more definition. For example, the time horizon for the Ontario Energy Report is still to be determined. Considering the IESO produces an 18-Month Outlook report and the LTEP provides a 20-year outlook, presumably the Ontario Energy Report will have a time horizon falling between 18-months and 20-years. Further, linkages with distribution plans must be made clear, especially considering that many new CDM, supply and technology resources are connecting to distribution systems and impacting the demand and supply balance on the bulk transmission system.

In order to ensure that Ontario Energy Reports will be produced on a timely and annual basis, and the scope of these Reports will have sufficient quantitative rigor found in IRPs, the IESO Market Rules should be amended to clearly obligate the IESO (with the OPA's support) to produce the Ontario Energy Report on an annual basis by a specific date. This governance is very similar to the previous rules that obligated the IESO to produce an annual 10-Year Outlook report without OEB approvals. After the introduction of the OPA and the obligation to produce an Integrated Power System Plan (IPSP), the IESO obligation to produce a 10-Year Outlook was removed from the Market Rules. The Ontario Government should declare whether the OPA has any obligation to produce an IPSP. Considering the framework where LTEPs will be produced every three years coupled with Ontario Energy Reports being produced annually, it appears that there is no longer any intention or need for the OPA to produce an IPSP, and if so this should be clarified.

3. Nuclear

- Ontario will not proceed at this time with the construction of two new nuclear reactors at the Darlington generating station (GS). However, the Ministry of Energy will work with Ontario Power Generation (OPG) to maintain the site licence granted by the Canadian Nuclear Safety Commission (CNSC).
- Nuclear refurbishment is planned to begin at both Darlington GS and Bruce GS in 2016.
- During refurbishment, both OPG and Bruce Power will be subject to the strictest possible oversight to ensure safety, reliable supply and value for ratepayers.
- Nuclear refurbishment will follow seven principles established by Government, including minimizing commercial risk to the Government and the ratepayer, and ensuring that operators and contractors are accountable for refurbishment costs and schedules.
- The Pickering GS is expected to be in-service until 2020. An earlier shutdown of the Pickering units may be possible depending on projected demand going forward, progress of the fleet refurbishment program, and timely completion of the Clarington transformer station (TS).
- Ontario will support the export of home-grown nuclear industry expertise, products and services to international markets.

Power Advisory LLC Commentary

Given the demand and supply outlook coupled with the projected cost increases to ratepayers, we believe the LTEP takes a prudent approach regarding the deferral of developing new nuclear generating units, the refurbishment schedule for the Darlington and Bruce units along with caution in proceeding with all refurbishments, and the potential to retire the Pickering GS prior to 2020.

There are significant supply risks regarding the refurbishment of the Darlington and Bruce units and the life extension of the Pickering units. The LTEP states that “Final commitments on subsequent refurbishments [after the first units at Darlington and Bruce begin refurbishments] will take into account the performance of the initial refurbishments with respect to budget and schedule ...”. The LTEP also states that “... an early shutdown of the Pickering units may be possible depending on projected demand, the progress of the fleet refurbishment program [Darlington and Bruce units], and the timely completion of the Clarington Transformer Station.” Power Advisory believes that the Ontario Energy Reports should include monitoring and reporting on the costs and progress of life extension of Pickering units and refurbishment of Darlington and Bruce units.

Resulting from refurbishment and life extension risks briefly listed above, there could be future scenarios where supply is needed sooner than anticipated in the LTEP and the quantity of supply needed could also increase.

4. Renewable Energy

- By 2025, 20,000 MW of renewable energy will be on-line, representing about half of Ontario’s installed capacity.
- Ontario will phase in, wind, solar and bioenergy over a longer period than contemplated in the 2010 LTEP, with 10,700 MW on-line by 2021.
- Ontario will add to the hydroelectricity target, increasing the Province’s portfolio to 9,300 MW by 2025.
- Recognizing that bioenergy facilities can provide flexible power supply and support local jobs in forestry and agriculture, Ontario will include opportunities to procure additional bioenergy as part of the new competitive process.
- Ontario will review targets for wind, solar, bioenergy and hydroelectricity annually as part of the Ontario Energy Report.
- The Ministry of Energy and the OPA are developing a new competitive procurement process for future renewable energy projects larger than 500 kW, which will take into account local needs and considerations. The Ministry will seek to launch this procurement process in early 2014.
- Ontario will examine the potential for the micro Feed-in Tariff (FIT) program to evolve from a generation purchasing program to a net metering program.

