

# PRIVATIZATION OF QAID-E-AZAM SOLAR POWER

## PRELIMINARY INFORMATION MEMORANDUM









JULY 2017



In collaboration with

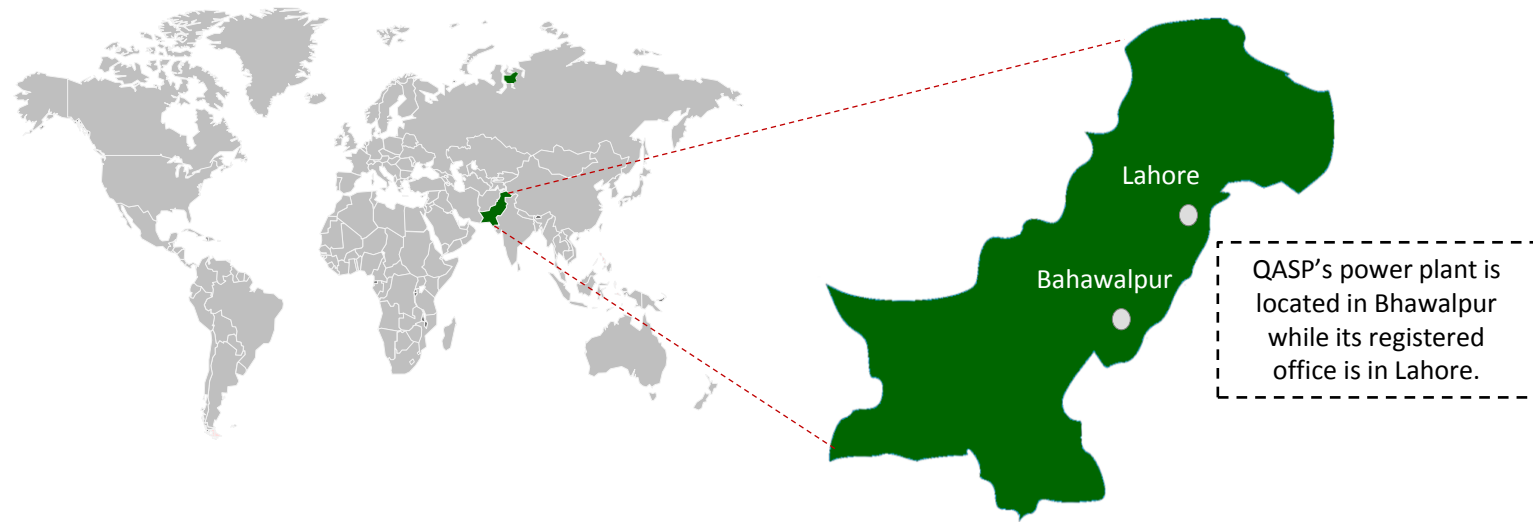


# TRANSACTION BACKGROUND

 CAPACITY <b>100 MW</b>	 CAPACITY FACTOR <b>18.27%</b>
 25Y LEVELIZED TARIFF <b>US c14.97/kWh</b>	 GUARANTEED USD EQUITY IRR OF <b>17%</b>
 FY2016 REVENUE <b>PKR 2.95 Bn</b>	 FY2016 ASSETS <b>PKR 16.7 Bn</b>
 <b>1<sup>ST</sup> SOLAR POWER PLANT IN PAKISTAN</b>	 CREDIT RATING <b>AA- (JCR-VIS)</b>

