

SEA4ALL INVESTORS FORUM

PAKISTAN

16 June 2015

*Investing in Energy Today,
Our key to a brighter tomorrow!*

PAKISTAN's VISION 2025

“Ensure uninterrupted access to affordable and clean energy for all sections of the population”

ENERGY STRATEGY

Attract

Private Sector
Investment

Provide

Enabling
Environment

Promote

Energy Efficiency

FUEL MIX AND ENERGY ACCESS

- **Total Installed Capacity** **22,797 MW (2014)**
 - **Fossil Fuel** **14,635 MW (64.2%)**
 - » Oil 35.2%
 - » Gas 29%
 - **Hydro** **6,611 MW (29%)**
 - **Nuclear** **1,322 MW (5.8%)**
 - **Renewable Energy** **<1%**
- **Power generation** **12,278 to 16,000 MW**
- **Average Demand** **17,000 MW**
- **Shortfall** **Between 4000-6000 MW**
- **Energy Access** **70% coverage**



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TARGETS OF ENERGY SECTOR UNDER VISION 2025

- Eliminate current supply-demand gap by 2018 and addition of 25,000 MW for providing 100% access of Energy to all by 2025.
- Optimize energy generation mix between oil, gas, hydro, coal, nuclear, solar, wind and biomass— **more focus on renewable clean energy and indigenouness;**
- Focus on demand management, energy efficiency and conservation
- Maximize distribution efficiency and cut wasteful losses;

TARGETS OF ENERGY SECTOR UNDER VISION 2025

- Implement highest priority hydel projects in northern Pakistan including Diamer Bhasha (4500 MW) and Dasu Dams (2160 MW) on fast track;
- Tap Pakistan's huge potential for alternative energy
- Undertake new Nuclear Power generation plants
- Operationalize immense potential of Thar Coal
- Address institutional fragmentation of the sector;
- Introduce institutional reforms and strengthen regulatory frameworks to improve transparency and efficiency.

PRIORITY AREAS AND INVESTMENT OPPORTUNITIES

- Hydel Power Projects (**Comparative Advantage** KPK, AJK, Punjab)
- Solar Projects (Punjab, Sindh) (**power evacuation issues**)
- Wind Power Projects (Baluchistan and Sindh)
- RLNG (Punjab, Sindh)
- Biomass (**regular supply of biomass**)
- Natural Gas (Baluchistan, KP)
- Coal Power Projects (Sindh and Punjab)
(**transportation, low quality of indigenous coal requiring import/blending, environmental issues**)
- Up-gradation and extension of transmission lines

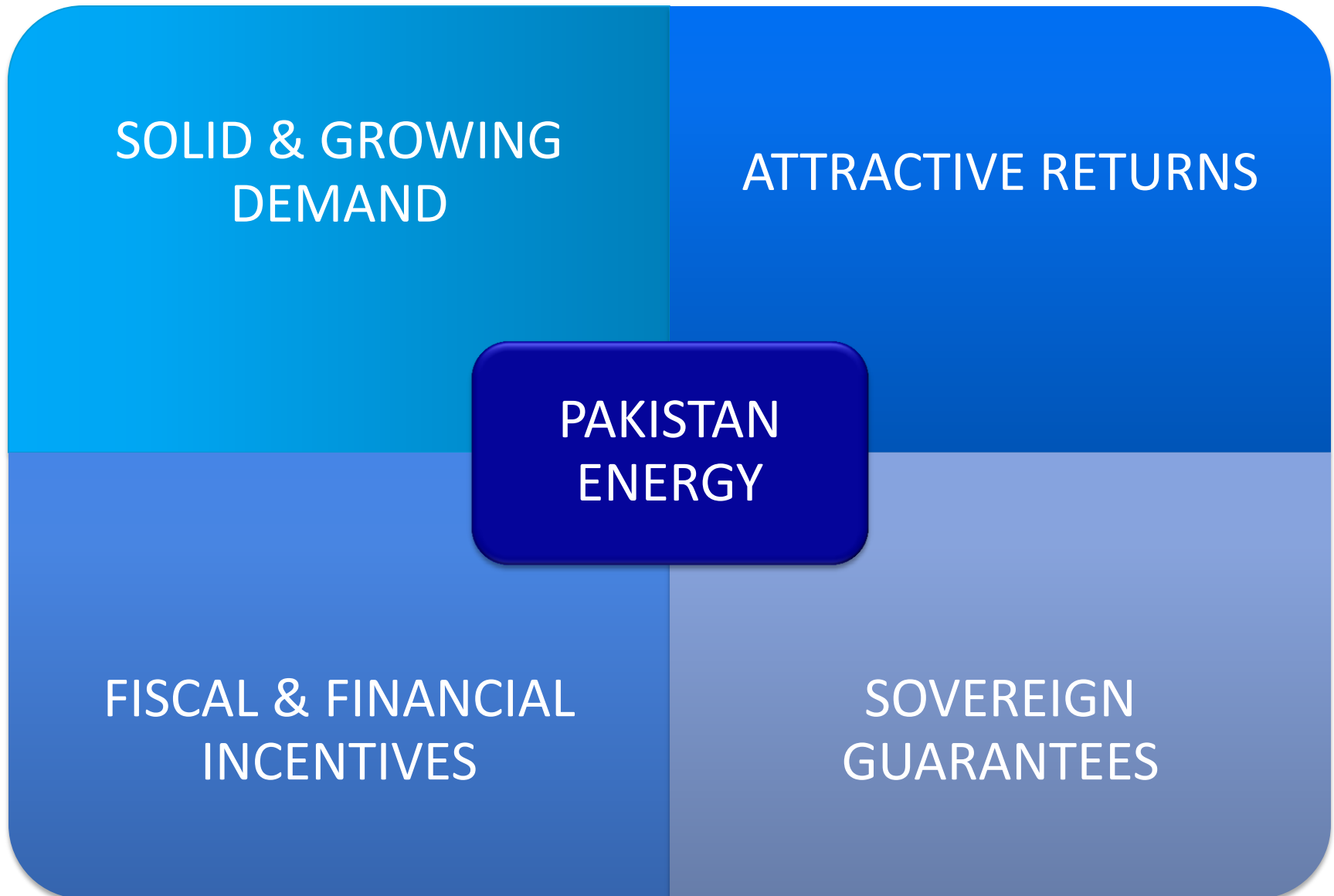
PAKISTAN Five Year Plan): POWER GENERATION PROJECTS (2014-19)