Power Advisory LLC Commentary

The 10,700 MW target for installed wind, solar and bioenergy generation capacity remains unchanged from the 2010 LTEP but the timeline for applicable projects to reach commercial

operation by 2021 has been solidified. The 2021 date is in-line with the LTEP's general need date for new supply (assuming Pickering units are extended to 2020 and the refurbishments of the Darlington and Bruce units go as planned). The hydroelectricity target of 9,300 MW by 2025 is slightly higher than the 2010 LTEP target and is also in-line with the LTEP's general need date for new supply.

The annual Ontario Energy Reports should provide sufficient data and information reporting on progress of procuring wind, solar, bioenergy and hydroelectric generation projects, along with progress in developing these projects once they have been contracted. Therefore, the Ontario Energy Report should either subsume the OPA's quarterly supply reports or ensure clarity and consistency with the OPA quarterly supply reports.

The Ontario Government and the OPA will design and implement new competitive procurement processes for large renewable generation projects (i.e., projects over 500 kW). General procurement schedules and targets have been listed in the LTEP.

Procurement targets for 2014:

- wind generation – 300 MW;
- solar generation – 140 MW;
- bioenergy generation – 50 MW; and
- hydroelectric generation – 50 MW.

Procurement targets for 2015:

- wind generation – 300 MW;
- solar generation – 140 MW;
- bioenergy generation – 50 MW; and
- hydroelectric generation – 45 MW.

If procurement processes result in not reaching the targeted supply, the generation capacity not procured will be allocated to respective procurement processes to be launched in 2016.

The procurement schedules above provide indications of plans to execute procurement processes but these procurement processes still need to be operationalized. That is, the Ontario Government has stated intentions to “launch” competitive procurement processes by the end of Q1/2014, and at this time there are more questions than answers regarding the timing and key design elements of these forthcoming competitive procurement processes.

Considering the recent challenges resulting from many procured wind generation projects and some gas-fired generation projects, Power Advisory is of the strong opinion that all future competitive procurement processes will have a series of mandatory criteria along with additional non-price criteria to which all qualified proponents and projects will be evaluated against each other. We expect the evaluation criteria ‘bar’ to be set sufficiently high in order to minimize risks of contracted projects not being developed in accordance with minimal opposition from communities, municipalities and Aboriginal peoples, while meeting

relevant power system requirements at reasonable bid prices. Therefore, we believe the adoption of the relevant project siting recommendations as recommended by the IESO and OPA to the Minister of Energy on August 1, 2013 will take some time, with significant stakeholder engagement, to be incorporated within these competitive procurement processes likely as some of the non-price evaluation criteria. As a result, we are of the opinion that ‘launching’ competitive procurement processes in Q1/2014 will likely be commencement of formal procurement processes only where procurement documents (e.g., Request for Proposal (RFP)) will likely be finalized several months after ‘launching’ respective competitive procurement processes. Therefore, this timeline suggests that respective project proposals will be evaluated by the OPA months after the RFP has been finalized which then means execution of successful projects some time in 2015 for a competitive procurement process launched in early 2014.

In addition, solely from a resourcing point of view, the OPA may be challenged to launch multiple competitive procurement processes for wind, solar, bioenergy and hydroelectric generation projects at the same time to meet the stated 2014 ‘launch’ objectives.

A transition of microFIT towards a net metering program, or similar, should better facilitate development of these projects where developers and customers will more directly enjoy the benefits of lower transaction costs, etc. In order for this transition to occur, changes to the OEB’s Distribution System Code (DSC) and Retail Settlement Code (RSC) will be required, as well as a likely re-evaluation of applicable principles of cost allocation and rate design in order to effectively facilitate a net metering program so as to eliminate barriers to entry while ensuring that LDCs are not unduly harmed by way of their own revenue requirements.

5. Natural Gas/Combined Heat and Power

- Natural gas-fired generation will be used flexibly to respond to changes in provincial supply and demand and to support the operation of the system.
- The OPA will undertake targeted procurements for combined heat and power (CHP) projects that focus on efficiency or regional capacity needs, including a new program targeting greenhouse operations, agri-food and district energy.

Power Advisory LLC Commentary

Natural gas-fired generation is an important supply resource today and will be even more important in the future as the balance of coal-fired generation is retired. That is, gas-fired generation fulfills a system need that coal-fired generation used to meet by providing needed flexibility to produce energy in accordance with intra-day changes in the demand and supply balance.

