



Republic of Iraq
Presidency of Council of Ministers
National Investment Commission



IRAQ OPEN FOR BUSINESS:

SNAPSHOT OF POTENTIAL PROJECTS

BY SECTOR

SESSION 1- OIL, GAS AND POWER

13th of February 2018

Agenda

- ▶ Introduction and Approach
- ▶ Snapshot of Potential Projects
 - ▶ Oil & Gas
 - ▶ Power
- ▶ Q&A

Breakout session 1



Oil & Gas



Power



Al Baraka Ballroom

Power sector

Sector overview

- ▶ Iraq is currently going through an unprecedented rebuilding effort, with development of its power sector being a key pre-requisite for sustainable growth of the country's economy.
- ▶ Iraq has made progress in restoring its power generation from a peak demand supply of about 5GW in 2005 to 14GW in 2016, but continues to face challenges, including a high demand growth.
- ▶ Iraq's Energy Master Plan envisages total installed generation capacity of 24,400 MW by 2020, including 13,000 MW of gas - fired capacity – this would equate to over USD 25 billion in the country's power generation sector.
- ▶ The portion of natural gas - based generation has recently increased to about 50 percent of the total installed capacity but represent only 37% of power supplied, due to gas supply constraints.
- ▶ A shift towards gas-fired generation would enable Iraq to increasingly switch to both gas turbines and more efficient combined-cycle gas turbines (CCGTs). Such a transition would reduce domestic oil demand by an estimated 1.2 MMbpd by 2035 and result in additional cumulative oil exports of USD 520 billion.
- ▶ Ministry of Electricity has already signed a number of Power Purchase Agreements (PPA) with investors for sizeable plants in Basra (3,000 MW) and Bismaya (3,000 MW) – focus on scaling up this initiative present significant private sector investment opportunities
- ▶ Iraq also has significant renewable energy potential, particularly solar – given the success of solar IPP programs around the region, Government of Iraq is keen for private investment in solar IPPs across the country

Power sector projects



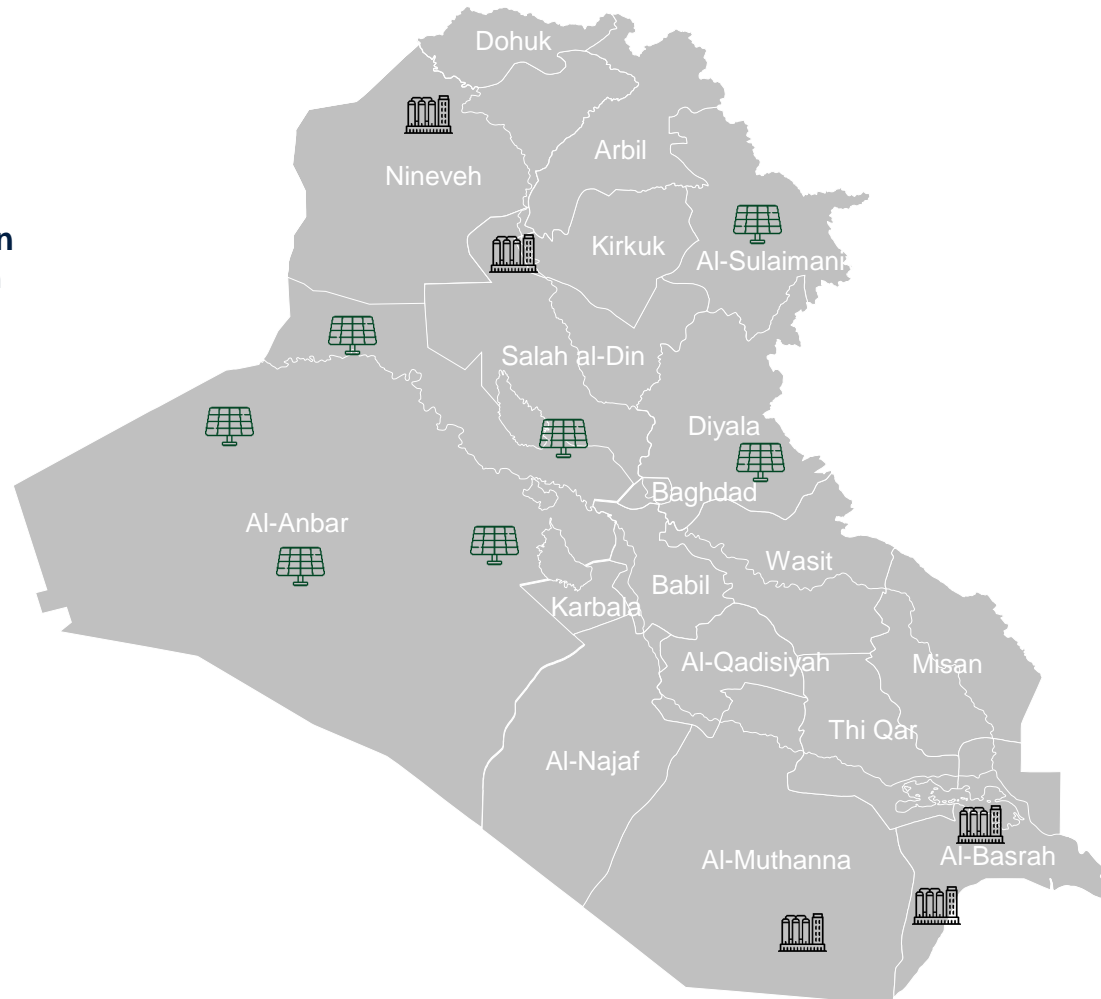
Power Stations

- Biji Station
- North Station
- Biji 2nd Station
- Hartha Commercial Station
- Salah al-Din steam station



Solar PV Stations

- Solar PV: Al – hay
- Solar PV: Diyala
- Solar PV: Abu Gharib
- Solar PV: Haditha
- Solar PV: Heet
- Solar PV: Fallujah
- Solar PV: Jissan



Power Sector – Power Stations

Biji Station - Rehabilitation

Governorate



Biji, is situated in northern Iraq and is in the Northern governorate of Salah al-Din.

