Advance Contracting Notice

Date: 23 April 2018

Country/Borrower: Pakistan

Title of Proposed Project: 48078-PAK: MFF Power Transmission Enhancement Investment Program II Tranche 3

Name and Address of Executing Agency:
National Transmission & Despatch Company Limited
WAPDA House, Shahrah-e-Quaid-e-Azam, Lahore, Pakistan

Brief Description of the Project:

The Asian Development Bank approved on 23 August 2016 a multitranche financing facility for Second Power Transmission Enhancement Investment Program (MFF II) to Government of Pakistan with an aggregate facility amount of up to $810 million [$ 800 million from ADB’s ordinary capital resources (OCR), and $10 million equivalent from special fund resources (ADF)]. The investment program aims to expand and reinforce Pakistan’s power transmission system, enabling the system to provide a reliable and quality service capable of meeting increasing customer demand and supporting economic growth.

The project is the 3rd Tranche under the investment program and supports the National Transmission and Despatch Company Limited (NTDC) in meeting growing electricity demand efficiently and reliably at loan centers in Punjab. Tranche 3 will also enhance NTDC’s capacity in dispatching intermittent renewable energy and providing frequency regulations.

Brief Description of Goods and Related Services, Works or Consulting Services to be Procured and Retroactive Financing:

To improve PAK power transmission coverage, reliability, transparency, and quality of service, the following packages will be procured under the project:

(i) ADB-300A – Procurement of plant-design, supply, installation, testing and commissioning of 500kV Lahore North S/S and extension at 500kV Nokar S/S: The work consists of:
   • A new 500/220/132 kV substation (Lahore North) with 4x750MVA, 500/220 kV transformers and 3 x 250MVA, 220/132 kV transformers;
   • Six 500 kV line bays, six 220kV line bays, and two 132kV line bays at Lahore North; and
   • Extension at 500 kV Gujranwala S/S by two 500 kV line bays

Asian Development Bank
(ii) **ADB-300B** – Procurement of plant-design, supply, installation, testing and commissioning of 500kV Maira Switching station, which consists of eight line bays and four Shunt Reactor Banks.

(iii) **ADB-300C** – Procurement of plant-design, supply, installation, testing and commissioning of Jauharabad 220kV substation and associated transmission line (12 km). The work consists of: consist of:

- 220kV S/S at Jauharabad with 3x160 MVA 220/132 kV transformers along with allied equipment and accessories
- Four 220kV line bays and eight 132kV line bays
- Two 220kV D/C T/L of twin bundle Rail conductor for looping In/Out of existing Ludewala – Chashnupp D/C T/L at 220kV Jauharabad (12km)

(iv) **ADB-300D** – Procurement of supply of substation equipment (Lot 1: Replacement of 37 MVAR Shunt Reactors at Sheikhpura & Gatti substation, and 20 MVAR at Sheikhpura substation; Lot 2: Replacement of 500/220kV, 450MVA Transformer at Gatti substation).

(v) **ADB-300E** – Procurement of plant-design, supply, installation, testing and commissioning of Numerical Relays for Islamabad, Lahore & Multan Region. The work consists of replacement of electro-mechanical relays with digital numerical relays at 34 grid stations in Islamabad, Lahore & Multan regions.

(vi) **ADB-301A** – Procurement of plant-design, supply, installation, testing and commissioning of 500 kV transmission line Nokar S/S- Lahore North S/S- Lahore HVDC switching/ converter station (150 km): This package is supplemental to ADB-300A.

(vii) **ADB-301B** – Procurement of plant-design, supply, installation, testing and commissioning of 220 kV transmission lines associated with Lahore North S/S (44 km): This package is supplemental to ADB-300A.

(viii) **ADB-301C** – Procurement of plant-design, supply, reconduting, testing and commissioning of 220 kV HTLS D/C transmission lines Kotlakhpat-Bund Road-Sheikhpura D/C T/L (44 km) and Gatti---Bandala (5 km).

(ix) **ADB-301D** – Procurement of supply of transmission line equipment (Lot 1 – Construction equipment; Lot 2 – Live line washing units; Lot 3 – Live line tools and plants equipment; and Lot 4 – Dead line tools and plants equipment). The transmission line construction equipment and live line crew equipment are needed to enhance line construction work, including live line maintenance operations.

(x) **ADB-301E** – Procurement of supply of fog resistant insulators for enhancing grid resilience to air pollution in heavily polluted area. The replacement with fog resistant insulators is needed to replace insulators which have been compromised by contamination with fog.

(xi) **ADB-302** – Procurement of plant-design, supply, installation, testing, commissioning and operation & maintenance of grid connected battery energy storage system pilot project: A 20 MW battery energy storage system at the proposed location of the Jhimpir-1 substation would provide two major benefits – network stability support and improved dispatch of variable renewable generation. The work to be carried out includes: (a)
installation of Lithium-ion Battery Packs (5 MWh); (b) installation of balance of system including inverters (20MW); and (c) installation of transformers (220kV/33kV, 30MVA 1 unit and 33kV/0.44kV, 5MVA 6 units).

Date of Advance Contracting and Retroactive Financing Approval: Following MFF approval on 23 August 2016, retroactive financing and advance contracting are also approved for all Tranches under the MFF.