The Route to Prosperity in the Kingdom:
Reimagining Infrastructure Risks and Rewards

APRIL 2018
Globally, we are in an era where change is the only constant and where volatility, uncertainty, complexity and ambiguity (VUCA) dominate. The pace of change is rapid; there are swift and large-scale changes in technology, increasing inter-connectivity, the fourth industrial revolution, rising geopolitical tensions and cyber security threats. And with risk comes reward...

The Kingdom of Saudi Arabia is embracing its future and is embarking on an ambitious journey of transformation towards a more diverse economy. The development of key infrastructure is, and will play a critical role in the country’s success and will be used as a catalyst for economic growth in the future.

During the 2018 Marsh Infrastructure Risk Management Forum titled “The Route to Prosperity in the Kingdom: Reimagining Risk and Rewards” we will address the risks and rewards associated with the investment, development and operationalization of infrastructure projects. We will also discuss a myriad of other topics, ranging from risk allocation to renewables to sustainable development opportunities.

At Marsh, we pride ourselves on being at the forefront of thought leadership, stimulating debate and creating awareness on the challenges and opportunities that affect the Kingdom of Saudi Arabia and the wider region.

We hope you find our Infrastructure Risk Management Forum thought provoking, interesting and that it provides you with content that will help you to make informed risk decisions.

We would also like to thank you, our clients, for your time today. We thank our sponsors, our speakers, our panelists, for without them, we could not have developed, together, such a rich and varied line up.

We hope you make the most of today!

Bassam Al Bader
Chief Executive Officer, Marsh
Saudi Arabia
The Route to Prosperity in the Kingdom: Reimagining Infrastructure Risks and Rewards

APRIL 2018
Masterclass

Risk Allocation within a Private Public Partnership (PPP) Transaction

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Director
Synergy Consulting

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Director
Synergy Consulting

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Vice President
Construction & Infrastructure Practice
Marsh MENA
Introduction

OBJECTIVES OF THIS PRESENTATION

- Highlight the key advantages of Public Private Partnership ("PPP") over traditional procurement method - Design Build Operate ("DBO")
- Provide a brief overview of a typical PPP procurement process
- Detail risk allocation framework and key bankability provisions under PPP framework

CONTENTS OF THIS PRESENTATION

This presentation is organized into the following sections:

- Traditional Procurement: Description and drawbacks
- PPP – Overview: Provides 1. brief description of PPP 2. snapshot of a typical contractual structure used under PPP framework 3. highlights advantages of PPP vis-à-vis DBO 4. brief summary of procurement process under PPP
- Project Risks Under PPP: Details key project risks under PPP transaction and there mitigation structure
- Bankability: Provides a brief summary of 1. key bankability consideration under PPP and 2. bankable risk allocation structure
Traditional Procurement
Overview

*Traditional procurement approach is also known as “Design, Build and Operate” or “DBO” approach*

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>Traditionally used by procurers for off-taker led development, financing, construction, ownership and O&amp;M of infrastructure assets:</td>
</tr>
<tr>
<td>✶ Asset ownership remains with procurer whereas construction (design in some cases) is subcontracted to private contractor</td>
</tr>
<tr>
<td>✶ Majority of design, construction and O&amp;M risks retained by procurer</td>
</tr>
<tr>
<td>✶ Financed by procurer</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>DRAWBACKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>✶ Financial constraints due to limited budgetary resources of procurer/ governments</td>
</tr>
<tr>
<td>✶ Implementing large scale, complex and technologically challenging projects may be outside core capabilities of government</td>
</tr>
<tr>
<td>✶ Time overruns due to delay in approvals/ site mobilization/ lack of incentive for timely completion</td>
</tr>
<tr>
<td>✶ Costs overruns due to poor project planning &amp; oversight and lack of accountability</td>
</tr>
</tbody>
</table>

The above drawbacks have led to alternate arrangements such as PPP
PUBLIC PRIVATE PARTNERSHIP (PPP)
Public Private Partnership

Introduction

PPP entails a legally-binding long term output based contract between Government (as project procurer) and Private Sector (as project developer) for the provision of construction of assets and delivery of services.

### PUBLIC
- Purchaser of service/ plant output
- Provide legal & regulatory framework
- Assume environmental, political, macroeconomic and payment risks

### PRIVATE
- Design, construction, testing, commissioning and O&M
- Assume financing, construction and O&M risks
- Adhere to Key Performance Indicators (“KPIs”)

### PARTNERSHIP
- Combine best capabilities of public & private sector
- Equitable allocation of risk between public & private sectors

#### TYPES OF PPP

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
</tr>
</thead>
</table>
| BOOT (Build Operate Own Transfer) | ➡️ Private developer shall finance, construct, own and operate the asset for the concession period (generally 20 – 30 years)  
 ➡️ Ownership of the asset shall be transferred to Off-taker at the end of concession period |
| BOO (Build Operate Own) | ➡️ Private developer shall finance, construct, own and operate the asset for the concession period (generally 20 – 30 years)  
 ➡️ Ownership of the asset shall remain with private developer at the end of concession period |
| BOT (Build Operate Transfer) | ➡️ Same as BOOT, except that ownership of the asset remains with the Off-taker/ concession grantor |
| TOT (Transfer Own Transfer) | ➡️ Private developer purchases an operational asset and owns & refurbishes/ operates it for concession period  
 ➡️ Ownership of the asset is transferred to the Off-taker at the end of concession period |
| TOO (Transfer Operate Own) | ➡️ Same as TOT, except that ownership of the asset remains with private developer at the end of concession period |
Public Private Partnership
Typical Contractual Structure

Vide the above water-tight contractual structure, risk is allocated to the party most suited to manage it.
# Public Private Partnership

## Comparison with DBO

<table>
<thead>
<tr>
<th>PARAMETERS</th>
<th>PPP</th>
<th>DBO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONSTRUCTION &amp; OPERATION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost Overrun</td>
<td>Technical advisors ensure project planning and oversight</td>
<td>Poor project planning and oversight</td>
</tr>
<tr>
<td></td>
<td>Cost overruns borne by EPC Contractor</td>
<td>Weak contractual structure with limited recourse to EPC Contractor</td>
</tr>
<tr>
<td>Performance Shortfall</td>
<td>Well defined performance criteria – performance LDs payable</td>
<td>Procurer to undertake performance checks on regular basis</td>
</tr>
<tr>
<td></td>
<td>for non-compliance</td>
<td>Supervision may have gaps resulting in performance shortfall</td>
</tr>
<tr>
<td></td>
<td>Stakeholders ensure adequate supervision vide technical advisors</td>
<td></td>
</tr>
<tr>
<td>Time Overrun</td>
<td>Well defined project implementation schedule &amp; milestone linked</td>
<td>Unclear project implementation schedule</td>
</tr>
<tr>
<td></td>
<td>payments</td>
<td>Delay in approvals/ site mobilization</td>
</tr>
<tr>
<td>Performance Linked Payments</td>
<td>Payments to project company are linked to: 1. Satisfactory commissioning and 2. adherence to KPIs during O&amp;M period</td>
<td>Full and final payment to contractor upon completion of construction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No/ minimal liability of contractor post construction completion</td>
</tr>
<tr>
<td><strong>COMMERCIAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upfront Cost</td>
<td>Financing tie-up (Financial Closure) before Notice to Proceed is</td>
<td>Large upfront cash outflow for procurer</td>
</tr>
<tr>
<td></td>
<td>is issued</td>
<td>May result in shortfall in budgetary resources during construction period</td>
</tr>
<tr>
<td></td>
<td>Procurer makes monthly tariff payments over concession term post</td>
<td>Budget may not be approved resulting in deferment</td>
</tr>
<tr>
<td></td>
<td>commissioning of plant</td>
<td></td>
</tr>
<tr>
<td>Return on Capital</td>
<td>Efficient utilization of assets and competitive pricing of user fees leads to optimum Return on Capital</td>
<td>Leakages in revenue collection mechanism and inefficient utilization of assets may affect Return on Capital</td>
</tr>
<tr>
<td>Price Tariff</td>
<td>Clearly defined scope of work and competitive bidding ensures lowest tariff</td>
<td>Unclear scope of work increases project cost</td>
</tr>
<tr>
<td></td>
<td>Equitable risk allocation results in lower cost of capital</td>
<td>Cost/ time-overruns may lead to higher cost of service delivery</td>
</tr>
</tbody>
</table>
# Public Private Partnership

