

**Agenda Notes
for
55th Meeting
of the
PROJECT SANCTIONING & MONITORING
GROUP-I
(PSMG – I)**

Venue:

**Conference Hall (Room No. 123-C)
Ministry of Housing & Urban Affairs
Nirman Bhawan
New Delhi**

**At 3:00 PM
on 14th November, 2017**



**National Capital Region Planning Board
Ministry of Housing & Urban Affairs, New Delhi.**



**Agenda Items for the 55th Meeting of the
Project Sanctioning & Monitoring Group-I (PSMG-I)**

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Agenda Item No. 1: Confirmation of the Minutes of the 54th Meeting of the PSMG-I held on 27.1.2017

The Minutes of 54th PSMG-I Meeting, held on 27.1.2017 were circulated to all members vide NCR Planning Board letter No. K-14011/5/2016/PMC/NCRPB dated 1.2.2017. No comments have been received. A copy of the same is placed at **Annexure-I**.

The Minutes may be confirmed.



Agenda Item No. 2: ATR of 54th PSMG-I meeting decisions

The following actions have been taken on the decisions of the 54th Meeting of the PSMG-I held on 27.1.2017:-

| Agenda proposed & decisions taken | Action Taken / Status |
|---|--|
| Agenda Item No. 1: Confirmation of the Minutes of the 53rd Meeting of the PSMG-I held on 19.1.2016 | No action to be taken. |
| <p>Agenda Item No. 2: ATR of 53rd PSMG-I meeting decisions</p> <p>Item 2(i): Special Secretary (Works), PWD GNCT of Delhi, informed that the necessary process regarding reimbursements of commitment charges was underway and NCRPB will be updated with the status at the earliest.</p> <p>Item 2(ii):</p> <p>Delays in award and initiation of EDMC project – “Construction of Multi-storied office building at Karkardooma Institutional area at Shahdara South Zone & HSIIDC’s Manesar Water Supply project of HSIIDC despite loan releases was viewed very seriously and the Chairman observed that in case the projects do not start soon, the sanctioned financial assistance would be cancelled. NCRPB may examine if the sanctioned financial assistance should be cancelled and the agency directed to refund the loan along with the applicable interest.</p> <p>Item 2(iii):</p> <p>The Group noted the status w.r.t projects against which loans were approved in the last PSMG-I.</p> <p>Item 2(iv):</p> <p>Regarding study on “Monitoring of developments at site in the National Capital Region (NCR) through use of Remote Sensing and GIS technology”, Chairman expressed concern over the slow progress. He directed that the matter be re-examined</p> | <p>Payment of Commitment Charges from GNCTD is still awaited</p> <p>The matter was taken up in NCRPB at the PSMG-II meeting chaired by Member Secretary, NCRPB wherein the agencies requested for time till April 2017 for award. Status requested in May 2017. EDMC has informed vide letter dated 15.09.2017 that ‘all sincere efforts will be made to complete the project by the end of Mar-2021’. Further, EDMC has informed vide letter dated 01.11.2017 that “Work has been awarded to M/s. SAM(India) Buitwell Pvt Ltd on 03.10.2017”. Replies awaited from HSIIDC.</p> <p>No action required</p> <p>In pursuance of the decision of High Court of Delhi in WP (C) No. 5559 of 2013 (Raghuraj Singh Vs. Union of India & ors.), a proposal to the effect of developing a mechanism to monitor land use change using the Remote Sensing and GIS technology through National Remote Sensing Centre (NRSC),</p> |



| Agenda proposed & decisions taken | Action Taken / Status |
|--|---|
| <p>in detail and deliberated separately to decide upon the course of action.</p> | <p>Govt. of India was placed before the PSMG-I in its 53rd meeting held on 19.01.2016.</p> <p>It was noted that Govt. of Haryana has already initiated a similar study at State level for all the districts of Haryana through NRSC and therefore it will be appropriate that such monitoring is carried out by the State Govt. as land is a State subject. After detailed deliberations, following decisions were taken:</p> <p><i>“i) The proposal was deferred. ii) Govt. of Haryana shall submit a copy of the proposal which they have sent to NRSC for conducting the study for monitoring of development at site. iii) A pilot study shall be carried out by the Govt. of Haryana for one of its district in the Central National Capital Region for monitoring of development at site.”</i></p> <p>Subsequently, Govt. of Haryana has submitted a proposal titled as “Change Detection, Monitoring & Enforcements of Development activities by the Geo Spatial Technology in NCR Haryana sub-region”, requesting NCRPB for in-principle approval for fund/part-funding. The proposed project cost is Rs. 41.687 Crores per annum.</p> <p>It may be noted that the proposal given by Govt. of Haryana is for the entire Haryana sub-region, unlike a pilot study for one district of NCR, as directed by PSMG-I in its 53rd Meeting held on 19.01.2016.</p> <p>Further, it may be noted that the project proposal is intended to carry out functions for monitoring of land use (as decided in PSMG-I) as well as certain internal functions of Govt. of Haryana such as preparation of Plans, granting of NOC, enforcement of Plans and taking action against illegal constructions, etc.</p> <p>In view of the above, vide letter no. K-14011/27/2015-NCRPB(Vol.II) dated 24.8.2017, Govt. of Haryana has been requested to revise the project proposal in line with the decision of the PSMG-I.</p> |



| Agenda proposed & decisions taken | Action Taken / Status |
|---|---|
| Agenda Item No. 3: Status Note on Assistance by Asian Development Bank (ADB) and KfW (German Development Bank) to NCRPB. | <i>Detailed status note presented at Agenda Item No. 3</i> |
| Agenda Item No. 4: New Projects submitted to NCRPB with Loan Requests | |
| Agenda Item No. 4.1: Rejuvenation of Amanishah Nallah (Dravyavati River) including Area Development in Jaipur City, JDA | Sanction letter for loan of Rs.1098.00 cr. issued on 3.2.2017 and Ist & IInd installment of Rs.240.00 cr. & 400.00 cr. has been released on 24.4.2017 & 27.09.2017 respectively after completion of necessary loan documentation. |
| Agenda Item No. 4.2 : ROB / RUB projects from Jaipur Development Authority, Rajasthan | |
| Agenda Item No. 4.2A: Construction of 6 lane ROB with Limited Height Subway (LHS) including Electrification work at L/C-211, Goner road, Dantli on JP-DLI Railway line in Jaipur | Sanction letter for loan of Rs.59.92 cr. issued on 6.2.2017 and Ist & IInd installment of Rs.6.00 cr. & 30 cr. has been released on 3.4.2017 & 23.10.2017 respectively after completion of necessary loan documentation. |
| Agenda Item No. 4.2B: Construction of 3 lane ROB parallel to existing Jhotwara ROB from Panchayat Bhawan/ SBBJ Bank to Ambabari T-junction, Jaipur | Sanction letter for loan of Rs.125.00 cr. issued on 6.2.2017. Loan documents for drawl of first installment of loan scheduled for 2017-18, are awaited from JDA. |
| Agenda Item No. 4.2C: Construction of Six lane ROB in lieu of LC-70, Sitapura on JP-SWM Railway line | Sanction letter for loan of Rs.79.00 cr. issued on 6.2.2017 and Ist & IInd installment of Rs.10.00 cr. & Rs.54.00 released on 3.4.2017 & 23.10.2017 respectively after completion of necessary loan documentation. |
| Agenda Item No. 4.2D: Construction of four lane road over bridge with Limited Height Subway (LHS) in lieu of L.C.-200, Bassi Town, Jaipur | Sanction letter for loan of Rs.35.50 cr. issued on 6.2.2017. Ist instalment of Rs.1.50 cr. released on 17.10.2017. |
| Agenda Item No. 4.2E: Construction of Four Lane ROB in lieu of LC-102/2E, Jahota on Jaipur to Sikar Railway Line, Jaipur | Sanction letter for loan of Rs.57.00 cr. issued on 6.2.2017 and Ist & IInd installment of Rs.6.00 cr. & Rs.30.00 cr. released on 3.4.2017 & 31.10.2017 respectively after completion of necessary loan documentation. |
| Agenda Item No. 4.2F: Construction of RUB on Jaipur-Sikar Railway Line near Bridge No. 107 to connect Anand Lok and Swapan Lok JDA Schemes, Jaipur | Sanction letter for loan of Rs.22.00 cr. issued on 6.2.2017 and Ist & IInd installment of Rs.1.00 cr. & Rs.12.00 released on 3.4.2017 & 23.10.2017 respectively after completion of necessary loan documentation. |
| Agenda Item No. 4.3 : Construction of Elevated Road from Sodala Tri-junction to | Sanction letter for loan of Rs.187.00 cr. issued on 3.2.2017 and Ist & IInd installment of |



| Agenda proposed & decisions taken | Action Taken / Status |
|---|--|
| LIC Office near Ambedkar Circle, Jaipur from JDA, Rajasthan | Rs.10.00 cr. & Rs.80.00 cr. released on 3.4.2017 & 23.10.2017 respectively after completion of necessary loan documentation. |
| Agenda Item No. 4.4: Extension of Delhi Metro from Mundka to Bahadurgarh | No action required |
| Agenda Item No. 4.5: Four Sewerage projects from PHED, Haryana | |
| Agenda Item No. 4.5A: Providing renovation of existing 7 MLD STP based on MBBR technology followed by tertiary treatment and chlorination, Ganaur in Sonipat district | Chairman had requested PHED, Haryana to first present the system prevalent in Haryana regarding management of the STPs and Sewerage networks along with information on the revenue collection, water & sewerage charges, policy for reuse of treated waste water, extent of usage, etc. in terms of present policies and regulations in place in next meeting of PSMG wherein the current four projects can also be taken up with the balance six projects which should be ready by then after necessary scrutiny. PHED, Haryana to make a presentation. Projects being taken up separately at Agenda 4 |
| Agenda Item No. 4.5B: Providing renovation of existing 4.5 MLD STP based on MBBR technology followed by tertiary treatment and chlorination, Kharkhoda in Sonipat district | |
| Agenda Item No. 4.5C: Upgradation and renovation of existing 5 MLD STP based on MBBR technology followed by tertiary treatment in Samalkha town in Panipat district | |
| Agenda Item No. 4.5D: Upgradation of existing 5.5 MLD STP & 5 MLD STP based on MBBR technology followed by tertiary treatment and chlorination at Kosli Road and Sampla road respectively alongwith some balance pipeline laying, Jhajjar | |
| Agenda Item No. 4.6 : Strengthening of Sub-transmission and distribution network including metering in Jhajjar, Rohtak, Panipat & Sonipat Circles of Haryana (under IPDS) by UHBVN | The Chairman suggested that the project may be taken up in next meeting of PSMG-I while directing that UHBVN and all agencies seeking financial assistance from NCRPB need to be represented by an appropriate senior level officer to present their case. |
| Agenda Item No. 5: Review of Projects financed by the NCR Planning Board | Details presented as a separate agenda. |
| Agenda Item No. 6: Noida Metro Rail Corporation(NMRC) request for waiving off condition of submitting Tripartite Escrow Agreement and to accept the bank guarantee issued by Noida & Greater Noida Industrial Development Authorities on behalf of NMRC for drawal of loan amount from NCRPB | In accordance with the decision of PSMG-I, the condition relating to submission of Escrow Agreement as a collateral security for drawal of loan amount, has been waived. Accordingly, NCRPB has released first instalment of loan of Rs. 580 Cr. in two parts (Rs. 406 Cr. on 26.12.2016 and Rs. 174 Cr. on 14.3.2017) & second instalment of Rs. 350 Cr. sanctioned for the project, on receipt of adequate security i.e. bank guarantee in favour of NCRPB, equivalent to 133.33% of loan amount, obtained by Noida & GNIDA on behalf of NMRC. |



| Agenda proposed & decisions taken | Action Taken / Status |
|--|--|
| Agenda Item No. 7: Extension of time period on the Study for “Creation and Updation of Landuse for Review of Regional Plan 2021 for National Capital Region (NCR)” through National Remote Sensing Centre (NRSC), Department of Space, Govt. of India | <p>During the last meeting of PSMG-I, i.e. 54th Meeting held on 27th January, 2017, extension of time was granted till December, 2017, taking into consideration the pending issues raised by MoEF&CC w.r.t. the draft revised Regional Plan-2021 (DRRP-2021).</p> <p>The inputs received from MoEF&CC have been examined and detailed comments of NCRPB Secretariat have been sent to then MoUD (now MoHUA). The same will be placed before the Board in its forthcoming meeting.</p> |
| Agenda Item No. 8: Creation and Updation of Regional Land use for the six additional districts of NCR | <p>Subsequent to approval by PSMG-I to carry out the study through NRSC, Govt. of India, an MOU (amended after addition of three more districts in NCR in November, 2015) has been executed between NCRPB and NRSC on May, 2017.</p> <p>NRSC has prepared draft Existing Landuse for all the six newly added districts. Site verification/ground truthing in these districts have also been completed and preparation of Final Existing Landuse is underway.</p> |
| Agenda Item No. 9: Consultancy Study on Economic Profile of NCR, undertaken by the Board | <p>Study completed, No action required.</p> |



Agenda Item No. 3: Status Note on Assistance by Asian Development Bank (ADB) and KfW (German Development Bank) to NCRPB.

Asian Development Bank

ADB has approved a loan of US \$ 150 million to NCRPB as a Multi-Tranche Financing Facility for financing infrastructure projects in the National Capital Region (NCR) and its Counter Magnet Areas (CMAs). The loan agreement for the 1st tranche of US \$ 78 million was signed between ADB and NCRPB on 17.3.2011. Out of Tranche-1 loan amount of USD 78 million, USD 18.01 million has been cancelled. Board has already utilized the entire loan amount of USD 59.99 million (INR 352.06 crore) by the loan closing date of 31.12.2014 for tranche1. **The repayment period is 25 years with 5 years moratorium for repayment of the principal amount.** The loan was disbursed to participating States subject to compliance with ADB procurement guidelines and environmental and social safeguards requirements.

A. Status of Projects under ADB line of credit: The status of projects being funded under the ADB loan facility is as follows:-

| S. No. | Project/Agency | Project Cost (Rs. Cr.) | Loan Sanctioned (Rs. Cr.) | Current Status |
|--------|---|------------------------|---------------------------|----------------|
| 1 | Improvement of Roads in Jhajjar districts, Haryana -PWD (B&R)/HSRDC | 169.98 | 127.48 | Completed |
| 2 | Improvement of Roads in Sonapat district, Haryana -PWD (B&R)/HSRDC* | 125.40 | 94.05 | -do- |
| 3 | Construction of Badli-bypass, Haryana - PWD (B&R)/HSRDC | 62.92 | 39.45 | -do- |
| 4 | Widening & Strengthening of Gohana Lakhanmajra Bhiwani road upto district Rohtak boundary road from km. 0.000 to 37.700 - PWD (B&R)/HSRDC** | 99.77 | 74.83 | -do- |
| 5 | Widening & Strengthening of U.P. border Sonapat Gohana road upto District Sonapat boundary from km. 11.600 to 74.000 - PWD (B&R)/HSRDC | 176.26 | 132.20 | -do- |
| 6 | Widening & up-gradation of Gurgaon-Chandu-Badli Bahadurgarh Road - PWD (B&R)/HSRDC* | 244.10 | 183.08 | -do- |
| 7 | Sonapat Drainage Scheme - PHED, Haryana. | 21.72 | 16.29 | -do- |
| 8 | Augmentation of Water Supply in Pataudi - PHED, Haryana | 41.15 | 30.86 | On-going |
| 9 | Water Supply Scheme for Nulhar Medical College & Nuh town - PHED, Haryana | 150 | 112.50 | -do- |
| | | 1091.3 | 810.74 | |

* The projects were earlier non-compliant to the Social Safeguard policy of the ADB, Implementing Agency (IA) i.e., HSRDC/ PWD (B&R) conveyed vide letter no. 988/HSRDC dated 8th March 2017 to NCRPB that social safeguards issues pertaining to Sonapat and Gurgaon-Chandu- Badli road projects are sub-judice as per the requirement of ADB. ADB



vide telefax dated 28th March 2017 has acknowledged that as social safeguards issues are now sub-judice, thus there are now no more pending social safeguards issues under the said projects. As an outcome, the projects have now become fully compliant to the ADB Social Safeguard Policy.

**** Issue of payment of compensation (compensation to be paid for lost assets (but not for land)) to the affected persons in the sub-project 'Widening & Strengthening of Gohana-Lakhan-Majra-Bhiwani Road from Km 0.000 to 37.700 is resolved as confirmed by the HSRDC and now the project is in full compliance with the Social Safeguard policy of the ADB, the same has been accepted by the ADB vide email dated 24.02.2017 to NCRPB.**

Matter is placed before the PSMG for information.

B. Reimbursement of Commitment Charges:

Two MMTC projects at Anand Vihar and Sarai Kale Khan have been dropped.

Commitment Charges pertaining to Govt. of Delhi: A reminder Letter dated 05.09.2017 was issued by the Member Secretary, NCRPB to the Chief Secretary, Govt. of NCT of Delhi requesting for reimbursement of commitment charges to the tune of Rs.69,95,613.81 up to 31.01.2013 being borne & paid by NCRPB to ADB on account of the two non-starter projects of the Transport Department, Govt. of NCT of Delhi. The Latest D.O letter also highlighted the details of the earlier several letters issued by NCRPB to the Govt. of Delhi in this regard.

