

Project Proposal N 11

Project title	BAYANTES HYDRO POWER PLANT, 470 KW
Project background, project outline:	<p>In the “National Program for Renewable Energy /2005-2020/” approved by the State Great Khural’s Resolution No 32 June 9, 2005, it was pointed out to perform feasibility studies of hydropower plant construction for electrification of selected 16 soum centers by using hydro energy resource.</p> <p>Pre-feasibility study of the proposed Bayantes hydropower project was carried out within the framework of “Support of Renewable Energy, Mongolia” project supported by GTZ.</p>
Production scale	<p>To be estimated 470 kW nominal power (electric)</p>
Market orientation and market analyses, market survey:	<p>According to the National Program for Renewable Energy, same approach could be applied to the electrification of 15 soum centers in Mongolia.</p> <p>Peak load of Bayantes soum centre is only 138 kW, therefore excess power of the hydropower plant to be sold to neighboring five soum centers through a local distribution grid of which need to be built in the future.</p>
Total investment:	<p>1.28 million US\$</p>
Requested Investment from foreign partners:	<p>Loan/private investment BOT loan with an interest rate of 5%</p>
Project venue, construction venue:	<p>Tes river, Bayantes soum, Zavkhan aimag (49° 44’ 40” N latitude and 96° 26’ 08” E longitude)</p>
Occupation area and construction area:	<p>470 kW hydropower plant with a 6 km long transmission line</p>
Estimated economic benefit	<p>Estimated annual electricity production – 1.55 GWh; O&M cost - 4% of the initial investment per year; IRR - 7%; NPV@5% - 361,684 US\$.</p> <p>Estimated annual average revenue 232,435 US\$ is based on a standard tariff of 10 US\$ cents per kWh (net sales price of power station, excluding VAT, other taxes, e.g.). A tariff increase to 14 US\$ cents over 10 years and to 19 US\$ cents over 20 years (net income power producers) has been anticipated.;</p>