ALTERNATIVE
AND
RENEWABLE ENERGY
POLICY
2011

GOVERNMENT OF PAKISTAN

FOREWORD

Nature has blessed Pakistan with enormous renewable energy potential which can be utilized for power generation and to meet energy needs of the country. The Government of Pakistan (GoP) initiated development of Renewable Energy Sector under a phased, evolutionary approach constituting a strategic policy implementation roadmap to increase the deployment of ARE technologies (ARETs) in Pakistan (ARE Policy 2006). ARE promises a higher proportion of the national energy supply mix and helps ensure universal access to electricity in all regions of the country.

The GOP's strategic objectives of Energy Security, Economic Benefits, Social Equity, Environmental Protection, Sustainable Growth and Gender Mainstreaming, now are further harnessed under the ARE Policy 2011, developed by the Ministry of Water and Power with the support of international agencies including Asian Development Bank (ADB), USAID, UNDP, German Technical Corporation (GTZ), Energia International and with consensus of all relevant stakeholder including provincial governments, private sector and academia. The ARE Policy 2011 will help create a conducive environment for the growth of domestic ARE Sector.

Experience under ARE Policy 2006 coupled with international best practices provide the basis for more comprehensive framework for ARE Policy, 2011. It has an expanded scope encompassing all alternative and renewable energy sources, enhanced financial mechanisms and also addresses areas like rural energy services and bio-fuels. It carries forward most of the liberal and attractive incentives of ARE Policy 2006 to maintain the investors' confidence, and places greater emphasis on aggressive growth of grid-connected ARET applications (e.g. wind farms) as well as a programmatic development of dispersed ARE power generation market (e.g. solar home systems) on more competitive terms.

Salient features of the ARE Policy 2011 include variety of investment options for tapping different ARE resources for on-grid and off-grid applications and also encourages consumer based initiatives. Attractive policy instruments supplement GoP's open door initiatives for private investment in ARE sector in Pakistan as it is envisaged to contribute its share in strengthening and improving the power supply position of the country and help fueling rapid and environmentally sustainable economic growth.

March 2011

Syed Naveed Qamar
Minister for Water and Power

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CHAPTER I INTRODUCTION

1.1 Background

The Policy for Development of Renewable Energy for Power Generation, 2006 (the "**ARE Policy 2006**") introduced Government of Pakistan's (**GOP**) phased program for the development and implementation of Alternative and Renewable Energy (**ARE**) based projects in the country. Initially, GOP introduced strong incentives in order to attract investment, remove barriers to project implementation, and 'hand-hold' pioneering projects through to successful commercial operations. While aiming at achieving certain defined medium-term objectives on the one hand and ensuring continuity on the other, the Policy for Alternative and Renewable Energy, 2011 (the "**ARE Policy 2011**") enumerates the medium-term objectives and provides the roadmap for further realizing the full potential of ARE in Pakistan.

Power generation in Pakistan is sourced through a mix of thermal, hydel and nuclear power plants, with thermal power generation comprising the bulk, followed by hydel and nuclear contributing nominally. Based on relevant international and domestic experience, ARE Policy 2011 provides a comprehensive framework encompassing wider scope for utilization of all ARE sources; not only for the purposes of generation of electricity but also for encouraging recourse and utilization of ARE technology (**ARET**) based applications by commercial and domestic consumers. The measures introduced in the ARE Policy 2011 are expected to set the requisite infrastructure in place so that ARE is fully mainstreamed and integrated within the country's energy planning, economic and social development process for the eventual benefit of the people of Pakistan.

GOP is determined to pursue the stated policy objectives and strategies with the participation and collaboration of the private sector. The goal is to continue the envisaged sustained transition towards greater use of indigenous, clean and abundant ARE resources, which must be tapped in a meaningful and timely fashion and utilized towards the social and economic advancement to assist the country's overall development strategy.

1.2 Legal Framework

Under the prevalent constitutional framework of the country, the Federal Government is envisaged to legislate on the subject of "electricity" whereas, provincial governments have significant role to play in the development of ARE in Pakistan. ARE Policy 2011 is therefore, presenting a coordinated arrangement between GOP and the provinces for the processing of ARE projects in Pakistan.

In early 2011, the Federal Government enacted the Alternative Energy Development Board Act, 2011 (the "**AEDB Act**"), which empowers Alternative Energy Development Board ("**AEDB**") to, *inter alia*, undertake the following responsibilities:

- To develop national strategy, policies and plans for utilization of ARE;
- To evaluate, monitor and certify ARE projects and products;
- To act as the coordinating agency for commercial application of ARET and to interact and coordinate with national and international agencies for the promotion and development of ARE;
- To facilitate power generation through ARE by acting as one-window facility for all investors;
- To set up ARET based power projects on it's own or through joint venture or partnership with public or private entities, and conduct requisite feasibility studies or surveys;
- To assist in the development and implementation of off-grid electrification;
- To make legislative proposals to enforce use and installation of ARET based equipment;
- To provide technical expertise to the Ministry of Environment as the Designated National Authority (**DNA**) in its role under the Clean Development Mechanism (**CDM**).

1.3 Extension of Term of ARE Policy 2006

The ARE Policy 2006 was originally stipulated to be replaced by a longer term policy by June 31, 2008, however the policy was extended and is being replaced by ARE Policy 2011. All existing projects including those which are going to achieve financial close under the ARE

Policy 2006 would have the option to be treated under the framework of ARE Policy 2011 or to continue with terms offered under the previous ARE Policy 2006.

CHAPTER II INSTITUTIONAL FRAMEWORK

2.1 Power Sector

The Ministry of Water and Power acts as the executive arm of the GOP in execution of Federal Government policies and strategy in the power sector. It also coordinates with relevant provincial governments and their agencies in achieving national policy objectives.

The National Electric Power Regulatory Authority (**NEPRA**) set up under the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (known as the "**NEPRA Act**") is the apex regulatory body, which is mandated to act as an independent regulator for the provision of electric power services in Pakistan. The Karachi Electric Supply Corporation (**KESC**) and the eight distribution companies provide distribution services under license from NEPRA. The sole transmission system operator, National Transmission and Dispatch Company (**NTDC**) also licensed by NEPRA transmits power purchased through the Pakistan Power Holding Company Ltd. / Central Power Procurement Agency (**CPPA**) / or any other legislative regime specified by GOP time to time, from GoP owned thermal generation companies **(GENCOs)** and independent power producers (**IPP**s). NTDC is also the System Operator for the secure, safe and reliable operation, control and dispatch of generation facilities as well as the Transmission Network Operator for the operation and maintenance, planning, design and expansion of the national transmission network.

Within the context of ARE Policy 2011, Alternative / Renewable Energy based Independent Power Producers (**ARE-IPP**s) are ARE based power generation companies established for dedicated sale of power under guaranteed agreements with NTDC/CPPA/DISCOs. Likewise, the ARE Distributed Generators (**ARE DGs**) produce power for self use and for sale to bulk consumers/utility under bilateral contract.