In the 35th Board Meeting of the NCR planning Board held on 09.06.2015, it has been decided that the amount which has been paid by the Board to ADB towards commitment charges may be recovered from GNCTD, Delhi

Inspite of repeated reminders & discussions in steering committee meeting held under the chairmanship of Chief Secretary, GNCT Delhi on 28.09.2017, the Govt. of Delhi has not paid the commitment charges to NCRPB till date..

C. Debt Service:

Board has been making regular payments of its dues to ADB. So far, Board has made payment of Rs.12.62 cr. (\$ 1.98 million) to ADB on account of interest and commitment charges. Further, Board has repaid an amount of Rs.14.24 cr. (\$ 2.14 mn) towards principal outstanding to ADB.

Matter is placed before the PSMG for information.



KfW - (German Development Bank)

Loan agreements of Euro 100 million + Euro 1 million Grant for environment friendly schemes in the water supply, sewerage, drainage, solid waste management and urban transport Sectors to National Capital Region Planning Board were signed between NCRPB & KfW on 09.02.2012 & 30.03.2012. The repayment period will be 15 years with 5 years moratorium for repayment of the principal amount. The loan is at a fixed rate of Interest @ 1.83% p.a. A total amount of Rs.466.53 Crores (Euro: 65.04 million) has been claimed & disbursed by KfW to the Board.

A. The status of projects to be funded under KfW line of credit are as follows:-

| Sl. No. | Name of the Project | Project Cost (Rs. Cr.) | Loan Sanctioned (Rs. Cr.) | Current Status |
|---------|---|------------------------|---------------------------|---|
| 1 | Augmentation of Water Supply in Kota, Rajasthan - UIT, Kota | 151.66 | 113.74 | Completed. |
| 2 | Water supply scheme at Farrukh Nagar Distt., Gurgaon-PHED, Haryana | 13.90 | 10.43 | Work almost completed. Completion & Utilization certificates are awaited. |
| 3 | Sewerage scheme at Farrukh Nagar Distt., Gurgaon-PHED, Haryana | 11.48 | 8.61 | Project was withdrawn by IA, citing difficulties with tendering under KfW procedures |
| 4 | Sewerage scheme and treatment plant for SADA, Gwalior | 28.38 | 21.28 | Due to lack of progress the project has been declared a "non-starter" by NCRPB management. |
| 5 | 15 Mld Sewage Treatment Plant and Pumping Station at Ecotech-II, Greater Noida - GNIDA | 21.17 | 15.87 | Contract awarded on 30.12.2016; Start Date was 01.02.2017; Work is in Progress. |
| 6 | 20 Mld Sewage Treatment Plant and Pumping Station At Ecotech-III, Greater Noida – GNIDA | 28.15 | 21.10 | -do- (Both STPs being tendered together as one contract) |
| 7 | Raw Water Conveyance Main from Intake at Dehra (Ghaziabad) to WTP Site at Palla (Greater Noida) and Clear Water Main from WTP Site to Master Reservoir (Greater Noida) Under 85 Cusec Ganga Jal Project for Greater Noida – GNIDA | 183.19 | 137.39 | The contracts were signed on 16.03.2016 and the Commencement Dates were 30.05.2016 and 14.06.2016 for Package 2 and Package 1 respectively. However, work has been extensively disrupted by farmers claiming additional compensation for land acquired 5 years ago. |



| Sl. No. | Name of the Project | Project Cost (Rs. Cr.) | Loan Sanctioned (Rs. Cr.) | Current Status |
|---------|---|------------------------|---------------------------|---|
| 8 | Primary Treatment Works at Dehra (Ghaziabad) & 210 Mld Water Treatment Plant At Palla (Greater Noida) & Allied Works Under 85 Cusec Ganga Jal Project For Greater Noida - GNIDA | 121.48 | 87.16 | Contract was awarded on 16.12.2016 signed on 27.12.2016 and started on 02.01.2017; Work has been disrupted by farmers claiming additional compensation for land acquired 5 years ago. |
| 9 | Alwar Water Supply Upgradation Scheme - PHED, Rajasthan | 174.86 | 131.14 | The contract was awarded on 10.03.2016 and the Start Date was 11.04.2016. Work is in progress. |
| 10 | Rajgarh Water Supply Upgradation Scheme - PHED, Rajasthan | 20.24 | 15.18 | The contract was awarded on 10.03.2016 and the Start Date was 13.04.2016. Work is in progress. |
| 11 | Behror Water Supply Upgradation Scheme - PHED, Rajasthan | 26.02 | 19.51 | - do - |
| 12 | Tijara Water Supply Upgradation Scheme - PHED, Rajasthan | 16.46 | 12.35 | - do - |
| 13 | Bhiwadi Water Supply Scheme-PHED, Rajasthan | 40.69 | 30.52 | The contract was awarded on 18.03.2016 and the Start Date was 18.04.2016. Work is in progress. |
| 14 | Noida to Greater Noida Metro Extension (7 eligible contracts)* | 448.00 | 144.30 | The 7 contracts were awarded between 29.10.2015 and 10.06.2016 and the Start Date were from 02.11.2015 to 10.06.2016. Work is in progress. |
| | | 1285.68 | 768.58 | |

* Board has added the project "Noida Metro Rail Corporation (NMRC)" in the list of projects being under implementation through KfW Line of Credit in order to cover the funding Gap of Euro: 20.27 million available under the KfW loan. NCRPB has released an amount of Rs.406 crore as 1st instalment of loan to Noida Metro Rail Corporation (NMRC). KfW has reimbursed an amount of INR: 143.74 crore (Euro:20.18 million) on the said project.

However, as the KfW loan is on reimbursement basis, NCRPB was not in a position to utilize the entire loan of Euro 100 million by the loan closing date i.e., December 2016. Therefore, in order to utilize the balance loan amount, upon the request of NCRPB, KfW has extended the tenure of the loan up to December 2018 with revised commitment fee from the existing 0.25% pa to 0.4% pa (starting from 04 January 2017).

Matter is placed before the PSMG for information.



B. Debt Service:

Board has also been making regular payments of its dues to KfW. Board has made payment of Rs.19.27 cr. (€ 2.56 million) to KfW on account of interest and commitment charges up to 30.06.2017. Further, Board has repaid an amount of Rs.37.65 cr. (€ 5 mn) towards principal outstanding to KfW.

Matter is placed before the PSMG for information.

C. Extension of Time:

Engineer-in-Chief, PHED Haryana vide letter dated 16.10.2017 & 14.06.2017 had informed that the completion of the following projects have delayed due to various reasons and so, requested for the time extension in the same i.e., up to 31.12.2017 (except in the case of the project mentioned at Sr.no 3 for which extension was sought up to 30.09.2017 only, However, the date has gone past and latest completion status is still awaited).:

- a) Augmentation of Water Supply in Pataudi - PHED, Haryana (ADB project).
- b) Water Supply Scheme for Nalhar Medical College & Nuh town - PHED, Haryana (ADB project).
- c) Water supply scheme at Farrukh Nagar Distt., Gurgaon - PHED, Haryana (KfW project).

Matter is placed before the PSMG for information & Approval.



Agenda Item No. 4: New Projects submitted to NCRPB with Loan Requests

The Board has received requests for sanction of financial assistance for 9 sewerage sector, 4 road/ROB projects & a power sector project from Govt. of Haryana; 38 road projects from PWD & 2 water supply projects from PHED, Govt. of Rajasthan. Detailed agendas are as presented below:-

Agenda Item No. 4.1: Four Sewerage projects primarily involving STP upgradation, from PHED Haryana

Agenda Item No. 4.1A: Providing renovation of existing 7 MLD STP based on MBBR technology followed by tertiary treatment and chlorination, Ganaur in Sonipat district

Agenda Item No. 4.1B: Providing renovation of existing 4.5 MLD STP based on MBBR technology followed by tertiary treatment and chlorination, Kharkhoda in Sonipat district

Agenda Item No. 4.1C: Upgradation and renovation of existing 5 MLD STP based on MBBR technology followed by tertiary treatment in Samalkha town in Panipat district

Agenda Item No. 4.1D: Upgradation of existing 5.5 MLD STP & 5 MLD STP based on MBBR technology followed by tertiary treatment and chlorination at Kosli Road and Sampla road respectively alongwith some balance pipeline laying, Jhajjar

Background

Hon'ble National Green Tribunal, New Delhi, in its decision dated 13.1.2015 regarding an application titled "Manoj Mishra vs. Union of India" has given following directions to Govt. of Haryana:-

"Wherever necessary, the technology of the existing STPs should be upgraded to ensure proper performance and adherence to the prescribed standards of effluent discharge.

To make every possible effort to ensure that the storm water drains do not carry sewage, sewage may be carried through those drains upon which the STPs have already been installed, till the completion of the project. After the completion of the project, steps shall be taken so that only minimal quantity of treated water from the STPs reaches Yamuna".

Further, Central Pollution Control Board, New Delhi vide its letter dated 21.4.2015 has asked the Chairman, Haryana State Pollution Control Board, to issue directions to the concerned departments/authorities to treat the effluent with BOD up to 10 mg/l.

So, in order to comply with the orders passed by Hon'ble NGT and to comply with the revised discharge standards fixed by CPCB, there is urgent necessity to upgrade these STPs. The upgradation is proposed by construction of additional structures such as Anoxic Tank, deep bed rapid gravity filters, installation of internal recirculation pumps, return activated sludge pumps and allied works which are necessary for bringing the BOD pumps, return activated sludge pumps and allied works which are necessary for bringing the BOD down upto 10 mg/l at existing. Accordingly, PHED Haryana has planned this



upgradation and renovation of its existing Sewage Treatment Plants (STPs) in the various towns of Haryana.

The agency (PHED) has further requested NCRPB to provide necessary financial assistance for these upgradation works. Accordingly, the current agenda covers 4 projects pertaining to upgradation of STPs in Ganaur, Kharkhoda, Samalkha and Jhajjar towns as listed below:-

- A. Providing renovation of existing 7 MLD STP based on MBBR technology followed by tertiary treatment and chlorination, Ganaur in Sonipat district
- B. Providing renovation of existing 4.5 MLD STP based on MBBR technology followed by tertiary treatment and chlorination, Kharkhoda in Sonipat district
- C. Upgradation and renovation of existing 5 MLD STP based on MBBR technology followed by tertiary treatment in Samalkha town in Panipat district
- D. Upgradation of existing 5.5 MLD STP & 5 MLD STP based on MBBR technology followed by tertiary treatment and chlorination at Kosli Road and Sampla road respectively alongwith some balance pipeline laying, Jhajjar

Projects Details

Present Status & Proposal

The towns of Ganaur and Kharkhoda in Sonipat district already have **7 MLD STP** and **4.5 MLD STP** respectively, based on MBBR technology. Similarly, while Jhajjar town has two functioning STPs of **5.5 MLD and 5 MLD** capacity, Samalkha town in Panipat has a commissioned STP of **5 MLD**, all based on MBBR technology. All these STPs are proposed to be upgraded by PHED as per the new norms.

Table below broadly presents the main norms for discharge of treated waste water considered earlier and required now as per Hon'ble NGT orders.

| S.No. | Parameter | Considered earlier | Now proposed |
|-------|-------------|--------------------|--------------|
| 1 | pH | 7-7.5 | 6.5-9 |
| 2 | SS | 100mg/L | <20mg/L |
| 3 | BOD | 30mg/L | <10mg/L |
| 4 | COD | 250mg/L | <60mg/L |
| 5 | TKN | - | <10mg/L |
| 6 | NH4-N | - | <5mg/L |
| 7 | Phosphorous | - | <1mg/L |

PHED Haryana proposes to upgrade and renovate the existing STPs by adding the nitrification, de- nitrification mechanisms, process upgradation followed by tertiary treatment which will require a tertiary treatment plant including inlet chamber, Chemical house, flash mixer, rapid sand gravity filters, chlorine Contact tank. However, upgradation in form of additional civil works. The entire STP & tertiary treatment is proposed to be automatized with online PLC & SCADA.



The project in Jhajjar town shall also include sewer pipeline laying of around 10.3 km of 200 mm and 250 mm dia pipes.

The Project Cost & Financing

The component-wise break up of cost estimate of the projects are as under:

- A. Providing renovation of existing 7 MLD STP based on MBBR technology followed by tertiary treatment and chlorination, Ganaur in Sonipat district

| S.No. | Particulars | Estimated Cost (Rs. In lakhs) |
|--------------|--|--------------------------------------|
| 1 | Civil works | 85.71 |
| 2 | Buildings | |
| | Annexe Building | 25.95 |
| 3 | Mechanical & Electrical Equipment | 420.24 |
| | Sub Total | 531.90 |
| 4 | Operation & Maintenance | 18.87 |
| | Total | 550.77 |
| 5 | Add 0.50% Contingency Charges | 2.75 |
| 6 | Add 1% Quality Control Charges | 5.51 |
| 7 | Add 0.85% 3rd Party inspection charges | 4.68 |
| | Grand Total | 563.71 |
| | Grand Total excluding O&M charges but including 5,6,7 above | 544.40 |
| | Loan part on Cost excluding O&M | 408.30 |

- B. Providing renovation of existing 4.5 MLD STP based on MBBR technology followed by tertiary treatment and chlorination, Kharkhoda in Sonipat district

| S.No. | Particulars | Estimated Cost (Rs. In lakhs) |
|--------------|--|--------------------------------------|
| 1 | Civil works | 85.85 |
| 2 | Buildings | |
| | Annexe Building | 25.20 |
| | Platforms | 4.20 |
| 3 | Mechanical & Electrical Equipment | 308.36 |
| | Sub Total | 423.61 |
| 4 | Operation & Maintenance | 18.87 |
| | Total | 442.48 |
| 5 | Add 0.75% Contingency Charges | 3.32 |
| 6 | Add 1% Quality Control Charges | 4.42 |
| 7 | Add 0.85% 3rd Party inspection charges | 3.76 |
| | Grand Total | 453.98 |
| | Grand Total excluding O&M charges but including 5,6,7 above | 434.62 |
| | Loan part on Cost excluding O&M | 325.97 |



- C. Upgradation and renovation of existing 5 MLD STP based on MBBR technology followed by tertiary treatment in Samalkha town in Panipat district

| S.No. | Particulars | Estimated Cost (Rs. In lakhs) |
|-------|---|----------------------------------|
| 1 | Civil works | 106.08 |
| 2 | Annexe Building | 17.78 |
| 3 | Platforms for DG Sets, Transformer Yard & Dry Sludge, Tonner Shed, Sludge Pump Room | 7.30 |
| 4 | Mechanical & Electrical Equipment | 505.95 |
| 5 | Provision for Repair of Existing structures and Development of Site | 24.50 |
| 6 | 10% of civil works | 10.61 |
| | Sub Total | 672.22 |
| 7 | Operation & Maintenance | 21.84 |
| | Total | 694.06 |
| | Add 0.5% Contingency Charges+0.5% consultancy charges | 6.94 |
| | Add 1% Quality Control Charges | 6.94 |
| | Add 0.85% 3rd Party inspection charges | 5.90 |
| | Grand Total | 713.84 |
| | Grand Total excluding O&M charges but including 7,8,9 above | 691.38 |
| | Loan part on Cost excluding O&M | 518.53 |

- D. Upgradation of existing 5.5 MLD STP & 5 MLD STP based on MBBR technology followed by tertiary treatment and chlorination at Kosli Road and Sampla road respectively alongwith some balance pipeline laying, Jhajjar (*the rates adopted in project report for quality control, third party inspection & contingency charges with regards to the pipeline laying part have also been considered for the STPs*)

| S.No. | Particulars | Estimated Cost (Rs. In lakhs) |
|-------|-----------------------------------|----------------------------------|
| | Part-I | |
| A | Pipeline Laying | |
| 1 | Trunk Sewer | 37.49 |
| 2 | Lateral Sewer | 125.2 |
| | Total (Part-I) | 162.69 |
| | Part-II | |
| B | 5.5 MLD STP | |
| 3 | Civil works | 116.30 |
| 4 | Buildings | |
| 5 | Annexe Building | 26.04 |
| 6 | Centrifuge Building | 11.16 |
| 7 | Platforms | 6.60 |
| 8 | Mechanical & Electrical Equipment | 303.05 |
| | Sub Total | 463.15 |



| S.No. | Particulars | Estimated Cost (Rs. In lakhs) |
|-------|---|-------------------------------|
| 9 | Operation & Maintenance | 22.19 |
| | Total (Part-II) | 485.34 |
| | Part-III | |
| C | 5 MLD STP | |
| 10 | Civil works | 116.14 |
| 11 | Chemical cum Annexe Buildings | 36.00 |
| 12 | Centrifuge Building | 12.00 |
| 13 | Platforms | 6.60 |
| 14 | Mechanical & Electrical Equipment | 230.96 |
| | Sub Total | 401.70 |
| 15 | Operation & Maintenance | 22.19 |
| | Total (Part-III) | 423.89 |
| | Total (Part I + II +III) | 1071.92 |
| 16 | Add 0.75% Contingency Charges | 8.04 |
| 17 | Add 1% Quality Control Charges | 10.72 |
| 18 | Add 0.85% 3rd Party inspection charges | 9.11 |
| | Grand Total | 1099.79 |
| | Grand Total excluding O&M charges but including 16,17,18 above | 1054.26 |
| | Loan part on Cost excluding O&M | 790.692 |

Drawl Schedule and Sharing Pattern

The target date of completion of all the four projects although proposed as 36-39 months in report is recommended to be kept as 24 months from the date of sanction and PHED Haryana shall be implementing the projects through financial assistance from NCRPB as per the following phasing and schedule. The loans components has been restricted at 75% of the project cost excluding O&M charges.

