ONTARIO POWER GENERATION

Internal Audit

Business Planning

September 1, 2017

Report Rating: **Generally Effective**

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1.0 EXECUTIVE SUMMARY

1.1 Report Rating and Summary of Findings

Report Rating: **Generally Effective**

No.	Finding	Risk Type	Risk Rating[1]		
			High	Moderate	Low
1	Project listing, prioritization methods and supporting planning-level documentation for projects included in Corporate Functions' business plans were not consistently reviewed by Finance.	Financial		X	
2	Some assumptions used in developing the generation plan did not align with the assumptions set out in the corporate business plan.	Financial			X
Total		**2**	**--**	**1**	**1**

1.2 Background

Business Planning ("BP") is an annual process led by Finance's Business Planning and Reporting ("BP&R") group with the support of Finance Controllership organizations, based on planning inputs developed and provided by Corporate Functions and Generating Business Units ("BUs"). The 2015 Memorandum of Agreement ("MOA") with the Ontario Minister of Energy requires OPG to annually submit a business plan to the shareholder which includes rolling 3 to 5 year performance targets and new project investment plans.

BP&R annually issues an OPG-wide BP Instructions document which provides planning context and assumptions, expenditure targets, BP information requirements and the planning process and schedule. The outcome of the BP process is a consolidated multi-year plan, submitted for review and approval to the Board of Directors, that outlines the planned revenue, investments, costs and performance targets to meet OPG's strategic objectives, in line with the mandate described in the MOA.

The BP Program (OPG-PROG-0037) provides the framework for conducting the annual BP cycle. It also describes the key elements, processes, roles and accountabilities of the groups involved.

The audit was performed as part of Internal Audit's ("IA") cyclical coverage of significant business unit processes across OPG.

1.3 Objective & Scope

The objective of this audit was to assess whether the design and operating effectiveness of the BP processes and controls adequately supported strategic objectives alignment, resource assignment to appropriate initiatives, and performance monitoring.

[1] Please refer to Appendix A for risk rating definitions

In order to achieve the audit objective, we reviewed the process and tested, on a sample basis, whether:

Governance framework
• Lessons learned from previous planning activities were captured and incorporated into successive years' planning processes; • BP schedule was generally adhered to, including timelines for BU plan submissions and consolidated plan preparations; and • BP activities were periodically assessed and aligned with stakeholder's expectations.
Strategic objective alignment
• Planning instructions took into account OPG's long term strategic direction endorsed by the Board of Directors, external strategic drivers and corporate developments; and • Strategic objectives defined by BUs were aligned with company's long term direction and articulated in BP presentations.
Validation of assumptions & outputs
• The generation plan considered future outages, facility in-service dates and past performance. Agreement from operating BUs was obtained for the plans; • Functional groups provided input and concurrence to major planning assumptions, which were reviewed with Senior Management and communicated to stakeholders through the BP Instructions document; • BP presentations clearly identified key planning assumptions which have been validated by BU Controllers; • Business Plans were reviewed with the Chief Executive Officer, Chief Financial Officer and relevant ELT members, and were consolidated into an OPG Business Plan for Board of Directors review and approval; • BU plans were assessed against targets defined in planning instructions including capital and Operating, Maintenance & Administration ("OM&A") expenditures; and • Cost allocations for support services groups were consistent with OPG's cost allocation methodology.
Capital investment planning and prioritization
• BUs prioritized projects to maximize value, taking into consideration factors such as risks, strategic alignment, facility requirements, and shareholder expectations; • Planned projects not fully released with significant cash flows in the planning period were identified and supported by project prioritization documents such as relevant planning-level Business Case Summaries ("BCSs") to facilitate resource planning, prioritization, and trade-offs; and • Processes used to prioritize projects were defined and communicated by BUs.
Risk and performance monitoring
• Risks that could impact the achievement of BU objectives over the planning period were identified in business plan presentations, included in BU risk registers and mitigating actions identified; • Indigenous Relations program activities were included in Business Plans and associated costs over the planning period identified; and • BUs performed periodic assessments and reported on progress against approved BP targets.
Fraud risk considerations
• No fraud risks identified.

Scope Period: The scope included activities that occurred in 2016 for the 2017-19 BP cycle, and preparation activities for the 2018-20 Business Plan that took place up to June 30, 2017.

1.4 Conclusion

Overall, IA found the design and operating effectiveness of processes and controls over business planning to be generally effective. Processes were established to coordinate the annual planning activities, verify the accuracy of the consolidated Corporate Business Plan and facilitate alignment across the organization. Some findings were identified, which we recommend that management address in a timely manner in order to strengthen the process. These findings, along with some positive observations, are summarized below.

Positive Observations

- Process expectations and planning assumptions set out for the BP cycle were aligned with corporate strategic direction and communicated across the organization;

- BU business plan presentations outlined key assumptions, operating performance targets, resource levels and risks, utilizing a common template that standardized the contents across BUs. The business plans were reviewed by the Chief Executive Officer, Chief Financial Officer and other ELT members as required;

- Timelines for business plan deliverables were generally adhered to by Finance and BUs, which facilitated the timely submission of the consolidated plan for the Board of Directors' review and approval as scheduled; and

- Processes are in place at the corporate and BU level to regularly report on operating and financial results against targets.

