APEGBC SUSTAINABILITY POLICY

Preamble

As much as any human endeavour, the practice of engineering lies at the interface between the human condition and the enveloping ecosystem. Our task is to design and build the many support systems that provide for human needs and wants. Until the last half of the 20th century, that task was undertaken with little regard for the surrounding world. However, with population growth and the evolution of technology, the human "footprint" has grown too large. There is concern that today's actions will seriously undermine conditions for those yet to be born. Thus, society and in particular, the engineer within, is now faced with a new challenge, that of providing for "the needs of the present without compromising the ability of future generations to meet their own needs."[1] This is the challenge of sustainable development.

Taking up this challenge and building on the APEGBC Code of ethics, in 1995 the Council of the Association of Professional Engineers and Geoscientists of BC approved and published the "Guidelines for Sustainability."

Guidelines For Sustainability

Within the scope of a Member's task and work responsibility each Member, exercising professional judgment, should:

1) Develop and maintain a level of understanding of the goals of, and issues related to, sustainability.

2) Take into account the individual and cumulative social, environmental and economic implications.

3) Take into account the short- and long-term consequences.

4) Take into account the direct and indirect consequences.

5) Assess reasonable alternative concepts, designs and/or methodologies.

6) Seek appropriate expertise in areas where the Member's knowledge is inadequate.

7) Cooperate with colleagues, clients, employers, decision-makers and the public in the pursuit of sustainability.

[1] WCED 1987, p. 8.

In the eight years since, much experience has been gained in terms of what this means in engineering practice. This Policy is intended to reflect that gain in knowledge and continue the leadership role that APEGBC has played in translating concepts of sustainability from theory to practical application.

Proposed APEGBC Sustainability Policy

Proposed Sustainability Policy

The Association of Professional Engineers and Geoscientists of B.C. is committed to engineering practice that is specifically aimed at contributing positively and simultaneously to human and ecosystem wellbeing over the long term.

Though values vary greatly in detail within and between cultures, at the heart of the concept of sustainability there is a fundamental, immutable value set that is best stated as "parallel care and respect for the ecosystem and for the people within."[2] From this value set emerges the goal of sustainability: to achieve human and ecosystem wellbeing together. It follows that the "result" against which the success of any engineering design should be judged is the achievement of, or the contribution to, human and ecosystem wellbeing together.

Seen in this way, the concept of sustainability is much more than environmental protection in another guise. It is a positive concept that has as much to do with achieving wellbeing for people and ecosystems as it has to do with reducing stress or impacts.

In short, it implies the need for any engineering design or project to seek a net environmental and human benefit (or in other words, maintain or improve human and ecosystem wellbeing) if it is to be considered as contributing to sustainability. Conversely, if that engineering design leads to a net degradation of human and ecosystem wellbeing, it must be described as reducing the potential for sustainability. In such cases, if the decision to proceed is made, decision-makers, other interests, and the public should understand the implications from a sustainability perspective.

Taken together, these ideas veer sharply away from thinking in terms of a "trade-off," human vs. ecosystem wellbeing. There are obviously hundreds of small trade-offs in any practical application: between interests, between components of the ecosystem, across time, and across space. However, in a macro sense, the idea of sustainability calls for each of human and ecosystem wellbeing to be maintained or improved over the long term. Maintaining or improving one at the expense of the other is not acceptable from a sustainability perspective because either way, the foundation for life is undermined.

[2] NRTEE, 1995.

The above 'positive contribution to sustainability' criterion is different from though built upon the 'mitigation of adverse effects' criterion that is the focus of traditional environmental and social impact assessments. The implications of the shift are two-fold. On the one hand, the positive orientation opens the door to a much fuller recognition of the benefits that result from engineering activities than has traditionally been the case with impact assessment approaches. On the other, the same positive orientation sets the bar higher – it is harder to demonstrate a contribution than it is to mitigate a negative.

These assertions do not negate the fact that the work of engineers can cause impacts or that human and/or ecosystem wellbeing might be degraded and permanent ecosystem or social change might occur in the vicinity of any given project site. However, when the full life cycle of projects/operations and the products and/or services that result are considered, a net positive contribution to human and ecosystem wellbeing should be realized. If not, the engineering design or project will not be contributing to sustainability.

Proposed APEGBC Goals for Sustainability

In pursuing this Policy, the Association itself, and members of APEGBC will be guided by the following goals:

1. ***Engagement:*** To seek the use of engagement processes for any project or use of engineering services that:
   a. ensure all affected communities of interest[3] have the opportunity to participate in the decisions that influence their own future; and
   b. are understood, agreed upon by implicated communities of interest, and consistent with the legal, institutional, and cultural characteristics of the community in question.

2. ***People:*** To seek an improvement in people's well-being (taking into consideration all communities of interest) through out the full project life cycle.

3. ***Environment:*** To seek a net improvement in the health and integrity of implicated ecosystems over the long term.

4. ***Economy:*** To conduct business in a way that:
   a. assures the financial health of any project and maximizes traditional shareholder value; and

[3] ***Communities of Interest*** include any interest that might be implicated by a project. Such interests might include: engineers, their clients, government (local, regional, provincial, federal); First Nations; local communities; organizations of civil society (faith, environment, social justice, politics, education and research (including teachers, students, and researchers), health, community development and housing, business and professional organizations, organized labour, industry associations); service support companies, the financial services industry and Future Generations. Mapping them out helps ensure that all implicated interests are brought into the process including those that might be disadvantaged by reason of, for example, minority status, gender, ethnicity, or poverty.

b. contributes to the long-term viability of the local and regional economy in ways that will help ensure sufficiency for all and provide specific opportunities for the less advantaged.

5. ***Traditional and Non-market Activities:*** To conduct business in a way that contributes to the long-term viability of traditional and non-market activities in the implicated communities and regions.

6. ***Institutional Arrangements and Governance***. To work with all implicated communities of interest including government and local citizens to ensure that the institutional arrangements and systems of governance are in place to provide a reasonable degree of confidence that the capacity to address project consequences will be in place through the full project life cycle from early design through to post-closure.

7. ***Overall Integrated Assessment and Continuous Learning***. To ensure that an overall assessment is periodically made that brings together:
   a. consideration of all reasonable activity configurations and designs (including the no-go option);
   b. consideration of the need for the activity, as well as the commodity or service being produced; and lastly,
   c. a synthesis of all the factors raised in these goals in an overall design check and long term assessment of contribution to sustainability.