PART F: CONCLUSION

18.0 OVERALL ENVIRONMENTAL ADVANTAGES AND DISADVANTAGES OF THE PROJECT

It is interesting to note that the overall findings of previous environmental screening report (AMEC, 2003) and the current Addendum study both conclude that the reconstruction of the Cascade Street Generating Station would be highly advantageous and no known serious, long term disadvantages are predicted.

The design of the current project provides substantially more advantages over its 2003 predecessor.

- Generating capacity of the current project is approximately three times that of the previous project.
- Drawdown of the headpond is not required.
- Mill Pond drawdown has been reduced to 1.25 m for only a three week period, during late fall or winter.
- The footprint of the current project is much smaller than the 2003 project and, by demolishing the existing powerhouse removes the long term maintenance and repair costs associated with the existing deteriorating building.
- Impacts on both aquatic and terrestrial habitat are reduced by the smaller project footprint.
- Impacts on aquatic habitat are further reduced by opportunities to scale back in-water works, the footprint of in-water work, and associated draw-down requirements.
- Opportunities for walleye spawning will be improved.

18.1 Social Advantages and Disadvantages

The Province of Ontario proclaimed its *Green Energy and Economy Act* in September, 2009. This legislation sought "*the development of renewable energy, clean distributed energy and conservation while creating thousands of jobs, economic prosperity and energy sustainability"*. The mitigation of climate change is a primary consideration of the Act. The Province predicts the installation of 10,000 MW of newly installed renewable energy by 2015 and 25,000 MW by 2025. By comparison, existing installed

renewable capacity is approximately 8,300 MW. The Cascade Street reconstruction project will add to that total.

Specific project advantages are as follows:

i) the expansion project would make effective use of the currently under-utilized waterpower resource;

ii) an additional 1740 local residential customers would be supplied with electricity by the proposed expansion;

iii) the expansion would contribute to air quality improvement in Ontario by generating emission-free electricity and displacing emission-intensive fossil fuel generation. BGL staff has calculated the reduction in greenhouse gases as "CO2 equivalents" which include carbon dioxide, methane and nitrogen oxides. Assuming production of 11,000 MWh per year, new electricity generation at the Cascade Falls site would displace the use of fossil fuels by 8,591 tonnes CO2 equivalent per year for the life of the facility. This compares favourably to the "one time" input of greenhouse gas emissions associated with reconstruction of the facility, which is 3,420 tonnes CO2 equivalent.

iv) the expansion would increase reliability and security of local supply;

v) local generation reduces the need for imported electricity. The reduction of dependence on higher-priced imported power and attendant reduction in transmission, distribution and uplift charges, serve to benefit local consumers in terms of lowered energy costs;

vi) profits from generation and electricity distribution are paid to BGL's shareholder municipalities of Parry Sound, Bracebridge, Sundridge, Burk's Falls, Magnetawan and Huntsville for local re-investment within these communities;

vii) construction expenditures would benefit local contractors and other businesses through sales of food, lodging services and materials during the approximately 14 month construction period. Both skilled trades and

unskilled labour are needed. Based on recent experience with the Bracebridge and Wilson's Falls Generating Station reconstructions and assuming that the general contractor would be a local firm, BGL estimates that approximately half of the construction cost would accrue to local business, a total of approximately $7 M.

Social disadvantages of the project are decidedly few and short-term in duration, perhaps the most significant being the temporary closure of Cascade Street during construction and its associated inconvenience to automobile users.

18.2 Ecological Advantages and Disadvantages

As an upgrade to an existing hydroelectric facility, this project avoids a number of potential concerns associated with new hydroelectric facilities. It does not have the potential to interfere with fish migration because Cascade Falls is a natural and complete barrier to fish movement within the Seguin River. The footprint of all work activities is limited, with aquatic work limited to areas of limited fish habitat potential (upstream) and areas providing generalized habitat (downstream), and with terrestrial work limited to an already highly altered footprint. Ecological advantages of the upgrade a facility include:

- newer turbine design, which reduces the potential for injury of fish accidentally transported through the intake;
- better automation of controls, and reduced need for peaking and cycling of flows to operate the facility, reducing fluctuations in water levels and flows within the upstream headpond, downstream Mill Pond and downstream Seguin Falls; and
- an opportunity to enhance fish habitat, and in particular opportunities for walleye spawning, in association with the tailrace reconstruction.

Ecological disadvantages of the project include:

- in-water construction works, which will temporarily interfere with small areas of fish habitat;
- the potential for blasting-related and water quality effects on fish during construction, all of which can be minimized through the implementation of identified Best Management Practices; and

- a very small footprint of permanently disrupted fish habitat in association with a slightly larger intake structure.

None of these impacts are considered significant if properly managed.

18.3 Cultural Advantages and Disadvantages

Although the existing intake, penstocks and powerhouse would be removed, the archaeological and Cultural Heritage studies described above make provisions for the retention and display of representative structures and pieces of machinery. Although the largest part of the buildings themselves would be lost, the "history" of site would not. The CHIA report recommends:

- retention in situ of the two stone masonry walls;
- assembly of a collection of photographs and other materials featuring site history; and
- retention and display of representative equipment such as the existing generator, alternator and butterfly control actuators.

Based on firm public support, the known ability to mitigate adverse environmental effects, the lack of residual environmental effects and, the proposed monitoring program, it is recommended that the Cascade Street Addendum be approved by the proponent and that detailed engineering design and acquisition of environmental approvals proceed.

19.0 NOTICE OF COMPLETION AND STATEMENT OF COMPLETION

The Addendum report for the reconstruction of the Cascade Street Generating Station has been reviewed and approved for release to the public by Bracebridge Generation Ltd.'s Board of Directors. The Notice of Completion is included in Appendix A. Issuing the Notice of Completion finalizes the consultation requirements for the Addendum and initiates a 30-day public response period. Subject to comments received and acquisition of necessary permits, BGL will continue with final engineering and begin construction. As required by Regulation 116/01, a Statement of Completion will be issued to the MOECC upon finalization of the above-noted public review process, signifying completion of the Addendum.