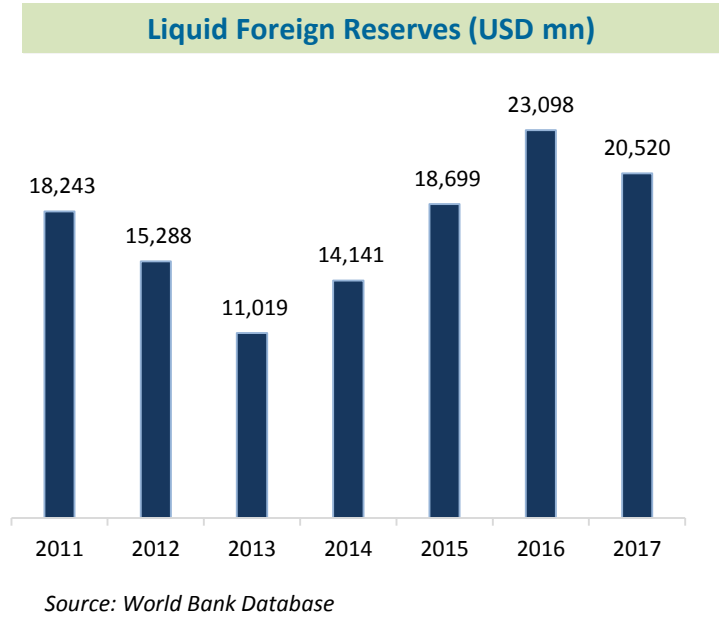
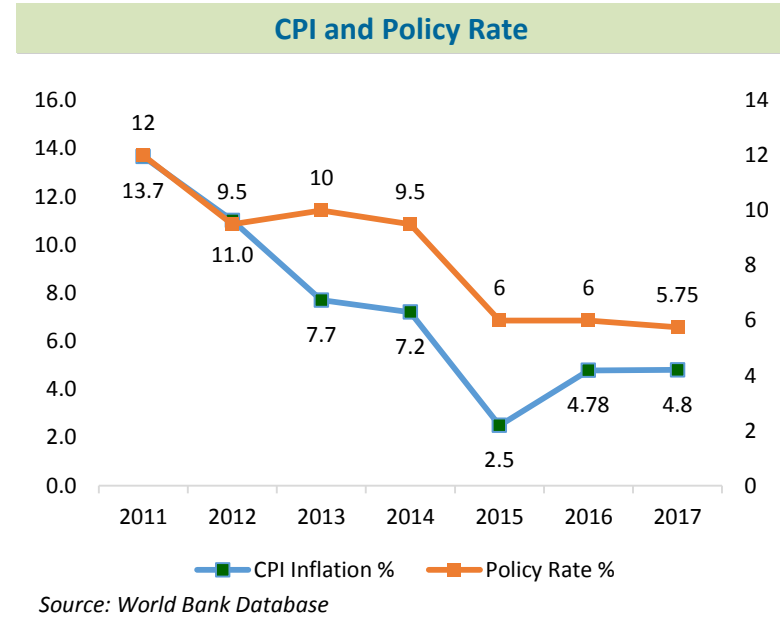
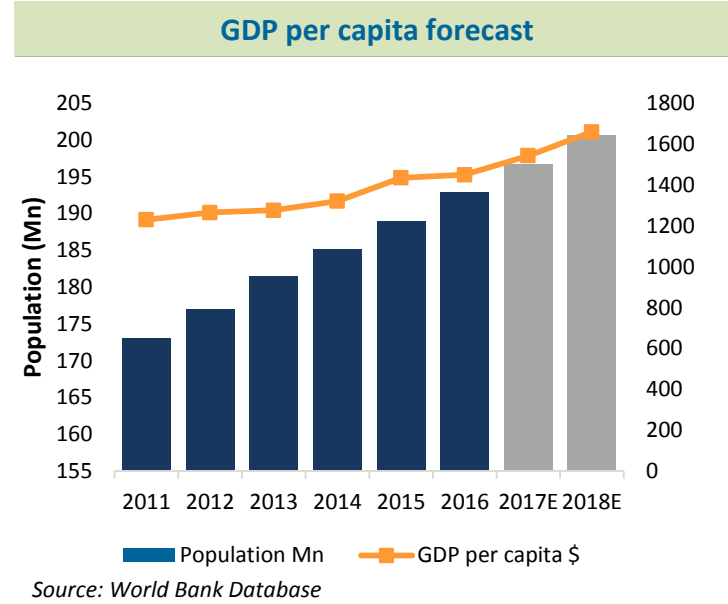
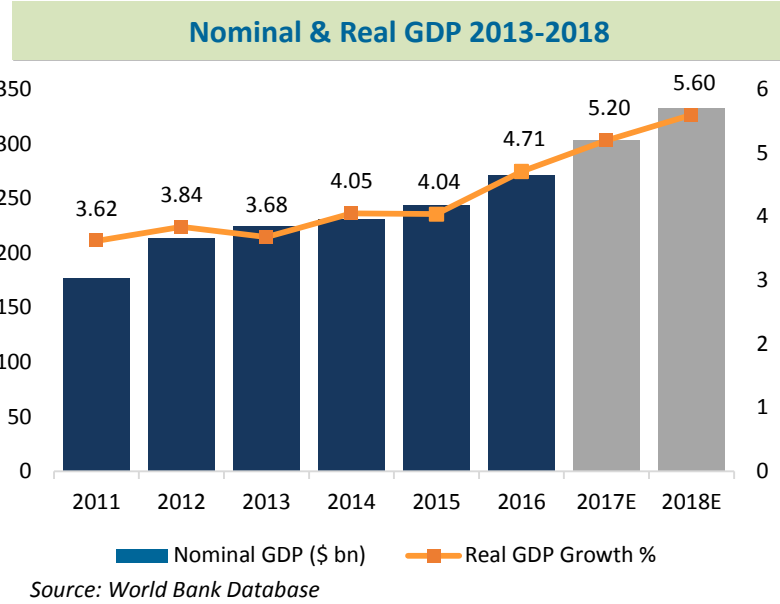
## TRANSACTION OVERVIEW

- The Government of Punjab, Pakistan (“**GOPb**”), which currently owns 100% of Quaid e Azam Solar Power (Pvt.) Ltd (“**QASP**” or the “**Company**”) seeks to divest its entire stake in QASP along with management control to a qualified local and/or international strategic bidder. The Punjab Privatization Board (“**PPB**”) on behalf of the GOPb thus invites Expression of Interest (“**EOI**”) from investors interested in acquiring 100% of QASP’s share capital.
- GOPb / PPB has appointed a Financial Advisory Consortium comprising of **United Bank Limited** (Lead Financial Advisor), **EY Ford Rhodes** (Accounting and Tax Advisor), **HaidermotaBNR** (Legal Advisor) and **ensibo GmbH** (Technical Advisor) to conduct this transaction.



# ECONOMIC FUNDAMENTALS

- Pakistan has a population of 188 Mn (2015), of which 30% is within 25-30 years age bracket, signifying growth potential for the country.
- Economic growth has gained momentum on improving macro economic fundamentals backed by GDP growth, lower discount rate, improving external outlook and consistently improving political / security environment.
- Lower oil prices have also pulled down the inflation trajectory with YoY monthly CPI clocking at below 5% for the past 3 years.
- An overall positive economic outlook and \$20 bn+ foreign reserves have enhanced investor confidence and upgraded country rating for Pakistan by Moody's from Caa1 in 2013 to B3 in 2017



	2012	2013	2014	2015	2016	2017
Rating (Moody's)	Caa1	Caa1	Caa1	B3	B3	B3
Outlook	Stable	Negative	Stable	Stable	Stable	Stable

Source: Moody's Rating Agency

# ECONOMIC FUNDAMENTALS

## 1. STRATEGIC LOCATION

- Pakistan is situated right at the junction of Central Asia, China, the Middle East and South Asia.
- Pakistan has the potential to become one of Asia's premier trade, energy and transport corridor
- It serves as the lowest cost land route to Central Asian countries

## 2. CPEC INITIATIVES

- China – which is Pakistan's biggest trading partner – signed an agreement, the China Pakistan Economic Corridor (CPEC). The agreements consists of infrastructure expenditure of \$54 bn
- C. \$35 billion allocated for Energy projects only, which includes 900 MW Solar Power Plant at the same site as QASPL's

## 3. CONSISTENT ENERGY SUPPLY

- USD 16 Billion LNG supply deal with Qatar to ensure consistent energy supply to Pakistan to support its power generation and domestic energy needs

## 4. ECONOMIC STABILITY

- Pakistani Rupee has been one of the relatively stable currencies in the emerging markets amidst decline in oil prices (average of 3.9% depreciation in FY16)
- Central Bank is following a relaxed monetary policy to promote investment, bringing benchmark rates down from 12% in 2011 to 5.75% in 2016 and maintaining at the same rate.

