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PROJECT DETAILS

Objective of Project
Development of grid connected utility scale solar power project at the designated Project Site in the Gegharkunik region of the Republic of Armenia

Project Installed Capacity
Pre-Qualified Bidders were allowed to propose a Project Installed Capacity between 46 MW up to 55 MW as per their own due-diligence

Implementation Model
Design, Finance, Build, Own, and Operate (DFBOO) basis under one special purpose company (the Project Company) to be 100% owned by the Successful Bidder

Authority
Armenia Renewable Resources and Energy Efficiency Fund (R2E2) by request of the Ministry of Energy Infrastructures and Natural Resources of RA was managing the process for selection of private developer through the support of a transaction adviser
Important Elements for Success

**DISPATCH**

**FIXED TARIFF, EXCHANGE RATE**

**DISPATCH:**

There are two structures generally accepted for mitigating the risk that the off-taker may not dispatch the generating facility.

**Take or Pay:** Usually the off-taker pays a fixed tariff comprising a capacity charge (a fixed amount that is paid for available capacity - no dispatch required) and an output charge (an amount paid in respect of energy actually delivered). This permits the power producer to cover its fixed costs with the capacity charge, including debt service, fixed operating costs, and an agreed equity return.

**Take and Pay (typical for wind and solar):** Usually the off-taker must take, and pay a fixed tariff for all energy delivered (no dispatch required). If energy cannot be physically taken by the off-taker and output is “curtailed,” energy will be calculated and paid for on a “deemed” delivered basis.

**FIXED TARIFF, EXCHANGE RATE:**

It is important that the revenue of any PPA, whether “Take or Pay” or “Take and Pay,” be a fixed amount per kWh generated to adequately cover the cost of operating the facility, repay the debt and provide a reasonable return on equity.

In order to avoid subjecting the power producer to currency risk, the tariff should be either denominated in or linked to an exchange rate of the currency of the power producer’s debt, and there should be no limitation or additional approvals required to transfer funds to offshore accounts as required.
Important Elements for Success

CHANGE IN LAW, CHANGE IN TAX

The agreement should explicitly state which party takes the risk of the law or tax regime changing after the date of the agreement in such a way as to diminish the economic returns of the transaction for such party (e.g., increase in taxes on power producers reducing the producer’s returns). In order for PPAs to be bankable, most lenders require the off-taker to take this risk.

FORCE MAJEURE

The agreement should excuse the power producer from performing its obligations if a force majeure event (an event beyond the reasonable control of such party) prevents such performance. The allocation of costs and risk of loss associated with a force majeure event will depend on the availability of insurance and in some cases the degree of political risk in the country/region.
Important Elements for Success

PAYMENT SUPPORT

Depending upon the size of the project and the creditworthiness of the off-taker and the development of the energy sector in a certain country, short term liquidity instrument, a liquidity facility and/or a sovereign guaranty will be required to support the off-taker’s payment obligations.

INTERCONNECTION

The agreement should indicate which party bears the risk of connecting the facility with the grid and transmitting power to the nearest substation. The more significant these risks (due to terrain, distance, populated areas), the more the lenders will require the off-taker to bear all or a significant portion thereof.
Important Elements for Success

**DISPUTE RESOLUTION TERMINATION**

**DISPUTE RESOLUTION:**
The agreement should provide for offshore arbitration, in a neutral location, under rules generally acceptable to the international community (e.g. UNCITRAL or LCIA or ICC).

**TERMINATION:**
The agreement should set out clearly the basis on which either party may terminate the it. Termination by the off-taker may leave the project with no access to the market and thus should be limited to significant events. The agreement should provide that if it is terminated for any reason, then in case of transfer of the facility to the off-taker, the off-taker shall provide a termination payment at least equal to the full amount of the power producer’s outstanding bank debt, and in the case of the off-taker’s default, a return on equity.
Risk Allocation Decisions

WHO and WHY should bears each of this risks? (1) Government? (2) Off-taker? (3) Project Company?

FINANCIAL CLOSE:
- Approvals & Permits
- Land Acquisition
- Project Design
- Access to Project Site

CONSTRUCTION:
- Financing
- Cost over-run
- Construction delays
- Exchange rate fluctuation risks during construction
- Additional civil work requirements

OPERATION AND MAINTANANCE:
- Flawed O&M impacting, technology issues, inadequate O&M spending, and other matters impacting energy output from the Project
- O&M cost over-runs due to changes in the legal and regulatory framework

COMMERSIAL RISKS:
- No dispatch due to energy surplus on the system due to overcapacity or low demand
- Lower than estimated solar irradiation reducing the energy output from the power plant
- Unplanned outages due to technical reasons at the power plant level
- Inability to evacuate energy due to infrastructure failure at the power distribution network
- Delays with connection of the project to the power distribution network
- Payments under PPA
- Currency convertibility and transfer
- Currency risk
- Interest rate risk
- Change in law and illegality
- Nationalization and expropriation
- Force majeure in general
Project Agreements