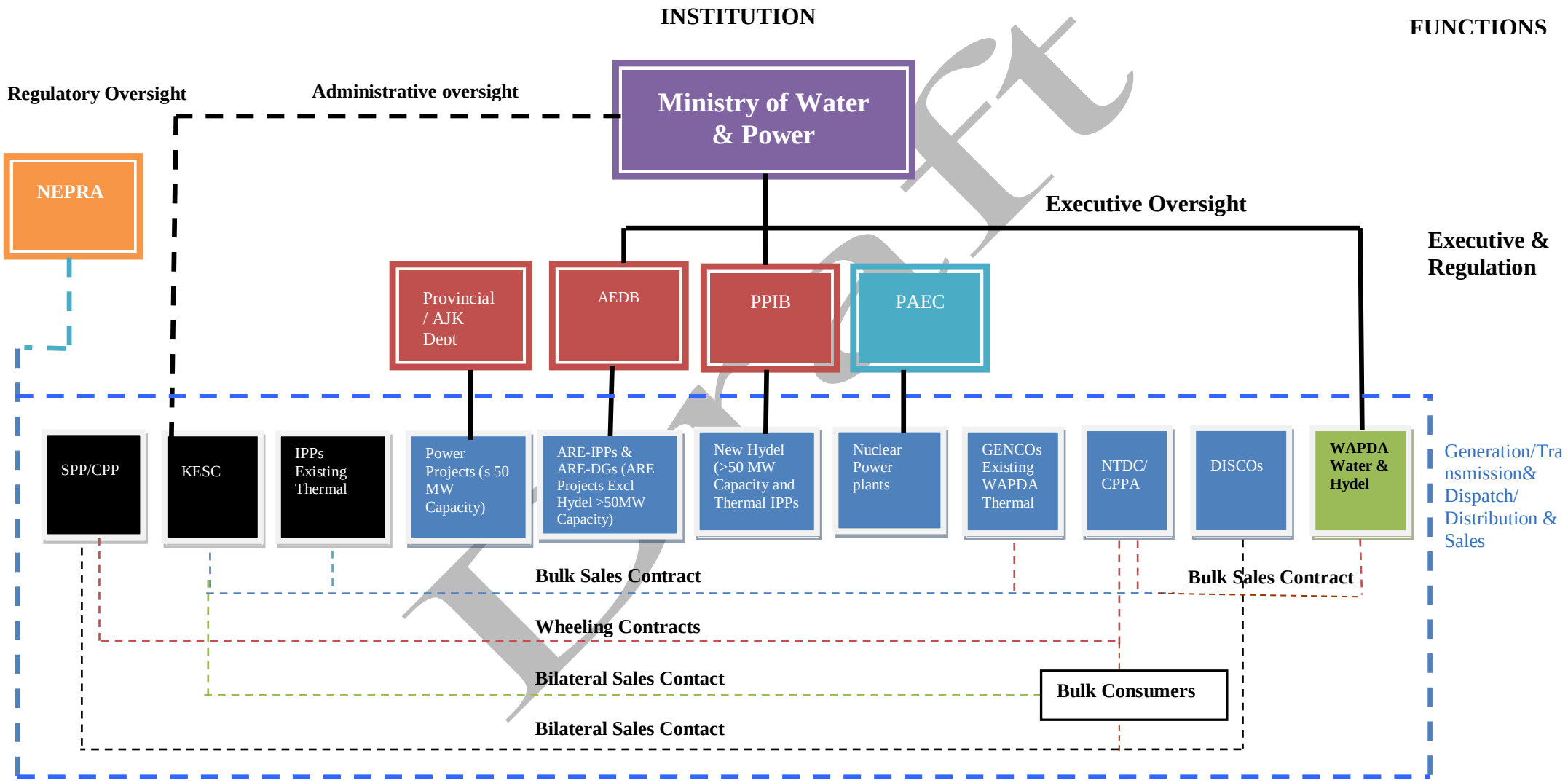
Private Power and Infrastructure Board (**PPIB**), is established as a "one window" facilitator for conventional private power sector generation projects, including hydel projects of above 50 MW

capacity. AEDB works very closely with PPIB to ensure consistency of policy outlook and implementation; however, each organization has distinct role and responsibilities.

The Provincial Governments of Balochistan, Khyber-Pakhtunkhwa, Punjab and Sindh support the development and implementation of ARE projects within their territories. Similarly, the Northern Areas comprising the Gilgit-Baltistan **(GB)** region and the State of Azad Jammu and Kashmir (**AJK**) support development of RE projects through local departments. Additionally, the Board of AEDB also ensures provincial representation for smooth ARE project implementation.

An organogram of the Pakistan power sector highlighting the inter-relation of various agencies is given in **Exhibit 1**.