Findings & Recommendations

- Finance did not receive formal documentation (e.g. planning-level BCSs) to support the inclusion of certain Corporate Functions projects in the 2017-2019 Business Plan. These projects represented less than 1% of the company's planned project expenditures (no issues were noted with respect to Nuclear and RGPM, where planning-level project documentation was prepared and submitted as required). Finance's role in the review was intended to ensure that planned activities for not fully released projects were supported by appropriate prioritization methodology and adequate documentation.

  Finance BP&R, as the owner of the BP and Investment Management Programs, should work with the BU Controllers to ensure that all stakeholders comply with planning-level project documentation preparation and review requirements.

  The finding does not pertain to the actual project business case approval or the release of project funding, which are performed through processes outside of business planning; and

- Some assumptions used in developing the generation plan did not align with the BP Instructions. Specifically, the generation plan for the 2017-2019 Business Plan did not take into account the planned in-service of the Nanticoke solar and Sir Adam Beck Units 1 & 2 60 Hz conversion projects in 2019, as per the BP Instructions. The omission accounted for less than 1% (0.1 TWh) of OPG's 2019 planned generation.

  Finance BP&R should leverage the existing forecasting model to automate the generation planning process for Nanticoke solar and should review planning assumptions with BU stakeholders prior to finalizing the generation plan.

The findings noted in this report have been reviewed with management and they have committed to specific action plans. Please refer to Section 2.0 for specific details of the above findings along with the associated risk impacts, audit recommendations and management action plans.

Opportunities for Improvement

The BP Program (OPG-PROG-0037) document issued in early 2016 made references to some outdated processes, governance and organizational structures. IA recommends BP&R to update OPG-PROG-0037 to reflect current practices.

Additionally, IA noted that the BP Instructions document can be streamlined to better focus on key requirements and process changes from the prior year.

2.0 DETAILED AUDIT FINDINGS

Internal Audit identified the following detailed findings and recommendations which have been risk rated based on the definitions outlined in Appendix A.

1. Project listing, prioritization methods and supporting planning-level documentation for projects included in Corporate Functions' business plans were not consistently reviewed by Finance.	**Moderate**
The BP Program (OPG-PROG-0037) Section 1.1.2 states that "Finance – Investment Planning reviews planning-level Business Case Summaries ("BCSs") for projects included in the OPG Business Plan to ensure alignment across business units." The 2017-2019 BP Instructions, issued in May 2016, further required that BUs provide a prioritized listing of planned projects and a description of their project prioritization process to the Finance – Investment Planning team. The review was intended to ensure that planned activities for not fully released projects were supported by appropriate prioritization methodology and adequate documentation. Our review of the 2017-2019 BP process revealed that Finance – Investment Planning had not consistently received and reviewed the required planning-level BU project documentation as per the BP Instructions. For one of the three business groups sampled, Finance – Investment Planning did not receive the planning project documentation. BP&R management has indicated that the function of Finance – Investment Planning had changed through organizational restructuring that took place subsequent to the issuance of the BP Instructions, and that the independent planning-level project documentation review was expected to be performed by the Controllers instead. IA performed additional testing to verify the planning-level project documentation with Controllers for a sample of three business groups: Nuclear, RGPM and Corporate Real Estate. Test results indicated that both Nuclear and RGPM had appropriately submitted the required planning-level project documentation to their respective Controllers for review as part of the 2017-2019 BP cycle. Corporate Real Estate, however, had neither prepared the required planning BCSs nor established a formal project prioritization process. Real Estate's annual project portfolio in the 2017-2019 Business Plan was less than 1% of the total planned annual project expenditures corporate-wide. The actual approval of project business cases and the release of project funding are performed outside of the business planning process, and therefore not included as part of this audit.	
Potential Cause & Impact	
Potential Cause: The transition of accountability from the now restructured Finance – Investment Planning group to the Controllers with respect to independent planning-level project documentation review took place subsequent to the issuance of the BP Instructions, and was not clearly communicated by BP&R or well understood among some stakeholders. Impact: Planned project spending for certain Corporate Functions may not be supported by appropriate planning-level documentation and prioritization methodology.	

