
INVESTMENT OPPORTUNITIES
IN
POWER SECTOR
OF
PAKISTAN

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MINISTRY OF WATER AND POWER



Pakistan



The World



SEQUENCE

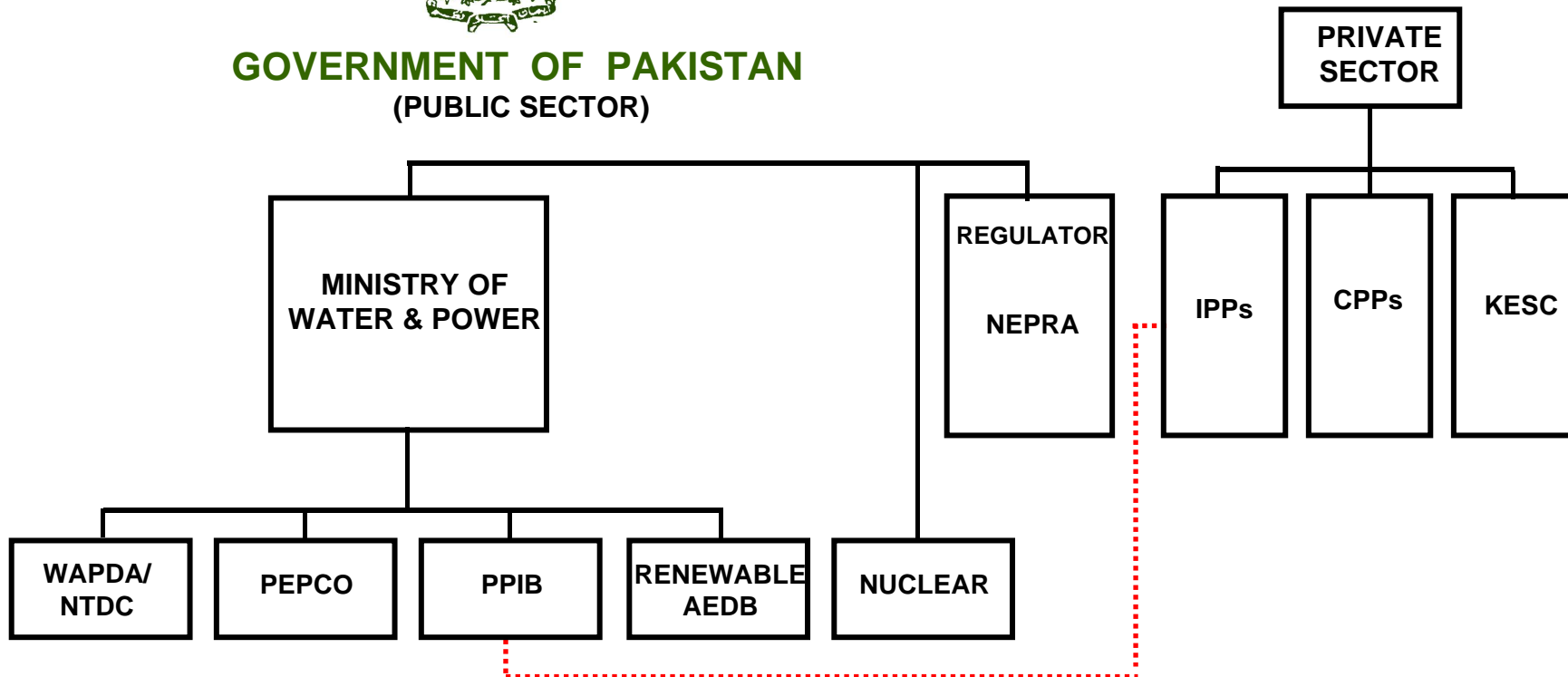
- **Overview of Pakistan Power Sector**
- **Private Power & Infrastructure Board (PPIB)**
- **Power Policy 2002**
- **Why to Invest in Pakistan Power Sector**
- **Investment Opportunities**



