
**Seven Mile Dam – Dam Safety Improvements Project
Major Capital Project Plan**

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1.0 OBJECTIVES OF THE PROJECT

1.1 The Project Objective

The project under consideration in this Major Capital Project Plan is the design and construction of the Seven Mile Dam Safety Improvements to reduce the risk of dam failure, preserve one of our core generating assets and comply with current safety standards.

1.2 Background and status

The Seven Mile dam and power plant came into service in 1979 and comprises a concrete gravity dam, a spillway and a four-unit powerhouse. While the facility was designed and built to the dam safety standards and criteria in effect at that time, the standards and criteria have evolved since then, particularly with respect to earthquakes.

A dam safety deficiency investigation undertaken as part of our Dam Safety Program identified deficiencies at the Seven Mile dam. In 2001, the BC Hydro Board of Directors approved interim project funding of \$19 million to complete the preliminary design studies and install some prototype dam anchors. Specific detailed recommendations for improvements have now been developed along with cost estimates and schedules.

2.0 COSTS AND BENEFITS OF THE PROJECT

2.1 Costs

In May 2002, the Board of Directors approved an additional \$81 million for a project total of \$100 million to implement and complete the improvements. The work includes improvements to the spillway, dam stability and dam safety systems and is scheduled for completion by early 2005.

2.2 Benefits

The improvements will protect the overall investment in the Seven Mile Generating Station (including Unit 4 that is under construction). Seven Mile Dam Safety improvements will ensure that current dam safety practice requirements are met and the risks to life, environmental damage and financial loss are mitigated resulting in an improvement to public and environmental safety.

3.0 RISKS ASSOCIATED WITH THE COSTS AND BENEFITS

3.1 Risks Associated with Costs

The potential for capital cost increases is mitigated by the establishment of strong project management and capital cost controls. The project design has been reviewed by internal and external specialists and an external Advisory Board comprising three internationally recognized experts. The British Columbia dam safety regulator has also been kept fully apprised of the project design.

3.2 Risks Associated with Benefits

The benefits are delivery of the expected improvements to life safety, and mitigation of environmental damage and financial loss associated with scope and on time delivery of the project. Risks associated with the benefits have been identified and mitigated in accordance with BCH standards of project management and reflected in the definition, design and implementation of the planned dam safety improvements. In particular, the project plan addresses and mitigates implementation risks impacting the delivery of the expected benefits including public and regulatory acceptance of the proposed solution, on time delivery and meeting dam safety and environmental standards during and after construction.