- A. Providing renovation of existing 7 MLD STP based on MBBR technology followed by tertiary treatment and chlorination, Ganaur in Sonipat district

(Rs. In lakhs)

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure for Loan (yr) | Moratorium period (yr) | Phasing of expenditure on works |
|--------------|-----------------|-------------------------------|----------------------|------------------------|---------------------------------|
| 2017-18 | 122.50 | 46.62 | 15 | 3 | 169.12 |
| 2018-19 | 142.90 | 54.39 | 14 | 2 | 197.29 |
| 2019-20 | 142.90 | 54.40 | 13 | 1 | 197.30 |
| Total | 408.30 | 155.41 | | | 563.71 |



- B. Providing renovation of existing 4.5 MLD STP based on MBBR technology followed by tertiary treatment and chlorination, Kharkhoda in Sonipat district

(Rs. In lakhs)

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure for Loan (yr) | Moratorium period (yr) | Phasing of expenditure on works |
|--------------|-----------------|-------------------------------|----------------------|------------------------|---------------------------------|
| 2017-18 | 97.79 | 38.41 | 15 | 3 | 136.20 |
| 2018-19 | 114.09 | 44.80 | 14 | 2 | 158.89 |
| 2019-20 | 114.09 | 44.80 | 13 | 1 | 158.89 |
| Total | 325.97 | 128.01 | | | 453.98 |

- C. Upgradation and renovation of existing 5 MLD STP based on MBBR technology followed by tertiary treatment in Samalkha town in Panipat district

(Rs. In lakhs)

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure for Loan (yr) | Moratorium period (yr) | Phasing of expenditure on works |
|--------------|-----------------|-------------------------------|----------------------|------------------------|---------------------------------|
| 2017-18 | 155.57 | 58.59 | 15 | 3 | 214.16 |
| 2018-19 | 181.48 | 68.36 | 14 | 2 | 249.84 |
| 2019-20 | 181.48 | 68.36 | 13 | 1 | 249.84 |
| Total | 518.53 | 195.31 | | | 713.84 |

- D. Upgradation of existing 5.5 MLD STP & 5 MLD STP based on MBBR technology followed by tertiary treatment and chlorination at Kosli Road and Sampla road respectively alongwith some balance pipeline laying, Jhajjar

(Rs. In lakhs)

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure for Loan (yr) | Moratorium period (yr) | Phasing of expenditure on works |
|--------------|-----------------|-------------------------------|----------------------|------------------------|---------------------------------|
| 2017-18 | 237.21 | 92.73 | 15 | 3 | 329.94 |
| 2018-19 | 276.74 | 108.18 | 14 | 2 | 384.93 |
| 2019-20 | 276.74 | 108.18 | 13 | 1 | 384.93 |
| Total | 790.69 | 309.10 | | | 1099.79 |

Abstract of the four projects are as enclosed at **Appendix 1A, 1B, 1C & 1D.**

Appraisal of DPRs

DPRs were technically looked into by available sewerage & waste water experts and the necessary suggestions were conveyed to agency for onward action, in the interest of the projects. The projects are simple upgradations as per Hon'ble NGT's directions and the standard norms & procedures applicable in the state government are proposed to be adopted. The necessary administrative approvals have been taken by PHED for the



projects from the Standing Financing Committee (SFC) “B” of Haryana Government in its meeting held on 29.7.2016.

It was found that submitted reports had varying %age charged regarding contingency, quality control and third party inspection etc. probably due to different circles. It is recommended that in future, before forwarding the projects for financial assistance, PHED should cross check that uniform rates of contingency, quality control and third party inspection etc. are being adopted for the projects.

The O& M cost although considered in project cost is not applicable for loan. The projects were also examined as per the ESMS adopted by NCRPB. Both the projects fall in ‘E-3’ category. The proposed projects neither have impact of involuntary resettlement nor impact on indigenous people. Hence these projects were categorized as S-3 and required no social resettlement plan etc.

Project Benefits & Justification

By virtue of upgrading and renovating the STPs PHED shall attempt to meet the fresh /revised discharge standards for effluents as set by the Hon’ble NGT as well as CPCB. Haryana Pollution Control Board who is monitoring the efficiency and efficacy of the STPs shall thereafter be able to give its consent (as treated effluent parameters are currently exceeding the prescribed limits).

The four projects shall therefore make its contribution towards the river cleaning efforts of government and the Hon’ble Tribunal. With the upgradation of the STPs, the pollution of water is expected to be minimized significantly. The projects thus shall have positive impact on the environment as it will reduce the pollution of surface and ground water. The flow of untreated sewage from these sectors into drains further leading to River Yamuna is expected to be considerably reduced with the implementation of the proposed project. The economic gains of improvement in health, less illnesses and more work days due to less number of illnesses are significant

Point for Decision

It is suggested that PHED may doubly check the basis for consideration of raw sewerage characteristics as they vary for different towns as does the required treatment for the different raw sewerage characteristics. The agency should take note as to how the raw sewage will be dealt during the period renovation / upgradation of the existing STPs. Further, the agency needs to be clear and ready with a plan as to how the treated effluent is planned to be discharged / utilized. In case of Jhajjar where small pipeline laying component is also involved, the agency should ensure that the design maintains the required self-cleansing velocity of the flow.

The State Govt. of Haryana is seeking loan of 75% of its share from the NCRPB. The loan amounts for the projects scheduled to be released in subsequent financial year as per project eligibility, will carry interest rate as applicable on the date of release of loan instalment. The principal amount along with interest is to be repaid in 15 years with a moratorium period of 3 years. Accordingly, PSMG-I may sanction respective loan amounts as indicated below:



- Loan amount of **Rs. 408.30 lakhs** for the project of “Providing renovation of existing 7 MLD STP based on MBBR technology followed by tertiary treatment and chlorination, Ganaur in Sonipat district”;
- Loan amount of **Rs. 325.97 lakhs** for the project of “Providing renovation of existing 4.5 MLD STP based on MBBR technology followed by tertiary treatment and chlorination, Kharkhoda in Sonipat district”;
- Loan amount of **Rs. 518.53 lakhs** for the project “Upgradation and renovation of existing 5 MLD STP based on MBBR technology followed by tertiary treatment in Samalkha town in Panipat district”;
- Loan amount of **Rs. 790.69 lakhs** for the project “Upgradation of existing 5.5 MLD STP & 5 MLD STP based on MBBR technology followed by tertiary treatment and chlorination at Kosli Road and Sampla road respectively alongwith some balance pipeline laying, Jhajjar”

The loan will be subject to Govt of Haryana making suitable budgetary provisions in the Annual Budgets and also undertaking to complete the project as per approved DPR. Any cost increase over and above, the current estimates, shall be borne by the agency from its own sources and all efforts to complete the project be ensured accordingly.

The loan will be disbursed in three instalments. The second instalment will be released by the NCRPB on receipt of utilization report and on-site verification of expenditure and progress made. The loan will carry an interest rate as applicable on the date of disbursement. The present rate is 7% p.a. A rebate of 0.25 % will be available in the form of reduction of interest rate for the timely repayment of loan instalment (principal +interest) strictly as per repayment schedule. The principal along with interest is to be repaid in 15 years with a moratorium period of 3 years for principal. The project completion time is 24 months from date of loan sanction.



APPENDIX–1A to Agenda No. 4.1A**I. General Particulars**

| | | |
|---|---------------------|---|
| 1 | Project | Providing renovation of existing 7 MLD STP based on MBBR technology followed by tertiary treatment and chlorination, Ganaur in Sonipat district |
| 2 | Type of project | Sewage Treatment Plant |
| 3 | Borrowing agency | PHED Haryana |
| 4 | Implementing agency | PHED Haryana |
| 5 | Land Availability | Land for STP is available with PHED Haryana |

II. Financial Particulars

| | | |
|----|----------------------------------|---|
| 6 | Estimated total cost of projects | Rs. 563.71 lakhs |
| 7 | Loan from NCRPB | Rs. 408.30 lakhs |
| 8 | Other sources of funds | Rs. 155.41 lakhs is to be provided by PHED Haryana |
| 9 | Tenure of loan | 15 years (with 3 years moratorium) |
| 10 | Rate of Interest | 7% p.a. A rebate of 0.25 % on conditions |
| 11 | Security for loan | Appropriate security will be provided by PHED Haryana |
| 12 | Stipulated date of completion | 24 months from the date of sanction. |

III. Phasing of Expenditure & Loan Schedule

(Rs. In lakhs)

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure for Loan (yr) | Moratorium period (yr) | Phasing of expenditure on works |
|--------------|-----------------|-------------------------------|----------------------|------------------------|---------------------------------|
| 2017-18 | 122.50 | 46.62 | 15 | 3 | 169.12 |
| 2018-19 | 142.90 | 54.39 | 14 | 2 | 197.29 |
| 2019-20 | 142.90 | 54.40 | 13 | 1 | 197.30 |
| Total | 408.30 | 155.41 | | | 563.71 |



APPENDIX–1B to Agenda No. 4.1B**I. General Particulars**

| | | |
|---|---------------------|--|
| 1 | Project | Providing renovation of existing 4.5 MLD STP based on MBBR technology followed by tertiary treatment and chlorination, Kharkhoda in Sonipat district |
| 2 | Type of project | Sewage Treatment Plant |
| 3 | Borrowing agency | PHED Haryana |
| 4 | Implementing agency | PHED Haryana |
| 5 | Land Availability | Land for STP is available with PHED Haryana |

II. Financial Particulars

| | | |
|----|----------------------------------|---|
| 6 | Estimated total cost of projects | Rs. 453.98 lakhs |
| 7 | Loan from NCRPB | Rs. 325.97 lakhs |
| 8 | Other sources of funds | Rs. 128.02 lakhs is to be provided by PHED Haryana |
| 9 | Tenure of loan | 15 years (with 3 years moratorium) |
| 10 | Rate of Interest | 7% p.a. A rebate of 0.25 % on conditions |
| 11 | Security for loan | Appropriate security will be provided by PHED Haryana |
| 12 | Stipulated date of completion | 24 months from the date of sanction. |

III. Phasing of Expenditure & Loan Schedule*(Rs. In lakhs)*

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure for Loan (yr) | Moratorium period (yr) | Phasing of expenditure on works |
|--------------|-----------------|-------------------------------|----------------------|------------------------|---------------------------------|
| 2017-18 | 97.79 | 38.41 | 15 | 3 | 136.20 |
| 2018-19 | 114.09 | 44.80 | 14 | 2 | 158.89 |
| 2019-20 | 114.09 | 44.80 | 13 | 1 | 158.89 |
| Total | 325.97 | 128.01 | | | 453.98 |



APPENDIX–1C to Agenda No. 4.1C**I. General Particulars**

| | | |
|---|---------------------|---|
| 1 | Project | Upgradation and renovation of existing 5 MLD STP based on MBBR technology followed by tertiary treatment in Samalkha town in Panipat district |
| 2 | Type of project | Sewage Treatment Plant |
| 3 | Borrowing agency | PHED Haryana |
| 4 | Implementing agency | PHED Haryana |
| 5 | Land Availability | Land for STP is available with PHED Haryana |

II. Financial Particulars

| | | |
|----|----------------------------------|---|
| 6 | Estimated total cost of projects | Rs. 713.84 lakhs |
| 7 | Loan from NCRPB | Rs. 518.53 lakhs |
| 8 | Other sources of funds | Rs. 195.31 lakhs is to be provided by PHED Haryana |
| 9 | Tenure of loan | 15 years (with 3 years moratorium) |
| 10 | Rate of Interest | 7% p.a. A rebate of 0.25 % on conditions |
| 11 | Security for loan | Appropriate security will be provided by PHED Haryana |
| 12 | Stipulated date of completion | 24 months from the date of sanction. |

III. Phasing of Expenditure & Loan Schedule*(Rs. In lakhs)*

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure for Loan (yr) | Moratorium period (yr) | Phasing of expenditure on works |
|--------------|-----------------|-------------------------------|----------------------|------------------------|---------------------------------|
| 2017-18 | 155.57 | 58.59 | 15 | 3 | 214.16 |
| 2018-19 | 181.48 | 68.36 | 14 | 2 | 249.84 |
| 2019-20 | 181.48 | 68.36 | 13 | 1 | 249.84 |
| Total | 518.53 | 195.31 | | | 713.84 |



APPENDIX–1D to Agenda No. 4.1D**I. General Particulars**

| | | |
|---|---------------------|---|
| 1 | Project | Upgradation of existing 5.5 MLD STP & 5 MLD STP based on MBBR technology followed by tertiary treatment and chlorination at Kosli Road and Sampla road respectively alongwith some balance pipeline laying, Jhajjar |
| 2 | Type of project | Sewage Treatment Plant |
| 3 | Borrowing agency | PHED Haryana |
| 4 | Implementing agency | PHED Haryana |
| 5 | Land Availability | Land for STP is available with PHED Haryana |

II. Financial Particulars

| | | |
|----|----------------------------------|---|
| 6 | Estimated total cost of projects | Rs. 1099.79 lakhs |
| 7 | Loan from NCRPB | Rs. 790.69 lakhs |
| 8 | Other sources of funds | Rs. 309.10 lakhs is to be provided by PHED Haryana |
| 9 | Tenure of loan | 15 years (with 3 years moratorium) |
| 10 | Rate of Interest | 7% p.a. A rebate of 0.25 % on conditions |
| 11 | Security for loan | Appropriate security will be provided by PHED Haryana |
| 12 | Stipulated date of completion | 24 months from the date of sanction. |

III. Phasing of Expenditure & Loan Schedule

| (Rs. In lakhs) | | | | | |
|----------------|-----------------|-------------------------------|----------------------|------------------------|---------------------------------|
| Year | Loan from NCRPB | Contribution from State Govt. | Tenure for Loan (yr) | Moratorium period (yr) | Phasing of expenditure on works |
| 2017-18 | 237.21 | 92.73 | 15 | 3 | 329.94 |
| 2018-19 | 276.74 | 108.18 | 14 | 2 | 384.93 |
| 2019-20 | 276.74 | 108.18 | 13 | 1 | 384.93 |
| Total | 790.69 | 309.10 | | | 1099.79 |



Agenda Item No. 4.2: Five Sewerage projects from PHED, Haryana

Agenda Item No. 4.2A: Sewerage network in left out colonies & newly approved colonies and tapping of drains to implement NGT guidelines in Hodal town in Palwal district

Agenda Item No. 4.2B: Sewerage scheme in left out areas & recently approved colonies in Kalanaur town and renovation of the existing 3.5 MLD STP based on MBBR technology followed by tertiary treatment and chlorination, Kalanur town in Rohtak district

Agenda Item No. 4.2C: Sewerage scheme in left out areas & recently approved colonies in Sampla town and upgradation & renovation of the existing 4 MLD STP based on MBBR technology followed by tertiary treatment in Sampla town in Rohtak district

Agenda Item No. 4.2D: Modification of existing STP with Tertiary Treatment, Effluent Disposal from STP Sohna to Nuh Drain and Laying of Sewerage System for Balance approved colonies as well as taping of drains of Sohna town

Agenda Item No. 4.2E: Providing sewerage system in left out approved colonies of Beri town and construction of 3 MLD STP based on SBR technology followed by chlorination in place of existing 2 MLD STP based on water stabilization pond complete in all respect at Beri in Jhajjar district

Background

Hon'ble National Green Tribunal, New Delhi, in its decision dated 13.1.2015 regarding an application titled "Manoj Mishra vs. Union of India" has given following directions to Govt. of Haryana:-

"Wherever necessary, the technology of the existing STPs should be upgraded to ensure proper performance and adherence to the prescribed standards of effluent discharge.

To make every possible effort to ensure that the storm water drains do not carry sewage, sewage may be carried through those drains upon which the STPs have already been installed, till the completion of the project. After the completion of the project, steps shall be taken so that only minimal quantity of treated water from the STPs reaches Yamuna".

Further, Central Pollution Control Board, New Delhi vide its letter dated 21.4.2015 has asked the Chairman, Haryana State Pollution Control Board, to issue directions to the concerned departments/authorities to treat the effluent with BOD up to 10 mg/l.

So, in order to comply with the orders passed by Hon'ble NGT and to comply with the revised discharge standards fixed by CPCB, PHED Haryana is in urgent necessity to upgrade these STPs. The upgradation is proposed by construction of additional structures such as Anoxic Tank, deep bed rapid gravity filters, installation of internal recirculation pumps, return activated sludge pumps and allied works which are necessary for bringing the BOD down upto 10 mg/l at existing.



In addition, there is also need to cover the left out areas with the sewerage network so that the problem of untreated sewage flow into the drains is minimized. Accordingly, PHED Haryana has planned this upgradation and renovation of its existing Sewage Treatment Plants (STPs) along with providing sewerage network in the left out areas / colonies in the various towns of Haryana.