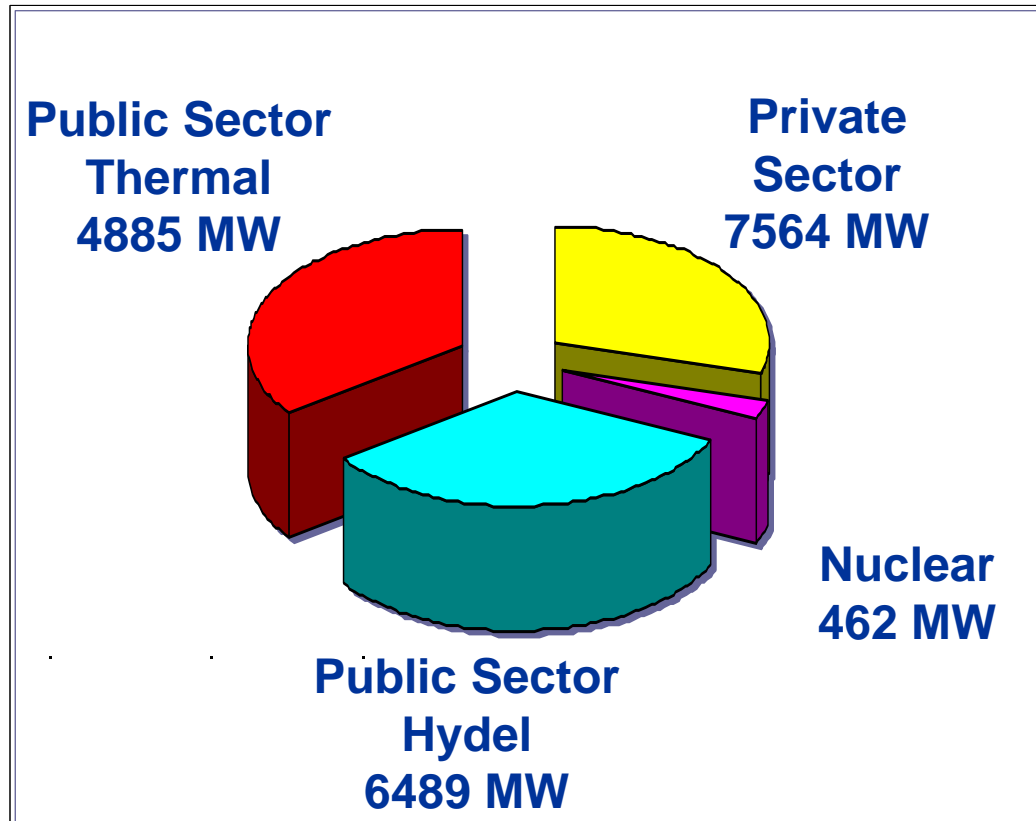
PAKISTAN POWER SECTOR PLAYERS



GOVERNMENT OF PAKISTAN
(PUBLIC SECTOR)



POWER SECTOR - TOTAL INSTALLED CAPACITY



Public Sector

	<u>MW</u>	<u>%</u>
WAPDA	11,374	59
NUCLEAR	462	2
Sub Total	11,836	61

Private Sector

	<u>MW</u>	<u>%</u>
IPPs	5,808	30
KESC	1,756	9
Sub Total	7,564	39
Grand Total	19,400	100

COMMISSIONED IPPs

Tot. Capacity: **4308 MW**

Tot. Inv: **US\$ 4 Billion**

ISLAMABAD

	MW	COD
Altern Energy Ltd	14	Jun 2001

LAHORE

Japan Power Generation, Lahore	120	Jan 2000
Kohinoor Energy Ltd., Lahore	132	Jun 1997
Southern Electric Co., Lahore	116	Jul 1999
Saba Power Company, Lahore	114	Dec 1999

MULTAN

AES Lalpir Ltd., Multan	362	Nov 1997
AES Pak Gen, Multan	365	Feb 1998
Fauji Kabirwala Co., Multan	157	Oct 1999
Rousch Power, Multan	412	Dec 1999
* Kot Addu Power Company, Multan	1500	--

