



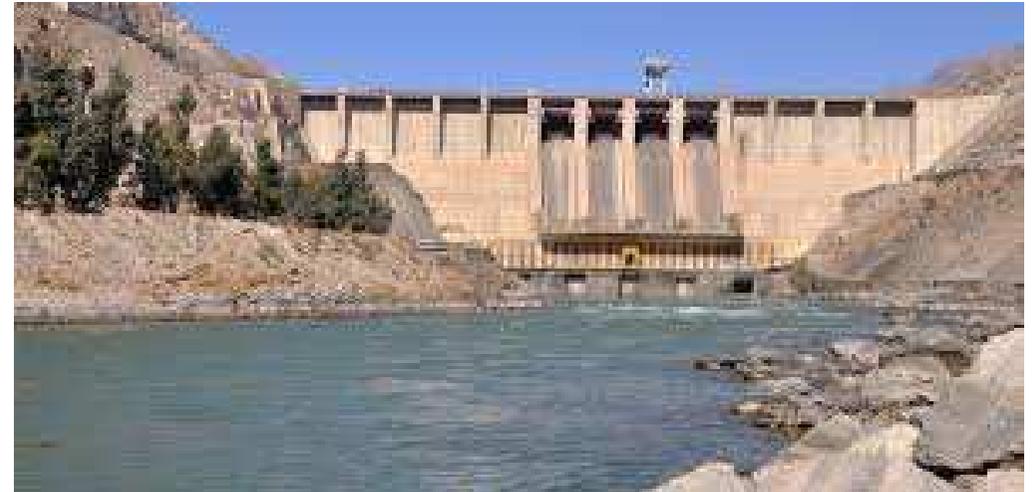
**INTERSOLAR MIDDLE EAST
“ENABLING PV AFGHANISTAN”**

AFGHAN GOVERNMENT SUPPORT FOR SOLAR ENERGY DEVELOPMENT

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Afghanistan Power Sector

- Domestic installed generation capacity largely hydroelectric.
- Reliance on power imports high.
- Only 35% of the households have access to grid power.
- Vast population in rural areas depends on standalone D.G.



- Demand for electricity growing at a fast pace.
- Integrated National Grid under construction – to be established over the next few years.
- Opportunities abound, including natural resources that are not yet fully exploited.
- Market expansion potential for international firms is vast.

Power Generation Potential: Diverse Opportunities

- Afghanistan has huge power generation potential.
 - 23,000 MW of **hydro power** potential across the country.
 - 3,000 – 4,000 MW of **gas power** generation potential.
 - 66,000 MW of **wind power** generation potential.
 - **222,000 MW** of **solar power** generation potential – 300 sunny days in a year.
 - 4,000 MW of **bio-mass power** generation potential – more than 85% of Afghanistan's energy needs are today met by traditional biomass.
 - 3,500 MW of **geo-thermal power** generation potential.



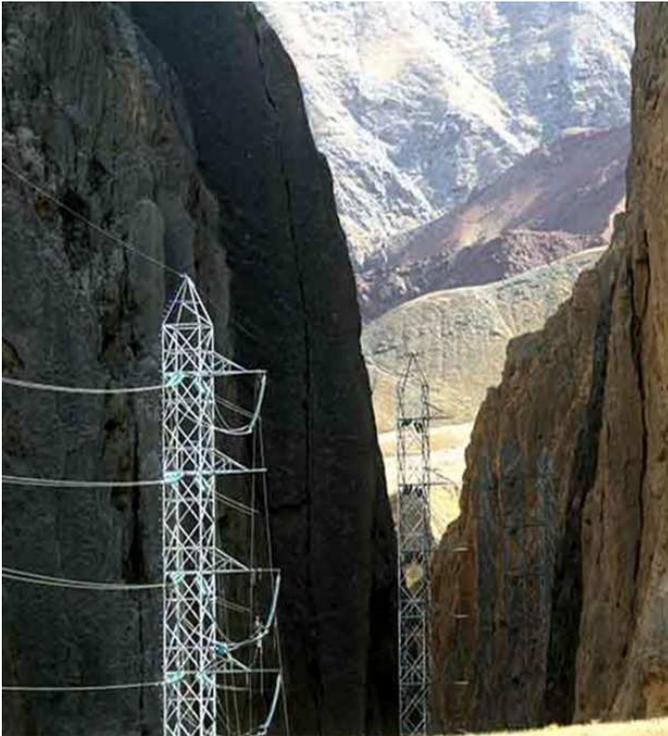
Legal and Regulatory Framework: Renewables

Afghanistan's energy law and policies explicitly **encourage private sector involvement** by providing:

- Financial incentives and other facilitation in terms of wheeling and banking.
- “Must-run” status
- Freedom to sell power to third parties
- Land acquisition and leasing assistance
- Assistance with licensing, and regulatory oversight