The agency (PHED) has further sought necessary financial assistance for these upgradation works from NCRPB. Accordingly, the current agenda covers 4 projects pertaining to upgradation of STPs as well as provision of sewer lines for few left out areas / colonies. These four project covers the towns of Kalanaur, Sampla, Sohna and Beri. In addition, the agenda also cover the agency's proposal for Hodal town to cover the left out colonies with sewerage network and tapping of drains to implement NGT guidelines. The project names and details are as listed below:-

- A. Sewerage network in left out colonies & newly approved colonies and tapping of drains to implement NGT guidelines in **Hodal** town in Palwal district
- B. Sewerage scheme in left out areas & recently approved colonies in Kalanaur town and renovation of the existing 3.5 MLD STP based on MBBR technology followed by tertiary treatment and chlorination, **Kalanur** town in Rohtak district
- C. Sewerage scheme in left out areas & recently approved colonies in Sampla town and upgradation & renovation of the existing 4 MLD STP based on MBBR technology followed by tertiary treatment in **Sampla** town in Rohtak district
- D. Modification of existing STP with Tertiary Treatment, Effluent Disposal from STP Sohna to Nuh Drain and Laying of Sewerage System for Balance approved colonies as well as taping of drains of **Sohna** town
- E. Providing sewerage system in left out approved colonies of Beri town and construction of 3.0 MLD STP based on SBR technology followed by chlorination in place of existing 2.0 MLD STP based on water stabilization pond complete in all respect at **Beri** in Jhajjar district

Projects Details

Present Status & Proposal

The towns of Hodal, Kalanaur, Sampla, Sohna and Beri already have **STPs** based on either MBBR or WASP technology as per capacities listed below:-

| S. No. | Town Name | STP Capacity in MLDs | Technology | Broad Proposal | | | | |
|--------|-----------|----------------------|------------|-----------------|--------------------|--------------|--------------|------------------|
| | | | | Pipeline Laying | Tertiary Treatment | Chlorination | Tech Upgrade | Capacity Upgrade |
| 1. | Kalanaur | 3.5 | MBBR | Yes | Yes | Yes | - | - |
| 2. | Sampla | 4.0 | MBBR | Yes | Yes | Yes | - | - |
| 3. | Sohna | 6.0 | MBBR | Yes | Yes | Yes | - | - |
| 4. | Beri | 2.0 | WASP | Yes | Yes | Yes | Yes (SBR) | Yes (3 MLD) |
| 5. | Hodal | 9.0 | MBBR | Yes | (already underway) | | - | - |



Apart from Hodal, STPs of all other four towns are proposed to be upgraded by way of providing with tertiary treatment & chlorination. Kalanaur Project also involves upgradation of its existing Intermediate Pumping Station involving 1.7 km rising main of 200 mm dia, a stand by pump of 500 lpm, a 15 KVA genset and 73 meter boundary wall. Sohna project also involves construction of pumping station

Table below broadly presents the broad norms for discharge of treated waste water considered earlier and required now as per Hon'ble NGT orders.

| S.No. | Parameter | Considered earlier | Now proposed |
|-------|--|--------------------|--------------|
| 1 | pH | 7-7.5 | 6.5-9 |
| 2 | SS (<i>Suspended Solids</i>) | 100mg/L | <20mg/L |
| 3 | BOD (<i>Biochemical Oxygen Demand</i>) | 30mg/L | <10mg/L |
| 4 | COD (<i>Chemical Oxygen Demand</i>) | 250mg/L | <60mg/L |
| 5 | TKN (<i>Total Kjeldahl Nitrogen</i>) | - | <10mg/L |
| 6 | NH ₄ -N | - | <5mg/L |
| 7 | Phosphorous | - | <1mg/L |

PHED Haryana proposes to upgrade and renovate the existing STPs by adding the nitrification, de- nitrification mechanisms, process upgradation followed by tertiary treatment which will require a tertiary treatment plant including inlet chamber, Chemical house, flash mixer, rapid sand gravity filters, chlorine Contact tank. The entire STP & tertiary treatment is proposed to be automatized with online PLC & SCADA.

The town-wise proposed pipeline laying details & colonies being covered is as placed below:-

| S.No. | Town | Sizewise length of sewer (in meters) | | | | |
|-------|-----------------|--------------------------------------|-------|-------|-------|-----------------|
| | | 200mm | 250mm | 300mm | 400mm | Total (in mtrs) |
| 1. | Hodal | 21939 | 3875 | 295 | 710 | 26819 |
| 2. | Kalanaur | 10929 | 4265 | 461 | 1170 | 16825 |
| 3. | Sampla | 5320 | 3009 | - | - | 8329 |
| 4. | Sohna | 15550 | 14730 | 4460 | 3340 | 38080 |
| 5. | Beri | 7710 | 460 | - | - | 8170 |

Colonies* / Areas being covered in each of the six towns



| Hodal (9 colonies) | Kalanaur (10 colonies) | Sampla (1 colony) | Beri (3 colonies) | Sohna (21 colonies) | |
|---|---|--|---|--|--|
| <ul style="list-style-type: none"> • Sainik Colony • Krishana Colony • Prem Colony (extn of Ch. Charan Singh Colony) • Kunj Vihar (also called Ch. Charan Singh Colony) • Tula Ram Colony • Aggarwal Colony • Friends Colony • Ram Nagar • Balmiki Basti | <ul style="list-style-type: none"> • Railway colony (line par no. 2) • New grain market • Tehsil colony • Prajapat colony • Khatiyani colony • Jatt Colony • Nigana road extension • Batra colony • Saini colony/ extension • Jindran road colony | <ul style="list-style-type: none"> • Dev Colony | <ul style="list-style-type: none"> • Pana Baithan • Pana Hindian • Pana ChuliYan | <ul style="list-style-type: none"> • Singhram Vihar • Hari Nagar Part I • Ambedkar Colony • Ambedkar Park • New Friends Colony (Saini Enclave Colony) Part I • Friends Colony Part 2 • Shiv Colony • Friends Colony (Sultan wali) • Friends Colony Part 3 • Ghalot Vihar Part I & II | <ul style="list-style-type: none"> • Bhim Nagar • Sushil Nagar • Paras Colony • Mangal Colony • Saini Colony • Shitalamata Colony (Kaji wara) • Village Raipur • Kabir Das Colony Part I • Kishor Colony • Parmar Colony • Village Zakhopur |

The Project Cost & Financing

The component-wise break up of cost estimate of the projects are as under:

A. *Sewerage network in left out colonies & newly approved colonies and tapping of drains to implement NGT guidelines in Hodal town in Palwal district*

| S.No. | Particulars | Estimated Cost (Rs. In lakhs) |
|-------|---|-------------------------------|
| 1 | Sub head No. 1: Trunk Sewer (7.9 km) | 153.06 |
| 2 | Sub head No. 2: Lateral Sewer (18.9 km) | 299.07 |
| | Total | 452.13 |
| | Add 1.25% (0.75% contingency + 0.50% consultancy charges) | 5.65 |
| | Add 1% quality control charges | 4.52 |
| | Add 0.85% 3rd Party Inspection Charges | 3.84 |
| | Grand Total | 466.15 |
| | Loan part on Cost excluding O&M | 349.61 |

Note: Operation & Maintenance Cost not included in the project



B. Sewerage scheme in left out areas & recently approved colonies in Kalanaur town and renovation of the existing 3.5 MLD STP based on MBBR technology followed by tertiary treatment and chlorination, Kalanaur town in Rohtak district

| S.No. | Particulars | Estimated Cost (Rs. In lakhs) |
|-------|---|-------------------------------|
| | Part-I | |
| 1 | Sub work No. 1: Existing Intermediate Pumping Station in Grain Market | 38.21 |
| 2 | Sub work No. 2: Sewerage Network (Trunk - 7.7 KM & Lateral – 9.1 KM) | 474.32 |
| A | Total of Part-I | 512.53 |
| | Part-II | |
| 3 | Sub work No. 3: Upgradation & Renovation of Existing 3.50 MLD STP | 335.58 |
| B | Total of Part-II (Including O&M) | 335.58 |
| | Total of Part II (Excluding O&M) | 313.06 |
| | Total(Including O&M) | 848.11 |
| | Grand Total (Excluding O&M) | 825.59 |
| | Loan part on Cost excluding O&M | 619.20 |

Note: Cost at A & B are inclusive of charges related to contingency, consultancy, quality control and third party inspection.

C. Sewerage scheme in left out areas & recently approved colonies in Sampla town and upgradation & renovation of the existing 4 MLD STP based on MBBR technology followed by tertiary treatment in Sampla town in Rohtak district

| S.No. | Particulars | Estimated Cost (Rs. In lakhs) |
|-------|---|-------------------------------|
| | Part-I | |
| 1 | Sub work No. 1 : Sewerage Network (Trunk & Lateral) | 172.56 |
| A | Total of Part-I | 172.56 |
| | Part-II | |
| 2 | Sub work No. 2: Upgradation & Renovation of Existing 4.00 MLD STP | 642.73 |
| B | Total of Part-II (Including O&M) | 642.73 |
| | Total of Part-II (Excluding O&M) | 620.27 |
| | Grand Total(Including O&M) | 815.29 |
| | Grand Total (Excluding O&M) | 792.83 |
| | Loan part on Cost excluding O&M | 594.62 |

Note: Cost at A & B are inclusive of charges and O&M related to contingency, consultancy, quality control and third party inspection.



D. Modification of existing STP with Tertiary Treatment, Effluent Disposal from STP Sohna to Nuh Drain and Laying of Sewerage System for Balance approved colonies as well as taping of drains of Sohna town, Gurgaon District

| S.No. | Particulars | Estimated Cost (Rs. In lakhs) |
|-------|-----------------------------------|-------------------------------|
| A | STP Upgradation Work | |
| 1 | Mechanical & Electrical Equipment | 186.86 |
| 2 | Civil Works | 53.18 |
| 3 | Buildings | |
| | Annexe Building | 22.25 |
| | Platforms Pump House | 5.40 |
| | Subtotal | 267.69 |
| B | Balance pipeline laying works | |
| 1 | Laying of sewer pipes (38 km) | 994.41 |
| 2 | Construction of pumping station | 72.46 |
| | Subtotal | 1066.87 |
| | Total | 1334.56 |
| | Add: Contingency Charges | 6.67 |
| | Add: Quality control charges | 13.35 |
| | Add: 3rd Party Inspection Charges | 11.34 |
| | Grand Total | 1365.92 |
| | Loan part on Cost | 1024.44 |

Note: Operation & Maintenance Cost not included in the project

E. Providing sewerage system in left out approved colonies of Beri town and construction of 3.0 MLD STP based on SBR technology followed by chlorination in place of existing 2.0 MLD STP based on water stabilization pond complete in all respect at Beri in Jhajjar district

| S.No. | Particulars | Estimated Cost (Rs. In lakhs) |
|-------|--|-------------------------------|
| 1 | Providing sewerage system in left out colonies of Beri town | 265.70 |
| 2 | Construction of 2.6 MLD based on SBR technology complete in all respect including transformer, DG set, O&M for three years after 12 months defect liability period at Beri | 645.74 |
| 3 | Sub total | 911.44 |
| | Add 0.50% contingency and 0.50% consultancy charges | 9.11 |
| | Add 1% quality control charges | 9.11 |
| | Add 0.85% 3rd Party Inspection Charges | 7.75 |
| | Add 7.50% price escalation charges | 68.36 |
| | Grand Total | 1005.77 |
| | Grand Total excluding O&M charges | 927.81 |
| | Loan part on Cost excluding O&M | 695.85 |



Drawl Schedule and Sharing Pattern

The target date of completion of all the five projects although proposed as 36-39 months in report is recommended to be kept as 30 months from the date of sanction and PHED Haryana shall be implementing the projects through financial assistance from NCRPB as per the following phasing and schedule. The loans components has been restricted at 75% of the project cost excluding O&M charges, as per policy.

A. Sewerage network in left out colonies & newly approved colonies and tapping of drains to implement NGT guidelines in Hodal town in Palwal district

(Rs. In lakhs)

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure for Loan (yr) | Moratorium period (yr) | Phasing of expenditure on works |
|---------|-----------------|-------------------------------|----------------------|------------------------|---------------------------------|
| 2017-18 | 104.88 | 34.96 | 15 | 3 | 139.84 |
| 2018-19 | 122.36 | 40.79 | 14 | 2 | 163.15 |
| 2019-20 | 122.36 | 40.79 | 13 | 1 | 163.15 |
| Total | 349.61 | 116.54 | | | 466.15 |

B. Sewerage scheme in left out areas & recently approved colonies in Kalanaur town and renovation of the existing 3.5 MLD STP based on MBBR technology followed by tertiary treatment and chlorination, Kalanur town in Rohtak district

(Rs. In lakhs)

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure for Loan (yr) | Moratorium period (yr) | Phasing of expenditure on works |
|---------|-----------------|-------------------------------|----------------------|------------------------|---------------------------------|
| 2017-18 | 185.76 | 61.92 | 15 | 3 | 247.68 |
| 2018-19 | 216.72 | 72.24 | 14 | 2 | 288.96 |
| 2019-20 | 216.72 | 72.24 | 13 | 1 | 288.96 |
| Total | 619.20 | 206.39 | | | 825.59 |

C. Sewerage scheme in left out areas & recently approved colonies in Sampla town and upgradation & renovation of the existing 4 MLD STP based on MBBR technology followed by tertiary treatment in Sampla town in Rohtak district

(Rs. In lakhs)

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure for Loan (yr) | Moratorium period (yr) | Phasing of expenditure on works |
|---------|-----------------|-------------------------------|----------------------|------------------------|---------------------------------|
| 2017-18 | 178.39 | 59.46 | 15 | 3 | 237.85 |
| 2018-19 | 208.12 | 69.37 | 14 | 2 | 277.49 |
| 2019-20 | 208.12 | 69.37 | 13 | 1 | 277.49 |
| Total | 594.62 | 198.21 | | | 792.83 |



D. Modification of existing STP with Tertiary Treatment, Effluent Disposal from STP Sohna to Nuh Drain and Laying of Sewerage System for Balance approved colonies as well as taping of drains of Sohna town

(Rs. In lakhs)

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure for Loan (yr) | Moratorium period (yr) | Phasing of expenditure on works |
|---------|-----------------|-------------------------------|----------------------|------------------------|---------------------------------|
| 2017-18 | 307.34 | 102.44 | 15 | 3 | 409.78 |
| 2018-19 | 358.55 | 119.52 | 14 | 2 | 478.07 |
| 2019-20 | 358.55 | 119.52 | 13 | 1 | 478.07 |
| Total | 1024.44 | 341.48 | | | 1365.92 |

E. Providing sewerage system in left out approved colonies of Beri town and construction of 3.0 MLD STP based on SBR technology followed by chlorination in place of existing 2.0 MLD STP based on water stabilization pond complete in all respect at Beri in Jhajjar district

(Rs. In lakhs)

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure for Loan (yr) | Moratorium period (yr) | Phasing of expenditure on works |
|---------|-----------------|-------------------------------|----------------------|------------------------|---------------------------------|
| 2017-18 | 208.76 | 69.59 | 15 | 3 | 278.35 |
| 2018-19 | 243.55 | 81.18 | 14 | 2 | 324.73 |
| 2019-20 | 243.55 | 81.18 | 13 | 1 | 324.73 |
| Total | 695.86 | 231.95 | | | 927.81 |

Abstract of the five projects are as enclosed at **Appendix 1A, 1B, 1C, 1D & 1 E.**

Appraisal of DPRs

DPRs were technically looked into by available sewerage & waste water experts and the necessary suggestions were conveyed to agency for onward action, in the interest of the projects. The projects are simple upgradations as per Hon'ble NGT's directions and the standard norms & procedures applicable in the state government are proposed to be adopted. The necessary administrative approvals have been taken by PHED for the projects from the Standing Financing Committee (SFC) "B" of Haryana Government in its meeting held on 29.7.2016.

Proper arrangement needs to be made for treatment / dealing of raw sewage during the period of renovation of STPs. The agency needs to formulate a detailed plan for reuse / recycle of the treated effluent, as applicable, in each of the towns. In addition, agency should take necessary action regarding proper sludge management

It was found that submitted reports had varying %age charged regarding contingency, quality control and third party inspection etc. probably due to different circles. It is recommended that in future, before forwarding the projects for financial assistance, PHED



should cross check that uniform rates of contingency, quality control and third party inspection etc. are being adopted for the projects.

The O& M cost although considered in project cost is not applicable for loan. Projects, however, have no concrete proposal to recover the expenditure as the present waste water charges do not even cover the O&M cost.

The agency cites reasons such as delay in permission from other departments and tendering process along with approvals of design & drawings etc. to arrive at proposed project completion duration as 30 to 39 months. However, PHED needs to initiate the procedures of taking permissions from other State Govt. departments simultaneously towards delays.

Further, as the project scope is too limited especially in case of Hodal (only pipeline laying) and Sampla (pipeline laying in one colony and STP renovation), the suggested project time period is 30 months for these 2 projects.

Target date of completion of other three projects (Beri, Kalanaur & Sohna) although proposed as 36-39 months in report is recommended to be kept as 36 months from the date of sanction.

The projects were also examined as per the ESMS adopted by NCRPB. All five projects were categorized as S-3 regarding social aspect as no land acquisition was involved. Regarding environmental aspect, projects at Hodal Sampla and Beri were categorized as E-3 while those in Kalanaur and Sohna are categorized as E-2 owing to extent of proposed works and would require preparation of Initial Environmental Examination (IEE) report for the purpose.

Project Benefits & Justification

By virtue of upgrading and renovating the STPs PHED shall attempt to meet the fresh /revised discharge standards for effluents as set by the Hon'ble NGT as well as CPCB. Haryana Pollution Control Board who is monitoring the efficiency and efficacy of the STPs shall thereafter be able to give its consent (as treated effluent parameters are currently exceeding the prescribed limits).

The four projects shall therefore make its contribution towards the river cleaning efforts of government and the Hon'ble Tribunal.

Point for Decision

It is suggested that PHED should check the basis for consideration of raw sewerage characteristics as they vary for different towns as does the required treatment for the different raw sewerage characteristics. The agency should take note as to how the raw sewage will be dealt during the period renovation / upgradation of the existing STPs. Further, the agency needs to be clear and ready with a plan as to how the treated effluent is planned to be discharged / utilized. In cases where pipeline laying components are also involved, the agency should ensure that the design maintains the required self-cleansing velocity of the flow.