1. **Government Support Agreement**
   - To be signed between the Government of Armenia and Successful Bidder

2. **Land Transfer Agreement**
   - To be signed between the Project Company and Local community

3. **License Agreement**
   - To be provided by the Regulatory Commission to the Project Company

4. **Power Purchase Agreement**
   - To be signed between Electricity Networks of Armenia (Offtaker) and Project Company
Key Provisions of GSA

**Government support arrangements**

- Change in Law, Change in Tax responsibility
- Support in Land transfer free and clear of all encumbrances
- Financial obligations if the Regulator fails to take any proper actions, including setting/revising tariffs annually
- Guarantee against payment defaults by ENA for more than 60 days
- Other support for project installation and operation
- Guarantee against any limitations of foreign exchange and transfers abroad

**Obligations on Successful Bidder**

- Conditions Precedent Deadline - 180 Days after the Signing Date
- Financial Close Deadline - 180 Days after the Signing Date
- Scheduled Commercial Operation Date - 2 years from the Effective Date
- Provisions on construction and commissioning
- Adherence to Minimum Technical Requirements and project performance
- Termination provisions

GSA for Masrik Power Plant is available by the following link:
Key Provisions of GSA

Government support arrangements

- Tax incentives customarily available to the developers of power generation projects in Armenia in accordance with applicable laws
- Termination payment under certain circumstances by the Government. Most importantly while a Force Majeure Event occurs and continues for more than 2 years the Developer has the right to terminate the Agreement, in which case Government will be obliged to purchase the Plant.
- Offshore arbitration: the venue of arbitration shall be Geneva, Switzerland and the legal seat of arbitration shall be London, England

Obligations on Successful Bidder

GSA for Masrik Power Plant is available by the following link:
## Key Provisions of Land Agreement

<table>
<thead>
<tr>
<th>Land Transfer Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ Land to be donated by Masrik Community of Gegharkunik to the Project Company</td>
</tr>
<tr>
<td>➢ Land to be transferred at NO COST</td>
</tr>
<tr>
<td>➢ Land to be used ONLY for the Solar power project</td>
</tr>
</tbody>
</table>
License Agreement

➢ License specifies the terms of the license to be granted to the Project Company, mainly:
  • Rights and obligations of the Licensee
  • Tariff adjustment mechanism

➢ License may not be sold, transferred or pledged to third parties, except as envisaged by law

➢ Adjustment of Tariff to address fluctuations:
  • Tariff is calculated each year for the upcoming year during 20 years
  • Tariff is adjusted based on the Official Exchange Rate (90%) and the CPI (10%) of the previous tariff period by a special formula

License Agreement for Masrik Power Plant is available by the following link:
Key Provisions of PPA

Obligations: ENA (off-taker)

- Power purchase by utility during testing and commissioning and the following 20 year period
- Payment guarantee through the ESCROW account until the 25th of the month following the settlement period
- Providing distribution grid connection
- Maximum hours of interruptions in electrical energy off-take by the ENA at the Delivery point is limited to 87.6 per annum, if the total annual interruptions take longer deemed energy payment will be applied*
- Off-shore arbitration is allowed for the parties by the request of one of the parties

Obligations: Project Company

- Adherence to technical requirements for grid interconnection
- Construction of power evacuation infrastructure up to the Ownership boundary (Delivery Point)
- Ensure delivery of electrical energy to distribution network not less than 80% in average for the first 10 years and not less than 70% in average for the following 10 years compared to the volume of the energy expected by the Plant Design Documentation.

* Deemed energy will be calculated based on the average hourly generated electricity of the same month of the previous year burned by the hours exceeding 87.6 hours. If no generation was available for the previous year same principle will be applied with the previous month data.

PPA is available by the following link: https://www.arlis.am/DocumentView.aspx?DocID=118547
Prequalification Criteria

TECHNICAL CRITERIA

1. At least two grid-connected solar photovoltaic power projects
2. Each in a different country anywhere in the world
3. With a minimum aggregate capacity of 50MW
4. Each of the projects should not be smaller than 25MW
5. Each of the relevant power plants must have achieved average annual availability of 95%
6. 25% or greater share directly or indirectly in the relevant power plant(s) at financial close, during construction and for at least two years of commercial operation
7. For power plants that are the subject of a concession issued by public authority and/or a power purchase or similar contract with a public power utility, a letter of reference from such authority and/or utility; and
8. For all power plants, a technical report from a reputable and independent engineering firm.
Prequalification Criteria

**FINANCIAL CRITERIA**

If the Prospective Bidder comprises a single entity

1. A Net Worth of at least US$45 million or equivalent
2. A Net Worth to Total Assets ratio of at least 15%

If the Prospective Bidder is a Consortium

1. The Anchor Sponsor(s) shall between them have had a Net Worth of at least US$45 million or Equivalent
2. Each of the Anchor Sponsors have had a Net Worth to Total Assets ratio of at least 15%
3. The Lead Sponsor shall have had a Net Worth of at least US$25 million or equivalent,
4. The Lead Sponsor shall have had a Net Worth to Total Assets ratio of at least 15%