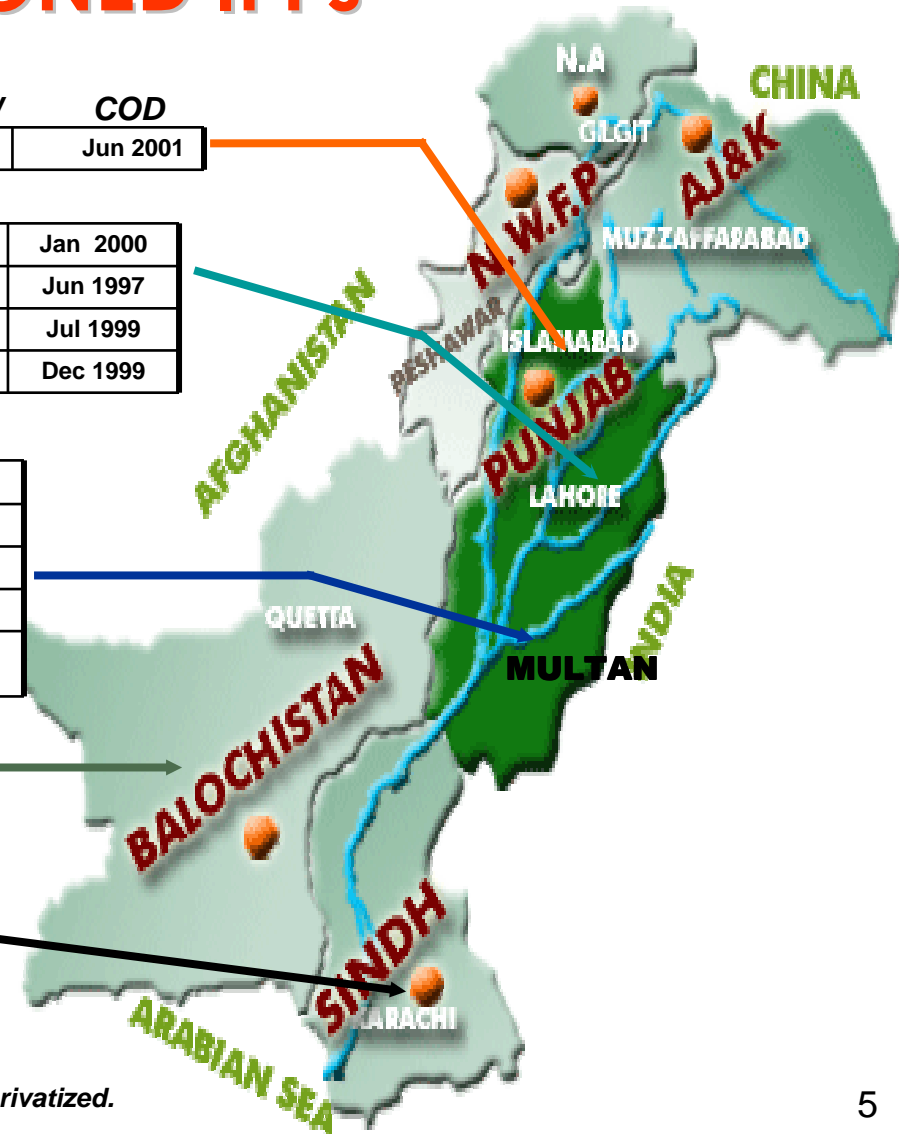
BALOCHISTAN

Uch Power Ltd., Uch	586	Oct 2000
Habibullah Coastal, Quetta	140	Sep 1999

KARACHI

Liberty Power Ltd., Dharki	235	Jun 2001
Tapal Energy Ltd., KHI	126	Jun 1997
Gul Ahmed Energy Ltd., KHI	137	Nov 1996
Hub Power Company, KHI	1292	March 1997

- Kot Addu Power Company was earlier in public sector, is now privatized. (Not shown in IPPs total capacity above).



POWER DEMAND AND SUPPLY POSITION

Year (Year Ending 30th June)	Firm Supply (MW)	Peak Demand (MW)	Surplus/Deficit (MW)
2008	15,055	17,689	(2,634)
2009	15,055	19,080	(4,025)
2010	15,055	20,584	(5,529)

By year 2010 additional power required will be 5529 MW. Induction of more than 5000 MW generation capacity by year 2010 would require an investment of over US\$ 5.5 billion.



POLICY INITIATIVES

- Encourage private sector to come forward for developing the power sector
- Privatization of the existing power sector assets
- Policy for Power Generation Projects 2002



POWER POLICY 2002 - PRINCIPLES

OPEN ARMS WELCOME

- Total private ownership
- Private Public Partnership
- BOO, BOOT Projects (Hydel on BOOT only)
- Solicited proposals through International Competitive Bidding (ICB)
- Raw sites – solicited and unsolicited proposals

MAKE PROFIT

- Competitive Returns
- Free Repatriation of profits



POLICY FOR POWER GENERATION, 2002

Salient Features

- **Applicable for projects in**
 - **private sector**
 - **public sector**
 - **private-public partnership**
- **Thermal, Hydel projects**
- **Projects above 50 MW: One window support by PPIB**
- **Projects up to 50 MW: One window support by Provinces**