The State Govt. of Haryana is seeking loan of 75% of its share from the NCRPB. The loan amounts for the projects scheduled to be released in subsequent financial year as per



project eligibility, will carry interest rate as applicable on the date of release of loan installment. The principal amount along with interest is to be repaid in 15 years with a moratorium period of 3 years. Accordingly, PSMG-I may sanction respective loan amounts as indicated below:

- Loan amount of **Rs. 349.61 lakhs** for the project of *“Sewerage network in left out colonies & newly approved colonies and tapping of drains to implement NGT guidelines in Hodal town in Palwal district”*
- Loan amount of **Rs. 619.20 lakhs** for the project of *“Sewerage scheme in left out areas & recently approved colonies in Kalanaur town and renovation of the existing 3.5 MLD STP based on MBBR technology followed by tertiary treatment and chlorination, Kalanur town in Rohtak district”*;
- Loan amount of **Rs. 594.62 lakhs** for the project *“Sewerage scheme in left out areas & recently approved colonies in Sampla town and upgradation & renovation of the existing 4 MLD STP based on MBBR technology followed by tertiary treatment in Sampla town in Rohtak district”*;
- Loan amount of **Rs. 1024.44 lakhs** for the project *“Modification of existing STP with Tertiary Treatment, Effluent Disposal from STP Sohna to Nuh Drain and Laying of Sewerage System for Balance approved colonies as well as tapping of drains of Sohna town”*
- Loan amount of **Rs. 695.86 lakhs** for the project *“Providing sewerage system in left out approved colonies of Beri town and construction of 3.0 MLD STP based on SBR technology followed by chlorination in place of existing 2.0 MLD STP based on water stabilization pond complete in all respect at Beri in Jhajjar district”*

The loan will be subject to Govt of Haryana making suitable budgetary provisions in the Annual Budgets and also undertaking to complete the project as per approved DPR. Any cost increase over and above, the current estimates, shall be borne by the agency from its own sources and all efforts to complete the project be ensured accordingly.

The loan will be disbursed in three instalments. The second instalment will be released by the NCRPB on receipt of utilization report and on-site verification of expenditure and progress made. The loan will carry an interest rate as applicable on the date of disbursement. The present rate is 7% p.a. A rebate of 0.25 % will be available in the form of reduction of interest rate for the timely repayment of loan instalment (principal +interest) strictly as per repayment schedule. The principal along with interest is to be repaid in 15 years with a moratorium period of 3 years for principal. The project completion time for projects in Hodal and Sampla shall be 30 months and for projects in Beri, Kalanaur and Sohna shall be 36 months from the date of loan sanction.



APPENDIX–1A to Agenda No. 4.2A**I. General Particulars**

| | | |
|---|---------------------|--|
| 1 | Project | Sewerage network in left out colonies & newly approved colonies and tapping of drains to implement NGT guidelines in Hodal town in Palwal district |
| 2 | Type of project | Sewerage |
| 3 | Borrowing agency | PHED Haryana |
| 4 | Implementing agency | PHED Haryana |
| 5 | Land Availability | Available with PHED Haryana |

II. Financial Particulars

| | | |
|----|----------------------------------|---|
| 6 | Estimated total cost of projects | Rs. 466.15 lakhs |
| 7 | Loan from NCRPB | Rs. 349.61 lakhs |
| 8 | Other sources of funds | Rs. 116.54 lakhs is to be provided by PHED Haryana |
| 9 | Tenure of loan | 15 years (with 3 years moratorium) |
| 10 | Rate of Interest | 7% p.a. A rebate of 0.25 % on conditions |
| 11 | Security for loan | Appropriate security will be provided by PHED Haryana |
| 12 | Stipulated date of completion | 30 months from the date of sanction. |

III. Phasing of Expenditure & Loan Schedule

(Rs. In lakhs)

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure for Loan (yr) | Moratorium period (yr) | Phasing of expenditure on works |
|---------|-----------------|-------------------------------|----------------------|------------------------|---------------------------------|
| 2017-18 | 104.88 | 34.96 | 15 | 3 | 139.84 |
| 2018-19 | 122.36 | 40.79 | 14 | 2 | 163.15 |
| 2019-20 | 122.36 | 40.79 | 13 | 1 | 163.15 |
| Total | 349.61 | 116.54 | | | 466.15 |



APPENDIX–1B to Agenda No. 4.2B**I. General Particulars**

| | | |
|---|---------------------|--|
| 1 | Project | Sewerage scheme in left out areas & recently approved colonies in Kalanaur town and renovation of the existing 3.5 MLD STP based on MBBR technology followed by tertiary treatment and chlorination, Kalanur town in Rohtak district |
| 2 | Type of project | Sewerage |
| 3 | Borrowing agency | PHED Haryana |
| 4 | Implementing agency | PHED Haryana |
| 5 | Land Availability | Available with PHED Haryana |

II. Financial Particulars

| | | |
|----|----------------------------------|---|
| 6 | Estimated total cost of projects | Rs. 825.59 lakhs |
| 7 | Loan from NCRPB | Rs. 619.20 lakhs |
| 8 | Other sources of funds | Rs. 206.39 lakhs is to be provided by PHED Haryana |
| 9 | Tenure of loan | 15 years (with 3 years moratorium) |
| 10 | Rate of Interest | 7% p.a. A rebate of 0.25 % on conditions |
| 11 | Security for loan | Appropriate security will be provided by PHED Haryana |
| 12 | Stipulated date of completion | 36 months from the date of sanction. |

III. Phasing of Expenditure & Loan Schedule

(Rs. In lakhs)

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure for Loan (yr) | Moratorium period (yr) | Phasing of expenditure on works |
|---------|-----------------|-------------------------------|----------------------|------------------------|---------------------------------|
| 2017-18 | 185.76 | 61.92 | 15 | 3 | 247.68 |
| 2018-19 | 216.72 | 72.24 | 14 | 2 | 288.96 |
| 2019-20 | 216.72 | 72.24 | 13 | 1 | 288.96 |
| Total | 619.20 | 206.39 | | | 825.59 |



APPENDIX–1C to Agenda No. 4.2C**I. General Particulars**

| | | |
|---|---------------------|--|
| 1 | Project | Sewerage scheme in left out areas & recently approved colonies in Sampla town and upgradation & renovation of the existing 4 MLD STP based on MBBR technology followed by tertiary treatment in Sampla town in Rohtak district |
| 2 | Type of project | Sewerage |
| 3 | Borrowing agency | PHED Haryana |
| 4 | Implementing agency | PHED Haryana |
| 5 | Land Availability | Available with PHED Haryana |

II. Financial Particulars

| | | |
|----|----------------------------------|---|
| 6 | Estimated total cost of projects | Rs. 792.83 lakhs |
| 7 | Loan from NCRPB | Rs. 594.62 lakhs |
| 8 | Other sources of funds | Rs. 198.21 lakhs is to be provided by PHED Haryana |
| 9 | Tenure of loan | 15 years (with 3 years moratorium) |
| 10 | Rate of Interest | 7% p.a. A rebate of 0.25 % on conditions |
| 11 | Security for loan | Appropriate security will be provided by PHED Haryana |
| 12 | Stipulated date of completion | 30 months from the date of sanction. |

III. Phasing of Expenditure & Loan Schedule

(Rs. In lakhs)

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure for Loan (yr) | Moratorium period (yr) | Phasing of expenditure on works |
|---------|-----------------|-------------------------------|----------------------|------------------------|---------------------------------|
| 2017-18 | 178.39 | 59.46 | 15 | 3 | 237.85 |
| 2018-19 | 208.12 | 69.37 | 14 | 2 | 277.49 |
| 2019-20 | 208.12 | 69.37 | 13 | 1 | 277.49 |
| Total | 594.62 | 198.21 | | | 792.83 |



APPENDIX–1D to Agenda No. 4.2D**I. General Particulars**

| | | |
|---|---------------------|---|
| 1 | Project | Modification of existing STP with Tertiary Treatment, Effluent Disposal from STP Sohna to Nuh Drain and Laying of Sewerage System for Balance approved colonies as well as taping of drains of Sohna town |
| 2 | Type of project | Sewerage |
| 3 | Borrowing agency | PHED Haryana |
| 4 | Implementing agency | PHED Haryana |
| 5 | Land Availability | Available with PHED Haryana |

II. Financial Particulars

| | | |
|----|----------------------------------|---|
| 6 | Estimated total cost of projects | Rs. 1365.92 lakhs |
| 7 | Loan from NCRPB | Rs. 1024.44 lakhs |
| 8 | Other sources of funds | Rs. 341.48 lakhs is to be provided by PHED Haryana |
| 9 | Tenure of loan | 15 years (with 3 years moratorium) |
| 10 | Rate of Interest | 7% p.a. A rebate of 0.25 % on conditions |
| 11 | Security for loan | Appropriate security will be provided by PHED Haryana |
| 12 | Stipulated date of completion | 36 months from the date of sanction. |

III. Phasing of Expenditure & Loan Schedule

(Rs. In lakhs)

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure for Loan (yr) | Moratorium period (yr) | Phasing of expenditure on works |
|---------|-----------------|-------------------------------|----------------------|------------------------|---------------------------------|
| 2017-18 | 307.34 | 102.44 | 15 | 3 | 409.78 |
| 2018-19 | 358.55 | 119.52 | 14 | 2 | 478.07 |
| 2019-20 | 358.55 | 119.52 | 13 | 1 | 478.07 |
| Total | 1024.44 | 341.48 | | | 1365.92 |



APPENDIX–1E to Agenda No. 4.2E**I. General Particulars**

| | | |
|---|---------------------|---|
| 1 | Project | <i>Providing sewerage system in left out approved colonies of Beri town and construction of 3.0 MLD STP based on SBR technology followed by chlorination in place of existing 2.0 MLD STP based on water stabilization pond complete in all respect at Beri in Jhajjar district</i> |
| 2 | Type of project | Sewerage |
| 3 | Borrowing agency | PHED Haryana |
| 4 | Implementing agency | PHED Haryana |
| 5 | Land Availability | Available with PHED Haryana |

II. Financial Particulars

| | | |
|----|----------------------------------|---|
| 6 | Estimated total cost of projects | Rs. 927.81 lakhs |
| 7 | Loan from NCRPB | Rs. 695.85 lakhs |
| 8 | Other sources of funds | Rs. 231.95 lakhs is to be provided by PHED Haryana |
| 9 | Tenure of loan | 15 years (with 3 years moratorium) |
| 10 | Rate of Interest | 7% p.a. A rebate of 0.25 % on conditions |
| 11 | Security for loan | Appropriate security will be provided by PHED Haryana |
| 12 | Stipulated date of completion | 36 months from the date of sanction. |

III. Phasing of Expenditure & Loan Schedule

(Rs. In lakhs)

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure for Loan (yr) | Moratorium period (yr) | Phasing of expenditure on works |
|---------|-----------------|-------------------------------|----------------------|------------------------|---------------------------------|
| 2017-18 | 208.76 | 69.59 | 15 | 3 | 278.35 |
| 2018-19 | 243.55 | 81.18 | 14 | 2 | 324.73 |
| 2019-20 | 243.55 | 81.18 | 13 | 1 | 324.73 |
| Total | 695.86 | 231.95 | | | 927.81 |



Agenda Item No. 4.3: Strengthening of Sub-transmission and distribution network including metering in Jhajjar, Rohtak, Panipat & Sonipat Circles of Haryana (under IPDS) by UHBVN

Introduction

Sub transmission & Distribution is the most critical segment of the electricity business chain. The real challenge in the power sector today lies in efficient management of the distribution sector. Availability of a robust sub-transmission and distribution network along with adequate metering arrangements is the need of the day for efficient management of the distribution system.

There is a consistent increase in electricity demand, particularly in urban areas, due to increase in customer base, changes in lifestyle and consumption pattern, which requires continual up-gradation and creation of infrastructure for electricity distribution. However, the poor financial health of the distribution utilities has resulted in inadequate investment in the distribution network. The Government of India has been providing support to State owned Discoms/Power Departments by extending financial assistance through various programmes. However, the State owned Discoms/Power Departments have not been able to keep pace with the growth in demand of electricity, resulting in critical gaps/missing links in the sub transmission and distribution network. The sub-transmission and distribution network has, therefore, become a bottleneck in ensuring reliable and quality power supply to the consumers. Apart from bridging the gaps in the requisite distribution infrastructure, there is also a need to focus on metering of consumers.

Keeping in view the present financial condition of Discoms/Power Department, GoI has launched the Integrated Power Development Scheme (IPDS) to extend financial assistance against capital expenditure to address the gaps in sub transmission & distribution network and metering in urban areas to supplement the resources of DISCOMs / Power Department.

As per the funding mechanism of IPDS launched by Ministry of Power, GOI, 60% of the sanctioned cost is to be provided by GOI as grant, 10% as the DISCOMs contribution and balance 30% are to be raised by DISCOMs as loan. Accordingly, UHBVN has approached NCRPB to provide with the 30% share of the cost of projects already approved under IPDS for the four circles i.e. Jhajjar, Rohtak, Panipat & Sonipat in Haryana Subregion.

Project Details

The existing scenario & proposed activities under the project, for each of the circles along with the towns being covered is as presented below circle-wise:-

A. Jhajjar Circle – Beri Town

a. Existing Scenario

| | | |
|---|---------|----------------------|
| No. of consumers in all towns covered in the project area | | 3325 |
| | Unit | Data for Previous FY |
| Energy Input | M Units | 112.50 |
| Energy Sales | M Units | 46.30 |
| Total Revenue Billed (FY 14-15) | Rs. Lac | 1807.65 |
| Total Revenue Collected (excluding arrears) | Rs. Lac | 1297.24 |



| | | |
|---|------|----------------------|
| No. of consumers in all towns covered in the project area | | 3325 |
| | Unit | Data for Previous FY |
| Billing Efficiency | % | 41.16% |
| Collection Efficiency | % | 71.76% |
| AT&C Losses | % | 70.47% |

b. Proposed activities

The activities focus on addition of 13 distribution transformers, enhancing the capacity of 2 LT sub stations along with providing a 2 km long LT line. With regards to metering, the sub project shall involve addition of 10 smart meters in Govt. establishment, 2 11 KV Feeder meters, 64 DT metering etc. A provision of 50 KWE (Kilowatt Electrical) solar panel is also included in the scheme.

B. Rohtak Circle – Kalanaur, Meham & Sampla Towns

a. Existing Scenario

| | | |
|---|---------|----------------------|
| No. of consumers in all towns covered in the project area | | 18582 |
| | Unit | Data for Previous FY |
| Energy Input | M Units | 626.47 |
| Energy Sales | M Units | 357.34 |
| Total Revenue Billed (FY 14-15) | Rs. Lac | 2402.63 |
| Total Revenue Collected (excluding arrears) | Rs. Lac | 2391.83 |
| Billing Efficiency | % | 57.04% |
| Collection Efficiency | % | 99.55% |
| AT&C Losses | % | 43.22% |

b. Proposed activities

The activities focus on addition of eight 11 KV feeders, 17 km 11 KV feeder line (overhead), 25 km LT line, 52 no. of distribution transformers, enhancing the capacity of 49 LT sub stations along with providing a 25 km long LT line. With regards to metering, the sub project shall involve addition of 30 smart meters in Govt. establishment, 4 11 KV Feeder meters, etc. A provision of 30 KWE solar panel is also included in the scheme.

C. Panipat Circle – Samalkha Town

a. Existing Scenario

| | | |
|---|---------|----------------------|
| No. of consumers in all towns covered in the project area | | 10218 |
| | Unit | Data for Previous FY |
| Energy Input | M Units | 237.67 |
| Energy Sales | M Units | 167.22 |
| Total Revenue Billed (FY 14-15) | Rs. Lac | 6771.96 |
| Total Revenue Collected (excluding arrears) | Rs. Lac | 6094.76 |
| Billing Efficiency | % | 70.36% |
| Collection Efficiency | % | 90.00% |
| AT&C Losses | % | 36.68% |



b. Proposed activities

The activities focus on addition of one 11 KV feeders, 4.9 km 11 KV feeder line (overhead), 8 km LT line, 14 no. of distribution transformers, enhancing the capacity of 13 LT sub stations along with providing 8 km long LT line. With regards to metering, the sub project shall involve addition of 55 smart meters in Govt. establishment, 2 11 KV Feeder meters, etc. A provision of 20 KWE solar panel is also included in the scheme.

D. Sonipat Circle – Ganaur & KharkhodaTownaa. Existing Scenario

| | | |
|---|---------|----------------------|
| No. of consumers in all towns covered in the project area | | 53742 |
| | Unit | Data for Previous FY |
| Energy Input | M Units | 371.00 |
| Energy Sales | M Units | 204.20 |
| Total Revenue Billed (FY 14-15) | Rs. Lac | 12244.24 |
| Total Revenue Collected (excluding arrears) | Rs. Lac | 11858.49 |
| Billing Efficiency | % | 55.04% |
| Collection Efficiency | % | 96.85% |
| AT&C Losses | % | 46.69% |

b. Proposed activities

The activities focus on 12 km 11 KV feeder line (overhead), 17 km LT line, 21 no. of distribution transformers, enhancing capacity of 25 LT sub stations along with providing 17 km long LT line. With regards to metering, the sub project shall involve addition of 10 smart meters in Govt. establishment, 5 11 KV Feeder meters, etc.