Fuel	No. of Projects	Installed Capacity (MW)
Coal	10	7,413
LNG	2	3,600
Gas	1	100
Nuclear	2	680
Hydel	7	4,174
Solar	3	1,000
Wind	4	1,550
RFO	1	140
Total	30	8,657

OTHER PROJECTS (2014-23)

Fuel	No. of Projects	Installed Capacity (MW)
Independent Power Plants (IPPs)		
Hydel	16	7,251
Coal	6	10,550
Gas	1	120
Total	23	17,921
Government of the Punjab		
Coal	6	820
Wind	1	F/S Stage

PAKISTAN ENERGY – A SMART INVESTMENT



ENABLING POLICIES & INCENTIVES

REGULATORY STRUCTURE

POLICY FRAMEWORK

- Federal Power Generation Policy 2002
- Federal Renewable Energy Policy 2006
- Federal Bagasse Based Co-Generation Policy 2008
- Punjab Power Generation Policy 2006 (2009)
- Federal Energy Policy 2013

ENABLING POLICIES & INCENTIVES

REGULATORY STRUCTURE

REGULATORY FRAMEWORK

- National Electric Power Regulatory Authority (NEPRA)
- Generating Licenses
- IPPs, CPPs, Co-Gen

CONTRACTUAL MECHANISM

- Guaranteed power purchase for IPPs
- Upfront tariffs
- Sovereign Guarantees
- Standardized Implementation Agreement (IA), Power Purchase Agreement (PPAs)

ENABLING POLICIES & INCENTIVES

FINANCIAL & FISCAL INCENTIVES

ATTRACTIVE RETURNS

- Ave. 17% RoE on Renewable Energy projects
- 20% for projects on local Coal
- Solar & Biomass in pipeline

CUSTOMS DUTY EXPEMPTION

- 5% on import of Plant & Equipment not manufactured locally
- No Duties on Renewable Energy Plants & Equipment

ENABLING POLICIES & INCENTIVES

FINANCIAL & FISCAL INCENTIVES

TAX EXEMPTIONS

- Exemption from Income tax
- Exemption from Turnover tax and
- Exemption from Withholding tax on imports