## 5. CLASSIFICATION TO MSCI EM STATUS

- Given strong stock market fundamentals in place, MSCI has reclassified Pakistan in its Emerging Market Index this year, providing an impetus for increased foreign investment

## 6. IMPROVED LAW & ORDER

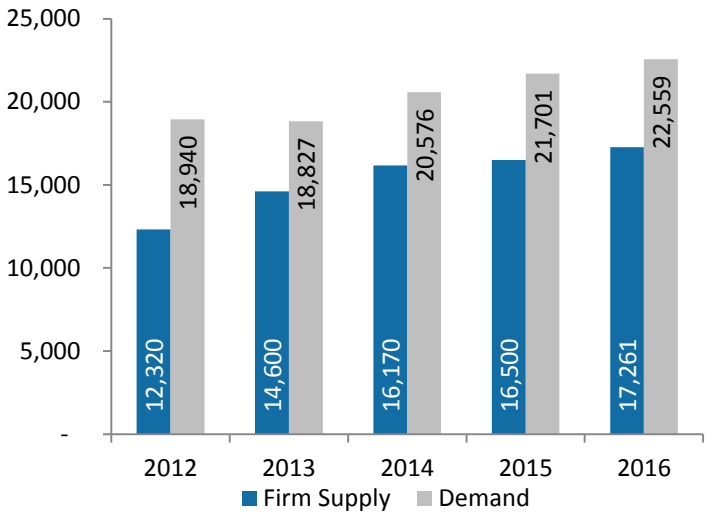
- Pakistan's security forces have achieved significant success in improving the law and order in the country as witnessed through a significant decline in terrorism
- The ongoing operations against militants throughout the country will further improve the overall security situation in the country

# POWER SECTOR SNAPSHOT

## Overview

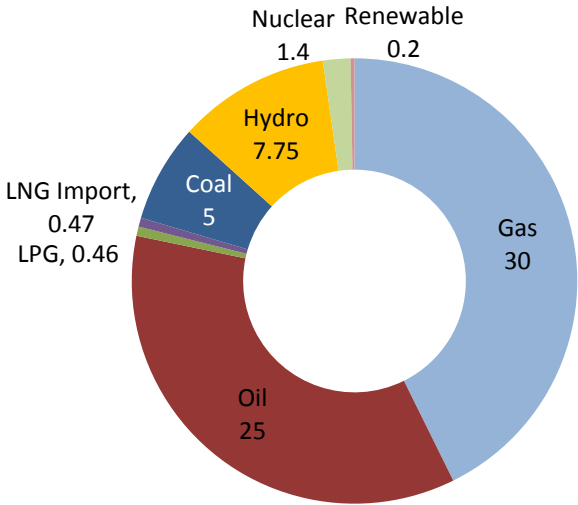
- Pakistan's high dependence on imported oil for electricity generation has contributed to high cost of electricity during the past decade.
- The energy mix will change in favor of hydel, coal and gas based power generation over the next 5 years due to increasing emphasis on RLNG, coal, hydel and renewable based power generation.
- Favorable Power sector policies with equitable and time-tested concessionary framework incorporating adequate lender protection and guaranteed USD based equity returns have encouraged private sector participation in electricity generation since the 90's.

### Demand and Supply scenario (MW)



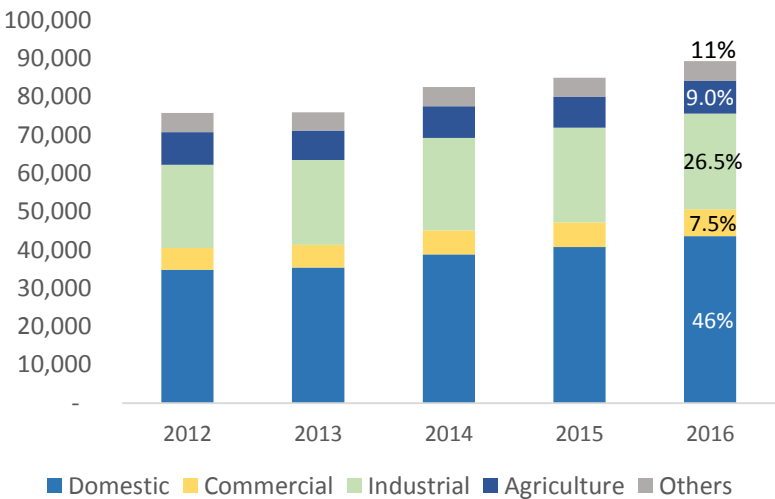
Source: NEPA – State of the industry Report 2016

### Primary Energy Supplies by Source (MTOE)



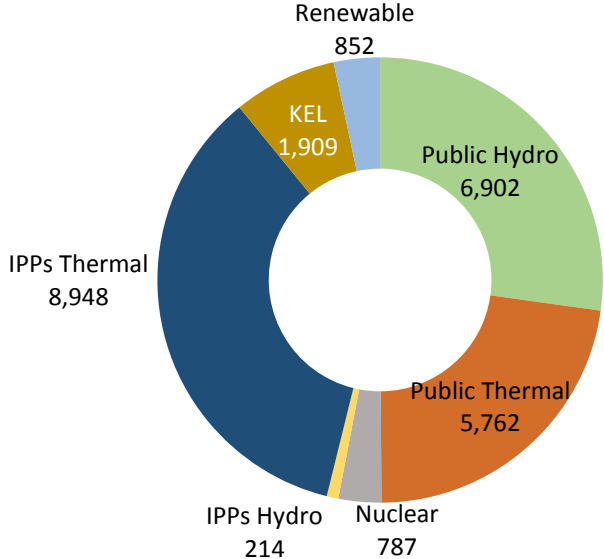
Source: NEPA state of industry report 2016

### Energy Consumption by Sector (GWh)



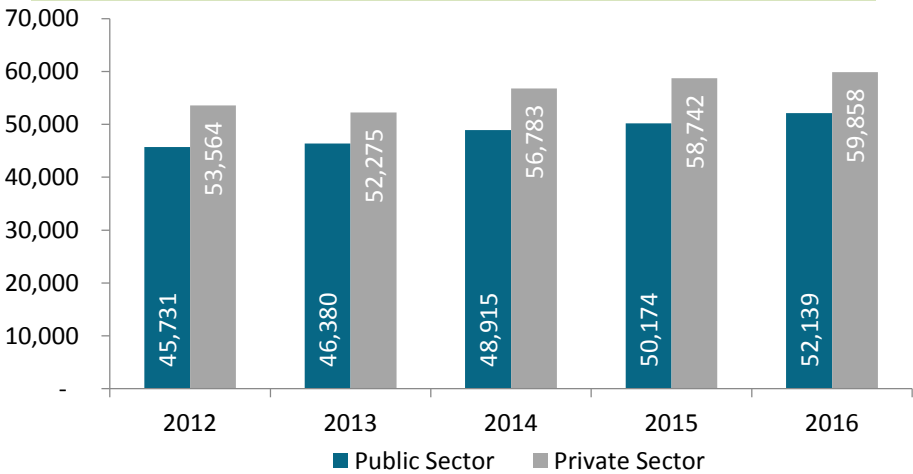
Source: NEPA State of the Industry Report 2016