The Project Cost & Financing

(Rs. in lakhs)

| S. No | Particulars/ Units | Jhajjar Circle (Berī Town) | | Rohtak Circle (Kalanaur, Meham & Sampla Towns) | | Panipat Circle (Samalkha Town) | | Sonapat Circle (Ganaur & Kharkhoda Towns) | | Total | |
|-------|---|----------------------------|---------------|--|---------------|--------------------------------|---------------|---|--------------|-------|----------------|
| | | Qty | Project Cost | Qty | Project Cost | Qty | Project Cost | Qty | Project Cost | Qty | Project Cost |
| A | 11KV Line: New Feeder/Feeder Bifurcation(Km) | | | 17 | 103.45 | 4.9 | 30.87 | 12 | 75.6 | 33.9 | 209.92 |
| B | 11KVLine:Augmentation/Reconductoring (km) | 2 | 6.52 | 10 | 46.6 | 23.7 | 77.26 | 17 | 57.52 | 52.7 | 187.90 |
| C | 11 KV Aerial bunched cable (Kms.) | | | | | | | | | | |
| D | 11 KV UG cable (Kms.) | | | 0.5 | 11.84 | 2.6 | 52.43 | 0.6 | 18.98 | 3.7 | 83.25 |
| E | 11 KV VCB (Nos.) | | | 4 | 12.4 | 2 | 6.2 | | | 6 | 18.60 |
| F | Installation of Distribution Transformer (Nos.) | 13 | 36 | 52 | 128.7 | 14 | 34.8 | 21 | 49.36 | 100 | 248.86 |
| G | Capacity Enhancement of LT S/S (Nos.) | 2 | 3 | 49 | 111.31 | 13 | 37.41 | 25 | 61.38 | 89 | 213.10 |
| H | LT Line: New Feeder/Feeder Bifurcation (Kms.) | 2 | 9.01 | 25 | 106.93 | 8 | 36.33 | 17 | 72.8 | 52 | 225.07 |
| I | LT Line: Augmentation/ Reconductoring (km) | 1.7 | 4.83 | 28 | 87.71 | 6.8 | 22.44 | 12.5 | 35.9 | 49 | 150.88 |
| J | Capacitor Bank (Set) | 2 | 2.04 | 17 | 17.34 | 2 | 2.04 | 3 | 3.06 | 24 | 24.48 |
| K | Maintenance free earthing (Nos.) | 30 | 1.8 | 202 | 12.12 | 54 | 3.24 | 92 | 5.52 | 378 | 22.68 |
| L | Trolley mounted s/s (Nos.) | 2 | 8.4 | 3 | 12.6 | 1 | 4.2 | 2 | 8.4 | 8 | 33.60 |
| M | Metering (Nos.) | | | | | | | | | | |
| | Prepaid/smart meters Govt Establishment (No) | 10 | 1.2 | 30 | 3.6 | 55 | 6.6 | 10 | 1.2 | 105 | 12.60 |
| | Boundary Meter (Nos.) | | | | | | | | | | |
| | 11 KV feeder meter (Nos.) | 2 | 0.06 | 4 | 0.12 | 2 | 0.06 | 5 | 0.15 | 13 | 0.39 |
| | Modem for 11 KV feeder meter (Nos.) | 13 | 0.78 | 13 | 0.78 | 20 | 1.2 | 8 | 0.48 | 54 | 3.24 |
| | DT Metering & Modem (Nos.) | 64 | 14.72 | | | | | | | 64 | 14.72 |
| | 1 Phase Downloadable / AMI (Nos.) | 125 | 1.25 | 8000 | 80 | | | 7065 | 70.65 | 15190 | 151.90 |
| | 3 Phase Downloadable / AMI (Nos.) | 25 | 0.5 | 220 | 4.4 | | | 495 | 9.9 | 740 | 14.80 |
| | 1:1 (Single Phase) (Nos.) | | | 5100 | 51 | | | 6453 | 64.53 | 11553 | 115.53 |
| | 1:1 (Three Phase) (Nos.) | | | 230 | 4.6 | | | 549 | 10.78 | 779 | 15.38 |
| | 4 in 1 (Nos.) | | | 1600 | 80 | | | 245 | 12.45 | 1845 | 92.45 |
| N | Provision of Solar Panel (Kwe) | 50 | 50 | 30 | 30 | 20 | 20 | | | 100 | 100.00 |
| O | Others (11 KV GO Switch) (Nos.) | 43 | 3.87 | 166 | 14.94 | 110 | 9.9 | 66 | 5.94 | 385 | 34.65 |
| | Grand Total | | 143.98 | | 920.44 | | 344.98 | | 564.6 | | 1974.00 |



The total estimated cost of the project being considered under this IPDS project comes to about **Rs.19.74 Cr.** The breakup of the cost sharing is as follows:-

| | Rs. in Cr. |
|------------------------------|--------------|
| GoI Grant (60%) | 11.84 |
| UHBVN share (10%) | 1.97 |
| Loan amount from NCRPB (30%) | 5.93 |
| Total | 19.74 |

The project is proposed to be executed **by September 2018**, as per the following details:-
(Rs. in Cr.)

| Year | GOI Grant (60%) | Loan from NCRPB | Contribution from State Govt. | Tenure for Loan (in yr.) | Moratorium period (in yr.) | Phasing of expenditure on works |
|--------------|-----------------|-----------------|-------------------------------|--------------------------|----------------------------|---------------------------------|
| 2017-18 | 1.19 | 0.59 | 0.20 | 10 | 2 | 1.98 |
| 2018-19 | 7.10 | 3.56 | 1.18 | 9 | 1 | 11.84 |
| 2019-20 | 3.55 | 1.78 | 0.59 | 8 | 1 | 5.92 |
| Total | 11.84 | 5.93 | 1.97 | | | 19.74 |

Abstract of the project is enclosed at **Appendix I.**

Appraisal of DPR

The project report had been proposed by UHBVN to Government of India under its **Integrated Power Development Scheme (IPDS)** launched by Ministry of Power, Government of India. As per the funding mechanism of IPDS, 60% of the sanctioned cost is to be provided by GOI as grant, 10% as the DISCOMs contribution and balance 30% are to be raised by DISCOMs as loan.

The project has been duly appraised by Power Finance Corporation Limited and sanctioned by Monitoring Committee, GOI. Thereafter financial assistance (grant portion) amounting to Rs. 11.84 Cr. (60% of the cost) has also been approved for the four sub schemes in March 2016.

The project has also been looked into from ESMS aspect and appears to fall in E3 and S3 category.

Project Benefits & Justification

- a. The project primarily focusses to reduce AT&C loss in the towns wherein the project is being implemented as indicated below:-
 - Beri town in Jhajjar Circle - The AT&C losses are proposed to gradually reduce from 70.47% in 2014-15 to 46% in 2018-19 to finally 28% by the year 2021-22.
 - Rohtak Circle (Kalanaur, Meham & Sampla Towns) - The AT&C losses are proposed to gradually reduce from 43.22% in 2014-15 to 31% in 2018-19 to finally 22% by the year 2021-22.



- Panipat Circle (Samalkha Town) - The AT&C losses are proposed to gradually reduce from 36.68% in 2014-15 to 26% in 2018-19 to finally 17% by the year 2021-22.
- Sonipat Circle (Ganaur & Kharkhoda Towns) - The AT&C losses are proposed to gradually reduce from 46.69% in 2014-15 to 36% in 2018-19 to finally 26% by the year 2021-22.

b. Other expected intangible benefits are as follows:-

- Accurate & reliable energy accounting on sustainable basis.
- Better accountability at all level.
- Improve the reliability of the power supply.
- 24x7 power supply for consumer in urban area.
- Reduction of losses to meet AT&C loss reduction trajectory.
- Providing electricity access to all urban household.
- Improvement in network planning.
- Improvement in quality of supply like voltage level, PF, etc.
- Prompt and effective solution to the consumer queries / grievances.
- Line loss reduction: With strengthening of network, conductor resistance will be reduced, resulting reduction in cu loss.
- Ensuring better accounting: With metering of all nodal points, the energy accounting & auditing will be improved, resulting better administrative action.
- Better voltage profile: With strengthening of network & improvement in PF, tail end voltage will be improved & reactive current will be reduced resulting improvement of quality of power & better consumer satisfaction.
- Decrease in the DT failure: With addition of DT & enhancement of DT capacity the load on DT will be reduced, resulting decrease in DT failure & improvement in reliability.
- Curbing the theft / pilferage / and unaccounted usage: With ABS, HVDS, multi meter boxes & proper consumer metering, theft / pilferage & unaccounted usages will be minimized.

Point for Decision

It is proposed that loan assistance of **Rs. 5.93 Cr.** for the project for “**Scheme for Strengthening of Power Infrastructure in NCR area of Haryana – Augmentation of Transmission works involving four sub schemes**” may be approved as per project details at Appendix-I. The total estimated cost of the project is **Rs.19.74Cr.** Any cost increase over and above, the current estimates, shall be borne by the agency from its own sources and all efforts to complete the project be ensured accordingly. UHBVN will take all necessary steps to follow the social, environmental and wildlife issue requirements as per applicable laws of state and central government. The loan will carry interest rate as applicable on the date of release of loan instalment. The present rate is 7.50% p.a. with eligible incentives. The principal along with interest is to be repaid in 10 years with a moratorium period of 2 years for principal. The project is to be completed in 1 year. The loan will be subject to furnishing of adequate security by UHBVN.



APPENDIX – I for Agenda 4.3**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Strengthening of Sub-transmission and distribution network including metering in Jhajjar, Rohtak, Panipat & Sonipat Circles of Haryana (under IPDS) by UHBVN |
| 2 | Type of project | Infrastructure (Power) |
| 3 | Whether a project at the same location has been earlier financed by NCRPB | No |
| 4 | Justification for project | The present scheme has been prepared to enhance distribution capacity and achieve reduction in AT&C losses which are necessary to strengthen the power supply system to cope with the increased load demand in the towns of Beri, Kalanaur, Meham, Sampla, Samalkha, Ganaur & Kharkohda. |
| 5 | Location | Jhajjar, Rohtak, Panipat & Sonipat Circles of Haryana |
| 6 | Borrowing agency | Uttar Haryana Bijli Vitran Nigam (UHBVN) |
| 7 | Implementing agency | Uttar Haryana Bijli Vitran Nigam (UHBVN) |
| 8 | Area covered | Parts of Beri, Kalanaur, Meham, Sampla, Samalkha, Ganaur & Kharkohda towns |
| 9 | Land availability | Available with UHBVN |

II. Financial features

| | | |
|----|------------------------------------|--|
| 10 | Estimated total cost of project | Rs. 19.74 Cr. |
| 11 | Loan from NCRPB | Rs. 5.93 Cr. |
| 12 | Interest rate | As applicable on the date of release of loan installment. The present rate is 7.50% p.a. |
| 13 | Provision in the Budget | UHBVN has to provide its counterpart share in their Annual Budget provision |
| 14 | Other sources of funds | Rs. 1.97 Cr. is to be provided by UHBVN Rs. 11.84 Cr. to be provided by GOI as grant. |
| 15 | Tenure of loan | 10 years |
| 16 | Provision of State Govt. Guarantee | - |
| 17 | Other Security proposed | Tripartite escrow agreement & State Government guarantee / Bank guarantee |
| 18 | Stipulated date of completion | September 2018 |

(Rs. in Cr.)

| Year | GOI Grant (60%) | Loan from NCRPB | Contribution from State Govt. | Tenure for Loan (in yr.) | Moratorium period (in yr.) | Phasing of expenditure on works |
|--------------|-----------------|-----------------|-------------------------------|--------------------------|----------------------------|---------------------------------|
| 2017-18 | 1.19 | 0.59 | 0.20 | 10 | 2 | 1.98 |
| 2018-19 | 7.10 | 3.56 | 1.18 | 9 | 1 | 11.84 |
| 2019-20 | 3.55 | 1.78 | 0.59 | 8 | 1 | 5.92 |
| Total | 11.84 | 5.93 | 1.97 | | | 19.74 |



Agenda Item No. 4.4: ROB projects

4.4.A : Construction of Two lane ROB at Level X-ing No 564, of Mumbai Delhi Rail Line on Palwal Hassanpur road in Palwal Distt..

4.4.B : Construction of Two lane ROB at Level X-ing No 561, of Mumbai Delhi Rail Line on Bamnikhera Hassanpur road in Palwal Distt..

Introduction

Continuous monitoring of the road and rail line intersections in terms of delays caused to traffic is an important aspect for improving the level of service of road network. As per Indian Railways, the level crossings with more than one lakh TVUs (Tram Vehicle units) need to have ROB/RUBs. Accordingly, PWD (B&R) Haryana/HSRDC has proposed following Road over Bridges (ROBs) which are currently informed to be included in the railway programme:-

- a) Construction of Two lane ROB at Level X-ing No 564, of Mumbai Delhi Rail Line on Palwal Hassanpur road in Palwal Distt.
- b) Construction of Two lane ROB at Level X-ing No 561, of Mumbai Delhi Rail Line on Bamnikhera Hassanpur road in Palwal Distt..

At all these crossings the built up area of the town has extended up to the level crossing and the traffic volume is very heavy due to the location of the level crossings within the town. The train traffic data on the two intersections as per the Railway Census and the necessary Railway approvals is as indicated below:-

| Level Crossing | Tram Vehicle Units (TVUs) | Railway Correspondence Reference | Approval | Administrative Approval |
|---|-------------------------------------|---|-----------------|--|
| L/C No 564, of Mumbai Delhi Rail Line on Palwal Hassanpur road in Palwal Distt. | 5,41,822 of 2016-17 Railway Census. | DyCE/C/II/AGC/Misc/dt. 12.01.2017 for Rs. 47.78 Cr. | | The standing Finance Committee-'B' has approved the Public Work Department (B&R) for Rs. 40.59 Crore |
| L/C No 561, of Mumbai Delhi Rail Line on Bamnikhera Hassanpur road in Palwal Distt. | 4,95,639 of 2016-17 Railway Census. | DyCE/C/II/AGC/Misc/dt. 12.01.2017 for Rs. 48.88 Cr. | | The standing Finance Committee-'B' has approved the Public Work Department (B&R) for Rs. 48.12 Crore |

Keeping in view the mixed traffic and severe difficulty encountered by people in these locations and assessing the TVUs much more than the mandatory minimum 1 lakh TVUs necessary to have an ROB/RUB, it has been decided by the Govt. of Haryana as well as Railways authorities to construct the 2 Road Over Bridges (ROBs) on cost sharing basis at the respective level crossings.



Projects Details

The broad technical details of the proposed ROB's are as summarized below:-

| Details | a) LC 564 in Palwal District | b) LC 561 in Palwal District |
|---|--|--|
| RD of Road | 1.400 km | 0.318 |
| RD of railway track | 1478/7-9 | 1470/11-13 |
| Nearby town | Lohagarh , Palwal | Bamnikhhera, Palwal |
| Railway span or length | 56.16m | 42.58m |
| Road | | |
| Ramp on stilts | 420.00m | 535.20m |
| Ramp on Solids | 475.20m | 434.50m |
| Total length | 895.20m | 967.70m |
| Service roads with drains | 3.30m CCP road with side drain | 3.30m CCP road with side drain |
| Typical Cross section | Two lane with footpath | Two lane with footpath |
| Gradient | 1:40 | 1:30 & 1:40 |
| Structural arrangement Foundation Substructure Super structure | Piles with pier & pier cap with RCC Girder & Deck slab | Piles with pier & pier cap with RCC Girder & Deck slab |
| Pavement Composition | CBR 7% | CBR 7% |
| GSB | 230mm | 230mm |
| WMM | 250mm | 250mm |
| DBM | 125mm | 125mm |
| BC | 40mm | 40mm |
| PCU | 5952 | 11977 |
| Land Acquisition | -Nil- | -Nil- |
| ESMS Categorization | | |
| Environment | E-2 | E-2 |
| Social | S-3 | S-3 |

Project Cost & Financing

PWD (B&R), Haryana through HSRDC is the implementing agency for all the projects. The works are proposed to be carried out after calling competitive tenders from contractual agencies. The total estimated cost of the 2 ROB projects as approved by the Railway authorities is indicated as follows:-



(Rs. In Cr.)

| S.No. | Description | Total Cost |
|-------|---|--------------|
| a) | Construction of Two lane ROB at Level X-ing No 564, of Mumbai Delhi Rail Line on Palwal Hassanpur road in Palwal Distt. | |
| | Railway share | 16.57 |
| | PWD share | 31.21 |
| | Cost as per available Railway approval | 47.78 |
| | Total Estimated Cost | 47.78 |
| b) | Construction of Two lane ROB at Level X-ing No 561, of Mumbai Delhi Rail Line on Bamnikhera Hassanpur road in Palwal Distt. | |
| | Railway share | 19.47 |
| | PWD share | 29.41 |
| | Cost as per available Railway approval | 48.88 |
| | Total Estimated Cost | 48.88 |

Note: As requisite ESMS reports (IEE & SRP, as applicable) have been finalized, the related costs, if over & above, the provisions taken beforehand, shall have to be borne by State Govt. from its own resources.

As per agreement between Railways and PWD (B&R) while the cost of stilt portion, solid filled portion, diversion road shall be shared 50:50, cost of service roads, stair cases, bridge electrification shall be borne by PWD only.

Drawal Schedule and Sharing Pattern

The rates taken in the estimate are based on the MORTH database. The estimated project cost includes provision for shifting of utilities etc. Each of the ROB are proposed to be completed within two years from the date of actual commencement of work. Accordingly, the target date of completion of project can be taken as **two years** from issue of sanction letter, as per the following financing structure:-

- a) Construction of Two lane ROB at Level X-ing No 564, of Mumbai Delhi Rail Line on Palwal Hassanpur road in Palwal Distt.