Exhibit 1: Pakistan's Power Sector Organizations



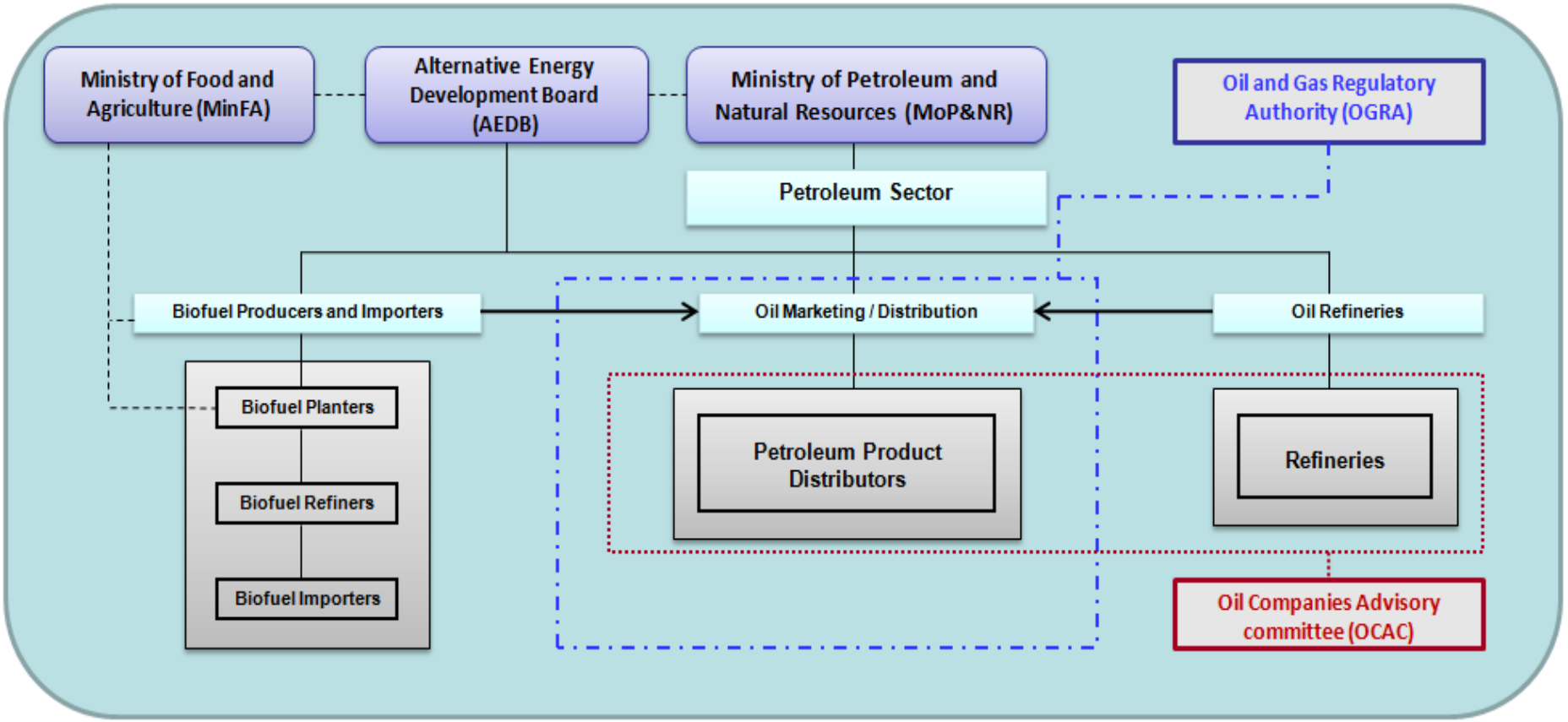
2.2 Bio-Fuel Sector

Ministry of Petroleum and Natural Resources (**MinP&NR**) ensures availability and security of sustainable supply of oil and gas for economic development and strategic requirements of Pakistan. A number of organizations/companies are working under its administrative control notable amongst these are the Hydrocarbon Development Institute of Pakistan (**HDIP**) providing consultancy and laboratory services for the oil and gas industry in diverse fields of its expertise, Oil and Gas Development Company Limited (**ODGCL**) and Pakistan State Oil Company Limited (**PSO**) the two public sector oil and gas exploration and Oil marketing companies, respectively. Oil and Gas Regulatory Authority (**OGRA**) set up under the Oil and Gas Regulatory Authority Ordinance dated 28th March 2002 regulates the midstream and downstream petroleum sector and safeguards public interest by fostering competition, increased private investment and ownership.

Ministry of Food and Agriculture and Livestock (**MinFAL**) is mainly responsible for policy formulation, economic coordination and planning in respect of food grain and agriculture. Main functions of the Ministry include: procurement of food grains, fertilizers; stabilization of import price for agriculture produce; international liaison; economic studies for framing agricultural policies etc. Exhibit 2 illustrates the Institutional organization of Biofuel Programme.

Alternative Fuel Producers (**AFPs**) are those companies established for the purpose of alternative fuel plantation, alternative fuel refining and/or alternative fuel importing in the country.

Exhibit 2: Institutional Organization of Bio-fuel Programme



CHAPTER III SCOPE AND OBJECTIVES

3.1 Effective Date and Scope of ARE Policy 2011

ARE Policy 2011 will become effective from its date of notification. Consistent with the AEDB Act, the ARE 2011 Policy framework includes incentives for all initiatives under the following categories:

- Alternative Fuels
- Renewable Energy
- ARE-Fossil Fuel Hybrid Systems

3.1.1 Alternative Fuel

- Biogas
- Biofuels - including but not limited to ethanol and bio diesel
- Fuel from Waste – including but not limited to refuse derived fuel (RDF), processed agricultural and industrial waste etc.
- Hydrogen

3.1.2 Renewable Energy

- Geothermal
- Hydro – up to 50 MW
- Marine – including Ocean, Wave & Tidal
- Solar – Solar Thermal or Solar PV
- Wind
- Energy from Waste – including but not limited to biomass, municipal solid waste and sewerage

3.1.3 ARE-Fossil Fuel Hybrid

Systems capable of utilizing both conventional fuel and ARE resources having a minimum of seventy percent (70%) share of ARE resource component.

3.2 Resource Potential in Pakistan

Exhibit 3 below provides an indicative summary of the ARE potential in Pakistan.

Exhibit 3: Resource Potential in Pakistan

Resource	Potential
Small Hydro	As per preliminary studies and available data, the potential for small hydro is around *[4,500[1]]* MW.
Wind	Pakistan has total estimated wind power potential of 346,000 MW[2] out of which around 60,000 - 70,000 MW is technically exploitable. The Wind Map of Pakistan indicates major wind corridors in southern Parts of Sindh, North Western parts of Balochistan, Central parts of Khyber Pakhtunkhwa and AJK, with several isolated wind corridors in central and western Punjab, Central and Southern Balochistan and Gilgit Baltistan areas.
Solar: Photovoltaic (PV) and thermal	Pakistan is blessed with solar potential of more than 5-6 kWH/m^2/day of irradiation in many areas. The potential is feasible for both Solar PV and Solar Thermal application. The area with highest solar potential is the province of Balochistan followed by Eastern Sindh and Southern Punjab promising technical and financially viable solar energy projects.
Biomass: Bagasse, rice husk, straw, dung, municipal solid waste, etc.	Pakistan's agricultural and livestock sector produces large amounts of biomass in the form of crop residues and animal waste, such as bagasse, rice husk, and dung, much of which is currently collected and used outside the commercial economy as unprocessed fuel for cooking and household heating. In addition, municipal solid waste produced by a large urban population is presently openly dumped, which could instead be disposed of in proper landfills or incinerated to produce useable methane gas or electricity. This sector has estimated potential of generating 4,000 MW of power.
Geothermal	There are several sites identified in different parts of the country having exploitable geothermal potential. Sites with different ranges of temperature and the pressure underneath the earth surface. The geothermal heat available at these sites can be used for power generation as well as internal heating/cooling purposes. However, exact potential for geothermal heat and power is still to be exploited. This sector has estimated potential of

[1] PPIB
[2] USAID-NREL-AEDB-PMD study conducted in 2006

	generating 2,000 MW of power.
Ocean	Pakistan is blessed with 1,046 km long coastal belt. There are several sites within this belt which can be exploited for power generation. However, exact potential of generating power from ocean is still to be exploited.
Biofuels	Pakistan being the agricultural country is having huge prospects for energy plantation. Around 34 million hectares of marginal land is available in different parts of the country that is best suited for this purpose. This has estimated potential to produce 50 million tones of bio-fuels per annum.

3.3 Policy Goals

Continuing with the policy goals and strategy outlined in the 2006 Policy, the ARE Policy 2011 endeavors to achieve the following:

- To achieve sustained and systematic deployment and growth of ARETs through effective federal and provincial coordination so as to achieve the target as envisaged in the ARE Policy 2011 and ensure universal access of ARETs across the country;
- To provide additional power supplies to help meet increasing national demand;
- Introduce and maintain investor-friendly benefits and incentives to encourage private sector participation and investment in ARE projects with a view, among others, to lower ARE costs and prices through competition in an increasingly deregulated power sector;
- Devise measures to support private sector in mobilizing financing and enabling public sector investment in the promotion and development of ARE projects;
- Encourage employment of ARET in off-grid and general households by displacing their dependence upon conventional sources with ARE sources;
- Optimize impact of ARE deployment in underdeveloped areas by integrating ARET based energy solutions and its productive use for income generating activities so as to alleviate poverty and improve livelihood by involving local communities; with special attention to diverse energy needs of men and women;
- Assist in the institutional, technical and operational capacity building of all parties involved in the ARE sector, including development of prototype contractual framework and business models, which may also be used by the Provinces/ AJK/ GB in the development of their respective ARE programs;

- Facilitate in the establishment of domestic ARET manufacturing basis in the country, among others, to lower costs, improve service, create employment and enhance local technical skills without in any way impeding or discouraging foreign investment or collaboration;
- Harmonize efforts of the various GOP and Provincial/ AJK/ GB governmental bodies engaged in ARE and coordinate their efforts in achieving the declared policy objectives.

3.4 Targets

Targets covered under the ARE Policy 2011 are those put forth in official development frameworks and policies and will be amended from time-to-time. Presently, the GOP has set the following targets for the ARE sector:

- At least 5% of total commercial energy supplies through alternative and renewable energy by 2030.

