Analysis & Redesigning of Watermills for Sustainable Development of Rural Areas of Uttarakhand

LIST OF GRAPHS

List of Curves / Graphs

Capacity Addition Target V/s Achieved in MW Demand and Supply gap (MW) Districtwise Population of TraditionalWatermill Overall status of Updraded and Traditional Watermill Districtwise Population of Upgraded Watermill Overall Status of Watermills in Uttaranchal District wise Status of Watermills in Uttaranchal Current Usage of Watermills Districtwise Usage Pattern of Watermills Working condition of watermills Districtwise working condition of watermills Working Duration of Watermills Distrctwise Working condition of watermill Potential for Up Gradation of Watermills Districtwise Potential for Up Gradation of Watermills Distance of Watermills from Village Districtwise Status for 'Distance of Watermills from Village' Distance of Watermills from Road Head Districtwise Status for 'Distance of Watermills from Road Head' Districtwise Status of Village Electrification in Uttaranchal Districtwise Status of Electrification in Uttaranchal Cumulative Average Annual Discharge Average Annual Discharge from 0 to 0.2 Cumec Average Annual Discharge from 0.2 to 0.4 Cumec Average Annual Discharge from 0.4 to 0.6 Cumec Cumulative Status of Available Head Districtwise Status of Available Head

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Districtwise Status for 'Distance of water Mills from Nearest Village'

Districtwise Status for 'No of Households Within 500 m Cumulative Status of Reasons for Non Functioning of Watermill Efficiency V/s Discharge Curve' - Crossflow turbine testing 'Efficiency V/s Loading Curve' - Crossflow turbine testing Efficiency V/s Discharge Curve' - Axialflow turbine testing 'Efficiency V/s Loading Curve' – Axialflow turbine testing 'Efficiency V/s Discharge Curve' - Peltonwheel turbine testing 'Efficiency V/s Loading Curve' - Peltonwheel turbine testing 'Penstock Diameter v/s Discharge Curve for 3m Head 'Penstock Wall thickness v/s Discharge Curve for 3m Head 'Diameter of Shaft v/s Head Curve' for different Heads 'Specific Speed v/s Jet Ratio' Curve 'Efficiency of Turbine v/s Head' Curve 'Efficiency of turbine v/s No of blade' Curve Comparison curves for Efficiency of Watermill Efficiency of Improved and our Watermill for different discharge conditions Efficiency Curve with & without Jet control