ADDENDUM #3

July 16, 2021

OLD HARBOUR TO CORPORATE AREA

TRANSMISSION NETWORK EXPANSION PROJECT

(OHCATNEP) – **TRANSMISSION LINE**

RFP#879742

1. We understand that Right of way along the route of the line will be in the scope of Employer and will arrange the access to site. We understand that the Way leave clearance and crop compensation along the route will be paid by the Employer. Please confirm if our understanding is correct.

   A. The Right of Way for the complete line route will be provided JPS.
   B. ROW Way Leave Clearance compensation to be paid for by JPS. Access Road Way Leave Clearance to be paid by Contractor. All crop and property damage to be paid by contractor.

2. We understand that any custom duties, vat or local taxes applicable on Schedule 1, Schedule 2, Schedule 3 and Schedule 4 will be exempted or promptly paid by the employer. Please confirm if our understanding is correct.

   IB.10.2 The price of the goods shall be quoted Delivered to site, Duties and GCT Paid by JPS.

   Prices shall include charges for port handling, fees, taxes, inland transportation, insurance, and other local costs incidental to delivery of the goods from the port of entry to their final destination.

   Prices for local materials and services shall include GCT, Tax Levy, and all other taxes due.

3. Type test reports similar to the item offered within last 5 years will be valid for the tender. We understand that, type test report, conducted within last 5 years, is to be submitted along with the bid. No type test needs to be conducted at execution stage; if all tests as per technical specification is already successfully conducted in reputed laboratory within last 5 years. Please Confirm.

   Response to be provided by COB Wednesday July 21, 2021.

4. Please confirm that the daily pocket allowance for training for overseas and local is to be provided bidder. If yes then provide us same.

   Response to be provided by COB Wednesday July 21, 2021.

5. Please inform the line route and angle point co-ordinates.

   The line route can be found by navigating online as shown;
   Website: https://www.jpsco.com/rfp/
   Tender: RFP#879742-OCATNEP-TRANSMISSION LINES v2
   Folder: Documents & Drawings - RFP#879742 - OCATNEP

File: **proposedoldharbourhuntsbay138kVtransmissionline_option1 & 69 kV Transmission Line .zip**

6. As per clause TS.01.6 on (Page No.66 of 470), TS.03.2.3 (Page No.90 of 470), TS.03.2.7 (Page No.93 of 470), please provide contract drawings for various tower types.

   The drawings included on the website indicate general tower arrangements and not exact details. On the website, please make reference to Documents & Drawings - RFP#879742 – OCATNEP|27287 – REV 2-TRANSMISSION TOWERS- OLD HARBOUR – HUNTS BAY 138kV INTERCONNECTION

7. As per clause TS.03.2.1 (Page No.90 of 470) , 138 kV double circuit shall be with six (6) Aluminum Alloy 927.2 MCM "Greeley" conductor and two EHS galvanized steel overhead shield-wire. From this we infer that there is only single conductor per phase. Please confirm.

   There is to be one (1) 927.2 MCM AAAC conductor per phase.

8. Further, as per clause TS.03.2.6 (Page No.92 of 470) shield wires are OPGW+EHS. Please inform if 2 EHS wires OR one EHS + one OPGW is required.

   For the purpose of tendering, please take into account the use of 2 - 5/16" EHS shield wires with improved galvanization.

9. We observed the tower types are A, B, C, D (as per clause TS.03.2.6) or AA, BB, CC and DD (as per clause SCH.03.2). Please provide us Final Tower types.

   Response to be provided by COB Wednesday July 21, 2021.

10. As per clause TS.03.2.6 (Page 92 of 470), overload factor is 2 for broken wire case (assumption no. 3) for vertical and transverse load for all tower types and long load of tower type D. This is greater than overload factor for assumption no. 1 and 2 (full wind and 45 deg. wind), which is 1.3. Normally overload factor for broken wire (security condition) does not exceed reliability condition. Therefore, please confirm overload factor for broken wire case.

    The overload factor shall be 2 for the broken wire case.