## Procurement Lifecycle

<table>
<thead>
<tr>
<th>STAGES</th>
<th>STAGE I - PREPARATION</th>
<th>STAGE II - TENDERING</th>
<th>STAGE III - SELECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-feasibility study</td>
<td>EoI &amp; RFQ Process</td>
<td>Bid Evaluation</td>
</tr>
<tr>
<td></td>
<td>Scope and timeline for the project</td>
<td>– Publish EoI</td>
<td>– Technical, financial and legal evaluation</td>
</tr>
<tr>
<td></td>
<td>Project structure and initial risk matrix</td>
<td>– Finalization of pre-qualification criteria</td>
<td>– Clarification process</td>
</tr>
<tr>
<td></td>
<td>Initial financial model</td>
<td>– Prepare and issue of RFQ</td>
<td>– Finalize draft report and discussion with procurer</td>
</tr>
<tr>
<td></td>
<td>Technical studies</td>
<td>– Shortlist prequalified bidders</td>
<td>– Recommendation of shortlisted bidders</td>
</tr>
<tr>
<td></td>
<td>Commercial analysis to ensure bankability</td>
<td>RFP Process</td>
<td>Selection of preferred bidder</td>
</tr>
<tr>
<td></td>
<td>Assessment of legal &amp; regulatory framework</td>
<td>– Preparation of RFP</td>
<td>– Negotiation with shortlisted bidder(s)</td>
</tr>
<tr>
<td></td>
<td>Developer market sounding</td>
<td>– Finalize bid evaluation criteria</td>
<td>– Project agreements execution with preferred bidder</td>
</tr>
<tr>
<td></td>
<td>Project feasibility report</td>
<td>– RFP issuance, site visit and pre bid meeting</td>
<td>Financial Closure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– Tender clarifications</td>
<td>– Financing agreements execution and debt drawdown</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– Issue of addendums &amp; RFP update, if required</td>
<td></td>
</tr>
</tbody>
</table>

- **STAGE I - PREPARATION**: 4 - 5 months
- **STAGE II - TENDERING**: 6 - 7 months
- **STAGE III - SELECTION**: 5 - 6 months

**Key Activities**

- **Bid Evaluation**
  - Technical, financial and legal evaluation
  - Clarification process
  - Finalize draft report and discussion with procurer
  - Recommendation of shortlisted bidders
- **Selection of preferred bidder**
  - Negotiation with shortlisted bidder(s)
  - Project agreements execution with preferred bidder
- **Financial Closure**
  - Financing agreements execution and debt drawdown

**Timeline**

- 30 May 2018
Risk Allocation and Mitigation
### Project Risks Under PPP

**Overview**

- Risk Identification and Mitigation form the core part of Project Financing because the lenders are secured only by the SPV assets.
- Like any other projects, PPP projects carry several risks that are unique to this type of delivery system.
- Risk can never be eliminated, it can only be allocated to party best able to manage that type of risk, therefore it is imperative to properly identify and allocate these risks to respective counter parties.

<table>
<thead>
<tr>
<th>TYPES OF RISK</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RISKS</strong></td>
<td><strong>DESCRIPTION</strong></td>
</tr>
<tr>
<td>Market/ Demand Risk</td>
<td>Lower than expected demand of product &amp; services</td>
</tr>
<tr>
<td>Development &amp; Construction Stage Risk</td>
<td>Project is not commissioned at Contracted Capacity, Efficiency &amp; Scheduled Dates</td>
</tr>
<tr>
<td>Operation Stage Risk</td>
<td>Project is not operated at contracted capacity and/or efficiency</td>
</tr>
<tr>
<td>Payment Risk</td>
<td>Payment of Tariff and Termination amounts (if applicable) by the Off-taker</td>
</tr>
<tr>
<td>Force Majeure Risk</td>
<td>Events like war, riots, floods etc. which can not be completely mitigated</td>
</tr>
<tr>
<td>Termination Risk</td>
<td>Termination of the concession agreement due to prolong event of default</td>
</tr>
<tr>
<td>Utility Risk</td>
<td>Absence/ inadequacy of utilities</td>
</tr>
<tr>
<td>Macroeconomic Risk</td>
<td>Volatility in inflation, foreign exchange and interest rates</td>
</tr>
</tbody>
</table>
# Project Risks Under PPP

## Market / Demand Risk

### OVERVIEW

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>Risk of lower than expected demand of the product or service.</td>
</tr>
<tr>
<td>Impact</td>
<td>Lesser demand than expected shall result in shortfall in revenue collection</td>
</tr>
</tbody>
</table>
| Allocation of Risk | **Off-taker:**  
|                    | - It possesses required expertise & experience to predict the demand schedule more accurately  
|                    | - The demand estimation are conducted at the feasibility stage and tariff components are designed with a pre determined demand projections. |

### RISK MITIGATION

#### TAKE OR PAY

- **Availability based cash-flows independent of demand of the service**

#### GUARANTEED MINIMUM PURCHASE LEVELS

- Off-taker commits to purchase the minimum contractual output in case of lower demand by consumers
Project Risks Under PPP
Development and Construction Stage Risk

OVERVIEW

<table>
<thead>
<tr>
<th>ITEM</th>
<th>TIME OVERRUN</th>
<th>COST OVERRUN</th>
<th>PERFORMANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>Project not being commissioned on Scheduled Dates</td>
<td>Project not being commissioned as per required standard - quantity &amp; quality of output</td>
<td></td>
</tr>
<tr>
<td>Impact</td>
<td>Loss in revenue; and</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>may also lead to termination of the Concession Agreement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allocation of Risk</td>
<td>Off-taker →Project-Co. → EPC Contractor</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

RISK MITIGATION

DEVELOPMENT SECURITY/ PERFORMANCE BOND

- To ensure that the project delivers the required output (quantity & quality) within the given timeframe

LUMP SUM TURNKEY EPC CONTRACT

- EPC is done vide a lump sum turnkey EPC contract
## Project Risks Under PPP
### Operation Stage Risk

### OVERVIEW

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td>➤ Failure to operate plant as per the agreed operating standards</td>
</tr>
<tr>
<td><strong>Impact</strong></td>
<td>➤ Actual Availability &lt; Contracted Availability</td>
</tr>
<tr>
<td></td>
<td>➤ Output quality is not as per the Concession Agreement</td>
</tr>
<tr>
<td></td>
<td>➤ Actual efficiency &lt; Contracted efficiency; leading to more utility (power) consumption</td>
</tr>
<tr>
<td><strong>Allocation of Risk</strong></td>
<td>➤ Off-taker → Project-Co. → O&amp;M Contractor</td>
</tr>
</tbody>
</table>

### RISK MITIGATION

#### PENALTIES & DEDUCTION REGIME

- Availability LDs/ penalties: To be paid by the Project Co., as part of various deduction regime in the tariff structure for (i) lower than Contracted Availability and/or (ii) poor output quality
- Project Co. commits to certain efficiency factors for electricity consumption; as such if
  - Actual efficiency < Contracted efficiency, then cost of additional electricity to be covered by the Project Co.
# Project Risks Under PPP
## Payment Risk

### OVERVIEW

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PERFORMANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td>◾ Delay / non-payment of tariff by the Off-taker</td>
</tr>
<tr>
<td></td>
<td>◾ Delay / non-payment of termination payments</td>
</tr>
<tr>
<td><strong>Impact</strong></td>
<td>◾ This will negatively impact the project economics and bankability of the Project</td>
</tr>
<tr>
<td><strong>Allocation of Risk</strong></td>
<td>◾ Off-taker</td>
</tr>
</tbody>
</table>

### RISK MITIGATION

#### GOVERNMENT GUARANTEE FOR UN-RATED OFF-TAKERS

- Usually provided by the Ministry of Finance ("MoF") and is an assurance to the Project Co. and the lender that the financial obligations of the Off-taker would be honored