Case Study SK Hydro 870 MW

Project Sponsors

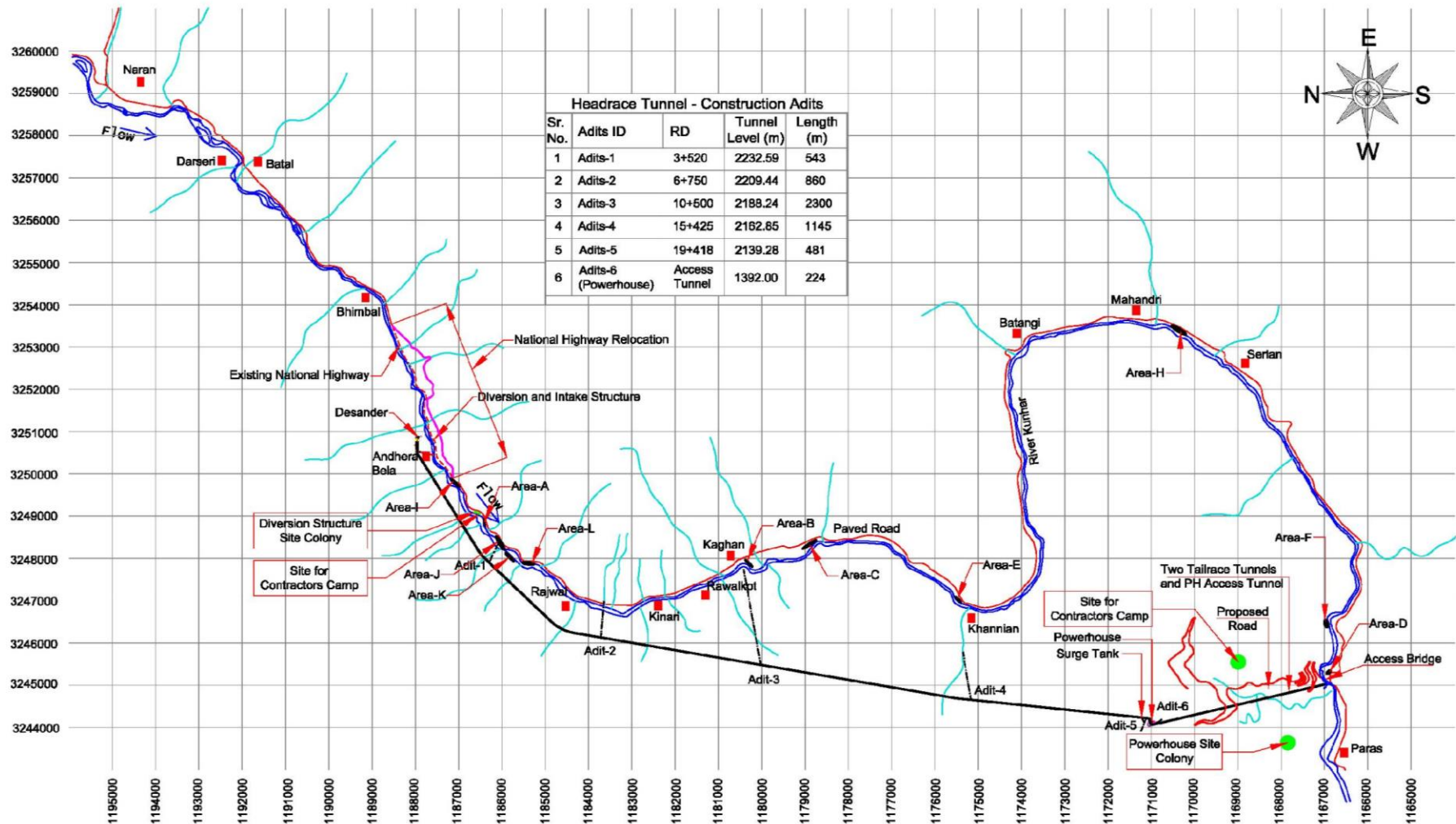
- Project awarded to SK Hydro Consortium through International Competitive Bidding (ICB) under Power Policy 2002.
- SK Hydro (Private) Limited was incorporated, under Companies Ordinance 1984.
- Project Sponsors include:
 - Al Jomaih Group, is the Main Sponsor, Saudi Arabia.
 - Haseeb Khan, Pakistan.
 - Eden Enterprises (M) Berhad, Malaysia.
 - China Gezhouba Group Company Limited, China.

The Project

Project Characteristics

- 870 MW run-of-the-river Hydropower project ('Project').
- The project will generate Annual Energy of about 3,000 GWh.
- Located on Kunhar River in the Kaghan Valley of District Mansehra, Khyber Pakhtunkwa, Pakistan.
- The Diversion & Intake Structure is expected to be located near the village of Andera Bela, upstream of Kaghan town.
- The underground powerhouse is expected to be located near the town of Paras.

Project Layout



Progress

Progress Highlights

S.No.	Activity	Status
1	Issuance of Letter of Interest (LOI)	Complete
2	Approval Of Feasibility Study	Complete
3	NEPRA Tier I (Feasibility Stage) Tariff Determination	Complete
4	NEPRA Generation License Issuance	Complete
5	Issuance of Gov. of Khyber Pakhtunkhwa EPA Approval	Complete
6	Issuance of Letter of Support (LOS)	Complete
7	Issuance of Security Package by PPIB	Complete
8	Basic Design of Project Components	Complete
9	Preparation of EPC Bidding Documents for International Tendering	Complete
10	Issuance of EPC Bidding Documents	Complete
11	EPC Bid Evaluation	Complete
12	Signing of EPC Contract	Complete
13	NEPRA Tier II (EPC Stage) Tariff Determination	Complete
14	Negotiation & Signing of Water Use Agreement (WUA)	Complete
15	Negotiation & Signing of Implementation Agreement (IA)	Complete
16	Negotiation & Signing of Power Purchase Agreement (PPA)	Complete
17	Signing of Land Acquisition Agreement with Government of KPK	Complete
18	Valuation of land & built-up property, Forest & Fruit/Fruitless trees	Estimate Received from GoKPK
19	Completion of Land Acquisition and Title Transfer to Project Company	In Progress
20	Signing of Framework Facility Agreement and Facilities Agreement with Lenders (CEXIM & ICBC)	Complete
21	Satisfaction of CPs to the Facilities Agreement.	In Progress
22	Financial Close	In Progress