3.5 Investment Structures and Options

GOP encourages all commercially viable investment options for purposes of development of the ARE sector in Pakistan, and these projects will be entitled to all existing benefits and incentives available to conventional (hydel or thermal) projects in addition to the specific ARE sector incentives granted under the ARE Policy 2011. To this end, GOP is committed to promoting projects in any modalities, including purely in the Private Sector or the Public Sector or Public Private Partnerships.

3.6 Financing ARE

The GOP recognizes that access to financing is a critical issue for many ARE projects, particularly small and medium scale ARE projects. GOP will facilitate access to all available conventional financial and investment instruments, or as announced from time to time.

3.7 Carbon Credits

The CDM under the Kyoto Protocol extends to Pakistan being its signatory. GOP encourages the ARE project developers to apply for procuring carbon credits through CDM and mandates AEDB to facilitate, coordinate and assist the ARE project developers and the DNA in reconciling the most effective approach in procuring carbon credits. AEDB will also facilitate the ARE project developers in trading the carbon credits in international carbon market. The revenues generated through the sale of carbon credits will be exempted from income tax or duty.

The sale, management and distribution of carbon credits and the revenues actualized therein as a result of an ARE project will be done under a carbon crediting mechanism that AEDB will formulate within six (6) months of announcement of the ARE Policy 2011.

The AEDB will assist in the development of local CDM capacities as well as to carry out CDM promotion and awareness in ARE sector. In this regard, updated Grid Emission Baseline of Pakistan will be developed and made public within six months of the issuance of this Policy. In addition to the CDM, project developers may also consider VERs in the international voluntary markets.

Considering that efforts are on way to put in place new international climate treaties, GOP is committed to revising incentives for procuring benefits consistent therewith. AEDB is empowered to effect requisite facilitation in the event of any new international regime or protocol applicable to Pakistan.

3.8 Collection of Resource Data

The collection and dissemination of ARE project related data is important for the sustained development of the ARE sector. GOP, therefore, has resolved to empower AEDB to collect primary and secondary ARE data and assemble it into a usable form and to make it readily accessible by potential investors and others interested in the ARE sector.

The AEDB will establish a central depository unit of ARE data collected through primary and secondary sources from time to time. Such data will be provided to interested parties upon attractive terms.

CHAPTER IV INCENTIVES AND PROCEDURES FOR GRID CONNECTED ARE PROJECTS

4.1 General Incentives

All qualifying ARE based power generation projects shall be eligible to avail benefits available to conventional power generation projects, in addition to those specifically outlined in this ARE 2011 Policy.

4.1.1 Guaranteed Market: Mandatory Purchase of Electricity

It shall be mandatory for NTDC/ CPPA/ DISCOs to buy all the electricity offered to them by ARE projects established pursuant to the ARE Policy 2011 at rates determined by NEPRA.

4.1.2 Grid Connection, Off-take Voltage and Interface

Electricity shall be purchased from ARE power projects at 220 kV at the outgoing bus bar of the power station of the project company if the power station is located within 70 km of an existing 220 kV transmission line, or at 132 kV if it is within 50 km of an existing 132 kV transmission line, or at 11 kV if it is within 5 km of an existing 11 kV distribution feeder, or at 400 V if it is within 1 km of a 400 V distribution feeder. The minimum average power to be supplied in each case would be 1,250 kW/km, 250 kW/km, 100 kW/km, and 20 kW/km, respectively. ARE-IPPs may also undertake to lay a new transmission line for connection with the main grid. The power purchase tariff determination will be adjusted accordingly for each of these options. The construction of transmission lines for evacuation of power from ARE IPPs set up for connection to the utility grid should be the responsibility of the power purchaser, unless the ARE-IPP, of its own choice, undertakes to install such infrastructure on a mutually agreed upon transmission charge with the power purchaser.

The net energy available for sale shall be determined after taking into account electrical efficiency, auxiliary loads, transformation efficiency, plant availability and other similar considerations, including for anticipated maintenance and outages. However, once EPAs are

entered into, technical parameters shall not be varied except with the consent of the power purchaser.

4.2 Specific Incentives for ARE IPPs

Specific incentives are provided under this Policy to ARE IPPs selling all generated electricity (minus auxiliary consumption) to the grid.

4.2.1 Simplified Generation Licensing Procedure

ARE-IPPs up to 5 MW will enjoy simplified methodology and procedures for grant of generation licence by NEPRA. NEPRA will also facilitate by providing for a generic template license and a concessional fee structure for such initiatives.

4.2.2 Land and Site Access

GOP in coordination with relevant provincial/ AJK/ GB agencies will facilitate investors in the acquisition of appropriate land and rights of way ("**ROW**"). However, the primary responsibility as well as the cost of acquisition will be on account of the project company.

4.2.3 Wind and Hydrological Risks

The variability risk of all ARE resources including wind and hydrological risks shall be borne by the ARE-IPPs. No related risk cover will be considered in the tariff determination, as well.

4.2.4 Security Package

NTDC/ CPPA acting for the power purchaser shall enter into a specific Energy Purchase Agreement (**EPA**) with the ARE-IPP based on the standard model developed by the AEDB consistent with this Policy. The GOP shall also enter into an Implementation Agreement (**IA**), which will guarantee the payment obligation of the public sector power purchaser on account of power sales extending over the term of the EPA. The EPA will be based on the purchase of all power generated and delivered at a per-kWh rate, that is, there will be no capacity charge, capacity testing, risk, and penalty conditions implied. GOP through the AEDB shall also facilitate the acquisition of carbon credits as provided in this ARE 2011 Policy. The Security

Package shall include the Site Sub-lease Deed in respect of projects who have been / would be allocated land by AEDB, and where required, a Water Use Licence Agreement ("**WUL**").

4.3 Tariffs

ARE-IPPs may avail either of these two categories of tariff to be determined by NEPRA in accordance with the NEPRA Act and the rules and regulations framed thereunder: (a) determined tariff; (b) tariff through competitive bidding, which will be subject to NEPRA approval. The tariff shall be determined on the basis of Energy Purchase Price (EPP) in Rs/kWh. However, NEPRA may consider two parts tariff [i.e. (1) Energy Purchase Price (EPP) (2) Capacity Purchase Price (CPP)] where applicable and other market best practices to adapt to the financing requirements for ARE projects.

In addition, ARE-IPPs could also benefit from feed-in tariffs to be determined by NEPRA, periodically for appropriate ARE sources, however, feed-in tariffs once announced shall be to the exclusion of the avenue of the determined tariff.

The benchmark currency rate used as a reference will be the interbank rate for US Dollars (US$) prevailing 30 days prior to the date the tariffs are determined by NEPRA. For unsolicited proposals or feed-in tariff regime, it will be the interbank lending rate as on the date of signing of the Engineering- Procurement-Construction (EPC) contract by the ARE IPP.

Indexation of various components of tariff and adjustment for foreign exchange rates ('true up') will be automatic, based on predetermined formulae and reference parameters. ARE IPPs will not have to approach NEPRA frequently for tariff indexation; only yearly submissions may be required.

4.3.1 Rate of Return

GOP recognizes the economic, social and environmental benefits of ARE. In order to encourage sustained investment in the sector, it has been resolved that ARE projects be awarded rate of return in excess of that available to conventional power producers during the lifetime of the ARE

project. Accordingly, this shall be ensured that the ARE projects shall be given preferential rate of return while calculating the tariff.