### Installed Generation by Source (MW)



Source: NEPA state of industry report 2016

### Electricity Generation (GWh)



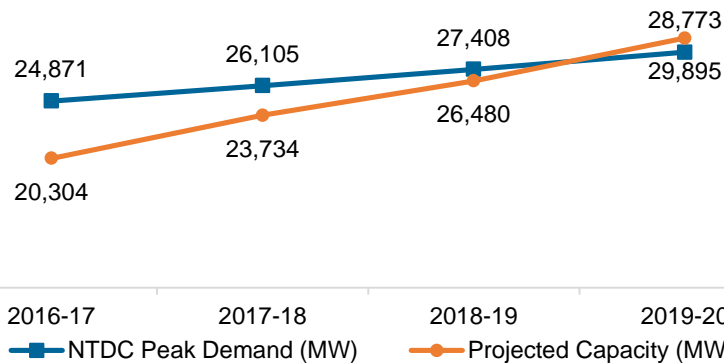
Source: NEPA State of the Industry Report 2016



# PAKISTAN'S ELECTRICITY GENERATION – WAY FORWARD

- Pakistan is expected to achieve power surplus by 2020 due to new additions to power generation under foreign & local investments.
- Projects under CPEC are expected to generate more than 6,000 MW in 2017-18 and another 2,910 MW beyond 2018
- Other than CPEC, there are many other power projects being undertaken by private sector and the Government and are expected to contribute additional generation of 7,748MW in 2017-18 while projects worth 27,940 MW are in the pipeline (including those at feasibility stage) going beyond 2018

**Demand and Supply Forecast**



Source: NEPRA

		Projected New Power Generation Capacity			
CPEC - Additional Generations (MWs)	Sr No	Project Name	2017	2018	Beyond
		1	Coal-based power project at RYK, Punjab	1,320	
2		Coal-based power project at Sahiwal	1,320		
3		Imported Coal-based project at Port Qasim,		1,320	
4		Engro coal-fired power project		660	
5		SSRL coal-based power plant		1,320	
6		Coal-based power project at Muzaffargarh			1,320
7		Suki Kinari Hydropower KPK			870
8		Karot Hydropower project Punjab			720
	<b>Total</b>		<b>2,640</b>	<b>3,300</b>	<b>2,910</b>
Other Energy Projects - Additional Generation (MWs)	1	Neelum Jehlum	969		
	2	Chashma Nuclear (C4)	340		
	3	Wind (Other than CPEC)	500		
	4	Hydel(Tarbela IV and 2 others)	1,679		
	6	LNG (3*1200)	3,600		
	7	Jamshoro Coal Power Plant		660	660
	8	K2 & K3			2,200
	9	CASA 1000			1,000
	10	Dasu 1& 2			4,280
	11	Diamer Basha			4,800
	12	Others			15,000
		<b>Total</b>		<b>7,088</b>	<b>660</b>

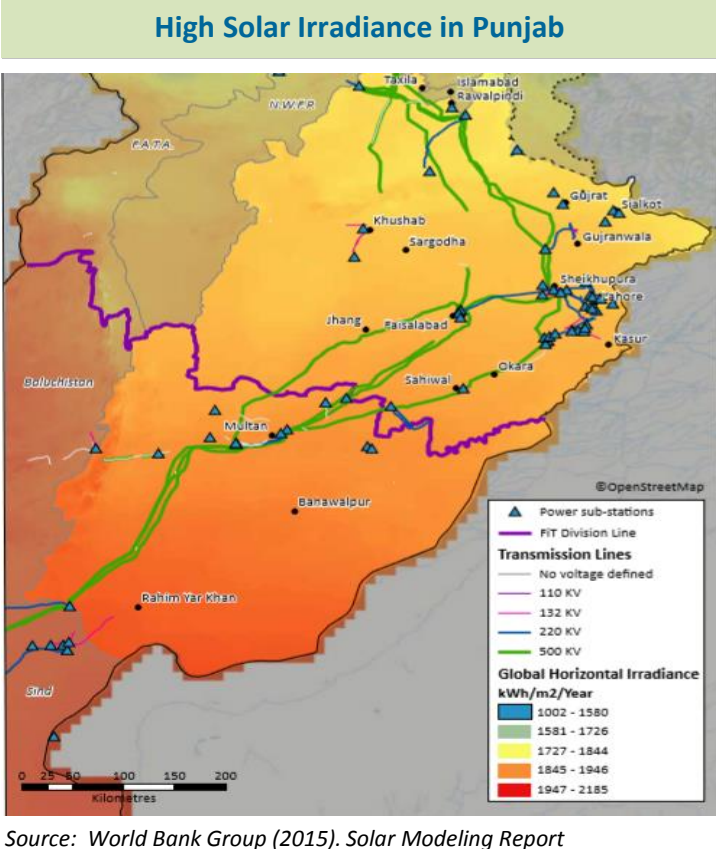
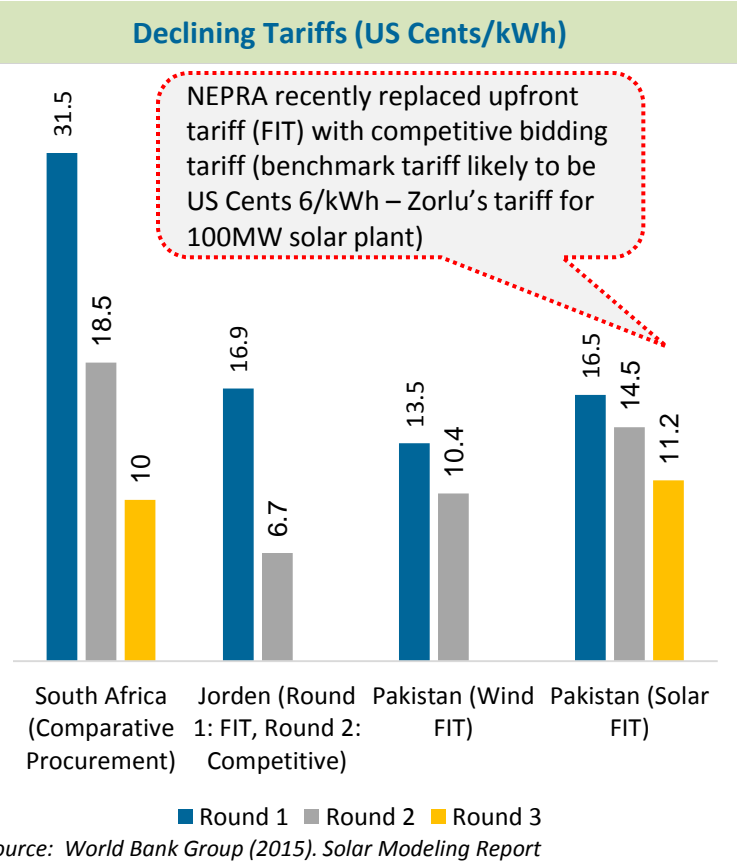
Source: NEPRA and News Article

