

15 MW Kandahar Solar Power Plant

Project Presentation

December 5th, 2018

Afghanistan Energy Study Committee Meeting

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1. Project Brief

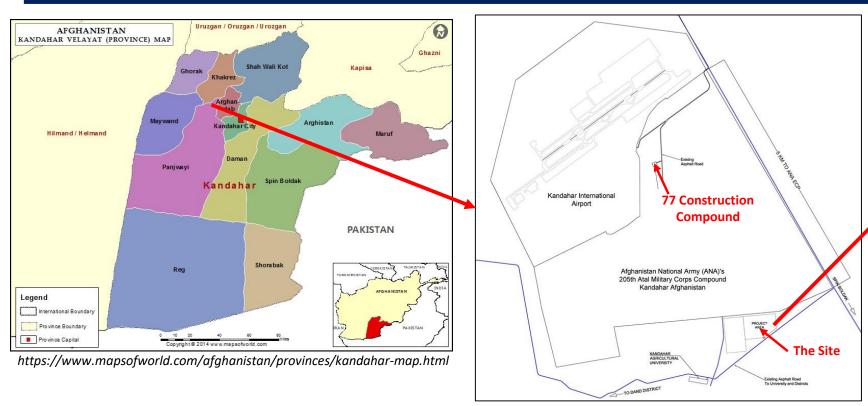
Bidding and Negotiations

- On **16 March 2016**, Ministry of Energy and Water Islamic Republic of Afghanistan announced "Design, Finance, Build, Own, Commission, Operate total of 30MWp Solar PV Power System in Kandahar" project with RFP no: MEW-REN-01-KAN.
- On **25 April 2016**, 77 Construction has submitted their proposal for this BOT project and was selected as a qualified bidder by the Bid Evaluation Committee.
- Early May 2017, drafting of Power Purchase Agreement and negotiations on the contractual terms has started.
- On **18 February 2018**, Power Purchase Agreement has been signed by DABS and 77CCA.
- On 13 June 2018, 77CC has reached to Financial Close Out for the Project. The NTP was issued by DABS to 77CC at this date.
- On 07 August 2018, 77CC has signed a mandate letter with Asian Development Bank for the financial support of the Project.



2. Technical Overview

Location



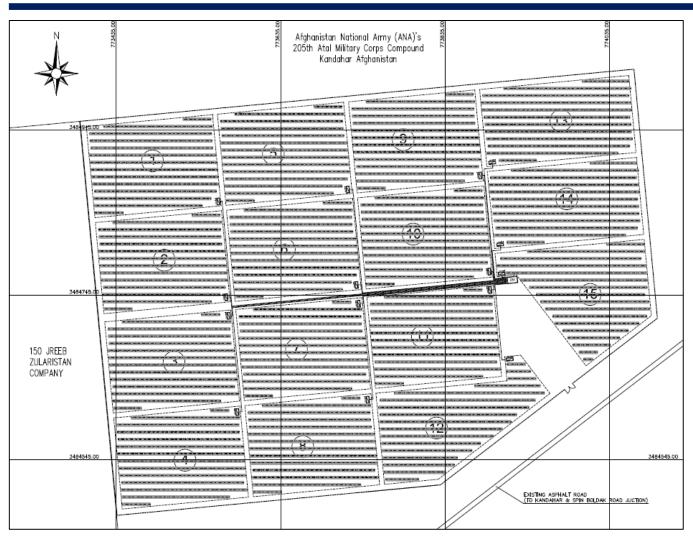


 The Facility will be located in Kandahar City in Kandahar Province of Afghanistan.