4.3.2 Premium on ARE Projects

GOP in its resolve to ensure fast growth of ARE projects will provide additional benefit of a premium to the tariff, for projects that are able to achieve financial close earlier than scheduled. AEDB has been mandated to coordinate and consult with NEPRA to develop the parameters, methodology, quotas and procedures for availing such premium, and is expected to notify the same within six (6) months from the coming in to force of the ARE 2011 Policy.

4.3.3 Feed in Tariffs

GOP recognizes that Feed-in Tariff has been globally tested tool to attract prompt investment in ARE sector. Feed in tariffs are therefore to be announced by NEPRA in respect of various ARE sources at such levels as deemed appropriate and duly supported by relevant NEPRA rules on the subject.

4.4 Specific Incentives for ARE DGs

4.4.1 Wheeling

For direct sales, where ARE DGs require to use national / regional transmission and/or distribution grid network to transport power from their project site to the point of interconnection of the power purchaser; such transmission and inter-connection services shall be acquired upon payment of corresponding transmission and inter-connection charges 'wheeling charges' as determined by NEPRA for the respective utility. This wheeling charge will reflect the cost of providing and maintaining the transmission interconnection, including the energy losses suffered *en route*, calculated on a utility-wide basis by NEPRA. For the purposes of connection, distribution codes and connection codes approved by NEPRA shall be referred.

4.4.2 Grid Spill Over

ARE DGs can enter into bilateral contract with the respective utility for sale of power in excess of their usage to the grid at rates determined by NEPRA.

4.4.3 Buy Back Mechanisms

GOP, visualizing the ARE resource potential in Pakistan believes that a significant potential in ARE can be employed through sale of part or all electricity to DISCOs produced by ARE DGs. NEPRA shall formulate clear and specific regulations for regulating sale/purchase of ARE between ARE DGs and the Utilities providing *inter –alia* tariff and corresponding technical parameters for notification under the NEPRA Act. The following buy back mechanisms are envisaged under the ARE Policy 2011.

4.4.3.1 Net-Metering

A consumer based ARE DG up to 1 MW has an option to sell full or part of generated electricity to the grid, which is netted against the energy delivered by the grid. Under this mechanism utility consumers are encouraged to generate their own electricity from ARE resources. Under this arrangement the tariff charged would be the applicable retail tariff to the premise (e.g., industrial, commercial, or residential rates).

4.4.3.2 Banking

Energy generated by ARE DGs can be stored into the grid which is to be supplied back by the utility on demand. This mechanism is expected to support displacement of conventional power usage at small scale along with promotion of small scale ARE applications.

4.5 PROCEDURES FOR ARE-IPPs

The procedure that ARE-IPPs has to follow for executing their projects is described under following headings:-

4.5.1 Categories of Proposals

AEDB welcomes and shall process proposals for ARE-IPPs in coordination with relevant provincial/ AJK/ GB agencies on a solicited as well as unsolicited basis. In the case of unsolicited proposals, LOI shall be issued to enable the sponsors to carry out a feasibility study, obtain tariff and generation licence from NEPRA. Thereafter, the LOS shall be issued to assist

the sponsors in achieving financial close for the project. In the case of solicited proposals, bids shall be invited by the AEDB inviting participation in a competitive bidding process. After evaluation of bids, the LOS shall be issued to the successful bidder to facilitate the project's financial close. The procedure is structured in line with NEPRA's powers and functions. The tariff arrived at after competitive bidding will be final and will not be re-opened by NEPRA.

4.5.2 Procedure for Unsolicited Proposals

Potential sponsors of ARE projects to be connected to the national or a utility's grid at a location of their choice ("**raw site**") may submit proposals consistent with the terms of ARE Policy 2011 to AEDB. The process flow is given in **Exhibit 4** below and is further explained in subsequent paragraphs.

Exhibit 4: Schedule for Unsolicited Grid-Connected ARE-IPPs

	Activity	**Indicative Process time**
1	Submission of proposal on raw site by sponsors	
2	Review of proposal and intimation of qualification of sponsors by AEDB (where required after consultation with relevant Provincial/ AJK/ GB agency)	Within 30 days from date of receipt of complete proposal
3	Posting of bank guarantee by sponsors	Within 15 days from intimation of approval of proposal
4	Issuance of LOI for an initial period of 24 months	Within 7 days of receipt of acceptable bank guarantee
5	Completion of Feasibility Study	Within the time specified in LOI (Maximum of 18 Months)
6	Procurement of Generation License	Any time within the validity period of LOI
7	Procurement of tariff from NEPRA	Any time within the validity period of LOI. NEPRA is required to announce its determination within 90 days of submission of petition by the project sponsor, In case if Feed-in tariff is announced,

		NEPRA will notify the tariff within fifteen (15) days submission of application by ARE-IPP.
8	Submission of Performance Guarantee by Sponsors	Within 15 days of grant of tariff by NEPRA
9	Issuance of LOS by AEDB for a period of 18 months	Within 7 days of receipt of acceptable Performance Guarantee
10	Execution of Security Package	Any time during validity of LOS
11	Financial Close	Within the time allowed in the LOS
12	Achieve Construction Start	Within the time allowed in the LOS/Security Package
13	Commissioning of Project	Within the time allowed in the LOS/Security Package

4.5.2.1 Submission of Unsolicited Proposals

Any sponsor wishing to undertake a project at a raw site would be required to submit a preliminary proposal to AEDB, which must be in compliance with applicable policy guidelines and include, at a minimum, the following:

i. Statement of qualification of project sponsors, listing relevant corporate experience, personnel, and financial capacity
ii. Project name and ARET classification (i.e., wind, solar, small hydro, etc.)
iii. Project location in compliance with grid compatibility criteria under section 3.1.2 of this Policy
iv. Proposed net installed capacity (MW)
v. Basic outline of plant and structures
vi. Summary implementation plan, milestones for project preparation, implementation and completion
vii. Any other information or data deemed relevant by the sponsors for consideration of the AEDB.

4.5.2.2 Evaluation of Unsolicited Proposals

Proposals for unsolicited projects on raw sites will be examined by a Project Committee appointed by the AEDB in the first instance, and if found appropriately qualified, AEDB in

consultation with the provincial/ AJK/ GB agencies concerned, process the case for issuance of LOI.

4.5.2.3 Issuance of LOI; Extension

LOIs for raw sites shall include relevant project details and milestones and lay down the mechanism or procedure for monitoring progress by AEDB. AEDB shall specify initial validity period of the LOI depending upon the size, schedule and other relevant considerations regarding the project, however, initial validity period of the LOI shall not exceed 24 months from its effective date. AEDB shall issue LOI against a bank guarantee in favour of AEDB and in the amount specified in Section 4.7.1. The said bank guarantee shall be issued by an 'A' rated scheduled bank in Pakistan and shall be valid for a period not less than six (6) months in excess of the initial validity period of the LOI.

AEDB may allow one-time extension in the validity period of the LOI on a case-by-case basis, but such extension shall not be for a period more than 06 months from the scheduled date of its initial expiry. Such extension shall be subject to and become effective upon the sponsors submitting another bank guarantee valued at twice the original amount (i.e., USD 1,000 MW), which shall be valid for a period six(6) months in excess of the extended validity period of the LOI. The earlier bank guarantee shall be returned to the sponsors upon submission of the subsequent bank guarantee of the abovementioned enhanced value.

In during the currency of the LOI, a project sponsor wishes to withdraw from the project, the extent to which the Bank Guarantee amount shall be encashed will be in proportion to the time elapsed such the issuance of the LOI with respect to the total period of the LOI. However, in the event, the project sponsor opts to withdraw from the project due to non-acceptance of tariff as determined by NEPRA, the Bank Guarantee shall be returned by AEDB.

