EXECUTIVE SUMMARY

1. In order to meet the future demand of power and to overcome the difference between Demand and Power Production in Uttar Pradesh, Jawaharpur Viduyut Utpadan Nigam Limited (JVUNL, A 100% subsidiary of UPRVUNL) intends to set up a **2x660 MW Coal based Jawaharpur Thermal Power Plant near Malawan village in District: Etah, U.P**. in the 1st phase. The distance between Etah to Plant siding is approx. **21.00Kms**. The capacity shall be augmented to 3x660MW in the 2nd phase.

2. The coal linkage for the proposed Jawaharpur TPP, has been granted from **Shaharpur-Jamarpani** Coal block, District **Dumka**, Jharkhand which falls under Asansol Division of Eastern Railway.

3. JVUNL has entrusted the work for Planning of Rail connectivity up to Jawaharpur Thermal Power Plant (JTPP) from nearest Rail head to **RITES Limited.**

4. The **'In Principle Approval**' of 'Feasibility Report' prepared by RITES has been granted by N.C. Railway vide their letter No. T/PL/Etah-TPP/72/ NCR, dated 09.08.2018. The proposed Rail infrastructure of siding has planned in three parts as Part-1, Siding from JTPP to Etah station of NCR (21Km), Part-2, Modification of different IR stations from Etah to Shivala Tehu of NCR & Part-3 (59Km), Siding connecting DFC network near Barhan to IR network at Shivala Tehu (14Km).

5. Coal movement from mines to plant is proposed through **Mughalsarai-Kanpur-Tundla DFC route**. Since designated mines are still under development, coal from CCL/SECL is also likely to follow almost same IR route. A new station is proposed on DFC route to be named as **New Barhan** near Barhan station of IR. The siding initially takes off from DFC route at **New Barhan** station and connects at Shivala Tehu Station of IR and then using IR Network from Shivala Tehu to Etah Railway Station it again takes off from Etah station of IR. Thus serving station for the proposed thermal plant is Etah station of NCR.

6. The New Barhan yard with Two lines of CSR 2x750M each near Barhan has been proposed outside of DFC Up line to accommodate Long haul trains. The loaded coal rakes coming via DFC Up line will enter the yard and move via bidirectional RFO up to Shivala Tehu of NCR. Further rakes shall move on Barhan -Etah Branch line of IR up to **Etah** station and then on Private siding up to JTPP. The empty rakes shall move over Etah-Barhan branch line & on IR Dn. line towards Kanpur via Barhan. The empty rakes from IR can be shifted to DFC at suitable transfer point.

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7. The loaded rakes shall predominantly move over DFC up to Shivala Tehu and then on IR network. Empty rakes shall predominantly move over IR network. The empty rakes from IR can be shifted to DFC at suitable transfer point. As an alternate, surface connectivity for Empty rakes movement via DFC has also been planned at New Barhan. As per DFC limited cut across movements can be permitted on DFC yard. The rake movements in the proposed system shall be in pulling mode i.e. engine leading except in emergency.

8. The present maximum speed of Barhan - Etah section is 60 KMPH only. The sectional speed is to be raised to 100 KMPH with necessary modifications and upgrading of existing stations of the section keeping in view the running of large number of goods trains booked for the thermal plant including long haul trains from and to DFC.

9. Existing flag stations **Shivala Tehu** and **Awagarh** between Barhan and Etah have been proposed for conversion into block stations with provision of Panel Interlocking and MACL signaling having token less block working on single line provided with simultaneous reception/dispatch facilities. This will reduce long block section distance between **Jalesar City and Etah** station from the present 38.82 Km. to 21.23 Km.

10. Existing 2 Block stations i.e. Jalesar City and Etah (Existing terminal station) are presently provided with running lines of shorter length insufficient to accommodate Goods trains of full length of 750M. Both the stations shall be upgraded and provided with running lines of full CSR with simultaneous reception/ dispatch facilities in order to handle goods trains without any hindrance.

11. A 3 line crossing station with CSR of 750M at **Singhpur Loya** to be managed by JVUNL, has been proposed at Ch. Km. 9/300 in between Etah station and JTPP. This CSR will be extended to 2x750M in future when long haul trains start running on DFC.