While the LTEP is not sufficiently descriptive in defining needed resources that are deemed as “Planned Flexibility”, it is our assumptions that due to the flexible operational attributes

and characteristics of gas-fired generation (especially ‘peaking’ gas-fired generation), there is likely a need for additional gas-fired generation to meet “Planned Flexibility”.

As stated above, resulting from the refurbishment and life extension risks of the Darlington, Bruce and Pickering generating units, there could be future scenarios where supply is needed sooner than anticipated in the LTEP and the quantity of required supply could also increase. If these future scenarios were to become reality, we believe that “Planned Flexibility” will become a requirement even more so than what’s projected in the LTEP and will result in procurement of additional gas-fired generation in the form of either new build and/or re-powering existing natural gas-fired and potentially retired coal-fired units (only where re-powering coal-fired units is proven to be cost effective).

The OPA has had many starts and stops with mixed success in procuring CHP generation projects across different fuel sources and of different sizes. We agree with the LTEP in so far as CHP generation projects should be treated differently in their procurement with greater acknowledgment of the non-energy attributes of these projects. This may improve the success of procuring CHP generation projects.

6. Clean Imports

- Ontario will consider opportunities for clean imports from other jurisdictions when such imports would have system benefits and are cost effective for Ontario ratepayers.

Power Advisory LLC Commentary

Clean imports could be an option especially falling under the “Planned Flexibility” resource category, as imports could be used to meet intra-day power system needs. However, it is challenging to successfully contract for import supply when considering the options many importers have to export energy into other energy markets (e.g., New England, New York, etc.) that have been historically higher priced than Ontario’s energy market. Further, scheduling import transactions over interties can be challenging regarding how security of supply is to be contractually ensured.

Power Advisory is of the opinion that the LTEP should have gone further by including exports as an area to be explored, especially considering Ontario’s present oversupply situation and its relative clean energy supply when compared to interconnected U.S. states and markets. That is, we believe there is potential for the export sale of energy and capacity to U.S. buyers who wish to secure clean energy supply for various reasons. If done correctly, export sales could result in credits to the Global Adjustment which in turn lowers electricity costs for all ratepayers in Ontario.

7. Rate Mitigation and Efficiencies

- The 2013 LTEP cost and price forecasts are lower than previously forecast in 2010.

- Significant ratepayer savings will be realized as a result of reduced FIT prices, the ability to dispatch wind generation, the amended Green Energy Investment Agreement, and the decision to defer new nuclear.
- The Government will continue to work with its agencies – Hydro One, OPG, IESO, OPA and OEB – to develop business plans and efficiency targets that will reduce agency costs and result in significant ratepayer savings.
- The Government will encourage OPG and Hydro One to explore new business lines and opportunities inside and outside of Ontario. These opportunities will help leverage existing areas of expertise and grow revenues for the benefits of Ontarians.
- The Distribution Sector Review Panel, which delivered a report in late 2012, identified the potential for significant savings among the Province’s LDCs. The Government expects that LDCs will pursue innovative partnerships and transformative initiatives that will result in electricity ratepayer savings.
- The Government will look closely at key features of the OEB’s new regulatory framework for LDCs such as the Scorecard, which will report annually on key LDC performance metrics, to develop further distribution sector policy options.

Power Advisory LLC Commentary

A significant portion of the projected cost increases to all ratepayers in Ontario are ‘locked-in’ as these cost increases result from investments in transmission and distribution, contracts and rates for generation, etc. Therefore, the LTEP is directionally correct in seeking means to minimize cost increases to ratepayers.

We believe that the Ontario Government has the most control over costs resulting from the operation of the agencies – Hydro One, OPG, IESO, OPA and OEB – and should conduct appropriate benchmarking in order to determine whether cost saving changes to any of these agencies should be undertaken in order to help lower costs to ratepayers.

8. Enhanced Regional Planning

- The Government will implement the IESO and the OPA recommendations for regional planning and the siting of large energy infrastructure.
- The Ministry of Energy, IESO and OPA will work with municipal partners to ensure early and meaningful involvement in energy planning.
- Municipalities and Aboriginal communities will be encouraged to develop their own community-level energy plans to identify CDM opportunities and infrastructure priorities.

The Municipal Energy Plan Program and the Aboriginal Community Energy Plan Program will support these efforts.

- Regional plans will promote the principle of Conservation First while also considering other cost-effective solutions such as new supply, transmission and distribution investments.