# SOLAR POTENTIAL IN PAKISTAN

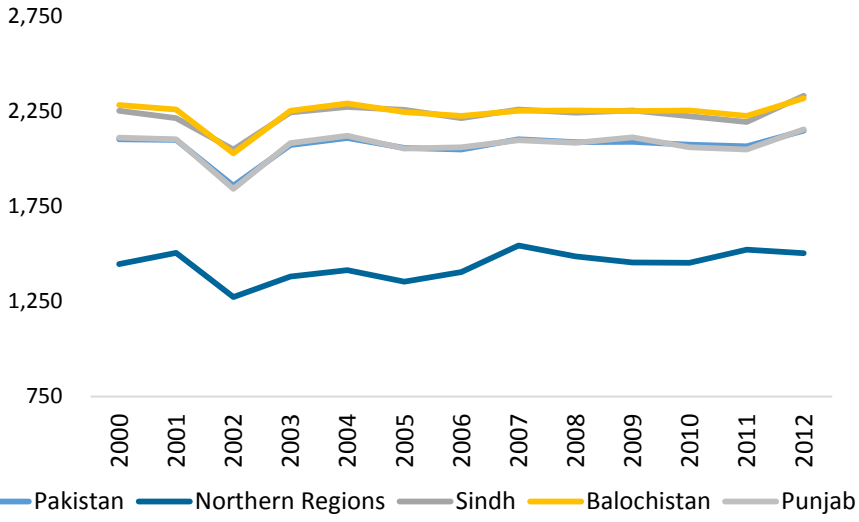
Pakistan has tremendous potential to meet its power demand needs from renewable energy sources and, in particular, solar.

Solar irradiance levels in parts of Pakistan, particularly in the southwest, are on par with the best in the world with global horizontal irradiance (GHI) values over 1500 kWh/m<sup>2</sup> in over 90% of the country's land area. The annual mean value of GHI for whole Pakistan, based on preliminary analysis by The World Bank, is 2071 kWh/m<sup>2</sup>.

Upcoming Major Solar Power Projects		
Capacity (MW)	Number of Projects	Sponsors
>50	7	ET Solar (Pvt.) Ltd, Forshine Pakistan, Siddiqsons Solar Ltd, M/s Solar Blue Pvt. Ltd., M/s Jafri & Associates, M/s Integrated Power Solution
>30, 50>	1	Asia Petroleum Ltd
>20, 30>	3	ET Solar (Pvt.) Ltd, M/s R.E. Solar Pvt. Ltd.



### Annual suns of GHI based on satellite estimates



The maps reveal that even areas receiving the least average annual irradiation are better than Germany's best regions for solar power generation

# QASPL – OVERVIEW OF THE ASSET

## Introduction

- Established as a part of GoPb's initiative to establish a 1,000 MW solar park in Bahawalpur.
- Incorporated in September 2013 and achieved COD in July 2015.
- During its first 18 months of operation, QASP generated approved energy of 232,660 MWh, while operating at a capacity factor of 18.27% against NEPRA's benchmarks of 223,094 MWh and 17.5% respectively.

## Project Cost & Contractors

### EPC & O&M Contractor

- TBEA

### EPC Cost

- 13,301 PKR mn

### Non-EPC Cost

- 456.8 PKR mn

### Total Adjusted Cost

- 14,946.8 PKR mn

## Key Milestones

2<sup>nd</sup> June 2014

EPC and O&M contract with TBEA

10<sup>th</sup> June 2014

Signing of Land lease Agreement

8<sup>th</sup> July 2014

Energy Purchase Agreement with CPPA-G

22<sup>nd</sup> Jan 2015

Tariff Determination by NEPRA

15<sup>th</sup> Jul 2015

Achieved Commercial Operations

## Plant Details

**Principal Activity** Own, operate and maintain the power plant

**Installed Capacity** 100 MW

**Location** District Bhawalpur, Punjab

**Governance** Independent Board & Professional Management

**Technical Specifications**

- 395,120 Polycrystalline Photo Voltaic (PV) modules (255 Wp each)
- 1,300 DC Combiner Boxes
- 200 Inverters (500 KW)
- 100 Transformers (0.315 / 33 kV)
- 33kV Collection System Loops (20 feeders)