12. A Reception and Dispatch yard (R&D yard) of 6 lines of full CSR length Minimum 750M have been proposed with simultaneous Reception and Dispatch facility of trains.

13. For unloading facility of Coal in plant Two Wagon Tipplers (Tandem type each) and One Track Hopper (280M long) has been proposed. An additional 3rd Wagon Tippler has also been planned to be constructed in future in second phase.

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14. In plant yard 2 Tippler lines, 1 Hopper line, 1 bye-pass line of full CSR length have been proposed. A future line for 3rd Tippler has also been proposed. An additional line for handling POL rakes have been proposed.

15. One In-motion Electronic Weigh Bridge (IMEWB) has been proposed at Ch. Km. 18/170 for weighing loaded as well as empty rakes meant for proposed units of JTPP.

16. For various train and shunting movements inside the in-plant yard, 3 Nos. of WDG-3 Locos have been proposed for procurement. Routine/preventive maintenance will be done under the proposed maintenance shed and POH to be done after 96 months, should be organized from Railway workshop of Indian Railways.

17. The maintenance of tracks of the siding and in-plant yard is recommended to be out sourced through contract. Railway shall carry out the inspection free of charge as per siding rules.

18. New Barhan to Shivala Tehu (siding line) and Barhan to Etah branch line of IR will essentially be electrified for seamless movement of trains without change of traction at Tundla and Barhan. All reception and dispatch lines, except oil decanting line and Tippler lines on both sides of tipplers as per extant rules have been proposed for electrification.

19. As per Para 6.2 of FM Circular No. 11 of 2016 dated 22.08.2016 on Private sidings, the capital cost for all traffic facilities, such as 'Y' connection, additional lines/loop lines at the serving station, crossing station patch doubling, shunting neck, engine escape line, S&T work, modification to existing OHE or Electrification in future in station limit etc. shall be borne by the Railway.

However, JVUNL has agreed to carry out absolute necessary works at stations of Barhan to Etah branch line of IR at their own cost. The work to be done by Railways has been shown in relevant Chapters -10 & 11.

As per para 6.3 of the same FM circular No.11 of 2016, capital cost for augmenting the facilities including electrification within the premises of siding owner shall be borne by the siding owner.

20. The Up-gradation works for Barhan-Etah branch line at Shivala Tehu and Awagarh shall be done by JVUNL while at Jalesar City, Etah and one additional loop line at Barhan shall be done by Railway on deposit works basis and cost shall be borne by JVUNL. However the OHE works of Barhan-Etah branch line shall be done by Railway at their own cost.

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21. Construction of OHE Depot, Tower Wagon Shed, Sub Sectioning Post (SSP) at Etah and Sectioning Post (SP) at Shivala Tehu shall be done. Construction of Railway Traction Sub Station and RTSS building shall be done at Awagarh.

22. Design Parameters for Alignment has been kept as per DFC and IR standards and SODs. Bridges have been proposed to be designed for 32.5T loading standards.

23. Permission shall be required from:
    i) IR & DFCCIL for construction of ROR (45.7M span) for crossing IR & DFC lines, New/extension of existing yards, buildings in their land.
    ii) UPPCL for shifting of HT & LT Transmission lines.
    iii) UPPWD for construction of various Road under bridges (24.4M Span).
    iv) U.P. Irrigation Department for construction of various bridges over canals (30.5M & 12.2M Span)
    v) Forest Department for cutting/re-locating of various trees falling in Right of Way (ROW) of the alignment shall be required.

24. The Alignment from Etah station to JTPP is passing through Tehsil and District Etah and land required for siding is 80 Hectares approx. The Alignment from New Barhan to Shivala Tehu is passing through Tehsil Etmadpur (District Agra) & Tehsil Sadabad (District Hathras) and land requirement is 45 Hectares approx. The proposed alignment passes through Private land as well as Gram Panchayat (Government) land.

25. The abstract cost of Rail Infrastructure work for proposed plant shall be Rs. **767.69Cr.** approx excluding cost of work to be executed by Railway at their cost, which is about Rs. **54.31Cr.** The Project cost is inclusive of Codal charges to be paid to Railways and PMC charges. But The Project cost is exclusive of the cost of land and statutory charges to be paid to Central/State Government departments/Statutory bodies if any.

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