4.5.2.4 Feasibility Study

The sponsors shall enjoy exclusive rights to carry out a feasibility study at a given raw site within the specified period.

The feasibility study will be reviewed by a 'Panel of Experts' ("**POE**") appointed by AEDB. If at any time during the feasibility study period, the POE determines that the sponsors have failed to adhere to relevant milestones or rectify such deviation, or are not diligent, the AEDB may serve a notice to the LOI holder to rectify the situation within the period recommended by the POE, failing which the LOI shall be deemed terminated and AEDB shall be deemed authorized to encash the Bank Guarantee. In such a case, the sponsors will have no claim for compensation against AEDB or any of the federal/ provincial/ AJK/ GB agency concerned.

Feasibility studies undertaken by the public sector and donor agencies will be made available to all interested private entrepreneurs by the AEDB upon payment of nominal administrative fee or a service charge to be prescribed by the AEDB. The full cost of the feasibility study (up to a reasonable ceiling and as reflected on the books of the concerned agency as being the actual cost of the feasibility study), shall be indicated in the LOI and shall be charged to the project developer at the time of issuance of the LOS, and shall be reimbursed to the agency which originally conducted the study, except in the case where such study was conducted under grant financing (e.g., donor funding, etc.). Wherever the GOP or a provincial government/ AJK/ GB agency has obtained such a feasibility prepared by the public or private sector, preference would be given to the award of these projects through international competitive bidding ("**ICB"**). For studies furnished to the private sector by the AEDB or any public sector organization, investors shall be responsible for verifying any or all aspects of the relevant feasibility study, and would be encouraged to carry out additional or alternative project appraisal of the site on their own. In case the feasibility has been completed by the public sector or private sponsor but the unsolicited proposal does not materialize for any reason whatsoever, and the AEDB wishes to invite bids using the same feasibility study, then the cost of feasibility study (up to a reasonable ceiling and as per proper audit) will be recovered from the successful subsequent bidder, if any, and be reimbursed to the public sector entity or sponsor who originally paid for, or conducted, the study.

4.5.2.5 Determination of Tariff

Upon completion, the feasibility study will be reviewed by the POE, and if approved, the project sponsors will be expected to apply to NEPRA for obtaining generation license and determination of tariff within a period not exceeding 02 calendar months from the date of approval of

feasibility study by AEDB. In case if NEPRA has notified the feed-in tariff, the tariff process would likely be significantly shorter. Refer to tariff annex here

4.5.2.6 Letter of Support; Performance Guarantee

Subsequent to the determination of tariff by NEPRA and acceptance by the project sponsor, it shall be required to post a performance guarantee in favour of AEDB and in the amount specified in Section 4.7.1, which shall be valid, initially, for a period of 6 months in excess of validity of the period of the LOS. Upon submission of the said performance guarantee, the LOS shall be issued to enable the project to achieve financial close and the original bank guarantee furnished at the time of issuance of LOI shall be released. The LOS shall exclusively govern the project and supersede all previously issued letters and instruments until the project achieves the financial closure.

4.5.3 Procedure for Solicited Proposals

4.5.3.1 Process Flow

Proposals for projects at pre-selected sites may be solicited by AEDB through public advertisement. These may include sites/projects for which feasibility studies have already been completed in the public sector, as well as 'raw sites' not yet fully investigated. Such projects will be processed according to the steps and schedule given in **Exhibit 5**.

Exhibit 5: Schedule for Solicited Grid-Connected ARE-IPPs

	Activity	Indicative Process time
1	Identification of specific projects by AEDB and invitation of Expression of Interest	
2	Registration and collection of documents from AEDB	Within 30 days of invitation
3	Evaluation of prequalification documents and notification of pre-qualified bidders by AEDB	Within 30 days from last date of registration
4	Requests for proposal (RFPs) from pre-qualified bidder(s) and collection of bidding documents	Within 30 days from date of intimation of successful bidder(s)

5	Submission of bids to AEDB together with bid bond and evaluation fee	Within 90 days of date of issuance of RFP
6	Evaluation of bids by AEDB, including preliminary tariff determination and notification of successful bidder	Within 30 days of acceptance of bid
7	Submission of Performance Guarantee by successful bidder	Within 15 days of notification of successful bid
8	Procurement of Generation License from NEPRA	Within 30 days of acceptance of performance guarantee by AEDB
9	Issuance of LOS by AEDB	Within 7 days of receipt of generation license
10	Execution of Security Package	Any time during validity of LOS
11	Commissioning of Project	Within the time allowed under the LOS/Security Package

4.5.3.2 Raw Sites

For raw sites, AEDB shall invite an Expression of Interest ("**EOI**") and make available to the investors the relevant ARET, location, and other preliminary information. Successful bidder shall be awarded the LOI for the project. The rest of the process for proposal submission and evaluation shall be identical to that described for unsolicited proposals (see previous section).

4.5.3.3 Other Sites

For sites in respect of which feasibility studies may have been completed prior to bid solicitation, specific tender documents will be prepared and bids will be invited for the sale price of electricity (against NEPRA's indicative tariff or Feed-in tariff if announced as a benchmark, using the same parametric formulation to allow for a standardized comparison basis). The successful bidder shall be awarded the LOS to help achieve financial close. The schedule of activities leading to issuance of LOS will be as give in **Exhibit 5**. AEDB may, however, where deemed appropriate for sake of efficiency seek proposals through advertisement in two envelopes; one containing the technical bid and the other financial bid. The said financial bids shall be opened for bidders whose technical bids are qualified.

4.5.3.4 Request for Proposal (RFP)

The RFP for solicited projects will contain all project specifications, components, and requisite

details necessary for the preparation of a proper technical and financial bid. The documents will also explain the evaluation criteria to be employed in scoring the bids. If necessary, AEDB may hold a pre-bid conference to facilitate exchange of information with qualified sponsors, giving equal and adequate opportunity to all prospective bidders to seek clarification on project requirements.

4.5.3.5 Bid Bond, Letter of Support and Performance Guarantee

A bid bond based on the project's installed generation capacity shall be required from each bidder at the time of submission of bids. After selection of the successful bidder, the bid bonds of all bidders other than the sponsors of the successful bid shall be returned, and the successful bidder will be required to post a performance guarantee based on project capacity in favour of the AEDB for issuance of the LOS, and which shall be valid, initially, for a period of 06 months in excess of validity of the LOS. After submission of the performance guarantee by the successful bidder, the bid bond shall be returned and the LOS issued to enable the project to achieve financial close. The LOS shall exclusively govern the project and supersede all previously issued letters and instruments until the project achieves the financial closure.

The said performance guarantee will secure the successful bidder's obligations to execute the security package and other relevant agreements and achieve financial close within the specified time period. In addition, the sponsor may also be required to reimburse the cost of feasibility study utilized (if so indicated in the bidding documents). The said performance guarantee shall be in the form of an irrevocable, direct-pay letter of credit, issued by a scheduled local or foreign bank acceptable to, and in favour of, the AEDB. If the performance guarantee is not furnished within the specified period, the LOS shall lapse automatically, and neither the sponsor nor the project company shall have any claim for compensation or damages against each other or any agency of the federal, provincial/AJK/GB government or any of their respective departments or organizations.