POLICY FOR POWER GENERATION, 2002

Tariff Structure

- Two-part structure of power purchase price
 - **Capacity payment** to cover fixed costs, debt servicing and return on equity regardless of dispatch level
 - **Energy payment** to cover fuel and variable O&M costs
- Indexation
 - Pass through of fuel price increase
 - Specified foreign currency exchange rate variations
 - Pakistan and US inflation



POLICY FOR POWER GENERATION 2002

Concessions

Fiscal Concessions

- **Customs Duty at the rate of 5% on the import of plant and equipment**
- **No sales tax on such imports**
- **Exemption from corporate Income Tax**

Hydel Projects

- **Hydrological risk to be borne by power purchaser**



POLICY FOR POWER GENERATION, 2002

Securities for Investors

- **Power Purchase Agreement for 25 – 30 years term**
- **Long Term Tariff approved by NEPRA (Regulator)**
- **Sovereign Guarantee for payments by Power Purchaser**
- **Compensation for political risks and change in law**
- **Protection for changes in taxes and duties regime**
- **Protection for convertibility/ remitability risks of project related payments, profits and capital**



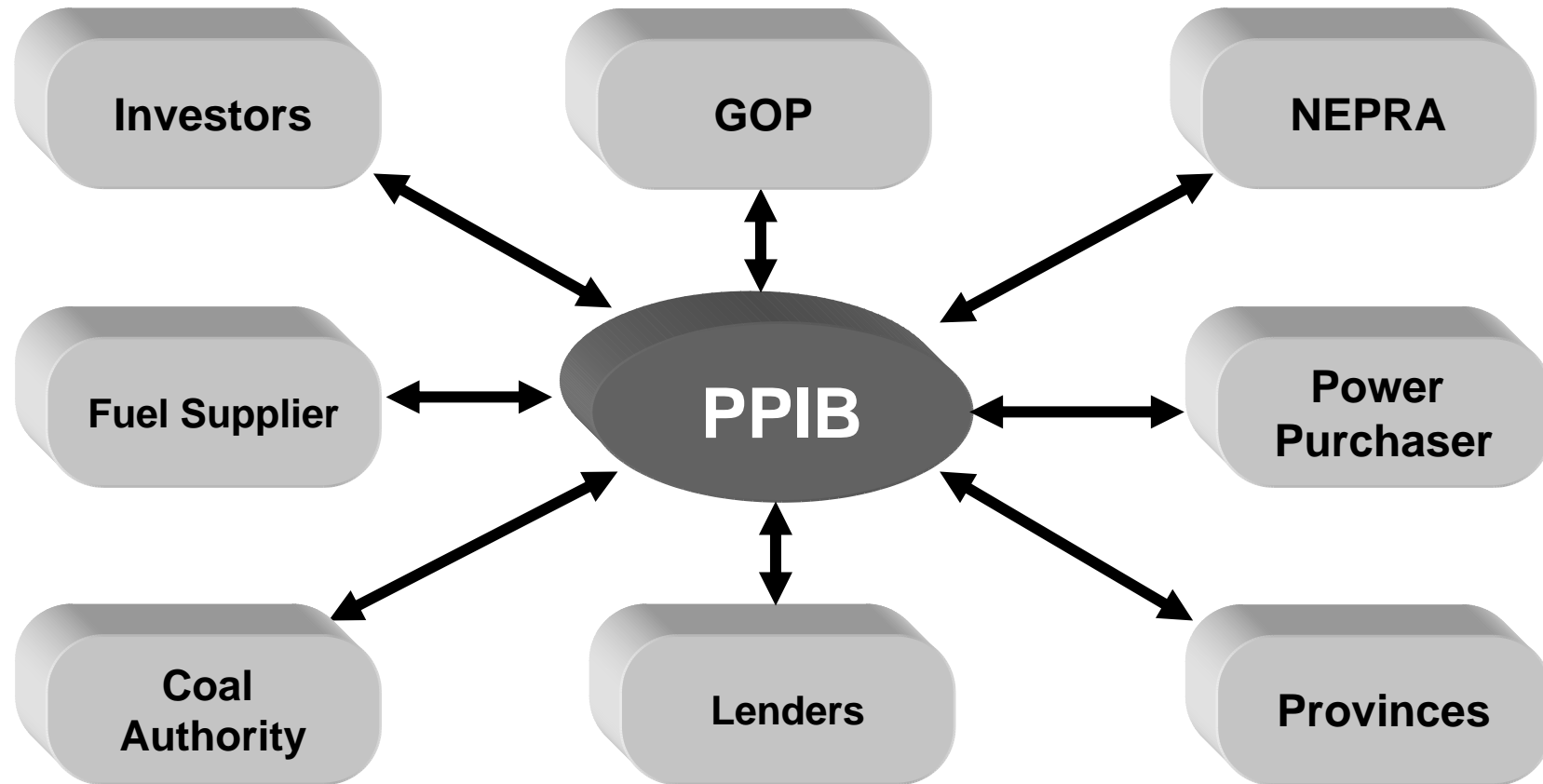
PRIVATE POWER & INFRASTRUCTURE BOARD (PPIB)

