



IRRICAN POWER GENERAL OVERVIEW

Irrigation development is woven inextricably into the history of southern Alberta and is a major influence on the social and economic fabric of the province. The St. Mary River Project is an extensive irrigation development that collects, stores, and conveys water for over 500,000 acres of irrigated agriculture.

In October 1988, the provincial government introduced the Small Power Research and Development Program. The program assured a guaranteed price and market for power, thus making small power projects in Alberta viable.

In order to benefit from this program, the Irrigation Canal Power Cooperative Ltd. (Irrican Power) was formed to develop hydropower projects on the existing water conveyance infrastructure in southern Alberta. Irrican is a cooperative subject to the laws of Alberta. Its members are the Raymond Irrigation District and the St. Mary Irrigation District. The common thread between both of these irrigation districts is that they both draw water from the St. Mary Main Canal. It is on this canal that the greatest potential for hydropower development exists. The power produced at the three Irrican plants is Eco-Logo certified as green power.

Raymond Reservoir Hydroelectric plant

This plant is located on the St. Mary River Irrigation Project Main Canal at Raymond Reservoir and came online on May 17, 1994. The project cost totaled \$26,800,000. The plant features a 4.0m diameter and 764m long steel Penstock, a Kaplan Turbine with nameplate capacity of 20.5mw; and 24,000hp at 44m head, and a 11.3 m³ /s to 56.6 m³ /s (400 to 2000 cfs) operating range.



Chin Chute Hydroelectric plant

Located on the St. Mary River Irrigation Project Main Canal at Chin Reservoir, the Chin Chute hydroelectric plant came online on June, 10, 1994. The total project cost was \$17,800,000. Specifications include a 3.5m diameter, 209m long, Steel Penstock, a Francis Turbine with 1.4mw and 15,000hp at 40.5m head, nameplate capacity, and an operating Range between 11.3 m³ /s to 56.6 m³ /s (400 cfs to 1100 cfs).



Drops 4,5 and 6 Hydroelectric plant

Located on the St. Mary River Irrigation Project Main Canal west of the Town of Raymond, the plant came online on July, 2, 2004. The total cost of the project was \$14,800,000 and includes a 4.1m diameter, 40m long, concrete Penstock, an 'S' Type Kaplan Turbine with a nameplate capacity of 6.9mw, and 9,000hp at 15.2m head, and an operating range of 11.3 m³ /s to 51 m³ /s (400cfs to 1,800cfs).