4.6 Other Significant Conditions

4.6.1 Legal Structure and License Requirement

For supply of power to the national grid, ARE-IPPs will be required to form a company under the Companies Ordinance, 1984, having the sole object of power generation and obtain a generation license from NEPRA. However, ARE DGs shall not be required to register as a company under the Companies Ordinance, 1984. ARE DGs can install plants for their dedicated use without getting a license from NEPRA. Such ARE DGs can also avail accelerated depreciation on their plants and equipment.

4.6.2 Capitalization and Lock-in Period

The "main sponsor" must hold issued and paid up shares in the project company of not less that 20% of the authorized capital at the time of grant of LOS, subject to the aforesaid minimum paid up capital. The "main sponsors" and the "initial shareholders", together must hold a minimum of 51% equity in the project company up to the commercial operations date.

4.6.3 Security Package

The security package for grid-connected ARE-IPPs will comprise of Implementation Agreement (IA), Energy Purchase Agreement (EPA), and Water Use License Agreement (WUL), and any other agreement as applicable.

4.6.4 Type of Contracts

EPA with ARE-IPPs for sale of all power to the grid system may be implemented through contracts forming a part of the security package having a validity period of not less than 20 years.

For the other type of projects, no such contracts shall be required. Instead, for projects availing buy back mechanisms, separate contractual arrangements will be required between the parties dealing with matters such as metering, maintenance of interconnection, system protection, and billing of net sales and purchase, wheeling, and banking charges/tariffs, etc. to be notified by NEPRA.

4.7 Fees and Charges

4.7.1 Fee Structure for Grid connected ARE-IPPs

The following fees and charges are payable to AEDB by the sponsors of grid-connected ARE Projects. All fees are subject to revision by the AEDB from time to time, and these are in addition to any other fees and charges payable for development of the project by the sponsors/project sponsors to other federal, provincial/ AJK/ GB agencies.

Exhibit 6: Fee & Financial Charges for Grid-Connected ARE-IPPs

	Activity	Fee (US$) or equivalent PK Rs. @ prevalent TTOD rate	Remarks
1	**Registration** - with AEDB	100	Payable at Registration. The AEDB. will provide an information package upon registration
2	**Pre-qualification** - Purchase of Prequalification Documents	1000	Payable at purchasing Prequalification Documents. AEDB will provide detailed Prequalification Document
3	**Bidding** - Purchase of RFP	2,000	Payable at issuance of RFP. The RFP by pre-qualified bidders shall also include the feasibility study, where relevant, and standard, IA, EPA, etc., as applicable
4	**Evaluation** - Project facilitation and evaluation expenses for projects: ≤ 5 MW > 5 MW but ≤ 20 MW > 20 MW but ≤ 50 MW > 50 MW but ≤ 100 MW > 100 MW an above	 2,000 10,000 20,000 30,000 50,000	ARE-IPP to pay upon acceptance of LOI proposal by AEDB
5	**Bank Guarantee** - For issuance of LOI by AEDB to Solicited Projects Unsolicited Projects	 1,000/MW name plate capacity or bid bond specified 1,000/MW name plate capacity	ARE-IPP to post the BG upon acceptance of LOI proposal by AEDB.
6	**Feasibility Study** - Reimbursement of public sector feasibility cost, if applicable Reimbursement of private sector	 As determined by AEDB As per cost	Payable prior to issuance of LOS, based on actual costs incurred, up to maximum ceiling

	feasibility cost, if applicable	ascertained by AEDB from relevant accounts	
7	**Performance Guarantee** - for issuance of LOS by AEDB to solicited as well as unsolicited projects	5,000 per MW capacity	Payable upon approval of power purchase tariff by NEPRA
8	**Legal Fees** ≤ 5 MW > 5 MW but ≤ 20 MW > 20 MW but ≤ 50 MW > 50 MW but ≤ 100 MW > 100 MW and above	Subject to a cap of 10,000 25,000 60,000 150,000 250,000	The Slab Ceiling is a maximum cap. This is payable to AEDB at time of start of project documents negotiations with stakeholders.

Note: Upon financial close, the ARE-IPP will provide a letter of credit to the power purchaser as performance guarantee as specified in the EPA (US$ 3/kW per month), subsequent to which the original Performance Guarantee furnished at the time of issuance of the LOS shall be released.

CHAPTER V STANDALONE APPLICATIONS

5.1 Off-Grid Applications

GOP designates AEDB to assist all concerned authorities at the provinces, AJK and GB in the development and implementation of off-grid electrification of rural areas using ARETs. GOP is committed to continue schemed deregulation and simplification of off-grid power generation wholly for captive or dedicated use or for supply to local communities through small, isolated distribution lines and stand alone systems.

5.2 Energy Services

GOP is committed to utilizing ARE resources to match the diverse energy needs of the men and women both in urban and rural population at affordable costs; while retaining primary focus on energy conservation and income generation by providing sufficient access to modern energy services for different applications including but not limited to, lighting and computer facilities in academic buildings, water pumping for irrigation and drinking purpose, water heating, fruit drying, refrigeration, cottage industries, and local communication centers. To this end, the AEDB as the GOP designated entity shall take measures:

- To prepare in collaboration with the federal, provincial/ AJK/ GB agencies concerned an appropriate "Rural Energy Services Vision" Plan and a master plan for implementation on balanced geographical bases with, among others, a view to minimize total costs of supply, and develop adequate monitoring of the integration of ARE programs in the national grid extension programs.
- To encourage private sector, particularly small-medium scale enterprises, in the promotion of ARE systems for rural applications as part of an integrated national plan for off-grid technologies and models for service delivery, and the special incentives that may be given to ARE rural energy service delivery;

- To develop in collaboration with federal, provincial/ AJK/ GB and other stakeholders relevant technical standards, codes and guidelines and the development of effective legal and regulatory enabling framework;
- To initiate capacity building programs to aid in the implementation of ARE strategy and plan; and
- To deploy ARETs for conservation of conventional fuel and energy and to combat deforestation.

CHAPTER VI ALTERNATIVE FUELS

6.1 Objectives

GOP is determined to achieve greater energy security by creating an enabling environment for easing dependence on imported petroleum by encouraging and facilitating increasing reliance on Alternative fuels, which in turn will not only enhance environmental and social objectives but also result in tangible economic advantages. GOP has designated AEDB to play a vital role in integrating various initiatives within and outside the public sector with the strategic aim of realizing true potential of Alternative fuels.

6.2 Classification

This ARE 2011 Policy mainly focuses on Biogas, Biofuels (biodiesel and ethanol), Fuel from Waste (Refuse Derived Fuel, Processed Agricultural and Industrial Waste) and Hydrogen.

6.2.1 Bio-Diesel Programme

GOP announced its bio-diesel programme in 2008 whereunder targets have been fixed for selling bio-diesel blended diesel fuel in Pakistan. By 2015 at least five percent (5%) bio-diesel shall comprise the annual volume of diesel fuel (B5) and by 2025 at least ten percent (10%) bio-diesel shall comprise the annual volume of diesel fuel (B10), actually sold and distributed by each and every Oil Marketing Company (OMC) in conformity with the applicable fuel quality standards in Pakistan.