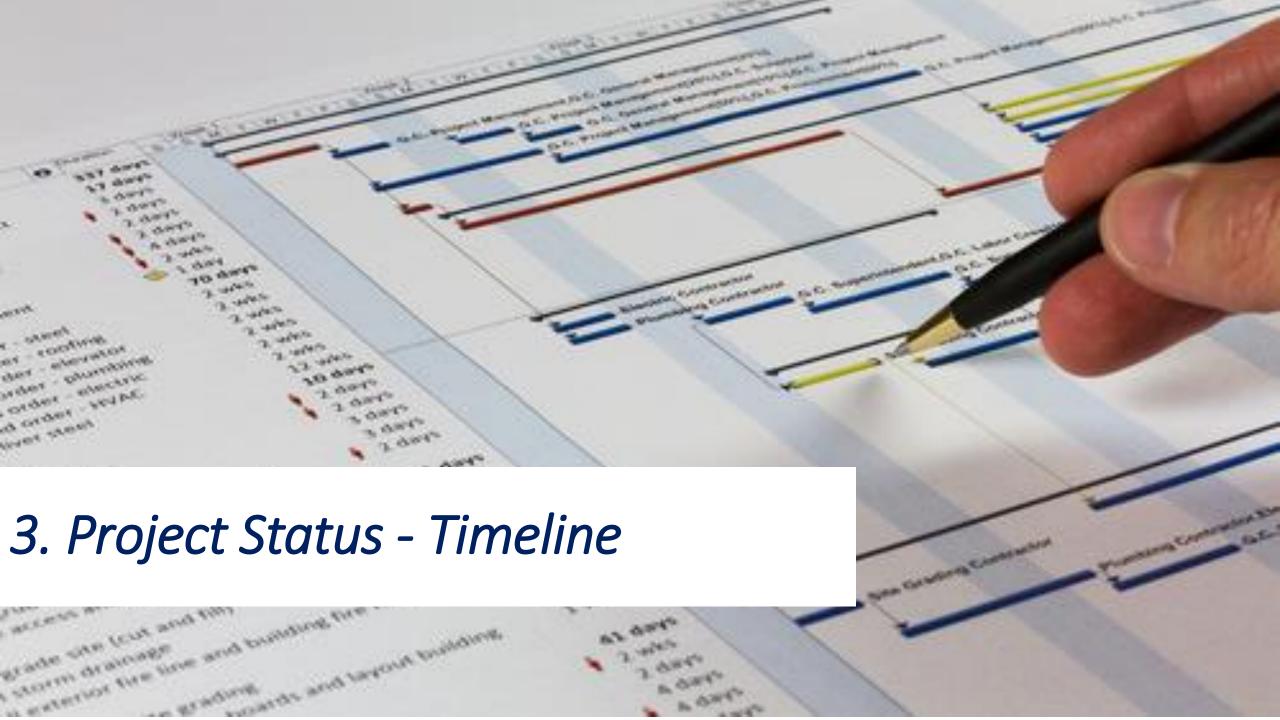
- The Site is in a relatively favorable location:
 - Close to Kandahar International Airport and major highways (~29 km to Ring Road)
 - Can be accessed easily via existing asphalt roads.
 - North border is neighboring Afghanistan National Army's 205th Atal Military Corps Compound.
 - 77 Construction has existing compound inside the Kandahar International Airport No need for a major mobilization.

2. Technical Overview

General Arrangement Plan



- Conceptual general arrangement was placed according to both technical and economical point of views and may only need small deviations.
- Main components inside the Facility fence are PV arrays, inverters, transformers, electrical building, control room and distribution center.
- Main entrance is south-east of the Site and a looping service road has been planned around the Facility inside the perimeters.
- PV arrays are placed to face south (azimuth is 0 degrees) with a pitch of 8.5 m between racks, which aims to increase annual production by reducing losses due to azimuth angle and shadowing effect.



Milestones

- The construction works have commenced on 19 June 2018.
- Critical activities are assumed as follows;
 - 1. Manufacturing, site delivery and erection/installation works for mounting system,
 - 2. Manufacturing, site delivery and erection/installation works for PV panels,
 - 3. Mechanical and electrical erection/installation works for balance of system,
 - 4. Testing and commissioning.
- 100% Design has been completed and submitted to DABS.
- Site grading, leveling and boundary wall construction activities are completed
- Installation of Mounting Structures is on going
- Procurement of PV Panels, Mounting Structure, Inverters, Cables and Transformers are completed.
- The target project completion date is 13 April 2019.

Current Progress









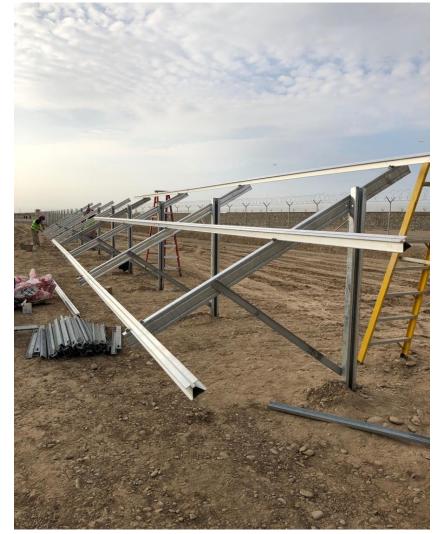
Sample of Borehole Drilling and Investigation Pit at the Site

Construction works have started on 19 June 2018 at the Site

Current Progress

• Installation of Mounting Structure is on going the Site.





Current Progress

• 10 MW Panels has reached to the Project Site.





Current Progress

• The construction of Transformer and Distribution Center Buildings is on going