Project Summary



- Rehabilitation of electricity station constructed by Orascom Construction Industries before the crisis with a capacity of (6 X 169 MW), project has been proposed by the ministry to be offered to investors under a ROT agreement along with PPA.
- The MoE estimate that damages amounted to approx. 80% of the total project costs.
- The project will be implemented through 2 phases:
 - Phase 1: Rehabilitation of the existing facility.
 - Phase 2: Operations.
- Project Duration; 10-15 years – MoE has indicated that the project is most likely to be over 15 years.



Power Sector – Power Stations

Biji Station – Rehabilitation (Continued)

Project Summary



- Type of turbines : SIEMENS gas turbines installed to fire three types of fuel (natural gas, distillate oil and heavy fuel oil)
- Tariff; will be dependent on fuel type, i.e. natural gas, LDO, HFO, fuel oil, gas fuel.
- O&M - will be implemented for the duration of the contract.
- Transfer - At the end of the contract with one to three years worth of spare parts to the MoE.
- The percentage of work progress of project until 5/6/2014 was 91.7%; and the project faced security related challenges. The estimated damage is as follows (civil works 20%, mechanical works 50%, electrical works 100%, control systems 50%, treatment systems 80%).

Power sector – Power Stations

Biji 2nd gas station (Rehabilitation)

Governorate



Biji, is situated in northern Iraq and is in the Northern governorate of Salah al-Din.

Project Summary



- Capacity: gas power plant (4 × 160 MW) existing gas turbine power units manufactured by SIEMENS company.
- Turbines installed to fire three types of fuel (natural gas, distillate oil and heavy fuel oil).
- Project purpose: rehabilitate all four of the turbines contract.
- More than 50% of the station has been damaged



Power sector – Power Stations

North station - thermal power station

Governorate



Mosul, is situated in northern Iraq and is in the Northern governorate of Nineveh.

Project Summary



- Rehabilitation of existing power station with capacity of (4 X 350 MW) in Al Mosul.
- Operational details:
 - 4 oil fired units.
 - Connected to 132 KV & 400 KV grids.
- There are 4 existing units on site, 2 need rehabilitation and the remaining 2 generating units have never been used.
- The Ministry is proposing to rehabilitate the 2 generating units.



Power Sector – Power Stations

Hartha station

Governorate



Strategically located between Kuwait and Iran, most of Iraq's oil production takes place in Basrah.

Project Summary



- Hartha Steam Power Plant consists of identical units 4x200 MW.
- Each unit consist of a conventional superheat boiler with reheat fueled by Natural Gas or Oil and a condensing three cylinder steam turbine.
- Rehabilitation of existing electricity station with capacity of (200 MW) under ROT agreement and add additional 2 new units with a capacity of (2 X 660 MW) through a BOT agreement.
- Procurement structures under consideration are ROT or BOT.
- Station is located on the bank of the Shat AL-Arab River, approximately 33 Km north of Basrah and 25 Km from the Iranian border.



Power Sector – Power Stations

Salah Al-Din Station

Governorate



The plant is situated in northern Iraq and is in the Northern governorate of Salah al-Din.

Project Summary




- Rehabilitation of existing power station with capacity of (2 X 610 MW). Ministry highlighted the project as one of key projects given it's in recently liberated area Salah al-Din and with large capacity.
- Ministry plans to execute the project through a 20-years BOT contract.
- Estimated Cost: USD 961 million.




Power Sector - Solar P.V Stations

Solar P.V stations in various regions of Iraq (7 Location)

Project & Governorate					
	Solar PV: Al - hay	Solar PV: Diyala	Solar PV: Abu Gharib	Solar PV: Haditha	Solar PV: Heet
Project Summary 	<ul style="list-style-type: none"> Establish a PV station with capacity of (25 MW) voltage 33KV. Project to be structured as a BOO over 15 years. 	<ul style="list-style-type: none"> Establish a PV station with capacity of (15 MW) voltage 33KV. Project to be structured as a BOO over 15 years. 	<ul style="list-style-type: none"> Establish a PV station with capacity of (30 MW) voltage 33KV. Project to be structured as a BOO over 15 years. 	<ul style="list-style-type: none"> Establish a PV station with capacity of (40 MW) voltage 132KV. Project to be structured as a BOO over 15 years. 	<ul style="list-style-type: none"> Establish a PV station with capacity of (125 MW) voltage 33KV. Project to be structured as a BOO over 15 years.

Power Sector - Solar P.V Stations

Solar P.V stations in various regions of Iraq (Continued)

Project & Governorate		
	Solar PV: Fallujah	Solar PV: Missan
Project Summary 	<ul style="list-style-type: none">• Establish a PV station with capacity of (25 MW) voltage 33KV.• Project to be structured as a BOO over 15 years.	<ul style="list-style-type: none">• Establish a PV station with capacity of (15 MW) voltage 33KV.• Project to be structured as a BOO over 15 years.

Q&A