#### CREDIT RATING OF RATED OFF-TAKERS

- Credit rating is dependent on, *inter alia*, past payment track record and general credit worthiness of the Off-taker
- Off-takers with strong credit rating, generally do not require Government guarantee
### Project Risks Under PPP

#### Force Majeure

#### OVERVIEW

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td><strong>Natural force majeure events (NFM)</strong></td>
</tr>
<tr>
<td></td>
<td>◆ Lightning, fire, earthquake, flood, cyclone, tornado, tsunami, typhoon or other natural disaster</td>
</tr>
<tr>
<td></td>
<td>◆ Epidemic or plague</td>
</tr>
<tr>
<td><strong>Impact</strong></td>
<td>◆ Interruption of operations leading to revenue loss</td>
</tr>
<tr>
<td></td>
<td>◆ Cost Overrun</td>
</tr>
<tr>
<td></td>
<td>◆ Termination of the project</td>
</tr>
<tr>
<td><strong>Allocation of Risk</strong></td>
<td>◆ Shared between Project Co. and Off-taker</td>
</tr>
</tbody>
</table>

#### Allocation of Risk

- NFM: Shared between Project Co. and Off-taker
- PFM: Off-taker

#### RISK MITIGATION

**NFM**
- Off-taker continues to make payment for:
  - Capacity payment for available service level
  - Output Payments for service delivered
  - Insurance Coverage for cost overrun
  - Time Relief

**PFM**
- Off-taker continues to make payment for:
  - Capacity payment based on capacity which would have been available had the PFM Event not occurred
  - Output Payments for service delivered
  - Cost overrun is covered by Off-taker
  - Time Relief
# Project Risks Under PPP

## Termination Risk – Events of Default

### OVERVIEW

<table>
<thead>
<tr>
<th></th>
<th>PROJECT COMPANY EVENT OF DEFAULT</th>
<th>OFF-TAKER EVENT OF DEFAULT</th>
<th>FORCE MAJEURE RELATED EVENT OF DEFAULT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td>Project company’s failure to perform or discharge its obligations</td>
<td>Off taker’s failure to perform or discharge its obligations</td>
<td>Off taker and / or project company’s failure to perform or discharge its obligations due force majeure events like NFM and PFM</td>
</tr>
<tr>
<td><strong>Impact</strong></td>
<td>Termination of the project</td>
<td></td>
<td>NFM: Shared between Project Co. and Off-taker</td>
</tr>
<tr>
<td><strong>Allocation of Risk</strong></td>
<td>Project Co.</td>
<td>Off-taker</td>
<td>PFM: Off-taker</td>
</tr>
</tbody>
</table>

### RISK MITIGATION

#### TERMINATION PAYMENTS

<table>
<thead>
<tr>
<th>PROJECT COMPANY EVENT OF DEFAULT</th>
<th>Off-taker EVENT OF DEFAULT</th>
<th>FORCE MAJEURE RELATED EVENT OF DEFAULT</th>
</tr>
</thead>
</table>
| ✗ Termination payments to cover debt outstanding | ✗ Termination payments to cover 1. debt outstanding 2. equity 3. equity returns | ✗ NFM: Termination payments to cover 1. debt outstanding  
                                                                                 ✗ PFM: Termination payments to cover 1. debt outstanding 2. equity 3. equity returns |
# Project Risks Under PPP

## Utility Risk

### OVERVIEW

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>✳ Project Company may not be able to procure utilities in 1. adequate quantity and/or 2. at a fixed cost and the cost may change</td>
</tr>
<tr>
<td>Impact</td>
<td>✳ Absence/inadequacy of utility supply will interrupt the operations of the project leading to revenue losses for Project Co.</td>
</tr>
<tr>
<td></td>
<td>✳ Cost of utility is generally passed through to the Off-taker as a component of tariff</td>
</tr>
<tr>
<td>Allocation of Risk</td>
<td>✳ Off-taker for the supply of utilities during O&amp;M period</td>
</tr>
<tr>
<td></td>
<td>✳ Project Co. commits to certain efficiency factors for electricity consumption</td>
</tr>
</tbody>
</table>

### RISK MITIGATION

#### LONG TERM UTILITY SUPPLY AGREEMENT

- A long term utility supply agreement is signed between the utility supplier and Project co. to guarantee supply of utilities at pre-agreed price and quantity
# Project Risks Under PPP

## Macroeconomic Risk

### OVERVIEW

<table>
<thead>
<tr>
<th>ITEM</th>
<th>INTEREST RATE</th>
<th>FOREIGN EXCHANGE</th>
<th>INFLATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td>✪ Risk from fluctuation in benchmark rates (LIBOR/SAIBOR)</td>
<td>✪ Mismatch of currency of revenues, operating costs and debt</td>
<td>✪ Mismatch between the escalation of revenues received and increased costs due to inflation</td>
</tr>
<tr>
<td><strong>Impact</strong></td>
<td>✪ Under/over recovery of costs incurred affecting cash flows of project company</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Allocation of Risk</strong></td>
<td>✪ Project Company</td>
<td>✪ Off-taker</td>
<td>✪ Off-taker</td>
</tr>
</tbody>
</table>

### RISK MITIGATION

<table>
<thead>
<tr>
<th>INTEREST RATE</th>
<th>FOREIGN EXCHANGE</th>
<th>INFLATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>✪ Fixed Interest Rate</td>
<td>✪ NA – risk allocated to Off-taker as Govt. entity is most suited to assume forex risk</td>
<td>✪ NA – risk allocated to Off-taker as Govt. entity is most suited to assume inflation risk</td>
</tr>
<tr>
<td>✪ Interest Rate Swap</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Bankability
Bankability Overview

Risks are typically allocated to the party best placed to manage the same. Risk allocation is a key requirement for making a project bankable and allowing developers to raise financing at competitive cost.

KEY BANKABILITY CONSIDERATIONS

- Quantum of off-take under take-or-pay arrangement by Off-taker
- Availability of Ministry of Finance credit support/ Credit worthiness of the Off-taker
- Allocation of O&M Risk: provision of performance based O&M contract including liquidated damages
- Overall security package
- Step-in rights to lenders
- Termination payment regime including payouts by Off-taker under different scenarios

SNAPSHOT OF BANKABLE RISK ALLOCATION STRUCTURE

<table>
<thead>
<tr>
<th>Aspects</th>
<th>RISK</th>
<th>Off-taker</th>
<th>PROJECT Co.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market</td>
<td>Demand Risk</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>Construction</td>
<td>Time Overrun</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Cost Overrun</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Performance risk</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>Operation</td>
<td>Availability &amp; Performance of plant</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>Payment</td>
<td>Payment of tariffs and/or termination payments</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td>Termination</td>
<td>Project Co. event of default</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Off-taker event of default</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>PFM</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>NFM*</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Utility</td>
<td>Availability of utilities</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td>Macroeconomic</td>
<td>Inflation</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Foreign exchange</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Interest rate</td>
<td>✓</td>
<td>-</td>
</tr>
</tbody>
</table>
Typical Project Agreements (with insurance obligations)
Loan Agreement

Lenders will stipulate a number of insurance requirements precedent to agreement of the loan. These will include:

The project owner control placement and maintenance of insurances covering the works. Including:

- Construction All Risks, Third Party Liability and Marine Cargo insurance to cover any materials being transported from overseas.
- Lenders will also require the project owner to protect their debt servicing requirements in the event the project is delayed following an insured loss during the construction of the project. Delay in Start Up insurance. (Sometimes waived by Lenders where a payment guarantee is provided by the project owner, its parent company or government)

🎯 Direct access to insurance
🎯 Timing of insurance placement and evidencing of policies
🎯 Various policy endorsements and clauses such as Non Vitiation, Cross Liability, named Insured, Loss Payee clauses …

(Insurances must also include any requirements obligated under the Offtake Agreement and Land Use Agreement)
Key to successful contract review and negotiations