**Net Output (FY2016)** 154,005 MWh

**Operational Efficiency (FY2016)** Capacity Factor: 18.27%

**Off-taker** Central Power Purchasing Agency (CPPA-G)

**Applicable Framework** Renewable Energy Act 2006

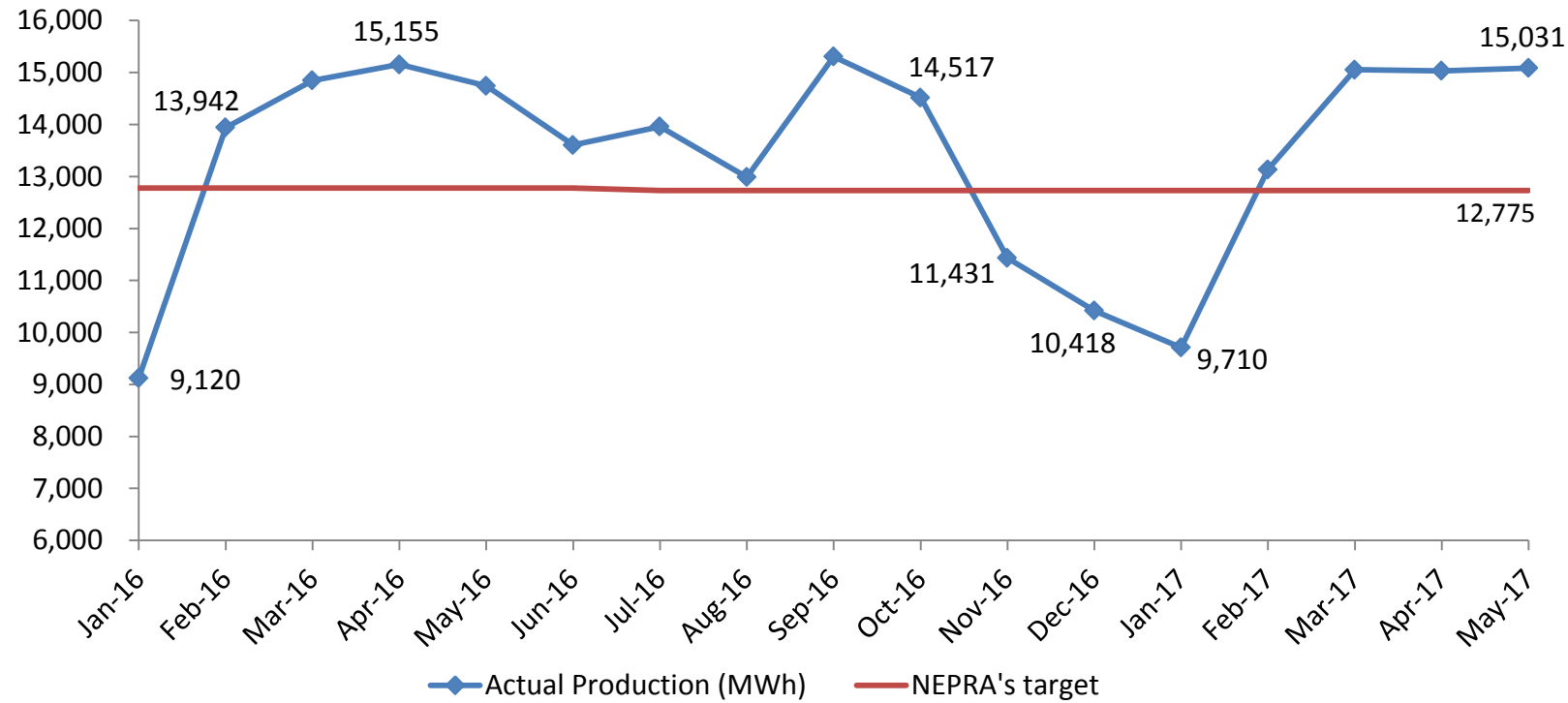
**Employees** 66 (Dec'16)

**Rating (JCR-VIS)** AA-



# TECHNICAL SNAPSHOT

<b>PERFORMANCE RATIO</b> [FEB 16 – FEB 17] <b>75.4%</b>	<b>UNITS EXPORT TO NATIONAL GRID</b> [JUL 16 – JUN 16] <b>153.9 GWH</b>	<b>HOUSES POWERED</b> <b>50,000 – 100,000</b>	<b>O&amp;M CONTRACT</b> [DURATION] <b>25 YEARS</b>
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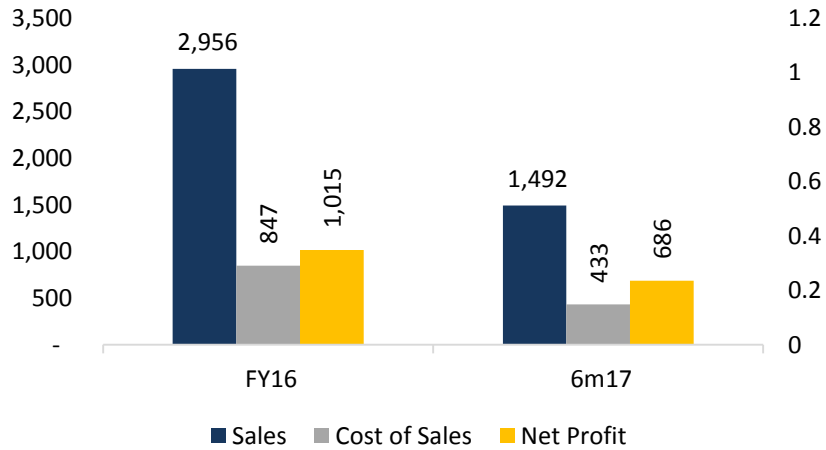
Source: QASPL's Management

Plant Details	
<b>Plant Type</b>	Ground-mounted Photovoltaic Plant
<b>Installation type</b>	Fixed installation
<b>DC-Capacity</b>	100,967 kWp (based on flash test data)
<b>PV Modules Manufacturer</b>	JA Solar
<b>Inverter &amp; Combiner boxes</b>	TBEA SunOasis
<b>Mounting Structure</b>	TBEA SunOasis
<b>Foundation</b>	TBEA SunOasis

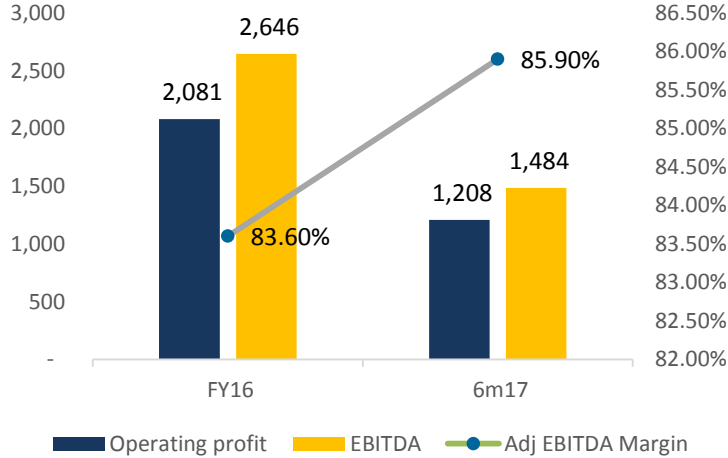
- QASPL is achieving higher efficiency than NEPRA's benchmark for the two successive years. As at 30 June 2017, QASPL exported 153.9 GWh to the national grid, which is more than NEPRA's 152.2 GWh benchmark, with 15 days left in the year end.
- On-site monitoring via SCADA system
- High plant availability is ensured by on-site monitoring and short response times

