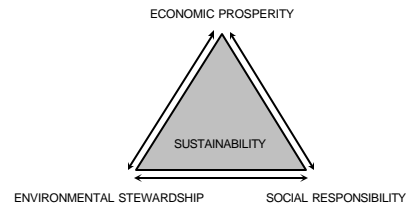


THE SOUTHERN CROSSING PIPELINE PROJECT

• *The Successful Application of Sustainability Principles In Natural Gas Pipeline Construction*

One of the underlying principles of the Southern Crossing Pipeline (SCP) Project was to build a natural gas transmission pipeline in such a manner that the Triple Bottom Line of Sustainability was achieved in both the short-term and the long-term. The Triple Bottom Line entails:

- **Environmental Stewardship**
- **Social Responsibility**
- **Economic Prosperity**



In order to achieve this vision, BC Gas undertook the following:

- A thorough Public Consultation Program that resulted in several improvements to the project.
- Preparation of detailed Environmental and Socio-Economic Impact Assessment and Cumulative Impact Assessment that examined both Direct and In-Direct impacts.
- Comprehensive review of the project in conjunction with the BC Environmental Assessment Office, the Canadian Environmental Assessment Agency, and other departments of government; the examination included a discussion of project alternatives, including routing changes, to minimize environmental and social impacts.
- Preparation of an Environmental Protection Plan that provided the vision and tools for ensuring environmental protection and impact avoidance and achieving sustainability goals.
- Approval of the project in a single government review stage attesting to the completeness of the plans and programs put forward by BC Gas.
- A diverse group of professional and technical experts collaborated on the design and construction of the project, including, among others:
 - Professional Engineers,
 - Professional Geoscientists,
 - Professional Foresters,
 - Professional Biologists,
 - Professional Agrologists,
 - Professional Planners,
 - Licenced Archaeologists,
 - Applied Science Technologists,
 - Licenced Surveyors,
 - Licenced Pilot, and
 - Lawyers.
- BC Gas empowered the project team members to perform their duties in a sustainable manner from the project design, through waste handling and facilitating a "green-office" strategy (including the field operations).

Specific results and highlights of the implementation of the **ENVIRONMENTAL STEWARDSHIP GOALS** were:

1. Installing the pipeline across 49 fish-bearing streams with minimal impact to fish.
2. Maintaining a suspended sediment concentration of less than 25 mg/L on most fish-bearing crossings during pipeline placement.
3. Successfully completing a Super-Flumed river crossing with the largest flow undertaken in Canada (greater than 10.5 m³/sec).

4. Conserving and replacing in excess of 480,000 m³ of topsoil on agricultural land in order to sustain soil productivity.
5. Planting in excess of 48,000 willow, alder and cottonwood stakes in riparian habitat to sustain stream productivity including in excess of 25,000 live stakes used for bioengineering on several watercourses.
6. Seeding (ground and aerial) in excess of 45,000 kg of up to 10 unique grass seed mixtures including 1100 kg of native grass species, formulated for the ecological characteristics of the area.
7. Planting in excess of 60,000 conifer seedlings to sustain forest productivity.
8. Installing in excess of 8,000 m of diversion berms and 2,000 m of silt fencing to control slope erosion at watercourse crossings.
9. Moving water from one hydro-test pipe section to the next in order to significantly reduce the amount of water required.
10. Building the project through the very dry South Okanagan Ecosystem that is considered to contain the greatest number of rare and endangered wildlife species in Canada with minimal and only temporary impact to their habitat.

Highlights of achieving the **SOCIAL RESPONSIBILITY GOALS** were:

1. A well-balanced and significant First Nations involvement in the planning and implementation of the project.
2. Providing in excess of \$60 million in local expenditures for labour and goods and services.
3. Utilizing existing accommodation and services, including pipe stockpile sites, in communities along the pipeline route in order to avoid creating short term impacts related to waste management and resource use.
4. Selecting the route for the pipeline that minimized environmental and socio-community impact and maximizing the use of existing rights-of-way.
5. Implementing follow-up monitoring programs that will be active for a minimum of five years following construction to measure the success of the environmental protection measures and to implement additional measures where necessary.
6. Designing and implementing a Purchasing Policy that encouraged the use of local and regional labour forces, including First Nations, in the planning, construction and operation of the SCP Project.

Highlights of achieving the **ECONOMIC PROSPERITY GOALS** included:

1. Providing a secure natural gas supply to BC Gas customers that will meet the growing need for peak day and seasonal gas requirements.
2. An expenditure of approximately \$190 million in BC on labour, and goods and services.
3. An increase to the Provincial Gross Domestic Product of over \$250 million.
4. Project expenditures providing approximately 900 person-years of direct employment, including 220 person-years in the local area of the project. Employment through indirect and induced effects are estimated to include 2,418 person-years, including 284 person-years in the local area.
5. Household income is estimated to have increased by over \$211 million in BC, including approximately \$40 million in the local area.
6. Provincial Government revenues, mainly from personal and corporate income taxes, estimated at \$17.5 million.
7. Federal Government revenues, mainly from personal and corporate taxes, estimated at \$23 million.
8. Municipal and Regional Governments annual property taxes of approximately \$3.2 million.
9. BC Gas annual expenditures of approximately \$340,000 on the operation of the pipeline.