Power Advisory LLC Commentary

As requested by the Minister of Energy, the IESO and OPA submitted a report, *Engaging Local Communities in Ontario's Electricity Planning Continuum: Enhancing Regional Planning and Siting* (August 1, 2013), that made 18 recommendations regarding regional energy planning and siting large energy infrastructure projects. The LTEP states that all 18 recommendations will be implemented. However, it is not yet clear how these recommendations will be implemented, and more importantly what the new obligations and requirements will be regarding the development of large energy projects (e.g., large renewable energy generation projects).

Many of the IESO and OPA recommendations are communicative (e.g., engagement with communities and local Governments, etc.) and collaborative (e.g., establishment of working groups and committees) in nature. Therefore, it is not clear how these types of recommendations will sufficiently better ensure that projects are successfully developed, other than for creating additional communications and channels for input (which are important and necessary but may not be sufficient). Power Advisory believes that the recommendations regarding integration of energy needs within municipal plans and community energy plans, both with linkages to regional energy plans, could improve the ability to successfully develop large energy projects. However, it is not clear from the IESO and OPA recommendations what is and what is not mandatory regarding the integration of energy projects within respective plans so as to plan for or support future development of respective energy projects (e.g., what obligations do municipal planners have regarding development of energy plans and/or incorporation of energy projects within municipal plans?).

As stated previously, we believe the adoption of the relevant IESO and OPA project siting recommendations will be incorporated within forthcoming competitive procurement processes for large renewable generation projects (as well as for other large energy projects) likely in the form of some of the non-price evaluation criteria. Since the IESO and OPA recommendations are at a sufficiently high level, much work is still to be done to operationalize these recommendations and we believe this will likely form the bulk of the consultation dealing with design and development of forthcoming competitive procurement processes for large renewable energy projects.

9. Transmission Enhancements

- Hydro One will be expected to begin planning for a new Northwest Bulk Transmission Line to increase supply and reliability to the area west of Thunder Bay. The area faces growth in

demand, some of which is beyond what today's system can supply. Hydro One and Infrastructure Ontario will be expected to work together to explore ways to ensure cost-effective procurement related to the line.

- Connecting remote northwestern First Nation communities is a priority for Ontario. Ontario will continue to work with the Federal Government to connect remote First Nation communities to the electricity grid or explore on-site alternatives for the few remaining communities where there may be more cost-effective solutions to reduce diesel use.
- All regions of the Province can expect timely local transmission enhancements as needs emerge. Upgrades and investments will meet system goals, such as maintaining or improving reliability or providing the infrastructure necessary to support growth.

Power Advisory LLC Commentary

The transmission section within the LTEP has undergone the most changes relative to the 2010 LTEP. The LTEP now places a stronger emphasis on northern transmission projects to accommodate projected increases in electricity demand resulting from mining activities and connection of remote First Nation communities. The 2010 LTEP placed an emphasis on transmission development and upgrades to accommodate increased connection capacity for renewable generation project development. As a result of this change, a new West of London transmission line is no longer being planned for development.

It is interesting to note that Hydro One is to work with Infrastructure Ontario to explore cost effective ways to procure the Northwest Bulk Transmission Line. We believe this new collaboration between Hydro One and Infrastructure Ontario may provide new opportunities for private sector participation (e.g., development, equity, etc.) through formal public-private-partnership (PPP) agreements. If this is the case and successfully done, potential PPP agreements could be considered involving OPG and future generation projects (which would be in-line with one of the key elements in the LTEP regarding exploration of new business opportunities for OPG).

Power Advisory also believes this new collaboration between Hydro One and Infrastructure Ontario regarding the Northwest Bulk Transmission Line signals the end of the OEB's transmission designation process that was used to appoint the developer of the East-West Transmission Line. That is, the Ontario Government could have chosen to use the same or similar OEB transmission designation process to appoint a developer of the Northwest Bulk Transmission Line; however, this is clearly not the case.

10. Aboriginal Engagement

- The Government understands the importance of First Nation and Métis participation in the development of energy and conservation projects. The Government will continue to review participation programs to ensure they provide opportunities for First Nation and Métis communities.

- Ontario will launch an Aboriginal Transmission Fund in early 2014 to facilitate First Nation and Métis participation in transmission projects.
- The Province expects that companies looking to develop new transmission lines will, in addition to fulfilling consultation obligations, involve potentially affected First Nation and Métis communities, where commercially feasible and where there is an interest.
- The Government will continue to encourage Aboriginal participation, including through the FIT program and future large renewable energy procurements, in a way that reflects the unique circumstances of the First Nation and Métis communities.

