

**JAPAN INTERNATIONAL COOPERATION AGENCY
VICE MINISTRY OF ENERGY AND HYDROCARBONS
THE REPUBLIC OF BOLIVIA**

**THE STUDY ON RURAL ELECTRIFICATION
IMPLEMENTATION PLAN BY
RENEWABLE ENERGY
IN
THE REPUBLIC OF BOLIVIA**

FINAL REPORT

APPENDIX III AND IV

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Abbreviations and Acronyms

(1) Domestic Organization

CINER	Centro de Información en Energías Renovables
CNDC	National Committee of Electricity Supply
COSUDE	Agencia Suiza para el Desarrollo y la Cooperación
CRE	Cooperativa Rural de Electrificación, Santa Cruz
DUF	Directorio Unico de Fondos
ECOTEC	Ecotecnologías Energéticas y Productivas
EDU	Energy Development Unit, VMEH
EDESER	Empresa de Servicios
EFP	Facilitator Team of PRONER Program
ELECTROPAZ	Electricidad de La Paz S.A.
ELFA	Empresa de Luz y Fuerza Aroma
ELFEC	Empresa de Luz y Fuerza de Cochabamba
ELFEO	Empresa de Luz y Fuerza Electrica de Oruro, S.A.
ENDE	National Electric Company
ENERGÉTICA	Energía para el Desarrollo
ESAND	Energía Solar Andina S.R.L.
FNDR	National Fund of Regional Development
FPS	National Fund of Productive and Social Investment
IGM	Instituto Geográfico Militar
IHH	Instituto de Hidraulica e Hidrologia, UMSA
INE	National Statistics Institute
MDE	Ministry of Economic Development
MDSP	Ministry of Sustainable Development and Planning
NOGUB	Programa de Apoyo a Organizaciones no gubernamentales
PRONER	National Program of Rural Electrification
SE	Superintendencia de Electricidad
SENAMHI	Servicio Nacional de Meteorologia e Hidrologia
SERGEOMIN	Servicio Nacional de Geologia y Minería
SERNAP	Servicio Nacional de Areas Protegidas, MDSP
SIN	National Interconnected System
STI	Interconnected Trunk System
TDE	Transportadora de Electricidad
UMSA	Universidad Mayor de San Andres

VIPFE	Vice Ministry of Public Investment and External Financing
VMARNDF	Vice Ministry of Environmental Natural Resources and Forestry Development
VMEH	Vice Ministry of Energy and Hydrocarbons

(2) International or Foreign Organization

AECI	Spanish International Cooperation Agency
ESMAP	Energy Sector Management Program, World Bank
GEF	Global Environmental Facility, World Bank
GTZ	German Technical Cooperation
IDB	Inter-American Development Bank
JICA	Japan International Cooperation Agency
KfW	German Financial Cooperation
NRECA	National Rural Electric Cooperative Association
UNDP	United Nations Development Program
UNEP	United Nations Environmental Program
UNDCP	United Nations Drug Control Program
USAID	The US Agency for International Development, USA
WB	World Bank

(3) Others

GDP	Gross Domestic Product
NGO	Non Governmental Organization
O&M,O/M	Operation and Maintenance
VAT	Value Added Tax

(4) Technical Term

AC	Alternative Current
CO ₂	Carbon Dioxide
DC	Direct Current
FC	Fuel Cell
Grid	Transmission Line
H	Head (m)
Hyd	Hydraulic Generator
LDC	Load Dispatching Center
MHP	Micro Hydro Power

PV	Solar Photovoltaic Cell
Q	River Flow Discharge
WG	Wind Generator

(5) Unit

mm	millimeter
m	meter
km	kilometer
El.m	Elevation in meter
l/s	liter per second
m/s	meter per second
m ³ /s	cubic meter per second
mm ²	square millimeter
km ²	square kilometer
mg	milligram
ton, t	metric ton
V	Volt
W	Watt
kW	kilowatt
MW	Megawatt
Wp	Watt peak
kWp	kilowatt peak
GWh	Gigawatt hour
kWh	Kilowatt hour
MVA	Megavolt ampere
KVA	Kilovolt ampere
Ah	ampere hour
Hz	Hertz
RPM	Revolution (revs) per minute
%	percentage

(6) Currency

Bs	Boliviano, Bolivian Currency
US\$	US Dollar
M.US\$	Million US Dollar
US ¢	US cent