- Introduction of all key parties to the project: Project owners, lawyers, insurance advisers, Lenders technical advisers, Construction Contractor, Lenders insurance adviser, Lenders Lawyers.
- Early review and engagement by your insurance advisers ensuring adequate time is available to negotiate terms and conditions.
- Ensure Allocation of Insurances are correctly stipulated with the EPC and O&M agreements.
- Clearly define the minimum scope and minimum limits of the insurance policies and ensure these are achievable and reflective of the current market place.
- Ensure deductible levels agreed are again achievable and not commercially onerous to comply with.
- Where policies are required to be purchased for a longer term ensure contract language is flexible, allowing the scope and level of cover can be amended to reflect market availability.
Typical Allocation of Insurances under a Financed Project

<table>
<thead>
<tr>
<th>Class of Insurance</th>
<th>Project Participant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Project Company / Principal</td>
</tr>
<tr>
<td>Construction ‘All Risks’</td>
<td>✓</td>
</tr>
<tr>
<td>Construction Delay in Start Up</td>
<td>✓</td>
</tr>
<tr>
<td>Marine Cargo / Transits</td>
<td>✓</td>
</tr>
<tr>
<td>Marine Cargo Delay in Start Up</td>
<td>✓</td>
</tr>
<tr>
<td>Third Party Liability (Const. &amp; Ops)</td>
<td>✓</td>
</tr>
<tr>
<td>Professional Indemnity</td>
<td>✓</td>
</tr>
<tr>
<td>Workmen’s Compensation</td>
<td>✓</td>
</tr>
<tr>
<td>Contractors’ Plant &amp; Equipment</td>
<td>✓</td>
</tr>
<tr>
<td>Auto Liability</td>
<td>✓</td>
</tr>
<tr>
<td>Employers Liability</td>
<td>✓</td>
</tr>
<tr>
<td>Operational ‘All Risks’</td>
<td>✓</td>
</tr>
<tr>
<td>Damage Risks</td>
<td>Non - Damage Risks</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>✱ Fire, Explosion</td>
<td>✱ Manpower shortage</td>
</tr>
<tr>
<td>✱ Earthquake, Flood</td>
<td>✱ Material shortage e.g. cement, steel</td>
</tr>
<tr>
<td>✱ Tsunami, Cyclone</td>
<td>✱ Port blockage</td>
</tr>
<tr>
<td>✱ Water</td>
<td>✱ Supply chain management</td>
</tr>
<tr>
<td>✱ Subsidence</td>
<td>✱ Technology</td>
</tr>
<tr>
<td>✱ Lightning</td>
<td>✱ Unforeseen ground conditions</td>
</tr>
<tr>
<td>✱ Sandstorm</td>
<td>✱ Environmental</td>
</tr>
<tr>
<td>✱ Theft</td>
<td>✱ War or Civil War</td>
</tr>
<tr>
<td>✱ Accidental damage</td>
<td>✱ Potable water shortage</td>
</tr>
<tr>
<td>✱ Strike Riot Civil Commotion</td>
<td>✱ Faulty Design/Material/Workmanship</td>
</tr>
<tr>
<td>✱ Faulty Design/Material/Workmanship</td>
<td></td>
</tr>
</tbody>
</table>
Contractual Review / Risk Allocation

Project Risks during Construction
(Material Damage and Liability to Third Parties)

- Owner’s Risk
- Contractor’s Risk

Project Insurance

Uninsured Risks
The Rising of Cost of Living in Saudi: Insights on market reaction and perspectives on compensation

Najla Najm
Career Business Leader, Mercer
Agenda

INTRODUCTION

GLOBAL PERSPECTIVE

MARKET INSIGHTS AND TRENDS
Background

### Information Solution

<table>
<thead>
<tr>
<th>Compensation</th>
<th>Benefits</th>
<th>Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td>All-industry TRS</td>
<td>Statuary Benefits</td>
<td>Quality-of-Living</td>
</tr>
<tr>
<td>Executive Survey</td>
<td>Tax Reports</td>
<td>Expatriate Consulting</td>
</tr>
<tr>
<td>Industry Surveys e.g. Life Science</td>
<td>Employee Mobility Guide</td>
<td></td>
</tr>
<tr>
<td>Africa and Middle East Survey</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Data & Information**

**Consulting**
Dubai (19), Abu Dhabi (22), and Riyadh (52), which have all climbed in this year’s ranking. Jeddah (117), Muscat (92), and Doha (81) are among the least expensive cities in the region. Cairo (183) is the least expensive city in the region plummeting ninety-two spots from last year following a major devaluation of its local currency.
Cost of Living in KSA Recent Developments

- Fuel prices increased by 237%
- Utilities increase based on consumption but it goes up to a 100%
- VAT and business rising prices

- State of owned companies, banks, oil and gas organization (Aramco suppliers/ Aramco pressure) provided a cost of living allowance following the government allowances

- Companies in general are tackling the cost of living issue with the merit increase cycle (5 -7% increase for those who are considering the cost of living 2-3% for those who are not)
10% of participating organizations already provided an increase to the total guaranteed cash to cover the increase in cost of living for their employees.

18% of participating organizations are planning to implement an increase/allowance around April.

44% of organizations still do not know if type or additional remuneration will be introduced in 2018.

64% of 11 organizations that have already provided an increase/allowance are limiting it to Saudi Nationals.

85% of 20 organizations are planning to provide an increase/allowance would provide it all employees.
Have organizations already provided an increase due to the recent price increase (E.G. Fuel, electricity, VAT and more)?

10% of Participating Organizations have already provided an increase to their total guaranteed cash.

Based on responses from 111 organizations.
What was increased?

Most organizations that have provided the increase already have introduced a temporary cost of living allowance to be reviewed by January 2019.

Based on responses from 11 organizations.
Solutions companies adopted to support rising cost of living

- A temporary allowance (for one year) of SAR 1000 for employees whose monthly total salary is less than 10,000 SAR.
- Cost of living allowance (1,000 SAR a month) regardless of salary.
- Temporary Cost of Living Adjustment (COLA) for employees making less that SAR 20,000 SAR per month.
- An increase to utilities allowance for Expat Assignees only.
Organizations plan to adopt a cost of living allowance in the future

20% organization are reviewing the possibility of increasing/adding an allowance to employees while the majority still do not have a clear view on the topic yet.

Based on responses from 99 organizations.
Organizations Plan To Increase Other/ New Allowance

- Additional variable pay allowance based on sales and performance
- Basic salary increase + cost of living temporary premium
- Introducing a Fuel Allowance
- Housing allowance, schooling allowance - all are being reviewed. Base salary increase will be part of the merit appraisal.
- Introducing Cost of Living Allowance
## Every Element Of Compensation Drives A Different Behaviour

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
<th>Role and Positioning Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Monthly base salary</strong></td>
<td>12 monthly pay-outs affecting variable bonus and end of service gratuity</td>
<td><strong>Attract and retain</strong></td>
</tr>
<tr>
<td><strong>Guaranteed or legally required cash payments.</strong></td>
<td>Housing, Transportation, Meal, Position Based, Skill Based, Other Guaranteed</td>
<td><strong>Attract and retain</strong></td>
</tr>
<tr>
<td><strong>Variable pay awarded to employee on an annual or quarterly basis</strong></td>
<td>Variable Bonus, Sales Incentive, Other Bonus</td>
<td><strong>Motivate and recognize</strong></td>
</tr>
<tr>
<td><strong>Value of awards provided to employee on a long-term basis (up to 5 years)</strong></td>
<td>Stock Options, Restricted Shares, Long-term Cash, Performance Shares</td>
<td><strong>Motivate and Retain</strong></td>
</tr>
<tr>
<td><strong>Value of the most important benefits and perquisites</strong></td>
<td>Health, Life and Accidental Insurance, Personal Loan, Leave/Holiday</td>
<td><strong>Retain</strong></td>
</tr>
<tr>
<td><strong>Total value to the employee in remuneration</strong></td>
<td></td>
<td>* Ratios and pay mix not to scale</td>
</tr>
</tbody>
</table>

### Base Salary

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
<th>Role and Positioning Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Base Salary</strong></td>
<td>Fixed</td>
<td><strong>Attract and retain</strong></td>
</tr>
<tr>
<td><strong>Total Guaranteed Cash</strong></td>
<td>Fixed</td>
<td><strong>Attract and retain</strong></td>
</tr>
<tr>
<td><strong>Total Cash Compensation</strong></td>
<td>Variable</td>
<td><strong>Motivate and recognize</strong></td>
</tr>
<tr>
<td><strong>Total Direct Compensation</strong></td>
<td>Non-cash</td>
<td><strong>Motivate and Retain</strong></td>
</tr>
<tr>
<td><strong>Total Remuneration</strong></td>
<td>Benefits</td>
<td><strong>Retain</strong></td>
</tr>
<tr>
<td><strong>Total Remuneration</strong></td>
<td>Benefits LTI</td>
<td></td>
</tr>
<tr>
<td><strong>Total Remuneration</strong></td>
<td>Benefits STI</td>
<td></td>
</tr>
<tr>
<td><strong>Total Remuneration</strong></td>
<td>Total Remuneration</td>
<td></td>
</tr>
</tbody>
</table>
Who will the increase apply to?