MANDATE

- Promote investments in power sector
- Provide One-Window facility to investors on behalf of GOP
- Assist GOP in development of Private Power related Policies
- Implementation of Policies and execution of agreements with Independent Power Producers (IPPs) on behalf of GOP
- Support IPPs in executing PPA/FSA/GSA
- Assist IPPs in obtaining consents/licences



PPIB A PROFESSIONAL FACILITATOR



IPPs UNDER PROCESS

	<u>No.</u>	<u>Capacity (MW)</u>
▪ Interest of the investors	59	15,065
▪ Letters of Interest (LOIs)	32	8,276
▪ Letters of Support (LOSs)	14	2,590
▪ Financial Closures	05	934



INVESTMENT OPPORTUNITIES – HYDROPOWER

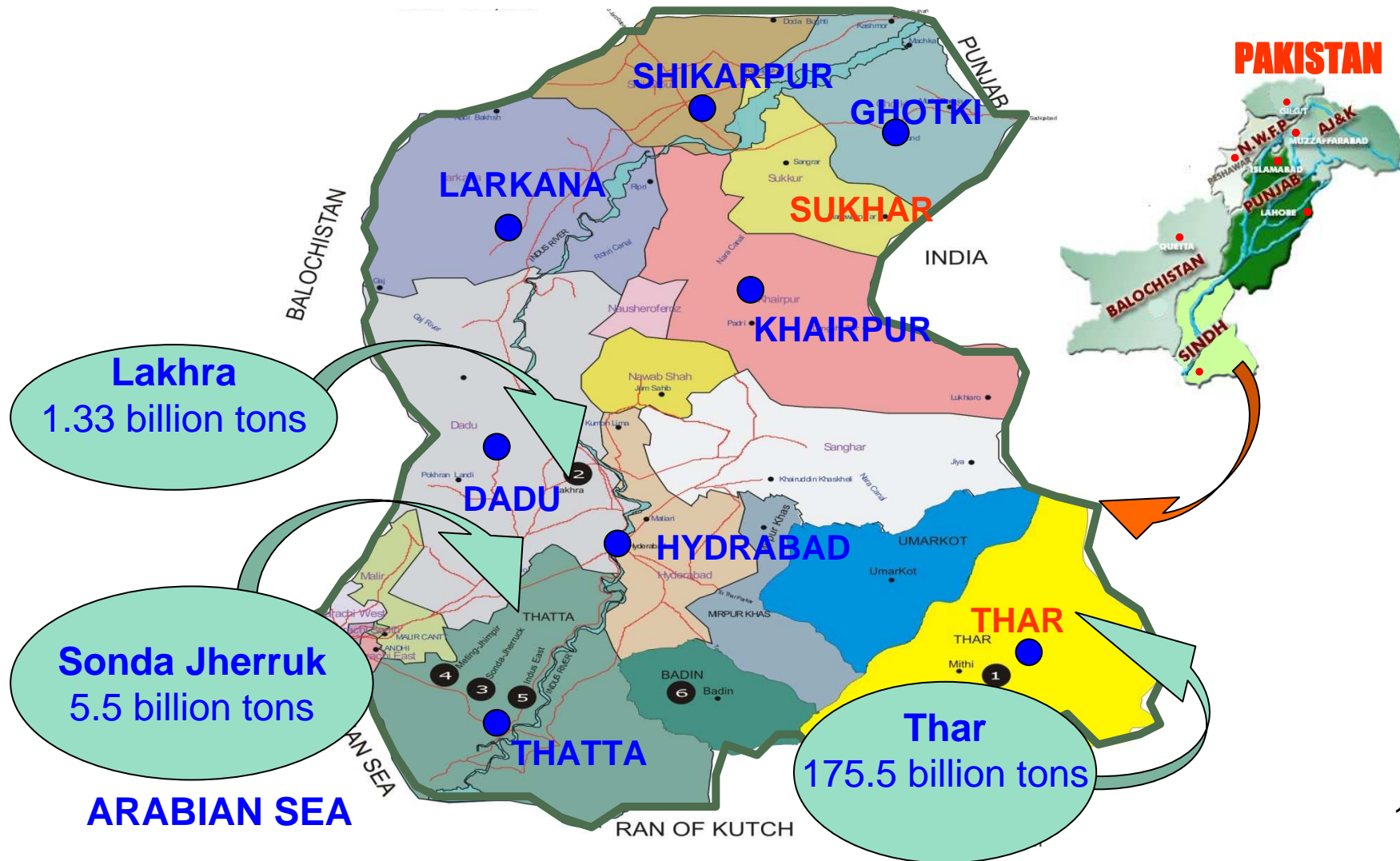
Hydel Potential : 41000 MW
Projects in operation : 6595 MW
Projects under Implementation : 7500 MW
Untapped Hydel Potential : 27000 MW



