***VI. ANNEX:***

**Country Report**

**Information and Data on Basic Energy and Power of your Country**

**All applicants** are expected to fill the form and submit it **with the Application Form** to JICA office in your country.

Country:

Name:

1. Utility
2. Major Electric Power Utilities (Public or Private)
3. System of Electric Power Utilities

Situation of deregulation

Situation of unbundling the transmission and distribution sectors

1. Availability of Energy Resources
2. Reserve of fossil energy (if endowed) in Year 20?? (Specify the year of data)

|  |  |  |
| --- | --- | --- |
| Fossil Energy | Estimated Amount of Reserve | Unit |
| Coal |  | Ton |
| Oil |  | Barrel |
| Natural Gas |  | m3 |

1. Potential of Renewable Energy

|  |  |  |
| --- | --- | --- |
| Forms of Renewable Energy | Estimated Amount of Potential | Unit |
| Biomass in Year 20?? ( Specify the year of data) |  | Ton or m3 |
| Hydropower in Year 20?? ( Specify the year of data) |  | MW |

|  |  |  |
| --- | --- | --- |
| Form of Renewable Energy | Annual Average Irradiation | Unit |
| Photovoltaic |  | kWh/m2/day |

|  |  |  |
| --- | --- | --- |
| Form of Renewable Energy | Annual Average Wind Speed with Specific Site Names  (Please select several representative sites) | Unit |
| Wind Power |  | meter/Second |

1. Annual Production of Fossil Energy (if produced)

|  |  |  |  |
| --- | --- | --- | --- |
| Forms of Fossil Energy | Amount of Annual Production | Year of Production | Unit |
| Coal |  |  | Ton |
| Oil |  |  | Barrel |
| Natural Gas |  |  | m3 |

1. Primary Energy Supply[[1]](#footnote-1) by Forms of Energy in Year 20?? (Specify the year of data)

Unit: Joule or specify unit

|  |  |  |  |
| --- | --- | --- | --- |
| Forms of Energy | | Primary Energy Supplied | Percentage |
| Fossil  Energy | Coal |  |  |
| Oil |  |  |
| Natural Gas |  |  |
| Sub-Total | |  |  |
| Natural  Energy | Hydro |  |  |
| Biomass |  |  |
| Solar |  |  |
| Wind |  |  |
| Geothermal |  |  |
| Sub-Total | |  |  |
| Nuclear | |  |  |
| Total | |  | 100 % |

1. Final Energy Consumption[[2]](#footnote-2) by Sectors in Year 20?? (Specify the year of data)

Unit: Joule or specify unit

|  |  |  |
| --- | --- | --- |
| Sectors | Final Energy Consumption | Percentage |
| Industry Sector |  |  |
| Social and Household Sector |  |  |
| Transportation Sector |  |  |
| Total |  | 100 % |

1. Installed Capacity of Power Generation Facilities (National Grid Connected) in a year of 20?? (Specify the year)

|  |  |  |
| --- | --- | --- |
| Generation Facilities | Installed Capacity (MW or kW) | Share (%) |
| **Hydropower[[3]](#footnote-3) in Total** |  |  |
| Conventional Hydropower over 10 MW |  |  |
| Small Hydropower between 10 MW and 1 MW |  |  |
| Mini Hydropower between 999 kW and 100 kW |  |  |
| Micro Hydropower less than 99kW |  |  |
|  |  |  |
| **Thermal Power in Total** |  |  |
| Diesel Power |  |  |
| Coal fired Steam Turbine |  |  |
| Oil fired Steam Turbine |  |  |
| Gas fired Steam Turbine |  |  |
| Gas Turbine (Single Cycle) |  |  |
| Gas Turbine (Combined Cycle) |  |  |
|  |  |  |
| **Renewable Energy except for hydropower in Total** |  |  |
| Grid connected Photovoltaic Systems |  |  |
| Grid connected Wind Power |  |  |
| Grid connected Biomass Generation |  |  |
| Other forms of grid connected renewable energy (Please specify) |  |  |
|  |  |  |
| **Overall Total** |  |  |

|  |  |
| --- | --- |
| Generating Capacity per Capita（kW/Capita） |  |

1. Electricity Generated by Grid Connected Generation Facilities in Year 20?? ( Specify the year of data)

|  |  |  |
| --- | --- | --- |
| Generation Facilities | Electricity Generated (MWh) | Share (%) |
| Hydropower |  |  |
| Thermal Power |  |  |
| Renewable Energy except for Hydropower |  |  |
| Total |  | 100 % |

1. Electricity Consumed by Sectors in Year 20?? (Specify the year of data)

|  |  |  |
| --- | --- | --- |
| Sectors | Electricity Consumed (MWh) | Percentage  (%) |
| General Household |  |  |
| Commercial |  |  |
| Industry |  |  |
| Agriculture |  |  |
| Government |  |  |
| Total |  | 100 % |

|  |  |
| --- | --- |
| Sales per Capita （kWh/Capita） |  |

1. Structure of Power System Supervision and Control
2. Frequency Control

Centralized Operation at CLDC (Central Load Dispatching Center) or Not?

1. Power System Control

Supervised voltage level and Control center supervising

1. Manufacturer of SCADA System
2. Combined Power System Losses in Year 20?? (Specify the year of data)

|  |  |
| --- | --- |
| 1. Annual Total Electricity generated at generation end by all Power Stations on National Grid | MWh |
| 1. Annual Total Electricity sent out to National Grid | MWh |
| 1. Annual Total Electricity consumed by all Power Stations 【Power Station Own Use】 (A) － (B) = (C) | MWh |
| Power Station own use Rate (C) / (A) X 100 | % |
| 1. Annual Total Electricity sold | MWh |
| 1. Annual Total of Transmission and Distribution Loss 【Transmission & Distribution Loss】 (B) － (D) = (E) | MWh |
| Transmission and Distribution Loss Rate (E) / (B) X 100 | % |

1. Conceptual diagram of power flow from generating facilities to the customers
2. Classification of Voltage for Interconnection (Transmission and Distribution)
3. Transmission Line Route Length (km)

|  |  |
| --- | --- |
| 200kV or over |  |
| Under |  |
| total |  |

1. Distribution Line Route Length (km)

|  |  |
| --- | --- |
| High Voltage |  |
| Low Voltage |  |
| total |  |

1. Household Electrification Rate

|  |  |
| --- | --- |
| National Average of Household Electrification Rate  (=Connected Households / Total Number of Households) | % |
| Rural Electrification Rate  (=Connected Households in Rural Area / Total Number of Households in Rural Area) | % |
| Urban Electrification Rate  (=Connected Households in Urban Area / Total Number of Households in Urban Area) | % |

1. Primary energy is the energy that exists in nature without processing for or converting to secondary energy. Primary energy can be divided into three categories, fossil energy, natural energy and nuclear energy. Primary energy supply is the total amount of energy supplied to a nation. [↑](#footnote-ref-1)
2. Final energy consumption is a total amount of energy actuary consumed by the industry sector, the social and household sector, and the transportation sector in a nation as the form of primary energy, or the form of secondary energy that was converted or processed from primary energy. Secondary energy includes petroleum products such as petrol and kerosene, and electricity generated by thermal power. [↑](#footnote-ref-2)
3. Different countries use different definition to categorize hydropower. If your county has its own definition, you can use it and specify the definition in the table. [↑](#footnote-ref-3)