11. As per clause TS.03.2.17 (Page 104 of 470), clearance requirement for suspension strings for 15, 45 and 75 degree swing of insulator is given. However, similar data for tension tower is not furnished. Please provide jumper and pilot insulator swings and corresponding clearance requirements for tension towers.

    Response to be provided by COB Wednesday July 21, 2021.

12. We observed that pole types are not clearly defined in tender specification. But based on clause no. TS.03.2.17 we can defined the pole type as follows.

i. Suspension type (0-2o) degree deviation
ii. Light angle pole (2o-15o) degree deviation
iii. Medium angle pole (15o-45o) degree deviation
iv. Heavy angle pole (45o-75o) degree deviation.

Please confirm the same.

Response to be provided by COB Wednesday July 21, 2021.

13. We observed that the Spans (Normal span, Wind span & Weight Span) to be considered in the design for different type of poles are not defined and Pole quantities are also not clear. Please provide the Span for Poled design and Pole quantities.

Response to be provided by COB Wednesday July 21, 2021.

14. Do we require poles with SINGLE CIRCUIT or DOUBLE CIRCUIT or both? Please confirm.

    a. **The entire route of the proposed transmission line shall be designed in such a way that all proposed structures selected by the designer shall be able to accommodate a double circuit.**
    b. **The contractor will be required to string a single circuit along some sections of the line route, in other locations the contractor will be required to string two circuits using 927.2 AAAC conductors for both circuits. Please refer to the pole locations in the KMZ file (see directory for KMZ file in answer to question 5 above)**
        i. **OH S/S to pole # 26 (Outside New Harbour Village) – String two circuits.**
        ii. **Pole #26 to pole #77 - String a single circuit**
        iii. **Pole # 77 to pole # 83- String two circuits**
        iv. **Pole #83 to pole#107 – String a single circuit**
        v. **Pole #107 to pole #123 – String double circuit**
        vi. **Pole#123 to pole#180 – String a single circuit.**
        vii. **Pole #180 – New Hunts Bay S/S – String double circuit**
        viii. **Note:**
            1. **An overbuilt is to be constructed at pole #209 to avoid existing 69kV circuit.**
            2. **There are two existing 69kV circuit from pole#206 to pole #209.**
            3. **There are two existing 69kV circuits from pole #212 to New Hunts Bay S/S**

15. In tender specification the conductor type is mentioned as : Aluminum Alloy 927.2 MCM "Greeley" conductor (ϕ= 28.14 mm) or equivalent

- Kindly provide the full specification of conductor with following details:
- OVERALL DIAMETER……...……
- TOTAL CROSS SECTIONAL AREA……..
- UNIT WEIGHT…….……...…...
- MODULUS OF ELASTICITY ….
- COEFFICIENT OF LINEAR EXPN…PER DEGREE
- CENTRIGRADE ULTIMATE STRENGTH …….. inches^2
-

Please see table below

Overall Diameter	**1.108 inches (28.14 mm)**
Total Cross Sectional Area	**0.7282 inches^2 (469.80 mm^2)**
Stranding	**37 x 0.1583 inches (37 x 4.02 mm)**
Unit Weight	**864.6 pounds per 1000 feet; 1288.5 kg/km**
Modulus of Elasticity	**6,550 kg/mm^2**
Coefficient of Linear Expansion	**0.00002304 /1 °C**
Ultimate Tensile Strength	**30,500 pounds (135.67 kN)**

16. The nos of earthwire for monopole will be single or double, please confirm.

    For monopole, only one (1) earthwire will be utilized.

17. In tender specification the EARTHWIRE as: two (2) EHS galvanized steel (ϕ = 7.92 mm) overhead shield-wire. Kindly provide the full specification of EARTH WIRE with following details:
    - OVERALL DIAMETER……...……
    - TOTAL CROSS SECTIONAL AREA……..
    - UNIT WEIGHT…….……...…...
    - MODULUS OF ELASTICITY ….
    - COEFFICIENT OF LINEAR EXPN…PER DEGREE CENTRIGRADE
    - ULTIMATE STRENGTH ……..