Recommendation
Finance BP&R should: • Update both the BP governance and instructions documents to reflect the current practice and accountability; • Reinforce the BP requirements over planning-level project documentation preparation and review with relevant stakeholders to ensure that the requirements are well understood and complied with; and • Verify with Controllership contacts before the end of business planning process that planning-level project documentation is being received from the business groups for review.
Management Action Plan
Management agrees with the recommendations and will implement them by the next planning cycle in 2018. The appropriate governance and BP Instructions documents will be updated to clarify the Controllership accountability for planning-level project documentation review, reinforcing the applicability of the requirements to both Generating BUs and Corporate Functions. As well, Finance (Controller) review and sign-off requirements for business plans will specifically reference review of planning-level project documentation. Management will also review governance requirements related to planning-level project documentation to ensure that they effectively support portfolio-level project planning, leveraging any applicable work currently underway to implement the Project Centre of Excellence. Owner: Anthony Melaragno, Director Business Planning & Regulatory Finance Target Completion Date: June 1, 2018

2. Some assumptions used in developing the generation plan did not align with the assumptions set out in the corporate business plan.	**Low**

The BP Program (OPG-PROG-0037) Section 1.1.2 states that the generation plan is prepared based on the planning assumptions set out in the OPG-wide BP Instructions.

IA examined the generation plan for the 2017-2019 Business Plan and noted that the following assumptions defined in the BP Instructions were not applied:

- Nanticoke solar had a planned in-service date of March 2019. However, due to a formula error, production from Nanticoke solar was omitted from the generation plan. Nanticoke solar had an annual planned generation of 75 GWh; and
- The conversion of Sir Adam Beck Units 1 and 2 to 60 Hz was planned to take place over the 2018-2020 period. Capital expenditures for the conversion project were included in the 2017-2019 Business Plan, based on then-expected in-service dates of July 2019 and November 2020 for Unit 2 and Unit 1, respectively. However, the impact of the conversion was not accounted for in the generation plan. As per the BCSs, the conversion project could increase each unit's annual generation by 46 GWh.

Potential Cause & Impact

Potential Causes:

- Nanticoke solar was not setup in the generation forecast model, requiring manual adjustment to the generation plan that made it susceptible to error; and
- Timing of the Sir Adam Beck Unit 1 and 2 frequency conversion project was reassessed on multiple occasions during the 2017 BP cycle. The final decision by RGPM to proceed with the conversion project over the 2018-2020 period was not communicated to Finance in a timely manner to enable generation plan adjustment.

Impact:

- The generation plan was understated by approximately 0.1 TWh in 2019 (pro-rated based on planned in-service dates). The understatement represented less than 1% of the 2019 planned generation of 74.2 TWh. Since the 2017-2019 Business Plan, the in-service date for the Sir Adam Beck frequency conversion project has been deferred to year 2021, according to the 2018-2020 BP Instructions; and
- Although the planned generation from Nanticoke solar was excluded due to a formula error, the related planned revenue was integrated into the Corporate Business Plan through a separate process and therefore not omitted from the plan.

Recommendation

Generation and Revenue Planning Management should:

- Update the generation forecast model to include Nanticoke solar as a generating unit, to reduce the likelihood of errors and omissions; and
- Review generation plan assumptions with BU stakeholders prior to finalizing the generation plan.

Management Action Plan
Management agrees with the recommendations and will implement them by the next planning cycle in 2018. The generation forecast model will be updated to include Nanticoke solar as an OPG generating unit, with energy and market revenue reported in the same manner as for the other OPG stations. BP&R will undertake a review of the assumptions used in the generation plan to ensure that they align with the final Business Plan assumptions. Discrepancies will be addressed with the applicable stakeholders prior to finalizing the generation plan. Owner: Bill Wilbur, Director Generation & Revenue Planning Target Completion Date: June 1, 2018

APPENDIX A – RISK RATING DEFINITIONS FOR AUDIT FINDINGS

Ratings are derived through professional judgment by the audit team and discussion with management. The ratings for individual control findings are outlined below.

Rating	Definition
High Risk	The finding presents a risk that could potentially have severe/major impact on financial sustainability (≥$5M), operational excellence, project excellence, safety, environment and reliability, reputation, regulatory relationship, or compliance with laws and regulations.
Moderate Risk	The finding presents a risk that could potentially have a moderate impact on financial sustainability ($500K to <$5M), operational excellence, project excellence, safety, environment and reliability, reputation, regulatory relationship, or compliance with laws and regulations. If not remediated, this risk could escalate to high risk.
Low Risk	The finding could potentially have a minor impact on financial sustainability (<$500K), operational excellence, project excellence, safety, environment and reliability, reputation, regulatory relationship, or compliance with laws and regulations. Recurring "low risk" findings may be elevated to medium risk status.

OVERALL REPORT RATING SCALE

An overall report rating has been assigned as an indication of the overall design, existence and effectiveness of the components of the internal control structure that was subject to the internal audit. The internal audit rating should be considered in conjunction with the definitions noted above.

- *Effective:* control and risk management practices provide reasonable assurance that business process objectives will be achieved and may include minor improvements and/or opportunities for improvement.
- *Generally Effective*: control and risk management practices require more than minor but less than significant improvements to provide reasonable assurance that business process objectives will be achieved.
- *Requires Improvement*: control and risk management practices require significant improvements in high risk and/or core areas to provide reasonable assurance that business process objectives will be achieved.
- *Not Effective:* control and risk management practices are not designed and/or are not operating effectively.

APPENDIX B – PROCESS OWNER AND DISTRIBUTION LIST

Distribution:

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