# STRONG FINANCIAL POSITION

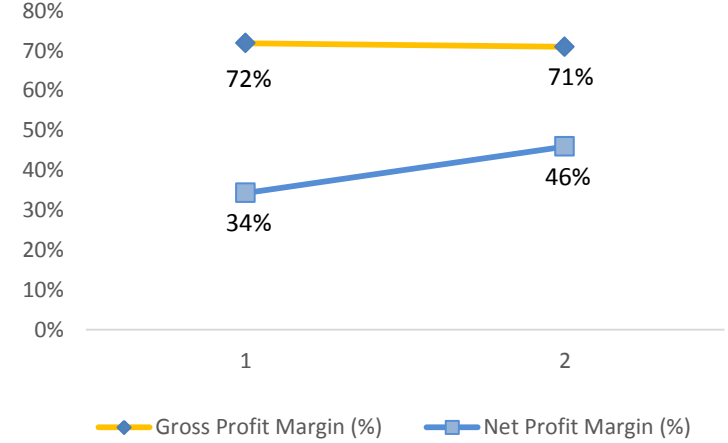
## Profitability and growth (PKR mn)



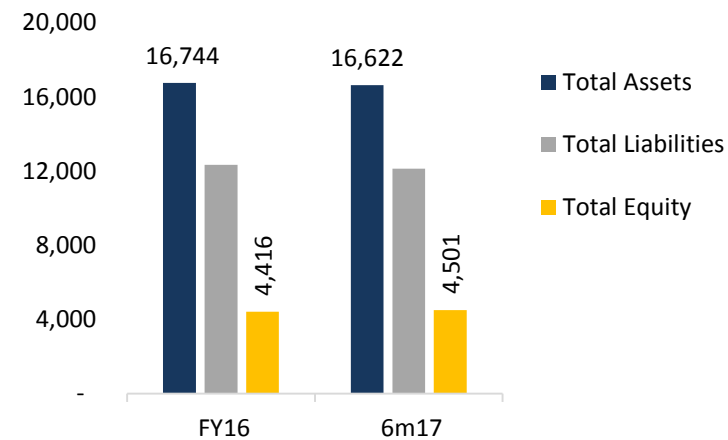
## Operating Profits and EBITDA (PKR mn)



## Gross Margin and Net profit Margin



## Balance Sheet Snapshot (PKR mn)



- Revenues generated during FY16 and 6m17 amounted to PKR 3.0 billion and PKR 1.5 billion respectively, while gross margin was reported at around 71% for corresponding period. The company's profitability draws support from high margins with net income reported at PKR 1.0 billion for FY16A and PKR 0.7 billion for 6m17.
- 6m17 earnings include one-off income of PKR 119.3 million recorded on account of liquidated damages recoverable from the O&M contractor.
- At Dec16, total asset base of the company amounted to PKR 16.6 billion. Major assets include operating fixed assets of PKR 12.9 billion, mainly representing plant and ancillary equipment, and cash and bank balances of PKR 2.5 billion, jointly representing c.93% of total assets.

Source: QASP's financial accounts

# APPROVED TARIFF STRUCTURE & FEATURES

## Tariff Structure

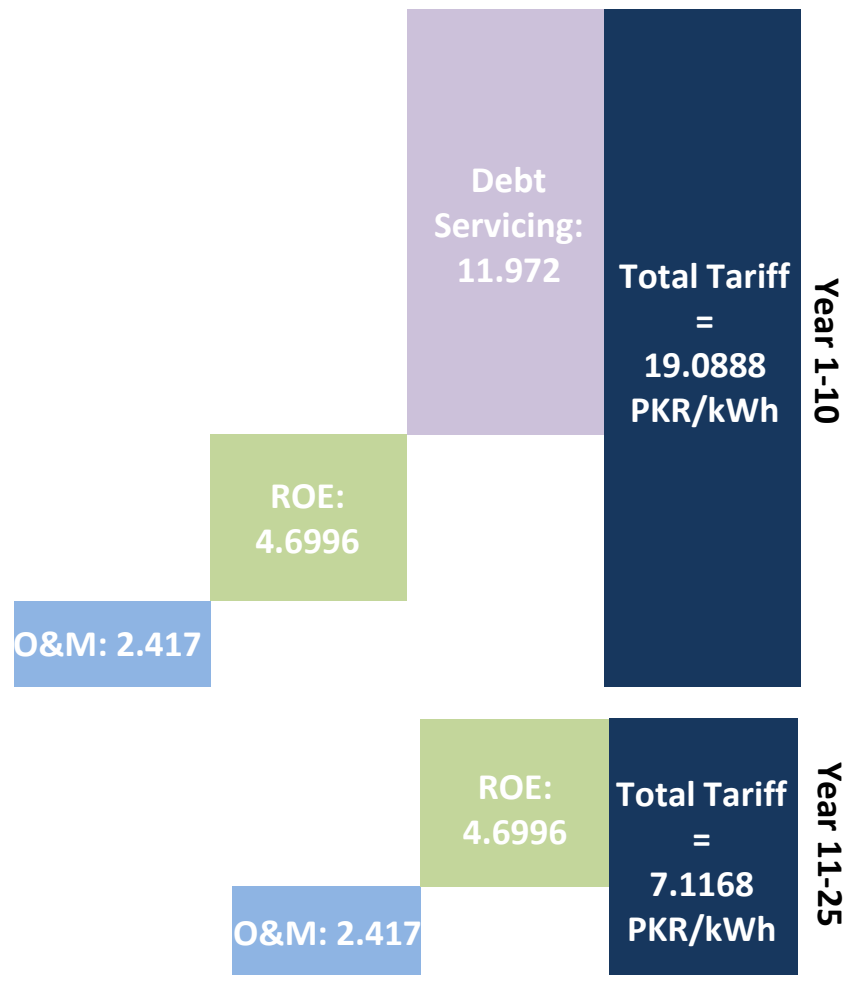
- Tariff Period: 25 years
- Tariff structure guarantees a fixed return under Capacity Purchase Payments (“CPP”) and Energy Purchase Payments (“EPP”)
- Capacity payments comprises of a fixed component of the tariff which covers shareholder’s return and debt servicing thereby ensuring stable dividends in case of declining energy offtake.