(Rs. In Cr.)

| Year | Loan from NCRPB | Contribution from State Govt. & Railways | Tenure for Loan | Moratorium period | Phasing of expenditure on works |
|---------|-----------------|--|-----------------|-------------------|---------------------------------|
| 2017-18 | 8.19 | 8.53 | 10 | 2 | 16.72 |
| 2018-19 | 15.22 | 15.84 | 9 | 1 | 31.06 |
| Total | 23.41 | 24.37 | | | 47.78 |



- b) Construction of Two lane ROB at Level X-ing No 561, of Mumbai Delhi Rail Line on Bamnikhera Hassanpur road in Palwal Distt.

(Rs. In Cr.)

| Year | Loan from NCRPB | Contribution from State Govt. & Railways | Tenure for Loan | Moratorium period | Phasing of expenditure on works |
|---------|-----------------|--|-----------------|-------------------|---------------------------------|
| 2017-18 | 7.72 | 9.39 | 10 | 2 | 17.11 |
| 2018-19 | 14.34 | 17.43 | 9 | 1 | 31.77 |
| Total | 22.06 | 26.82 | | | 48.88 |

Abstract of the 2 ROB projects are as enclosed at **Appendix 1A, 1B.**

Point for Decision

In case of RoBs wherein the project is approved by Railway authorities and the project cost shared, NCRPB considers the Railway approved estimated cost and cost sharing and provides for loan on the agency share. Accordingly, the loan for the RoB LC 564, & LC 561 have been arrived at, based on the PWD(B&R) share in the available Railway approved estimated cost sharing amounts. The requisite details regarding Project cost, approvals etc. have been provided by Government of Haryana duly vetted/sanctioned by the Railway authorities.

(Rs. In Cr.)

| Level Crossing | Railway Approval Correspondence Reference | Railway Sanctioned Cost and Share | | Cost as per available Railway approval | Estimated Cost | Loan from NCRPB |
|----------------------------------|--|-----------------------------------|-----------|--|----------------|--------------------|
| | | Railway | PWD (B&R) | | | |
| LC 564 in Palwal District | DyCE/C/II/AGC/Misc/ dt. 12.01.2017 for Rs. 47.78 Cr. | 16.57 | 31.21 | 47.78 | - | 23.41 [#] |
| LC 561 in Palwal District | DyCE/C/II/AGC/Misc/ dt. 12.01.2017 for Rs. 48.88 Cr. | 19.47 | 29.41 | 48.88 | - | 22.06 [#] |

[#]loans have been calculated based on PWD share in the available Railway approved project estimates

PWD (B&R), Haryana is in process of carrying out the necessary ESMS studies and shall comply with the requirements. As requisite ESMS reports (IEE & SRP, as applicable) have been finalized, the related costs, the provisions taken beforehand, shall have to be borne by State Govt. from its own resources. The Implementing Agency also needs to explore the possibilities regarding incorporation of Rain Water Harvesting mechanisms and other environment improvement measures along the road as a ground water recharging measures which should be made part of all current & future road development schemes.



The State Govt. of Haryana is seeking loan of 75% of its share from the NCRPB. The loan amounts for the projects scheduled to be released subsequent financial year as per project eligibility, will carry interest rate as applicable on the date of release of loan installment. The principal amount along with interest is to be repaid in 10 years with a moratorium period of 2 years. Accordingly, PSMG-I may sanction respective loan amounts as indicated below:

- Loan amount of **Rs. 23.41Cr.** for the project of “Construction of Two lane ROB at Level X-ing No 564, of Mumbai Delhi Rail Line on Palwal Hassanpur road in Palwal Distt.”;
- Loan amount of **Rs. 22.06 Cr.** for the project of “Construction of Two lane ROB at Level X-ing No 561, of Mumbai Delhi Rail Line on Bamnikhera Hassanpur road in Palwal Distt.”;

The target date of completion of project shall be two years from issue of sanction letter. The loan will be subject to Govt of Haryana making suitable budgetary provisions in the Annual Budgets and also undertaking to complete the project as per approved DPR. Any cost increase over and above the current estimates, shall be borne by the agency from its own sources and all efforts to complete the project be ensured accordingly.

In addition, the loan release for each of the project shall be subject to following, as applicable:-

- Land should be in possession of PWD B&R, Govt of Haryana/HSRDC as per the land records, as applicable
- Revised administrative approvals from Govt. of Haryana on the proposed and Railway approved cost against which loans have been sanctioned.
- Forest clearances, if any.
- The Environment Management Plan (EMP) along with the relevant mitigation measures provided in the ESMS reports will be part of the bid document for implementation during the construction period.
- A Social Impact Assessment identifying all the number of project affected person (PAP) and assessing the impact for all the projects and based on the impacts R&R plan has to be duly abided and taken care of. If there is any increase in fund requirement of R&R then PWD will provide additional funds to implement R&R.



Appendix-1A to Agenda 4.4A

I. General Particulars

| | | |
|---|---|--|
| 1 | Project | Construction of Two lane ROB at Level X-ing No 564, of Mumbai Delhi Rail Line on Palwal Hassanpur road in Palwal Distt. |
| 2 | Type of project | Road Over Bridge (ROB) Infrastructure |
| 3 | Whether project at same location has been earlier financed by NCRPB | No |
| 4 | Justification for project | As per Indian Railways, the level crossings with more than one lakh TVUs (Tram Vehicle units) need to have ROB/RUBs. As the average TVU at level crossing no. 564 at Palwal Hassanpur road on Mumbai Delhi Rail Line road - comes to 541824 units, a 2 lane Road over Bridge (ROB) has been proposed here to facilitate free movement of traffic. There is very heavy traffic volume on the stretch of road because the level crossing is located within the Palwal town which is one of the industrial towns of Haryana State. |
| 5 | Location | Palwal town, Haryana |
| 6 | Borrowing agency | Haryana Government |
| 7 | Implementing agency | Haryana Govt. through their Public Works, (B&R) Department. |
| 8 | Land availability | No Land acquisition required |

II. Financial features

| | | |
|----|---|---|
| 9 | Estimated cost of projects | Rs. 47.78 Cr. |
| 10 | Loan from NCRPB | Rs. 23.41 Cr |
| 11 | Interest rate | As applicable on the date of disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Haryana in the budget of corresponding financial year. |
| 13 | Other sources of funds | Rs. 24.37 Cr. to be contributed by State Govt. & Railway Deptt. |
| 14 | Tenure of loan | 10 years |
| 15 | Provision of State Govt. Guarantee | Not required as loan to be given to State Govt. |
| 16 | Other Security | Letter of Comfort from State Govt. |
| 17 | Stipulated date of completion | 24 months from issue of sanction letter |

III. Financial structure of project

(Rs. In Cr.)

| Year | Loan from NCRPB | Contribution from State Govt . | Tenure for Loan | Moratorium period | Phasing of expenditure on works |
|--------------|-----------------|--------------------------------|-----------------|-------------------|---------------------------------|
| 2017-18 | 8.19 | 8.53 | 10 | 2 | 16.72 |
| 2018-19 | 15.22 | 15.84 | 9 | 1 | 31.06 |
| Total | 23.41 | 24.37 | | | 47.78 |



Appendix-1B to Agenda 4.4B

I. General Particulars

| | | |
|---|---|---|
| 1 | Project | Construction of Two lane ROB at Level X-ing No 561, of Mumbai Delhi Rail Line on Bamnikhera Hassanpur road in Palwal Distt. |
| 2 | Type of project | Road Over Bridge (ROB) Infrastructure |
| 3 | Whether a project at the same location has been earlier financed by NCRPB | No |
| 4 | Justification for project | As per Indian Railways, the level crossings with more than one lakh TVUs (Tram Vehicle units) need to have ROB/RUBs. As the average TVU at level crossing no. 561 on Mumbai Delhi Rail Line - comes to 495629 units, a 2 lane Road over Bridge (ROB) has been proposed here to facilitate free movement of traffic. There is very heavy traffic volume on the stretch of road because the level crossing is located near the Palwal which is one of the industrial towns of Haryana State. |
| 5 | Location | Palwal town, Haryana |
| 6 | Borrowing agency | Haryana Government |
| 7 | Implementing agency | Haryana Govt. through their Public Works, (B&R) Department. |
| 8 | Land availability | No land acquisition required |

II. Financial features

| | | |
|----|---|---|
| 9 | Estimated total cost of projects | Rs. 48.88 Cr |
| 10 | Loan from NCRPB | Rs.22.06 Cr |
| 11 | Interest rate | As applicable on the date of disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Haryana in the budget of corresponding financial year. |
| 13 | Other sources of funds | Rs. 26.82 Cr. to be contributed by State Govt. & Railway Deptt. |
| 14 | Tenure of loan | 10 years |
| 15 | Provision of State Govt. Guarantee | Not required as loan to be given to State Govt. |
| 16 | Other Security proposed | Letter of Comfort from State Govt. |
| 17 | Stipulated date of completion | 24 months from issue of sanction letter |

III. Financial structure of project

(Rs. In Cr.)

| Year | Loan from NCRPB | Contribution from State Govt . | Tenure for Loan | Moratorium period | Phasing of expenditure on works |
|--------------|-----------------|--------------------------------|-----------------|-------------------|---------------------------------|
| 2017-18 | 7.72 | 9.39 | 10 | 2 | 17.11 |
| 2018-19 | 14.34 | 17.43 | 9 | 1 | 31.77 |
| Total | 22.06 | 26.82 | | | 48.88 |



Agenda Item No. 4.5: Up-gradation of Existing Sonapat – Rathdhana – Narela Road from km 2.31 to 14.80 in Sonapat District including Design of Bridges and Cross Drainage Works (stretch from ITI chowk to Safiabab village up-to Sonapat District boundary)

Introduction

The Transport Plan policies and strategies of the Regional Plan-2021 recommend that accessibility should be provided to all parts of the NCR to promote and support economic development. It further calls for linkages amongst regional centers and also sub-regional centers with efficient transport network for facilitating faster movement of traffic amongst such centers.

The high intensity of traffic on Sonipat – Rathdhana –Narela Road on account of its direct connectivity between the important districts of Haryana and Narela in Union Capital Delhi/NCR has aggravated the necessity of up gradation of the project road. The existing carriageway width of road is 5.5 mtr. The width is not found to be sufficient to accommodate the present demand of traffic. Congestion in some stretches of Sonipat – Rathdhana – Narela Road is often leading to delay in delivery of goods and services. Accordingly Haryana State Roads and Bridges Development Corporation Ltd. (HSRDC) under PWD (B&R) Haryana had proposed the project of “Up-gradation of Existing Sonapat – Rathdhana – Narela Road from km 2.31 to 14.80 in Sonapat District including Design of Bridges and Cross Drainage Works (stretch from ITI chowk to Safiabab village upto Sonapat District boundary)” and approached NCRPB to approve funds for the project. The total project cost is 101.81 cr.

Project Details

The project road in, starts from Y Junction of ITI chowk in Sonipat town of Haryana and extends up to Haryana Delhi Border of Sonipat District near Safiabab Village. The total length of the road is **13.27 kms.** which includes the design length of 12.31 Km and additional 780m length loop (from Km. 5.030 to Km. 5.810). With year 2017 (existing) traffic volume being 9347 PCU, the high intensity of traffic at Sonipat- Rathdhana-Narela Road specially on account of direct connectivity of Sonipat town with Narela, the present width of road is insufficient for the existing traffic. Looking at the existing traffic congestions in some stretches of the road and with projected traffic volume for the year 2033 being 20889 PCU, the agency has decided to widen the road stretch. Apart from Sonipat town, the project passes through some prominent villages that include Rathdhana, Jagdishpur, Akbarpur, Barota and Safiabab. Further, the road has one (1) major Junction (at NH-334 B), 29 minor junctions, 2 minor bridges (at Km 5+230 & at Km 10+630) and 3 culverts.

Summary of existing features

| S.no. | Particulars | Details |
|-------|-----------------|---|
| 1 | Start Point | Km. 19/4 of NH-334B at Y junction with ITI Chowk in Sonipat town i.e. Km. 2+310 of Project Road |
| 2 | End Point | Km 14+800 at Haryana-Delhi Border in Sonipat District |
| 3 | Total Length | 13.270 Km. |
| 4 | Right of Way(m) | Km 2+310 to km 10+400 : 20 meters |



| S.no. | Particulars | Details |
|-------|---------------------|---|
| | | Km 10+500 to 14+800: 12 meters |
| 5 | Carriage way | Generally, Intermediate lane (5.5m) with Earthen Shoulder |
| 6 | Minor Bridges | 02 Nos. |
| 7 | RCC Box | 01 Nos. |
| 8 | RCC Slab Culvert | 02 Nos. |
| 9 | Minor Junctions | 29 Nos. |
| 10 | Major Junction | 01 Nos. |
| 11 | Towns/Villages | 05 Nos. |
| 12 | Petrol Pumps | 02 Nos. |

Proposal

The project proposal primarily involves widening and strengthening of the 13 km road stretch from existing two lanes to four lanes with granular shoulder. The improvement proposal includes widening and strengthening of road to the desired configuration system including the provision of Geometric Improvements, Junction Improvements, Road Realignment, Cross Section/Widening Schedule, Design of Overlay and New Pavement, Surface and Pavement Drainage, Bridge and Culverts, Traffic control and safety measures, and miscellaneous. The project shall involve repair of the existing minor bridge and new construction of another minor bridge along with reconstruction of 2 RCC slabs on canal. Flexible pavements have been proposed with a composition of 40 mm BC, 60 mm DBM, 250 mm WMM, 230 mm GSB, 500 mm subgrade with minimum 8% CBR.

Drainage

Earthen Drain with a gentle side slope (1:4) having a depth of 1.0 with a steep gradient in the built up section of the proposed road is has been recommended. The RCC Box Drain has also been proposed at right side of the project alignment for the length of 3.7 Km (Approx.) from RD 5700 meter to 10460 meter.

Proposed Location of RCC Box Type Drain

| S. No. | Chainage (in Km) | | Length (in Km) |
|--------|------------------|---------|----------------|
| | From (Km) | To (Km) | |
| 1 | 5+860 | 6+450 | 0.590 |
| 2 | 6+880 | 7+010 | 0.130 |
| 3 | 7+075 | 8+200 | 1.125 |
| 4 | 8+250 | 8+622 | 0.372 |
| 5 | 8+635 | 9+534 | 0.899 |
| 6 | 9+543 | 9+785 | 0.242 |
| 7 | 9+855 | 10+083 | 0.228 |



Improvement of Junctions

Improvement of all major and minor intersections along the project corridor have been proposed. To enhance the efficiency of the intersections suitable traffic control measures and necessary traffic management measures are proposed to be taken. The improvements suggested at the major intersections as a part of short term recommendation includes providing of adequate corner radii and sufficient turning radii, Flaring approaches towards intersections, providing channelizers/division islands/ landscaping and providing signage/lane markings/street lighting

Improvement proposal for culverts & bridges

There are 2 minor bridges and 3 culverts existing along the corridor. There is a drain (Nallah) which is having 2 minor bridges at two different locations, and 3 culverts on water streams. Out of three, two are slab culverts and one is RCC box. Due to the poor condition of the culverts, 2 box culverts has been proposed for reconstruction. A provision of new minor bridge has been proposed at design chainage 5+820.

The design period for the road is taken up for 15 years. No land acquisition has been informed to be involved in this project.

Project Cost & Financing

The component-wise break up of cost estimate for each of the project is as presented below:-

| S. No | Description | Amount (In Cr.) |
|----------|--|-----------------|
| 1 | Site Clearance | 0.65 |
| 2 | Earthwork | 2.64 |
| 3 | Sub base, Base (Non Bituminous) & Shoulders | 11.72 |
| 4 | Flexible Payment | 13.03 |
| 5 | Road Side Drain (RCC) | 1.82 |
| 6 | Traffic Signs, Road Marking and other apputenances | 0.61 |
| 7 | Miscellaneous | 0.21 |
| 8 | Box Drain (Nallah) | 3.48 |
| 9 | Cross Drainage Structures | 63.62 |
| A | Total cost of road works | 97.76 |
| B | Utility Relocation (Shifting of utilities like electric pole & Hand Pump) | 1.37 |
| | Miscellaneous Cost | 0.00 |
| | 0.25% of A for Contingency | 0.24 |
| | 2.5% of A for Supervision Charges | 2.44 |
| C | Total Miscellaneous Cost | 2.69 |
| D | Total Cost of the Project = A+B+C | 101.81 |



The total revised estimated cost of the project amounting to Rs.101.81 Cr. is proposed to be met as under:-

| | |
|---------------------------------------|--------------|
| Loan amount from NCRPB @ 75% | Rs.76.36 cr |
| PWD (B&R)Govt. of Haryana, Share @25% | Rs.25.45 cr. |

Abstract of the project is as enclosed at **Appendix 1.**

Drawl Schedule and Sharing Pattern

The target duration of completion for this project has been taken as 24 months from the date of issue of sanction letter. PWD (B&R), Haryana shall be implementing the project through financial assistance from NCRPB as per the following phasing & schedule:-

(Rs. in Cr.)

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 30.54 | 10.18 | 10 years | 2 years | 40.72 |
| 2018-19 | 45.82 | 15.27 | 9 years | 1 year | 61.09 |
| Total | 76.36 | 25.45 | | | 101.81 |

Appraisal of DPR

The project was appraised from planning, financial, environmental & social point of view. The report was accordingly revised. Concern was flagged raised regarding repeated practice of revising scope and estimates of projects after approval of loans from NCRPB. Project cost revised from earlier estimate of Rs. 80.22 Cr. to Rs. 101.81 Cr. Information regarding traffic surveys & analysis which were earlier missing were included. Out of the total project estimates, about Rs. 62 Cr. is expected to be spent on a box drain.

