

## RAVINE DU SUD HYDRO POWER STATION

On the Ravine du Sud there exists the possibility of constructing a hydro power station of the run-off the river type. This facility will be referred to as the Ravine du Sud (RS) power plant.

The RS project will consist of a Tyrolean dam that will divert the flow to a silt trap and a forebay connected to a 3,000 meters long glass reinforced pipe (GRP) penstock of 1,219 mm in diameter. The penstock will bifurcate into a two branches manifold that will provide the necessary flow to drive



two Francis type turbines rated at 900 KW each. The proposed power plant will be connected to an existing 23 KV line via a high tension line of the same 2,000 meters long.

The hydraulic and hydrologic analyses have been performed for this project and the installed capacity has been estimated at 1,800 KW. The minimum yearly energy production is estimated at 7,586,378 KWH, and the maximum at 14,004,862 KWH. The construction cost has been estimated at \$9,800,000 which also includes cost on financing and contingencies. The project is summarized in the table below. A preliminary financial analysis has been made on the mean annual energy production of 11,329,218 KWH, and a project cost of \$9,800,000. The result of the financial analysis shows a satisfactory positive cash flow and IRR on the equity.

The project preliminary studies have been performed and the feasibility verified both by the United Nations Environmental Program (UNEP) and Norwegian engineers. The environmental impact studies have been completed, and submitted to the Ministry of Environment, and the Ministry of Agriculture. Following the approval of the environmental impact studies, we have applied and obtained the water usage permit.

## RAVINE DU SUD HYDRO POWER STATION PROJECT SUMMARY

RS PROJECT SUMMARY		
PROJECT DATA		
Head	65	m
Flow	4.20	m <sup>3</sup> /s
Maximum Power	1,800	kw
Average Power	1,293	kw
Minimum Power	642	kw
Turbine Type	Francis	
Number of Turbines	2	
Canal Length	20	m
Penstock Length	3,000	m
Penstock Diameter	1.219	m
Transmission Line Length	2.00	km
Min. Yearly Energy	7,586,378	kwh
Mean Yearly Energy	11,329,218	kwh
Max. Yearly Energy	14,004,862	kwh





DAM  
73°53'05" N 18°21'50" W

PENSTOCK  
3,100 M OF 1200 MM PIPE

POWERHOUSE  
73°52'12"N 18°20'29"W



# RAVINE DU SUD HYDROPOWER PROJECT