O&M	• As per O&M contract
Debt service – principal	• 10-year repayment period of loan
Debt service – interest	• 350bps spread over KIBOR*
ROE	• guaranteed 17% equity return

• Indexations:

O&M (Local – 80%)	• Linked to local CPI
O&M (Foreign – 20%)	• Linked to US CPI and USD/PKR parity
Debt service – interest	• Linked to fluctuations in KIBOR
ROE	• Linked to USD/PKR parity

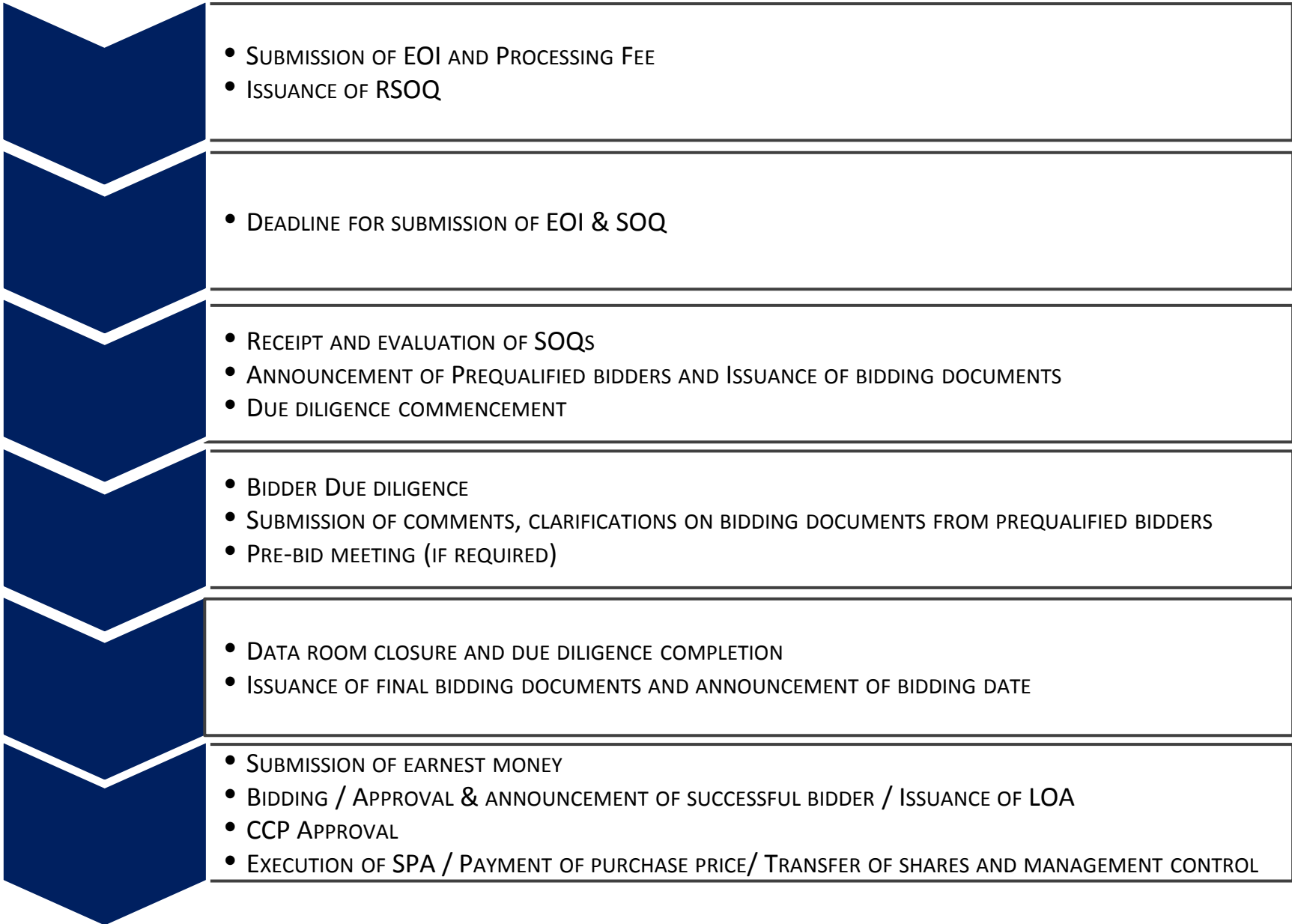
- Debt servicing component of the tariff ceases subsequent to repayment of debt (after 10 years of operation). Consequently, the reference tariff for Years 11-25 stands at 6.99 PKR/kWh.



**Levelized Tariff: 15.22 PKR/kWh**  
**14.97 US Cents/kWh**

\*QASP has submitted that it has procured local financing at KIBOR plus 300 bps as against the allowed KIBOR plus 350 bps, in accordance with Authority's upfront tariff determination the savings are to be shared in the ratio of 60:40 between power purchaser and the sponsor respectively.

# TRANSACTION STEPS



# FINANCIAL SNAPSHOT

Key Financials (PKR mn)	FY16	6mFY17
Sales	2,956	1,492
Cost of Sales	847	433
Gross Profit	2,109	1,059
Operating Profit	2,081	1,208
Financing Costs	1,038	490
Net Profit	1,015	686
Key Balance Sheet Items (PKR mn)	FY16	6mFY17
Property, Plant and Equipment	13,272	12,904
Total Non-Current Assets	13,275	12,907
Cash and Bank Balances	2,438	2,507
Total Current Assets	3,468	3,715
<b>Total Assets</b>	<b>16,744</b>	<b>16,622</b>
Total Current Liabilities	1,876	2,014
Long Term Debt	10,439	10,081
Total Non-Current Liabilities	10,451	10,107
<b>Total Liabilities</b>	<b>12,328</b>	<b>12,120</b>
<b>Total Equity</b>	<b>4,416</b>	<b>4,501</b>
Key Metrics	FY16	6mFY17
Gross Profit Margin (%)	71.3%	71.0%
Net Profit Margin (%)	34.3%	46.0%
Current Ratio (x)	1.32	1.84
Operational Highlights	FY16	6mFY17
Net Output (MWh)	154,005	78,840
Plant Capacity Factor (%)	18.27%	18.11%