OGRA will announce the pricing mechanism for bio-diesel within six months of the announcement of ARE Policy 2011. The import of B100 is exempted from all taxes and duties. The GOP shall consider scaling up of further incentives for feedstock growers. The following incentives will be available:

- Mandatory purchase of B100 bio-diesel, as well as various blends, by Oil Marketing Companies from bio-diesel suppliers, such as refineries or importers;50% of the bio-diesel production shall be from indigenous resources by 2015;

- In case of shortages in local bio-diesel supply prior to 2015, OMCs, are permitted to import volumes equivalent to shortfall, subject to certification by AEDB;
- Ministry of Petroleum and Natural Resources shall notify standards for B-100, B5, B10 and other bio-diesel blends within three months of the announcement of this policy;
- A minimum of one percent (1%) bio-diesel by volume to be blended into all diesel fuel sold in Pakistan within one year of the announcement of this policy.

6.2.2 Ethanol

GOP has issued successive polices in May 2009 and October 2009 for introduction of Ethanol-10 (E-10) for vehicular usage and OGRA has been designated as the entity to determine ex-depot and retail price of E-10. All incentives available for bio-diesel will also be applicable to Ethanol in context of gasoline replacement.

6.2.3 Certification

All entities involved in growing, processing, importation, and/or sale of feed stocks and biofuels (B100 & E100) shall be certified by AEDB under appropriate certification regulations.

6.3 Hydrogen

Hydrogen has been identified as a proven alternative fuel internationally. GOP encourages utilization of Hydrogen as one of the important alternative fuel source with promising impact on the overall energy mix in the long run. AEDB is mandated to support pilot projects for Hydrogen production in collaboration with academia and public and private sector organizations.

6.4 Biogas

ARE Policy 2011 envisages to promote Biogas technology to meet the domestic and commercial energy needs through facilitation and support mechanism.

6.5 Environmental and Social Impacts

GOP appreciates the requisite attention to the environmental and potential social impacts of Alternative Fuels from procurement of raw material and production to refining and consumption. The Pakistan EPA shall develop emissions standards for Alternative Fuels based on their

emissions profiles including, but not limited to, aldehydes or the use of methanol in biodiesel production and Environmental and Social Assessment Guidelines for biodiesel plantations. AEDB will work with MinFAL to develop guidelines for plantation in the area of marginal soil.

CHAPTER VII ARE PROJECTS INITIATIVES

7.1 Awareness and Demonstration

Successful implementation of ARE Policy 2011 requires dissemination of accurate information about ARE, its benefits, its impact on poverty alleviation, women empowerment and contribution to overall energy requirements of the populace. AEDB will undertake mass awareness programmes for ARET applications. AEDB, in collaboration with relevant institutions, academia and research institutions, will continue to engage in R&D for establishing ARE technology base and requisite training of technical manpower for ARE sector in Pakistan. Incentives, both fiscal and financial extended for ARE projects in Pakistan, shall also be available for setting up of manufacturing base for ARE plants and accessories.

7.2 Special Promotional Projects

Development of commercial scale ARE projects is envisaged under the AEDB Act, additionally, it shall encourage adoption of ARE applications like solar water heaters, solar cookers and other technologies utilizing ARE sources.

The collection of data/information relating to contribution of ARE resources to the overall energy mix has an instrumental role in the development of ARE in Pakistan. AEDB will ensure acquisition of all relevant data pertaining to different aspects of ARE usage and penetration in Pakistan such that future policy decisions are founded on sound analytical statistics of ARE.

GOP is conscious of the phenomenal role of women in promoting ARE. AEDB is mandated to attend to their peculiar energy needs while executing ARE promotional projects.

CHAPTER VIII SUMMARY OF INCENTIVES

8.1 Incentives

GOP has resolved to extend all existing benefits under ARE Policy 2006 to ARE Policy 2011. A complete list of these incentives is given below:

8.2 Incentives for ARE-IPPs, ARE-DGs & AFPs

8.2.1 Fiscal Incentives

- No customs duty or sale tax for plant, machinery, equipment and spares (including construction machinery, equipment, and specialized vehicles imported on temporary basis) meant for the initial installation or for balancing, modernization, maintenance, replacement, or expansion after commissioning of ARE projects subject to fulfillment of conditions under the relevant SROs. All imported plant, machinery, equipment and specific items used in the production of Alternative Fuels shall also be exempted from Customs Duty and Sales Tax
- Parties may raise local and foreign finance in accordance with regulations applicable to industry in general. GoP approval may be required in accordance with such regulations.
- Non-Muslims and non-residents shall be exempted from payment of Zakat on dividends paid by the company.

8.2.2 Financial Incentives

- Non-residents allowed purchase of securities issued by Pakistani companies without State Bank of Pakistan's permission, subject to prescribed rules and regulations.

8.2.3 Risk Cover

GOP has developed a security package consistent with international best practices which offers protection against "political" risk in a manner consistent with GOP policies in other infrastructure and related projects;

8.3 Incentives Exclusive for ARE–IPPs,

8.3.1 Fiscal Incentives

- Exemption from income tax, including turnover rate tax and withholding tax on imports.
- Repatriation of equity along with dividends freely allowed, subject to rules and regulations prescribed by the State Bank of Pakistan.

8.3.2 Financial Incentives

- Permission for power generation companies to issue corporate registered bonds.
- Permission to issue shares at discounted prices to enable venture capitalists to be provided higher rates of return proportionate to the risk.
- Permission for foreign banks to underwrite the issue of shares and bonds by ARE-IPPs to the extent allowed under the laws of Pakistan.
- Independent rating agencies in Pakistan to facilitate informed decision-making by investors about the risk and profitability of project company's bonds/TFCs.

8.3.3 Risk Cover

Significant risks covered are:

- GOP guarantees payment obligations under the EPA in respect of projects to whom AEDB issues LOI and/or LOS;
- Safeguards in the event of privatization of any power purchaser or other constituent public sector entity;
- Protections against change in law, including tax and duty impositions;

- Foreign Exchange approvals and facilities commensurate with those in place for conventional power projects;
- Ensure convertibility of Pakistani Rupees into US Dollars at the prevailing exchange rate and the remittance of foreign exchange to cover necessary payments related to the project, including debt servicing, payment of dividends, and repatriation of equity.
- Indexation of tariff to cover exchange rate and inflation etc. consistent with that available to conventional power projects.

8.4 Incentives Exclusive for AFPs

8.4.1 Fiscal Incentives

- No petroleum levies and duties shall be imposed upon B100 bio-diesel blend.
- Biodiesel blend petroleum products (e.g., B5, B10) and Ethanol blend petroleum products (e.g., E5, E10) shall not be liable for petroleum duties or levies on the non-petroleum portion (by volume) of their constituents.
- The import of B100 shall be exempted from Customs Duty, Income Tax and Sales Tax.
- Exemption from income tax, including turnover rate tax and withholding tax on imports.
- Parties may raise local and foreign finance in accordance with regulations applicable to industry in general. GoP approval may be required in accordance with such regulations.

8.4.2 Financial Incentives

- Permission to issue corporate registered bonds.
- Permission to issue shares at discounted prices to enable venture capitalists to be provided higher rates of return proportionate to the risk.
- Permission for foreign banks to underwrite the issue of shares and bonds by AFPs to the extent allowed under the laws of Pakistan.
- Independent rating agencies in Pakistan to facilitate informed decision-making by investors about the risk and profitability of project company's bonds/TFCs.

8.4.3 Risk Cover

Significant risks covered are:

- GOP guarantees purchase of various blends of bio-diesel and ethanol by Oil Marketing Companies
- GOP encourages growing feedstock for bio-fuels in marginal lands
- Safeguards in the event of any statutory change in public sector;
- Protection against "political" risk in a manner consistent with GOP policies in other infrastructure and related projects;
- Protections against change in law, including tax and duty impositions;