



DROPS 4,5, AND 6 POWER PLANT

The Drops 4,5, and 6 power plant is located on the SMRID Main Canal west of the Town of Raymond on the north boundary of the Milk River Ridge. There are a total of twelve drop structures located on this reach of canal. The drop structures can be developed individually or in combinations of two or three in order to make best use of the available resource. Power can normally be produced during the irrigation season, between April and October of each year, with peak energy production occurring between June 15 and August 15.

The combination of Drops 4, 5, and 6 into a single development presents a viable opportunity to take advantage of the Green Power potential on the Main Canal. The plant went online July, 2, 2004 and utilizes a horizontal 'S' Type Kaplan Turbine, coupled with a GE electric synchronous generator that was manufactured in Peterborough, Ontario. The Kaplan turbine (made in France by ESAC) has adjustable blades and is suited to a wide range of flows. The main design characteristics of the Drops 4,5, and 6 plant are:

- combining the Main Canal Drops 4,5 & 6 to create a drop of 15.2 m, (50 feet).
- a power canal (51 m³/s, or 1800 cfs) adjacent to the main canal (88 m³/s, or 3100 cfs).
- a power plant midway with a capacity to generate 6.9 mw.

This is Irrican Powers third hydroelectric plant. Irrican Power is made up from the three Irrigation districts drawing water from the St. Mary River Irrigation Projects main canal. They Include Raymond Irrigation District, St. Mary River Irrigation District, and the Taber Irrigation District.

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Head Available	15.2 meters
Design Flow Rate	44 m ³ /s