While most organizations who implemented the increase already focus on Saudi Nationals, most Organizations who plan to give the increase are planning to apply to all employees.

- All employees: 85%
- Saudis only: 15%

Based on responses from 20 organizations.
How long will organizations be offering the increase/allowance?

- 75% Permanently
- 25% Temporarily

Based on responses from 20 organizations.

The majority of organizations plan to give the increase permanently, however some are going to re-visit upon the merit increase cycle again.
Keynote Speech
The Route to Prosperity in the Kingdom:
Reimagining Infrastructure Risks and Rewards

GAURAV BHATNAGAR
Head of Speciality, Marsh MENA
Presentation

The Route to Prosperity in the Kingdom:
Developing a World Class Railway Network

AMER AL-GHAMDI
Director, Corporate Control - Saudi Arabia Railway
Vision 2030

- Vibrant Society
- Thriving Economy
- An Ambitious Nation
Vision 2030

**Vibrant Society**
Promoting Culture and Entertainment

**An Ambitious Nation**
Achieving Environmental Sustainability

**Thriving Economy**
- Building a unique regional logistical hub
- Integrating regionally and internationally
- Privatizing our Government Services
History of Railway

- In 1947 the journey from Dammam to Riyadh has begun with (freight – passenger) transportation.
- In 2011, Northern Railway Network From Riyadh – Qurayyat
- Haramain High Speed Railway for passengers in 2018 Jeddah – Makkah – KAEC – Madinah
- By end of 2018, SAR is the responsible Railway Network in KSA

Saudi Railway Company (SAR) established in May 2006
The Company is a fully funded and owned by the Public Investment Fund, PIF (Ministry Of Finance)
SAR Network

🔹 3 Major Network: (Riyadh, Dammam, HHR, North/South Project)

🔹 KSA operates a network of railways with a total length of approximately 5,590 KM (Q4 2017 1385KM & Q4 2018, 1907 KM)

🔹 Top Signaling System in the world

🔹 9 yards

🔹 2 Mines

🔹 14 Passenger Stations

🔹 2 Ports (King Abdulaziz Port / Mina Al-Jaff)

30 May 2018
Freight Services

- Mainly or Minerals & Cargo
- Length: 3.2 KM
- Speed: 80/100 KM/h
- Weight (full Capacity 20KTNs) = 400 Trucks
Freight Services

dın North - South Project (NSR):
• Riyadh – Almajma’ah – Qassim – Hail – Al-Jouf - Qurayyat
• Riyadh-Dammam:
• Dammam – Abqaiq – Al-Hafouf – Riyadh

 الدين Haramain High Speed Railway (HHR):
• Makkah – Jeddah central – King Abdulaziz Airport – KAEC – Madinah
Harameen

**CONNECTS:**

Makkah – King Abdulaziz International Airport- Central of Jeddah– King Abdullah Economic City – Madinah

- Fleet of 35 Modern trains reaching up to of 300 KM
- Capacity: up to 60 Millions a year
- Length: 449 KM
Passenger Service

14 Stations
Saudization

More than 60%
Network 2030
Prosperity Reward but has Risks
Top Challenges

Complex Risk that are Unique to KSA

- Long Network
- Harsh Environment
- Multi – Traffic
  - Fright + Passenger
- Some Public Behaviors + Animals

30 May 2018
Top Challenges

Complex Risk that are Unique to KSA

- Long Network
- Harsh Environment
- Multi-Traffic Fright + Passenger
- Some Public Behaviors + Animals

30 May 2018
Mitigating the Risk

- Safety Management System
- Best Signaling & Controlling System
- Security along the network & stations
- Public Awareness through campaigns
- Continuous Exercises
Thank you
Presentation

Bridging the Infrastructure Gap:
Engaging the Public Sector in Critical National Development

JEFF YOUSSEF
Public Sector Partner, Oliver Wyman
The delivery of sound and reliable infrastructure
Crude price starts to drop in June 2014, leading Saudi Arabia to start tapping its foreign reserves.

KSA Government Foreign Assets vs. Oil price
LHS: USD Billion\(^1\), RHS: USD per Barrel\(^2\)

Drop in KSA foreign assets between August 2014 – February 2018

\(-35\%\)

1. High level estimate based on 2017 USD 61Bn deficit and 2018 expected USD 52Bn deficit; 2. USD per barrel refers to generic 1st ‘CO’ Future

Source: SAMA, Bloomberg, Oliver Wyman Analysis
Benefits of private-sector participation

- Increase efficiency
- Create a dynamic workforce
- Improve transparency of operations
- Speed up change
- Raise customer satisfaction
- Leverage private capital
- Spread share ownership
Privatisation is a central part of the KSA economic transformation plan

National strategy

- Increase & diversify government revenues
- Improve government services
- Increase private sector GDP

High level, strategic

Privatisation initiatives

Revenues:
- Total revenue resulting from privatization projects (target under calculation)

Services:
- Percentage private sector facilities in Ministry of Justice (current 0%, target 10%)

GDP:
- Percentage of Private sector contribution in total healthcare spend (current 25%, target 35%)

1. Some targets still under negotiation

National Center forPrivatization & PPP (NCP)

Supervisory Committees

30 May 2018
Importance of infrastructure

Relationship between quality of overall infrastructure and GDP per capita (2016)

Note: GDP per capita (in current USD, 2016) in logarithmic scale; quality of overall infrastructure (2015-2016) – each country is assigned a score from 1 to 7. The question asked is how would you assess general infrastructure (e.g. transport, telephony, etc.) in your country? (1 = extremely underdeveloped, one of the worst in the world; 7 = extensive and efficient, one of the best in the world); measured through executive surveys. Countries for which the data on both axes is available. Source: World Bank, Global Competitiveness Index
Successful public-private collaborations in infrastructure

<table>
<thead>
<tr>
<th>Sector</th>
<th>Country</th>
<th>Asset</th>
<th>Involvement</th>
<th>Major Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airport</td>
<td>Jordan</td>
<td>Queen Alia Int’l Airport</td>
<td>25-year concession</td>
<td>• Tripling of capacity</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 45% increase in daily traffic</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Greater profitability and more than USD 1Bn in foreign investment</td>
</tr>
<tr>
<td></td>
<td>Denmark</td>
<td>Copenhagen Airport</td>
<td>60% sale to private sector</td>
<td>• Passenger satisfaction consistently above 85%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Named by IATA, most efficient airport in Europe for 11 years</td>
</tr>
<tr>
<td>Seaport</td>
<td>Madagascar</td>
<td>Toamasina Port</td>
<td>20-year concession</td>
<td>• Tripling of container movement per hour</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Halving of avg. clearance time</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Cancellation of port surcharge</td>
</tr>
<tr>
<td></td>
<td>Brazil</td>
<td>Suape Container Terminal</td>
<td>30-year BOT</td>
<td>• 500% increase in port handling activity</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 140% increase in port employment</td>
</tr>
<tr>
<td>Power Gen.</td>
<td>Oman</td>
<td>Four plants</td>
<td>Sale of plants – 70% of national production</td>
<td>• 164% increase in supply</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• 75% growth in customers</td>
</tr>
</tbody>
</table>
Saudi Arabia infrastructure market is booming with large megaprojects

Announced mega developments

“Saudi awards first contracts for USD 500Bn Neom city”
Arabian Business, Feb 2018