Power Advisory LLC Commentary

All of the key elements regarding Aboriginal engagement are important.

11. Energy Innovation

- The Government will seek to expand the Smart Grid Fund and build on previous success.
- The Government intends to initiate work, on a priority basis, to address regulatory barriers that limit the ability of energy storage technologies to compete in Ontario's energy market.
- By the end of 2014, the Government will include storage technologies in applicable procurement processes, starting with 50 MW and assessing additional engagement on an ongoing basis.
- The new competitive procurement process for renewable energy projects larger than 500 kW will also provide an opportunity to consider proposals that integrate energy storage with renewable energy generation.

Power Advisory LLC Commentary

LDCs, IESO and OPA should develop and implement pilot programs in order to facilitate development of innovative energy projects.

12. Oil and Natural Gas

- The Government will work with gas distributors and municipalities to pursue options to expand natural gas infrastructure to service more communities in rural and northern Ontario.

- Ontario has adopted principles it will use to review large scale pipeline projects to ensure that they meet the highest environmental and safety standards as well as benefit Ontario's economy.

SUMMARY AND CONCLUSIONS

The updated LTEP reinforces the direction set by the 2010 LTEP by staying the course in transforming Ontario's energy supply mix by emphasizing CDM resources first and maintaining significant supply targets for renewable generation.

The main differences with the updated LTEP when compared to the 2010 LTEP are clarity with refurbishment schedules for Darlington and Bruce generating units, deferral of developing two new generating units at Darlington, and focus on transmission projects in northern Ontario to meet energy demand requirements resulting from mining activities and connection of remote First Nation communities.

Power Advisory agrees that electricity demand is forecast to be lower than what was forecast in the 2010 LTEP and therefore not driving the need for new supply resources. However, we believe that risks to future supply exist mainly resulting from the potential to retire Pickering before 2020 and potential to not refurbish all generating units at Darlington and Bruce. Under a potential future scenario with less than planned nuclear generation capacity, "Planned Flexibility" resources will be required sooner than later which likely means that additional gas-fired generation will likely be procured. Gas-fired generation is well positioned to meet future system needs because it can be developed relatively quickly, it provides operational flexibility in producing energy to meet intra-day changes in the demand and supply balance, it is cost effective as fuel costs are projected to stay relatively low, and existing gas-fired generation facilities can be re-powered relatively easily (e.g., Non-Utility Generators (NUGs)).

While the updated LTEP sets policy direction, operationalizing the Plan will not be without its challenges. Listed below are the LTEP's main electricity infrastructure procurement and development initiatives, including CDM, to be undertaken within the next few years along with existing OPA procurement initiatives that are expected to continue:

- CDM programming by LDCs and OPA, and negotiation of a new Conservation and Demand Framework (replacing the existing master CDM Agreement between the LDCs and the OPA);
- DR initiatives developed and facilitated by IESO;
- competitive procurement processes for wind, solar, bioenergy and hydroelectric generation projects developed and administered by the Ontario Government and OPA in 2014 and 2015 (where, in Power Advisory's opinion, separate procurement processes by generation fuel type will likely be the case, resulting in multiple and parallel competitive procurement processes);
- continuation of the microFIT program and the FIT program (projects between 10 kW and 500 kW);
- CHP generation procurement by OPA;

- continuation of re-contracting negotiations between NUGs and OPA;
- contract negotiations between OPG and OPA to re-power the Thunder Bay GS with biomass;
- contract negotiations between Bruce Power and OPA for refurbishment of the remaining Bruce generating units;
- inclusion of 50 MW of storage technologies in applicable procurement processes by the end of 2014;
- Hydro One and Infrastructure Ontario collaboration regarding a procurement for a new Northwest Bulk Transmission Line;
- connecting remote northwestern First Nation communities to the grid and exploring on-site alternatives for remaining communities; and
- local transmission upgrades and investments needed to meet power system requirements.

The list of initiatives is plentiful and will present challenges how the LTEP's initiatives become operationalized, especially consider likely resource constraints at the OPA (as OPA is being tasked with developing, launching and facilitating several procurement processes). Therefore, priorities of these initiatives need to be better understood and conveyed to all stakeholders in order to provide clarity relating to present and future business opportunities.