



## **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 approximately 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 for a period of 20 years, thus ensuring the viability of small power projects in Alberta.

In order to benefit from this program the Irrigation Canal Power Cooperative Ltd. (Irrican Power) was formed to develop hydropower projects on the existing irrigation water conveyance infrastructure in southern Alberta. Irrican is a cooperative subject to the Alberta Cooperatives Act. Its members are the St. Mary River Irrigation District and the Raymond Irrigation District. The common thread between these two irrigation districts is that they all draw water from the St. Mary Main Canal. The power produced at the two Irrican plants is Eco-Logo certified as green power.

### **Raymond Reservoir Hydroelectric plant**

Located on the St. Mary Project Main Canal at Raymond Reservoir.

- Online May 17, 1994 with a total cost \$26,800,000
- Steel Penstock (4.0 m diameter, 764 m long)
- Vertical Kaplan Turbine
- Nameplate capacity of 18 MW (24,000 HP) at 44 m head
- Operating Range 11.3 m<sup>3</sup>/s to 56.6 m<sup>3</sup>/s (400 cfs to 2000 cfs)



### **Chin Chute Hydroelectric plant**

Located on the St. Mary River Irrigation District Main Canal at Chin Reservoir.

- Online April 21, 1994 with a total cost \$17,800,000
- Steel Penstock (3.5 m diameter, 209 m long)
- Vertical Francis Turbine
- Nameplate capacity 11.4 MW (15,000 HP) at 35.9 m head
- Operating Range 11.3 m<sup>3</sup>/s to 56.6 m<sup>3</sup>/s (400 cfs to 1100 cfs)



### **Drops 4, 5 and 6 Hydroelectric plant**

Located on the St. Mary River Irrigation District Main Canal west of the Town of Raymond.

- Online July 2, 2004 with a total cost \$14,800,000
- Concrete Penstock (4.1 m diameter, 40 m long)
- Horizontal 'S' Type Kaplan Turbine
- Nameplate capacity of 7 MW (9,000 HP) at 15.2 m Head
- Operating Range of 11.3 m<sup>3</sup>/s to 51 m<sup>3</sup>/s (400 cfs to 1,800 cfs)