The call for proposals has been published in April 2017, 20 applications has been received, 10 companies has been prequalified in July 2017
Request for Proposals

RFP has been structured in the following way:

– **Part A: Selection Procedures and Requirements**

– **Part B: Appendices**
  - Appendix 1: Format for Bid Submission Letter
  - Appendix 2: Format for Submission of Financial Proposal
  - Appendix 3: Format for Bid Security
  - Appendix 4: Minimum Technical Requirements of the Project
  - Appendix 5: Draft Government Support Agreement
  - Appendix 6: Format for Clarifications and Amendments

– **Part C: Attachments**
  - Attachment 1: Terms and Conditions of License
  - Attachment 2: Exemplary Form of Power Purchase Agreement with the off-taker
  - Attachment 3: Draft Technical Conditions for Interconnection to the distribution grid
  - Attachment 4: World Bank Group Cover Letter and Indicative Terms and Conditions for the Proposed Guarantee in Support of the Project
**Project Fees and Guarantees**

- **USD 82,500**
  - Project Preparatory Fee

- **USD 165,000**
  - Local Area Development Fee

- **USD 1,000,000**
  - Bid Security, in the form of Bank Guarantee

- **USD 1,620,000**
  - Performance Bank Guarantee (in accordance with the terms of the GSA)
Bid Submission and Evaluation Timeline

**BID STAGE TIMELINES UP-TO BID SUBMISSION DEADLINE**

- **Issue Date**
  - 27 Dec 2018
- **Pre-Bid Site Visit(s)**
  - 8–31 Jan 2018
- **Setting up of Data Room**
  - 11 Jan 2018
- **26 Jan 2018 Original**
- **14 Feb 2018 Extended**
- **Pre-Bid Conference**
  - Last date for receiving queries: 31 Jan 2018
- **Last date of response to all queries received**
- **Bid Submission Deadline & Opening of Technical Proposals**
  - 09 Feb 2018
  - 24 Feb 2018 (for additional queries)

**EVALUATION AND LOA STAGE TIMELINES**

- **Opening of Financial Proposals**
  - 27 Mar 2018
  - 21–27 Mar 2018
- **Evaluation of Technical Proposals**
  - 26 Apr 2018
- **Issuance of Letter of Award**
  - 10 May 2018
  - 26 Apr 2018
- **Approval of Tender Results by GoA**
  - 27 Mar 2018
- **The Parties signed Government Support Agreement in July, 2018**
  - 21 Mar 2018: Extended
  - 7 Mar 2018: Original

- Land Transfer Agreement was signed in July 2018
- License was issued by PSRC in October 2018
Virtual Data Room has been available to Pre-Qualified Bidders throughout the Bid Submission Deadline. Data Room was structured in the following way:

**A. Laws and Decrees:**
- Codes and Laws of the Republic of Armenia;
- Decrees of the Government of the Republic of Armenia;
- Decrees of the Public Services Regulatory Commission (PSRC);
- Other relevant legal acts;

**A. Project RFP:**
- Project RFP issued to Pre-Qualified Bidders;
- Responses of the Authority to Requests for Clarifications by the Pre-Qualified Bidders;

**A. Studies and Reports:**
- Available reports and studies to help bidders to prepare their bids
The Pre-Qualified Bidders were allowed to request clarifications on any part of RFP and RFP documentation.

The deadline for queries originally was set at 26 January 2018.

After Pre-Bid Conference, the Ministry extended the deadline allowing Pre-Qualified Bidders to ask for additional clarification queries between 12-14 February 2018.

In total 241 has been received and responded during this process.

**Structure of the queries received**

- Draft GSA 30%
- Technical aspects 25%
- Draft License 7%
- Exemplary Form of PPA 16%
- Tender Procedure 17%
- Other 5%
Selection Process

- Successful Bidder: Lowest quoted Bid Tariff

  *Lowest quoted Bid Tariff was **0.0419 USD/kWh** excluding VAT*

  *It was provided by Fotowatio Renewable Ventures B.V, Netherlands (Lead Sponsor) and FSL Solar S.L., Spain (Anchor Sponsor)*

- Government approved results of tender on 26 April, 2018

- Ministry of Energy issued the Letter of Award to Successful Bidder on 10 May, 2018

**Conditions precedent for signing GSA:**

- Payment of Project Preparatory Fee
- Performance Bank Guarantee
- Payment of Local Area Development Fee

*Successful Bidder provided all the required guarantees and payments and parties signed Government Support Agreement on 18 July, 2018*
POWER THE FUTURE (PTF) REGIONAL PROGRAM

CHIEF OF PARTY, ARMEN ARZUMANYAN

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