“Saudi Arabia is building an entertainment city almost as big as Las Vegas near Riyadh”
Independent, May 2018

“Saudi Arabia begins awarding contracts in giant Red Sea business zone project”
Daily Sabah, Feb 2018

“New USD 218MM waterfront project opens in Jeddah”
Arabian Business, Dec 2017

Additional Real Estate mid size projects

>850
In the following categories
(selected main categories)

- Free Zones/Economic Zones
- Retail
- Leisure & Entertainment
- Hotels
- Community Development
- Public Building
- Commercial
- Mixed Development
- Healthcare
- Residential
- Education

Vision Realization Programs
(e.g. National Champions, Strategic Partnerships, PIF)

Source: Vision 2030 Press releases, Zawya, Company website
KSA does not meet the required funding for its infrastructure investment

Infrastructure funding gap up to 2040 (USD billions)

Main Takeaways

- **Saudi Arabia has an ambitious vision 2030 which has huge investment needs**
- The Kingdom’s **increasing urban population** requires additional infrastructure investment to achieve the sustainable development.
- Even taking into account a high government and foreign investment in KSA’s infrastructure sector, there is still a **gap of USD 114 billion** to fulfil the investment requirements.
- Given the forecasted gap, **privatization will be required** to close the gap and allow the Kingdom’s sustainable growth.

Source: The National – Global Infrastructure Hub; Oxford Economics report
There are risks to privatization that often render the process ineffective

**Political will**
- Limited political support to take difficult, often unpopular, decisions (e.g. tariff reforms) and publicly champion the reforms leading to lack of interest from private sector

**Commercial viability**
- Assets are not commercially attractive, either due to legacy costs (e.g. over staffing) or due to business model restrictions (e.g. no clear revenue stream), leading to lack of traction from the private sector

**Anti-competitive process**
- Privatization process is not transparent (e.g. no clear bid factors), or designed to increase competition (e.g. through optimal lot sizes), leading to inefficient awards and subsequently poor service delivery

**Property rights**
- Insufficient safeguards built in for private sector against the risk of expropriation, which results in lower valuation from the private sector and later increased likelihood of privatization failure

**Regulatory lag**
- Regulatory capacity is not upgraded to manage new contracts, leading to either over or under regulation of privatized entities
  - Particularly challenging for regulated monopolies requiring strong regulated oversight
Key success factors for Government for private sector participation in infrastructure

1. Sound sector strategy and policies
2. Robust processes and governance
3. Qualified private sector investors
4. Effective regulator and regulations
5. Transparency and communication
What should private sector do?

1. Project governance
   - Obtain clarity on multiple decision makers with equal authority
   - Set rules to reduce conflicting incentives between government, regulators & the private sector

2. Business case
   - Ensure economic model to allow privatised entity is profitable
   - Align on constraints on pricing, labour condition, expansion prospects, etc.

3. Institutional readiness
   - Ensure access to technical expertise (even if not requested)
   - Teach sound business processes & structures
   - Reward innovation & completion
Thank you!
Panel Discussion

Private Public Partnership (PPP): A Doorway to Private Investment in a Wide Array of Infrastructure Projects in the Kingdom

Moderator:

Panelists:

Shashank Rath  
Director  
Synergy Consulting

Aamir Syedain  
Head of Structured Debt  
Banque Saudi Fransi

Assim Alsuaibani  
CEO  
Masic Logistics

Shaun Johnson  
General Counsel  
ACWA Holding

Gaurav Bhatnagar  
Head of Speciality  
Marsh MENA
Saudi Vision 2030
Privatisation and Economic Reform Program

Saudi Vision 2030 is a wide-ranging privatisation and economic reform program to transform the economy and diversify the country’s sources of income (reduce dependence on oil). This has been supplemented by the National Transformation Program 2020 (NTP), which identifies strategic objectives, direction and necessary initiatives.

Targets under Vision 2030

- Reduction of the dependence of the economy on oil through the development of other industries and sectors;
- Reduction of public spending through more efficient use of current resources;
- Greater participation of the private sector and an increase in its contribution to GDP;
- Creation of an attractive environment for both local and foreign investors; and
- Increased employment and participation of Saudi nationals in the workforce.

Performance Targets

- **Global Competitive Index**
  - To rise from the current position of 25 to the top 10 countries on the Global Competitiveness Index

- **Foreign Direct Investments**
  - To increase Foreign Direct Investment from 3.8% of GDP to a higher level of 5.7% of GDP

- **Private Sector Contribution**
  - Increase private sector contribution in GDP from 40% to 65%
  - 40% of public spending on initiatives will be funded by the private sector
Evolution of PPP in Saudi Arabia
Increasing Focus on Different Sectors

**First Phase of PPP**
- Conventional Power
- Water

**Next Phase**
- Conventional Power
- Water
- District Cooling
- Aviation

**FOCUS SECTOR**
- Shuaibah IWPP
- Rabigh IPP
- Shuqaiq IWPP
- RAWEC IWSPP
- Ras Azzour IWPP

**SAMPLE PROJECTS**
- Qurayyah IPP
- Jazan ASU
- Rabigh 2 IPP
- Shuaibah Expansion II IWP
- Dhahran District Cooling
- JODC District Cooling
- KKIA District Cooling
- Madinah Airport
- Saudi Cargo Company

**Project Pipeline**
- Conventional Power
- Water
- District Cooling
- Aviation
- Housing
- Renewable energy
- Wastewater
- Education/ Healthcare
- Roads/ Railways

- Rabigh 3 IWP
- Shuqaiq 3 IWP
- Taif Airport
- Qassim/ Hail Airports
- Yanbu Airport
- Housing PPP (Aramco)
- Sakaka Solar
- DAJ Wind
- Dammam ISTP
- Jeddah Airport 2 ISTP
- Tatweer Building Co.

30 May 2018
# PPP Transactions in KSA

## Key Considerations

### Key Considerations of PPP Transactions

1. **OFF-TAKER CONSIDERATIONS**
   - Whether PPP approach results in value-for-money vis-à-vis traditional EPC approach
   - Experience in procurement of PPP projects by off-taker – including experience & size of procurement team of off-taker
   - Creditworthiness of off-taker, evidenced by (i) investment grade credit rating or (ii) availability of government credit support for unrated off-takers

2. **EQUITABLE RISK ALLOCATION**
   - The concession agreement shall set out the risk allocation framework between public (as procurer) and pvt. sectors (as developer)
   - Risk shall be allocated to the party most suited to manage and mitigate the risk – such as, inter alia, allocation of (i) political force majeure risk to public sector and (ii) cost overrun/ performance risks to private party
   - Equitable risk allocation shall result in (i) value for money for off-taker and (ii) optimal risk adjusted returns for developer

3. **BANKABILITY CONSIDERATIONS**
   - Bankable risk allocation framework enables availability of cheap, long-term capital from commercial banks to finance PPP projects
   - (i) Snapshot of bankable risk allocation framework and (ii) key bankability considerations have been highlighted in the following slide

---

*30 May 2018*
PPP Transactions in KSA
Bankability Considerations

SNAPSHOT OF BANKABLE RISK ALLOCATION STRUCTURE

<table>
<thead>
<tr>
<th>KEY ASPECTS</th>
<th>RISK</th>
<th>OFF-TAKER</th>
<th>PROJECT CO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONSTRUCTION</td>
<td>Time Overrun</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Cost Overrun</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Performance Risk</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>OPERATIONS</td>
<td>Demand Risk</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Performance Risk</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>REVENUE</td>
<td>Tariff Payment</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td>TERMINATION</td>
<td>Project Co. EoD*</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Off-taker EoD*</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>PFM</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>NFM**</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>MACROECONOMIC</td>
<td>Inflation</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Foreign Exchange</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Interest Rate</td>
<td>-</td>
<td>✓</td>
</tr>
</tbody>
</table>

KEY BANKABILITY CONSIDERATIONS

- Quantum of off-take under take-or-pay arrangement by off-taker (applicable primarily for power and water projects)
- Creditworthiness of off-taker/availability of suitable credit support from government/authority
- Technical and financial capability of developer to execute the project
- Provision of performance based EPC and O&M contracts
- Overall security package as per lenders requirement
- Step-in rights to lenders
- Termination payment regime including senior debt payout by off-taker under all termination scenarios

*EoD = Event of Default **NFM risk may be mitigated vide insurance coverage
# AGENDA

**Key Considerations – PPP in KSA**

1. Opening of new sectors for PPP
2. Development of regulatory framework for PPP transactions
3. Roles and responsibilities of public sector – key enabler for PPP
4. Credit worthiness of the offtaker and other bankability considerations
5. Steps to attract international developers/investors
6. Role of international/domestic banks – diversification of financing sources
7. Change in laws/ taxation impact on privatization program
8. Way forward and next steps

30 May 2018
Thank you!
Presentation

Powering Up to Renewables:
Leading the Energy Mix Transition in KSA

Abdullah Badruddin
Acquisitions and Project Finance Manager,
ACWA Power

Husam Al-Ghailani
Business Development Manager,
ACWA Power
ACWA Power at Glance ...