    Information requested is outlined in TS.03.4.6.4

18. According to clause no. TS.02.6, TS.02.7 & TS.02.8 the wind speed at site is 67m/sec (3 sec gust) and according to clause no. TS.03.2.6 the wind speed shall be 193 km/h to be considered for transverse and 45 degree oblique wind. Please state which wind speed shall be considered for design.

    The wind speed of 67m/sec shall be considered for the design.

19. The material for tower is clearly defined as ASTM A572 GRADE 50. For pole it is mentioned as ASTM A572 only, so can we use ASTM A572 Grade 50 and/or Grade 65 for pole design please confirm.

    ASTM A572 Grade 50 and/or ASTM A572 Grade 65 can be used for the pole design.

20. We observed that Bid Security Format is not in the Tender Documents (Bid Form). We have taken the Bid Security format from FIDIC and enclosed **Under Annexure 1**. Please confirm and if any revision please provide.

Response to be provided by COB Wednesday July 21, 2021.

21. Please advise us how we can submit the Original Bid Security to the employers as the Tender is to be submitted online.

Response to be provided by COB Wednesday July 21, 2021.

22. In reference to the Q&A session with all the bidders on 28th may 2021 and explained the nitty-gritty of transmission line route & answered the queries raised by the bidders. You also told us this Q&A session shall be part of the bid document, hence we request you to share the video recording of this session. Also since bidder has to do the complete design & arrive the quantity we request you to share the KMZ file of the complete route.

Information pertaining to the line route was addressed in question #5 above. JPS to share recording of meeting held on May 28, 2021(to be provided by COB Wednesday July 21, 2021).

23. As per 1st page of bid document (1/470) scope of work is FOR THE TURNKEY SUPPLY, INSTALLATION AND COMMISSIONING OF:

    1) ONE (1) NEW 138/69kV TRANSMISSION LINE FORM OLD HARBOUR 138KV SWITCHYARD TO NEW HUNTS BAY SUBSTATION

    2) TWO (2) NEW 69KV TRANSMISSION LINES FROM NEW HUNTS BAY SUBSTATION TO HUNTS BAY B SUBSTATION

    3) MODFICATIONS TO EXISTING 138KV TRANSMISSION LINE FROM OLD HARBOUR 138KV SWITCHYARD TO DUHANEY SUBSTATION

    4) MODFICATIONS TO FOUR (4) EXISTING 69KV TRANSMISSION LINE ALONG THE ROUTE FROM OLD HARBOUR 138KV SWITCHYARD TO NEW HUNTS BAY SUBSTATION.

    Please elaborate the scope of work of point 3 & 4.

The existing transmission lines stated in bullet points 3 and 4 above will be impacted by the new 138 kV transmission line to be constructed from Old Harbour to New Hunts Bay either by it traversing along the same path or crossing at some points. As such, modifications by

way of constructing a double circuit transmission network within the respective pole locations (stated in response to question 14 above) will be required to these existing transmission lines in order to facilitate the construction without resulting in clearance breaches.

24. As per TS.03.5.6.2, pile type shall be driven open or closed end, steel, H-Piles, or steel pipe piles or bored piles with reinforced concrete as recommended in the Geotechnical reports. Can we develop & use micro piles for this job?

    For the purpose of this bid, your submission shall be per stated at TS.03.5.6.2. However, you can provide in addition with your bid, an alternate proposal for our review. Your alternate pile type proposal shall include a comparative study of cost, permanency, stability under horizontal and vertical loading, length of the pile required to develop sufficient point bearing and frictional resistance, long term settlement, etc., informed by the Geotechnical Report provided.

25. TS.03.2.17, Sheet No. 7D, No. 5 states “Wind Pressure on 2.0 time the projected area of the members of the members of one face of towers” equals 293 kg/m2. The 293k/m2 pressure will be applied on the tower front and back faces. Is the drag coefficient included in this value or do we need to multiply this value by an appropriate factor (ie. 1.5 or 1.6)?

    The drag coefficient is not included in this value. Please use a factor of 1.5.