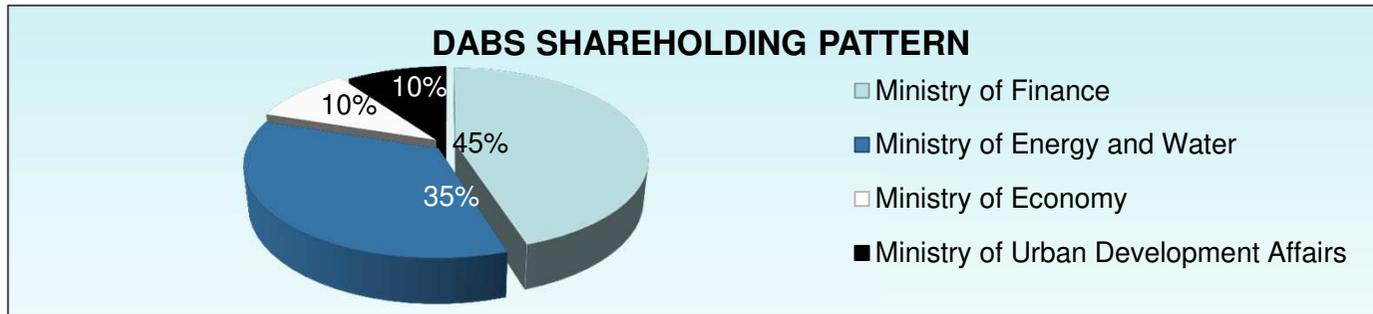
Legal and Regulatory Framework: Business Environment



- There are **no restrictions on foreign investments** in the power sector regarding equity and debt.
- Investors are allowed to **repatriate foreign exchange** without any restrictions.
- Private power companies may **import equipment without restriction**, after payment of applicable custom duties.
- The national power utility, DABS, is **permitted to sign long-term Power Purchase Agreements (PPAs)**, providing Indian companies a point of contact, and a transparent decision-making process.

DABS and the Government of Afghanistan – Reliable Investment Partners

- DABS is a truly **independent and autonomous** corporate utility.
- DABS is **financially solvent**.
- Since incorporation in 2008, DABS has grown into a professionally organized utility, led by a qualified and **experienced management team**. Current staff strength is about 7000.
- DABS assets have increased by over 30% between 2010 and 2016.



Investment Promotion Desk

The German Development Agency (GIZ) is establishing an **Investment Promotion Desk** to service both the Ministry of Energy and Water (MEW) and DABS. This desk will greatly increase the support we offer private sector developers by:

- Providing relevant information to private power companies regarding policy framework and approval processes.
- Assisting in **bid process management** of private power projects.
- Guiding investors in the **assessment of their project proposals**.
- Following up for **timely approvals** for setting up power projects.
- Speeding up the process by becoming a “**one stop shop**” for investment facilitation.

For more information on the Investment Promotion Desk, please refer to your information packets.

DABS – Private Developer Support

With infrastructure in place and more under construction, a rapidly developing legal and regulatory framework, comprehensive support from the Investment Promotion Desk, and our own professional capacity, DABS stands ready to support you. As you invest, DABS will:

- **Negotiate and sign** all-long term Power Purchase Agreements with private power developers.
- Be responsible for **prompt payment** for power purchased.
- Coordinate and provide **interconnection facilities**.
- Support and facilitate investors in obtaining necessary **regulatory clearances** from the relevant authorities.
- Support and facilitate **signing of Land Agreements** for the land owned by the government.



Examples of some important Solar Power Projects that have been Planned

- **10 MW Kandahar Solar Power Project**

- Project supported by USAID.
- The contractor will construct a 10 MW solar plant in Kandahar.
- DABS successfully negotiated a 15-year power purchase agreement.
- Project Construction has recently commenced.



- **12 MW Farah Hybrid project – Solar PV + Wind + Diesel Generators + Battery Back-up**

- Will supply round the clock power to all 14,000 households in Farah town (currently only 3,000 households are partially served).
- Power tariff will come down from 48 cents/kWh to 13.4 cents/kWh.
- Battery Back-up (4 MW for 4 hours).

Examples of Solar Power Projects that have been Planned

- **100 MW Naghulu Solar Power Project**

- Largest Grid tied solar power plant to be built by the private sector in the country at a single location.
- Will operate in combination with 100 MW Naghulu hydroelectric power plant located at the same location.
- To be funded by multilaterals viz. ADB, USAID etc.
- Will supply power to Kabul and other provinces.

- **75 MW Nangarhar Hybrid Project – 40 MW Solar PV + 35 MW Diesel Generators**

- Project conceived as a stand-alone project to supply round the clock power to Nangarhar province.
- To have an advanced energy management system.
- Will significantly improve the living standard of the people living in Nangarhar and the economy of the region.

- **Gazni, Gaedez and Urzgan Renewable Power Projects**

- Will need to operate in the absence of a live grid.
- All of these projects to have large battery back-ups.

Thank You