- 22+ GW Power
- 2.7 Mm³ per day Desalinated Water
- 36 Assets
- 10 Countries
- 30bn USD of Assets Under Management
- 14% Portfolio in Renewable Energy
- 2,750+ Employees
- 30+ Nationalities
- ~60% Local Employment in projects

Map showing ACWA Power's presence in various countries:
- Saudi Arabia 2004
- Oman, Jordan 2008 - 2010
- Morocco, South Africa, Turkey 2012 - 2014
- UAE, Egypt, Vietnam 2015 - ...

30 May 2018
Renewable Energy: Global Landscape and Future Outlook

- Global energy demand has undergone and is expected to undergo major structural changes.
- Over the next 25 years, it is envisaged that there will be a 25% growth in global demand.
- Growth in demand will be underlined by growth in population and appetite for economic expansion, offseted by pressure on economic growth and falling energy intensity with the shift to services and efficiency.
- Globally, 2016 was the first year in which solar and wind net additions exceeded coal and gas (on a year-on-year basis).
- Such development is driven by rapidly improving economics of renewables and
- Solar and wind generation is envisaged to grow 5-10 times faster than other conventional means of generation.
- Other major developments to be seen on the energy storage (thermal storage and batteries), competing to enter commercial viability zone.

Source: Enerdata, UDI, McKinsey

Net Annual Capacity Additions (GW)

Global Power Generation ('000 TWh)
Renewable Energy: MENA Outlook

- Though MENA region countries were late in adopting renewable energy, the focus over the last few years has been on solar PV energy, driven by the low prices. Policy-makers, regulators and industry leaders are taking more steps and setting out ambitious targets to adopt renewable energy.

- In 2017, the region has seen the completion and successful commercial operation of large scale solar energy plants, notably:
  - Dubai Electricity and Water Authority’s (DEWA) 200 MW phase II of the Mohammed bin Rashid Al Maktoum Solar Park was successfully completed one month ahead of schedule, with estimated cost of USD 326.7 million.
  - The Renewable Energy Project Development Office’s (REPDO) 300 MW Sakaka project in Saudi Arabia reported the lowest PV LCOE (2.34 US$ cents per kWh) in the MENA region.
  - Financial closure of MASEN 170 MW Ouarzazate IV PV in Morocco, the ADWEA 1GW PV in Abu Dhabi, and a number of the 1.4 GW of PV projects under Egypt’s Round II feed-in tariff (FiT).
  - Singing of PPA for DEWA 700MW CSP.

- These developments led to further solar-energy capacity announcements across the region (e.g. Bahrain, Egypt, Jordan, Kuwait, Morocco, Oman, Qatar, Saudi Arabia, Tunisia, UAE), and all these countries are targeting large-scale project announcements in 2018 and early 2019.

Source: MESIA
Renewable Energy in the Glossary of Saudi Arabia’s Vision 2030

Vision 2030 …

- considers renewable energy as one of the promising sectors that will be supported and fostered to become one of the new pillars of the Saudi economy.
- assumes that local energy consumption will increase three fold by 2030.
- has set an initial target of generating 9.5 gigawatts of renewable energy.
- has set a target of localizing a significant portion of the renewable energy value chain in the Saudi economy, including research and development, and manufacturing, among other stages.

### Strategic Objectives and Key Performance Indicators in NTP 2020*

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Baseline</th>
<th>Target 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity introduced from renewable energy</td>
<td>0</td>
<td>4.2 GW</td>
</tr>
<tr>
<td>Percent of commercially invested technologies out of total targeted</td>
<td>0</td>
<td>50%</td>
</tr>
<tr>
<td>Percent of localized technologies out of total targeted</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>Percent of local content contribution within the renewable energy sector</td>
<td>25%</td>
<td>35%</td>
</tr>
</tbody>
</table>

Source: Saudi Arabia’s Vision 2030 and National Transformation Program 2020

30 May 2018
National Renewable Energy Program

Vision 2030 sets out the Kingdom of Saudi Arabia’s vision to reduce the country’s dependence on oil and to diversify the economy. It includes a commitment to develop 9.5GW of renewable energy capacity by 2023 and for the encouragement of the public-private partnerships.

The Ministry of Energy, Industry and Mineral Resources (MEIM), acting through the Renewable Energy Project Development Office (REPDO), will execute the Kingdom’s renewable energy plan and will be supervised by a Steering Committee that includes the major energy stakeholders in the country.


Under the National Renewable Energy Program, Saudi Arabia is committed to procure 9.5GW of renewable energy on an IPP basis by 2023.

<table>
<thead>
<tr>
<th>Round I</th>
<th>Round II – Solar PV</th>
<th>Round II – Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>700MW</td>
<td>3250MW</td>
<td>800MW</td>
</tr>
<tr>
<td>Sakaka PV (300MW)</td>
<td>(in a number of sites with various project sizes)</td>
<td></td>
</tr>
<tr>
<td>Domat al Jandil (400MW)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: National Renewable Energy Program, REPDO
Local Content: Existing/New Development

Localization of renewable energy technologies has been looked at by a number of government entities over the last few years, but with the ongoing restructuring of government entities, a more focused approach is expected to be achieved on this endeavour.

It is observed that, in order to create a manufacturing base for renewable energy technologies, Saudi Arabia is approaching local content from a number of policy perspectives;

- Applying progressive local content requirements for the local utility-scale demand (e.g. the case of Sakaka solar PV IPP), with comprehensive control and penalty system.
- Committing to a long-term of renewable energy utilization, with minimum size auctions, to allow for economies of scale.
- Supporting local manufacturers’ competitiveness through SIDF.
- Supporting selected energy to ensure focus while being technology agnostic.
Local Content: Cost Factor

Considering the Existing Local Capabilities, Localizing the Main Equipment (Fully or Partly) will be Next on the “To-Do List” for Saudi Arabia

Source: IRENA
Local Content: Potential Opportunities for Localization

### Value chain coverage in the KSA

<table>
<thead>
<tr>
<th>Selected products</th>
<th>Value chain coverage in the KSA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cell</strong></td>
<td>Polycrystalline silicon wafers</td>
</tr>
<tr>
<td></td>
<td>Anti-reflection coating surface</td>
</tr>
<tr>
<td></td>
<td>A full area metal application</td>
</tr>
<tr>
<td><strong>Module</strong></td>
<td>Float process</td>
</tr>
<tr>
<td></td>
<td>Solar grade low iron float glass</td>
</tr>
<tr>
<td></td>
<td>Solar grade pattern glass</td>
</tr>
<tr>
<td><strong>Parabolic mirror</strong></td>
<td>Float process</td>
</tr>
<tr>
<td></td>
<td>Bending and tempered</td>
</tr>
<tr>
<td></td>
<td>Silvering</td>
</tr>
<tr>
<td></td>
<td>Protecting layer &amp; drying</td>
</tr>
<tr>
<td></td>
<td>Accessories</td>
</tr>
<tr>
<td><strong>Blades assembly</strong></td>
<td>Shell manufacturing</td>
</tr>
<tr>
<td></td>
<td>Epoxy injection</td>
</tr>
<tr>
<td></td>
<td>Heat curing</td>
</tr>
<tr>
<td></td>
<td>Gluing</td>
</tr>
<tr>
<td></td>
<td>Smoothing and painting</td>
</tr>
<tr>
<td><strong>Collector</strong></td>
<td>Steel &amp; glass tubes</td>
</tr>
<tr>
<td></td>
<td>Welding</td>
</tr>
<tr>
<td></td>
<td>Anti reflecting coating</td>
</tr>
<tr>
<td></td>
<td>Sputtering</td>
</tr>
<tr>
<td></td>
<td>Vacuum and getter</td>
</tr>
<tr>
<td><strong>Inverter</strong></td>
<td>Control card</td>
</tr>
<tr>
<td></td>
<td>Distribution board</td>
</tr>
<tr>
<td></td>
<td>Filters</td>
</tr>
<tr>
<td></td>
<td>Power electronics</td>
</tr>
</tbody>
</table>