Investors to come forward to harness Pakistan's Hydropower Potential



MAJOR COAL RESOURCES



Why Invest in Pakistan Power Sector

- Abundant local resources (Coal/Hydel)
- Rapidly growing economy (7% of GDP) and strategic importance of power availability
- Growing Power Demand (8%-10%): Around 2,000 MW per year
- Government is committed to boost Private Sector Investments
- 100% foreign ownership allowed
- Integration with regional markets
- Already tested market – 40% power generation in private sector
- One window support through PPIB



**We Welcome Private Investors
to Join Hands With Us**



**to Invest in Pakistan's Power Sector
for Mutual Business Benefit**



TARIFF STRUCTURE

COMPONENTS OF TARIFF

- I. **Energy Purchase Price (EPP)** is paid based on the actual units delivered by the IPP and comprises of two sub-components:
 - Fuel Cost Component – FC
 - Variable Operation & Maintenance Component - V(O&M) covers all O&M-related expenses that vary with plant output
- II. **Capacity Purchase Price (CPP)** provides monthly fixed payments (Rs/kW/hour) to cover fixed expenses of IPPs, and comprises of following sub-components:
 - **Non-Debt-Service Component:** covers fixed O&M and insurance, working capital financing cost, return on equity during construction and operations periods
 - Covers all costs and payments related to debt servicing

CALCULATION OF TARIFF

- Withholding tax on dividends payments to shareholders is reimbursed by power purchaser
- Presently Regulator (NEPRA) is allowing 15% Return on Equity
- The annual tariff is calculated at 60% Annual Plant Factor.

‘**Levelized Tariff**’ is a single tariff figure over plant life and it is computed by calculating the present value of tariff for all years during the project life, using a discount rate of 10%. This present value is then compounded @ 10% on yearly basis over the same project life.



POLICY FOR POWER GENERATION, 2002

Tariff Determination

Solicited Proposals (Through ICB)

- **Bidding on Levelized Tariff**
- **All requirements for bidding set out upfront**
- **Bid Evaluation criteria approved in advance by NEPRA**

Unsolicited Proposals (Through cost justification)

- **NEPRA to determine Tariff**



INTERNATIONAL INTEREST IN PAKISTAN – POWER SECTOR

(EXISTING)

Sponsors

- AES, USA
- El Paso, USA
- Warstillia, USA
- Tanaska, USA
- Hawkins, USA
- National Power, UK
- Siemens, Germany
- ABB, Switzerland
- Xenel, KSA
- Mitsui Japan
- TNB, Malaysia

Lenders

- IFC
- ADB,
- J-Exim
- ABN AMRO
- EDC, Canada
- Finnish Export Credit
- World Bank
- COFACE
- MITI, Japan
- CDC
- SACE
- US Exim Bank
- Nations Banks of Texas
- Toronto – Dominion Bank



INTERNATIONAL INTEREST IN PAKISTAN – POWER SECTOR

(PROSPECTIVE)

- Mitsui, Japan
- Hazama, Japan
- Al-Ghurair Group, UAE
- Temokin Energy, Malaysia
- AlJomaiah Group, KSA
- Assmandal, UAE
- Dong Fang, China
- CWE, China
- Central China Power Group, China
- Harbin Power Engineering, China



POWER POLICY 2002 – PRINCIPLES

NO AMBIGUITIES

- All Documents, Tax Laws, Concessions, Incentives etc. provided upfront

SIMPLIFIED PROCEDURES

- Simplified, well-defined, level playing field