Segments covered by KSA players

Segments with limited or no coverage by KSA players

Achieving the Vision 2030 Targets for Localization in Renewable Energy is a Function of Economies of Scale – Long-term, Sustainable and Competitive Business Pipeline

Source: REPDO, SAGIA
Local Content: Beyond Local Utility-Scale Demand
Deployment of Renewable Energy: IPP Model

**Project Financing** – Financing the power projects in IPP model is made on a project financing basis, with non-recourse or limited recourse structure.

**Lifecycle Approach** – IPP transaction considers the complete project lifecycle, including the initiation, development, construction, operations and maintenance, and closure.

**Risk Allocation** – In IPP arrangements, risk should be allocated to the party that is best positioned to manage or bear that risk, or more specifically, the party that can accept the risk at the lowest costs.

**IPP Requirements** – IPP transactions are driven by:

1. Off-taker requirements; competitiveness and compliance.
2. Bankability requirements; technical, financial and legal due diligences, world bank standard, equator principles and local regulations.
3. Insurability requirements; proven technology, track record contractor and all non-financial risk can be identified and insured.

**Focus Areas** – Requirements, technology optimization, efficiency, CAPEX optimization, schedule and completion, efficient and competitive O&M.
Local Content and IPP: Bankability and Insurability

- In IPPs financed on project finance basis, bankability and insurability tests are fairly the same for new contractors, suppliers, operators, or for new equipment.
- Key consideration will be to given to assessing and measuring the overall project risks, with the objective of minimizing the risk of external influences or events acting to the detriment of the project.
- Lender groups differs; int’l/local commercial banks, multilateral/development banks, export credit agencies – Each group may have additional considerations more and above the bankability tests usually run for project finance purposes.
- Specific attention will be paid by lenders to each of the parties involved in the project, whether at inception, during the construction phase or during the operating phase.
- Further, lenders pay close attention not only to the insurance cover provided but also to entities providing that cover. Most lenders will want to see the involvement of large international insurance companies and will be reluctant to accept local insurance companies from emerging market countries.

### Key Bankability Considerations …

- Creditworthiness of the parties.
- Ability of the parties to deliver and perform according to the specifications of the project documents.
- Back-to-back principle.
- Arm’s-length relationships and independence of the project parties.
- Continuity of the parties and their obligations.
- Warranties, guarantees and securities provided by the relevant parties.
- Legality aspects – validity and enforceability.
Case Study: Sakaka 300MW PV IPP

**Sakaka PV IPP**

- **Location** – Sakaka, Al-Jouf Province, Saudi Arabia
- **Capacity** – 300MW
- **Technology** – Photovoltaic power technology variants
- **Contract Type** – Build, Own, Operate (BOO) under one special purpose vehicle (Project Company)
- **Term** – 25 Years under a Power Purchase Agreement (PPA)
- **Offtaker** – Saudi Power Procurement Company, limited liability company whose financial obligations are guaranteed by SEC
- **Project Land** – Secured by REPDO and will be provided to the Project Company
- **Total Investment** – circa USD 300 million
Case Study: Sakaka 300MW PV IPP

- In April 2017, MEIM through REPDO tendered the first utility-scale solar PV project on IPP basis, to be located in Sakaka, Al-Jouf, with a capacity of 300MW.

- Local content was one of bid requirements the bidders were required to comply with using a metric, referred to as the NREP Saudisation Compliance Metric (NSCM).

- Bidders were required to submit their bids that include (1) achieving an NSCM percentage of 30%, and (2) as a conditions precedent to the effectiveness of the PPA to put in place an NCSM bond with a value of USD 10 million in favour of the offtaker.

- Successful bidder is required to provide the offtaker with a proposal setting out its projection of its localized value by detailed cost factor and remuneration of Saudi Arabian nationals identifying how the it envisages achieving the 30% NSCM percentage.

- Upon PPA signing, on a quarterly basis until COD, the successful bidder is required to report on its progress towards achieving the NSCM percentage, substantiating its report by evidence of spend and certificates of origins, as applicable, related to in-kingdom sourced goods, services and manpower.

- In the event of failing to meet the NSCM percentage, the successful bidder will pay, by way of LDs, UDS 1 million per percentage point not achieved, up to USD 10 million. Failing to achieve 20% NSCM percentage may result in blacklisting the bidder for a period 3 years from NREP.

30% NSCM percentage is expected to be achieved based on the existing in-Kingdom market capabilities (namely on BoP portion of such plants); increasing such percentage will require further engagement among procurer, developers, lenders and insurance companies to assess the impact on risk allocation.
Thank you!
Panel Discussion

A New Economic Dynamism:
The Challenges and Opportunities for Investment Transformation

Moderator:

Nirav Modi
Private Equity & Mergers and Acquisitions Services, Marsh MENA

Panelists:

Alexander Blom
Head of Financial Lines - MENA AIG

Brian Gillespi
Senior Associate Allen & Overy

Mario Salameh
Partner, Project and Infrastructure Finance PWC

Sameer Nawaz
Head of Investment Banking Al-Rajhi Capital
EFFECTIVE INVESTMENT IN OUR THRIVING ECONOMY

Diversifying our economy is vital for its sustainability and we have begun expanding our investments into promising sectors.

Utilize our country’s resources efficiently and effectively.

Unleash the capabilities of our promising economic sectors.

To assume a better place, we need to:

- Invest in all of our resources in order to diversify our economy.
- Privatize some government services.
Vision 2030

“Diversifying our economy is vital for its sustainability and we have begun expanding our investment into promising sectors”

- Utilize country’s resources efficiently and effectively
- Unleash the capabilities of promising sectors
- Invest in all of our Resources in order to diversify the economy
- Privatize some government services

Achieve a Thriving Economy
Drivers

- Stimulate Competition
- Improve performance of state owned enterprises
- Access to global resources
- Use proceeds to reduce debt
- Implement and speed up political ideology
- Employment opportunities
- Governance and Transparency

Policy Choices and Private Investor Strategy

Challenges

- Political Will
- Financial Systems
- Legal Systems
- Labour Market
- Ownership and Corporate Governance
Panel Discussion

The Evolving Dynamics of the Insurance Markets in KSA and Globally: Ensuring the Certainty of Outcomes

Moderator:
Maissa Bachnak
Vice President
Construction &
Infrastructure Practice
Marsh MENA

Panelists:
Mohammad Mahboob Ali Khan
Managing Director,
Group Risk Mitigation & Insurance, Abdul Latif Jameel Group

Paul Smith
Regional Engineering
Head
Allianz London

Wasif F. Minhas
Chief Underwriter
Walaa

Ian Peters
Head of Claims
Solutions
MEA, Marsh
The Route to Prosperity in the Kingdom:
Reimagining Infrastructure Risks and Rewards
Panel Discussion

The Evolving Dynamics of the Insurance Markets in KSA and Globally: Ensuring the Certainty of Outcomes

Moderator:

Maissa Bachnak
Vice President
Construction & Infrastructure Practice
Marsh MENA

Panelists:

Mohammad Mahboob Ali Khan
Managing Director, Group Risk Mitigation & Insurance, Abdul Latif Jameel Group

Paul Smith
Regional Engineering Head
Allianz London

Wasif F. Minhas
Chief Underwriter Walaa

Ian Peters
Head of Claims Solutions
MEA, Marsh
Thank you!