The project involves covering of drain no. 6 along a 200 meter stretch. Drain No. 6 belongs to Irrigation Department who in turn had given its consent and NOC for any construction work such as covering of open drain no. 6 to Municipal Corporation Sonipat within Sonipat limits. The same No Objection has been extended by Municipal Corporation to PWD B&R in this regard.

The necessity for the box drain in the project which constitutes 66% of total cost of road works excluding utility shifting, contingency and supervision charges etc. has been justified by the Department by informing that the other option of having a retaining wall along the road would have costed just as much but having a box drain would provide the additional width required for four laning the road, prevent foul smell emanating from open drain, improve aesthetics besides option for future widening.

As per the details available, the project has been categorized as E-2 regarding environment aspect and S-3 regarding social aspect. The IEE report has been submitted and the proposed Environment Management Plan is to be followed by the Agency during project implementation.



Point for Decision:

It is proposed that loan assistance of **Rs. 76.36 Cr.** for the project – Up-gradation of Existing Sonapat – Rathdhana – Narela Road from km 2.31 to 14.80 in Sonapat District including Design of Bridges and Construction & Demolition Works (stretch from ITI chowk to Safiabab village up-to Sonapat District boundary” in the State of Haryana against estimated cost of **Rs. 101.81 Cr.** may be approved as per project details. The loan will carry an interest rate as applicable for basic infrastructure project on the date of release of instalment. The principal along with interest is to be repaid in 10 years with a moratorium period of 2 years for principal. The project is to be completed in 2 years from date of issue of sanction letter. The loan will be subject to Govt of Haryana making suitable budgetary provisions in the Annual Budgets and also undertaking to complete the project as per approved DPR. Any cost increase over and above, the current estimates, shall be borne by the agency from its own sources and all efforts to complete the project be ensured accordingly. In addition the loan release shall be subject to:-

- Requisite administrative & financial approvals for the revised estimates (if any) to be provided by PWD (B&R)
- MoEF & CC clearances, if any to be obtained by PWD (B&R) Govt. of Haryana
- The Environment Management Plan (EMP) along with the relevant mitigation measures provided in the ESMS reports will be part of the bid document for implementation during the construction period.



APPENDIX-I to Agenda 4.5

I. General Particulars

| | | |
|---|---|---|
| 1 | Project | Up-gradation of Existing Sonapat – Rathdhana – Narela Road from km 2.31 to 14.80 in Sonapat District including Design of Bridges and CD Works (stretch from ITI chowk to Safiabab village up-to Sonapat District boundary ” |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Y Junction of ITI chowk, Sonipat town and ends at Haryana Delhi Border of Sonipat District near Safiabab Village. The total length of the road is 13.270 kms. |
| 5 | Borrowing agency | Haryana Government |
| 6 | Implementing agency | PWD (B&R), Haryana |
| 7 | Length | 13.270 km |
| 8 | Land availability & land acquisition | NOC required from Irrigation Department for a stretch of 200 meters. The remaining land is in the possession of IA |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 101.81 Crore |
| 10 | Loan from NCRPB | Rs. 76.36 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Haryana in the budget of corresponding financial year. |
| 13 | State Government of Haryana funds | Rs. 25.45 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Haryana along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter |

Rs. 101.81 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 30.54 | 10.18 | 10 years | 2 years | 40.72 |
| 2018-19 | 45.82 | 15.27 | 9 years | 1 year | 61.09 |
| Total | 76.36 | 25.45 | | | 101.81 |



Agenda Item No. 4.6: Construction of link road from Rewari-Narnaul road to Rewari Jhajjar via Rewari Dadri road and Rewari Mohindergarh Road including 3 no. ROBs (Proposed Bye-pass), Rewari

Introduction

The strategies of the Regional Plan-2021 recommend that accessibility should be provided to all parts of the NCR to promote and support economic development. It further calls for linkages amongst regional centres and also sub-regional centres with efficient transport network for facilitating faster movement of traffic amongst such centres.

The Government of Haryana (GOH) is contemplating to enhance the traffic capacity and safety for efficient transshipment of goods as well as passenger traffic on some of the selected heavily trafficked stretches / corridors of State Highways and some other important district roads. Presently, the Government has decided to create new links/Bye Pass and also convert some of the existing single / two lane roads into two lane with / without paved shoulder / four lane roads.

Accordingly Haryana State Roads and Bridges Development Corporation Ltd. (HSRDC) has proposed the project of “Construction of link road from Rewari Narnaul Road to Rewari Jhajjar Road via Rewari Dadri Road and Rewari Mohindergarh Road including 3-Nos of ROB’s (Proposed Bye Pass)” and approached NCRPB to approve funds for the project. The total project cost is 176.20 cr. The design period is taken up for 15 years.

Project Details

The proposed bypass from Rewari Narnaul road to Rewari Jhajjar Road via Rewari Dadri Road and Rewari Mohindergarh road starts at Rewari Jhajjar Road (Km 0.00) and ends at Rewari Narnaul Road (Km 5.06). The project corridor is by-pass facility to the traffic of Rewari Jhajjar road, Rewari Dadri Road, Rewari Mohindergarh road and Rewari Narnaul Road. It has got four connecting roads with NH8 and it also connects the emerging economic zone of Manesar and Gurgaon. The total length of the road is 5.06 Kms. The projected traffic volume is 16858 PCU in 2017 and is 35047 PCU in 2032.

Table: Name and Chainage of Roads/ROB connected by Project Road

| Sl. No. | Chainage of Project Road | Name of Road and ROB |
|----------------|---------------------------------|---|
| 1. | 0.000 km | Rewari Jhajjar road |
| | 0.805 km | ROB near LC-2 on Rewari-Bhatinda Railway Line (Railway RD: 2.920) |
| 2. | 2.520 km | Rewari Dadri road |
| 3. | 4.0313 km | ROB near LC-62 on Rewari-Mohindergarh Railway Line (Railway RD: 86.363) |
| 4. | 4.050 km | Rewari Mohindergarh road |
| | 5.0282 | Rewari Narnaul Railway Line (Railway RD: 3.3255) |
| | 5.055 km | Rewari Narnaul road |



Due to industrial development activities, this corridor is having significant movement of heavily loaded vehicles. Besides, there falls three level crossings namely LC-4, LC-62 and LC-2 on Rewari Narnaul road, Rewari Mohindergarh road and Rewari Jhajjar road respectively nearby the proposed road. During emergency, when the railway barriers are closed, services like ambulance, fire also suffers. Level crossings when closed, also lead to waste of time and fuel. In line with the existing scenario, CVPD values (12,776 in March, 2017) are also found to be on a higher side. Heavy traffic entering into city area thus leading to traffic jam in Rewari city throughout the day.

The scope of the project has been divided into two portions; one is Road Portion and the other is ROB Portion. The road portion includes 4-lane road to be constructed. The cross section width of the road is 26.00m. 7.0 m clear carriage way will be provided with 1.50 m paved shoulder and 2.0m earthen shoulder on both sides. The size of median will be 5 m. Plantation to be provided along the major road.

The ROB portion includes construction of 3 ROB's as per Railways/MORT&H design requirements by giving due consideration to safety and economy of the project. Proper service lanes to be provided along the ROB's for easy movement to the users in the vicinity of proposed by-pass. Rain water harvesting wells are proposed for recharging the ground water table through surface runoff.

Table: Summary of Proposed Features

| SL No. | Particulars | Details |
|--------|--|---|
| 1 | Start Point | Rewari Jhajjar Road (Km 0.00) |
| 2 | End Point | Rewari Narnaul Road (Km 5.06) |
| 3 | CPVD value considered for design purpose | 8305 |
| 4 | Total Length | 5.06 Kms |
| 5 | Right of Way(m) | 45.0 m (except at major junctions/minor junctions) |
| 6 | With of Carriage way | 7.0 m on each side |
| 7 | Width of Paved Shoulders | 1.50 m |
| 8 | Side slopes for Proposed Embankment | 2:1 |
| 9 | Drainage | Unlined trapezoidal drain in open area lined drains with ROB's. |
| 10 | Cross Drainages | 9 Hume Pipes with 0.600 m dimension |
| | | 1 RCC Box-Bridge with 2 x 2 m dimension |
| | | 1 RCC Box-Bridge with 4 x 2.5 m dimension |
| 11 | ROB at Rewari-Bhatinda (Railway RD-2.920) | Length – 1070 m Width – 21.50 m |
| 12 | ROB at Rewari - Mohindergarh (Railway RD-86.363) | Length – 994.08 m Width – 21.50 m |
| 13 | ROB at Rewari - Narnaul (Railway RD- 3.3255) | Length – 1651.329 m Width – varies from 24 m to 15.50 m. |



The propose pavement with CBR 8% and MSA 143.1 to be constructed with the following composition:

| | | |
|----|--------------------------------|--------|
| 1. | Bituminous Concrete (BC) | 50 mm |
| 2. | Dense Bituminous macadam (DBM) | 135 mm |
| 3. | Wet Mix Macadam (WMM2) | 125 mm |
| 4. | Wet Mix Macadam (WMM1) | 125 mm |
| 5. | Granular Sub-base (GSB2) | 100 mm |
| 6. | Granular Sub-Base (GSB1) | 100 mm |
| 7. | Camber in metalled portion | 2.50 % |
| 8. | Camber in Paved Shoulder | 3.00 % |

The improvement proposal includes the provision of Geometric Improvements, Junction Improvements, Design of Overlay and New Pavement, Surface and Pavement Drainage, Bridge and Culverts, Traffic control and safety measures, and Miscellaneous.

The T- Junctions/X-intersections have been proposed for improvement as per IRC standard where the existing roads would be crossing the proposed by pass road.

Status of Land

As informed by Department, sufficient B&R/Government Land (Right of Way) is available and land has already been acquired. However, 0.97 Ha. of forest land needs to be diverted for this project.

In the railway portion, construction will be done by the State Government.

Project Cost & Financing

| S. No | Description | Amount (In Cr.) |
|--------------|--|------------------------|
| A. | Cost of ROB near LC no.-2 | 41.51 |
| i | Cost of Stilted Portion | 20.13 |
| ii | Cost of Reinforced earth wall | 3.84 |
| iii | Cost of Approach Road | 6.74 |
| iv | Cost of Electrification, Service roads/Slip Roads, RCC Drain along service road, Rainwater Harvesting and Stair Case | 3.04 |
| v | Cost of Stilted Railway Portion | 7.76 |
| B. | Cost of ROB near LC no.-4 | 64.65 |
| i | Cost of Stilted Portion | 33.65 |
| ii | Cost of Reinforced earth wall | 7.54 |
| iii | Cost of Approach Road | 11.23 |
| iv | Cost of Electrification, Service roads/Slip Roads, RCC Drain along service road, Rainwater Harvesting and Stair Case | 4.43 |
| v | Cost of Stilted Railway Portion | 7.80 |
| C. | Cost of ROB near LC no.-62 | 36.80 |
| i | Cost of Stilted Portion | 18.41 |
| ii | Cost of Reinforced earth wall | 3.60 |



| S. No | Description | Amount (In Cr.) |
|-----------|--|-----------------|
| iii | Cost of Approach Road | 6.14 |
| iv | Cost of Electrification, Service roads/Slip Roads, RCC Drain along service road, Rainwater Harvesting and Stair Case | 2.40 |
| v | Cost of Stilted Railway Portion | 6.25 |
| D. | Cost of Road Work | 15.06 |
| I | Cost of Road Portion | 14.05 |
| ii | Cost of Box type Bridge including 2.0m span and 4.0m span and Hume Pipe | 1.01 |
| E. | Total (A to D) | 158.02 |
| F. | Contingency, Supervision, Consultancy charges etc. | 8.3 |
| G. | Consultancy service | 0.38 |
| H. | Utility Shifting of 33 KV/11KV/LT line crossing pole | 1.65 |
| I. | Environment and Social Management System Cost | 0.17 |
| J. | Plantation in Central Verge | 0.15 |
| K. | Deforestation | 1.00 |
| L. | Total (E to K) | 169.67 |
| M. | 40% Financial Progress in 1 st Year on "L" | 68.00 |
| N. | 60% Financial Progress in 2 nd Year with escalation @6%*** | 108.00 |
| | Total (M to N) | 176.00 |

*** Escalated rate @ 6% calculated in second year.

The total revised estimated cost of the project amounting to Rs.176.00 Cr. is proposed to be met as under:-

| | |
|---|--------|
| Loan amount from NCRPB @ 75% | 132.00 |
| Govt. of Haryana, HSRDC, Haryana Share @25% | 44.00 |

Abstract of the project is as enclosed at **Appendix 1.**

Drawl Schedule and Sharing Pattern

The target duration of completion for this project has been taken as 32 months from the date of issue of sanction letter. PWD (B&R), Haryana shall be implementing the project through financial assistance from NCRPB as per the following phasing & schedule:-

| (Rs. In Cr.) | | | | | |
|--------------|--------------------------|--|----------------|-------------------|------------------------|
| Year | Loan from NCRPB (in Cr.) | Contribution from State Govt. (in Cr.) | Tenure of Loan | Moratorium period | Phasing of expenditure |
| 2017-18 | 52.80 | 17.60 | 10 | 2 | 70.40 |
| 2018-19 | 79.20 | 26.40 | 9 | 1 | 105.60 |
| Total | 132.00 | 44.00 | | | 176.00 |



Appraisal of DPR

Technical, financial, environmental & social appraisal of the project reports have been done by available sector experts / consultants available in NCRPB. Agency was requested to revise its submission and prepare a consolidated DPR indicating the Projected Traffic Volume, summary of costs for road construction and construction of 3 ROB's etc. Regarding land, 0.97 Ha. of forest land, agency has informed that land under Forest area is to be received from District Forest Officer, and an online case (FP/HR/Road/26730/2017) has been applied to the Forest Department for the same.

Under various iterations, the final project estimated cost was Rs. 176.00 Cr. The total cost is being borne by PWD (B&R) and no cost is being shared by Railways who, however, GAD has been approved by them but design of railway portion stands submitted to Railways and is awaiting approval.

The project has been categorized as E-2 regarding environment aspect and S-3 regarding social aspect.

Project Benefits and Outcomes

The proposed road is a new link connecting Rewari Jhajjar road to Rewari Narnaul road via Rewari Dadri & Rewari Mohindergarh road. This connection shall act as a bye pass road for Rewari town and overall help in managing the heavy traffic on the network. As the new link is crossing 3 Railway lines, the need for the 3 ROB's arose as at grade crossing might have resulted in more congestion than providing solutions.

Point for Decision

It is proposed that loan assistance of **Rs. 132.00 Cr.** for the project “**Construction of link road from Rewari Narnaul Road to Rewari Jhajhar Road via Rewari Dadri Road and Rewari Mohindergarh Road including 3-Nos of ROB's (Proposed Bye Pass)**” in the State of Haryana against estimated cost of **Rs. 176.00 Cr.** may be approved as per project details. The loan will carry an interest rate as applicable for basic infrastructure project on the date of release of installment. The principal along with interest is to be repaid in 10 years with a moratorium period of 2 years for principal. The project is to be completed in 2 years from date of issue of sanction letter. The loan will be subject to Govt. of Haryana making suitable budgetary provisions in the Annual Budgets and also undertaking to complete the project as per approved DPR. Any cost increase over and above, the current estimates, shall be borne by the agency from its own sources and all efforts to complete the project be ensured accordingly.

In addition the loan release shall be subject to:-

- Requisite administrative & financial approvals for the revised estimates (if any) to be provided by PWD (B&R)
- The project involves execution of tasks to be done in the railway portion. Since the task is on deposit basis, cost approval from Railways is required.
- Land should be in possession of PWDB&R, G/o Haryana/PWD (B&R) as per land records.
- MoEF clearances, if any to be obtained.
- The Environment Management Plan (EMP) along with the relevant mitigation measures provide in the ESMS reports will be part of the bid document for implementation during the construction period.



APPENDIX-I to Agenda 4.6

I. General Particulars

| | | |
|---|---|---|
| 1 | Project | Construction of link road from Rewari Narnaul Road to Rewari Jhahhar Road via Rewari Dadri Road and Rewari Mohindergarh Road including 3-Nos of ROB's (Proposed Bye Pass) |
| 2 | Type of project | Infrastructure–Transportation |
| 3 | Whether a project at the same location has been earlier financed by NCRPB | No |
| 4 | Location | Starts at Rewari Jhajjar Road (Km 0.00) and ends at Rewari Narnaul Road (Km 5.06) |
| 5 | Borrowing agency | Haryana Government |
| 6 | Implementing agency | PWD (B&R), Haryana |
| 7 | Length | 5.06 kms |
| 8 | Land availability & land acquisition | Approval from District Forest Officer is in process for 0.97 Ha. of forest land to be used for this project. Permission for construction in the railway portion has been received from department of Railways. The remaining land is in the possession of PWD (B&R) |

II. Financial Particulars

| | | |
|----|---|---|
| 1. | Estimated total cost of project | 176.00 Cr |
| 2 | Loan from NCRPB | 132.00 |
| 3 | Interest rate | As applicable at the time of loan disbursement. |
| 4 | Provision in State Budget of Principal & interest | To be provided by Govt. of Haryana in the budget of corresponding financial year. |
| 5 | State Government of Haryana funds | Rs. 44.00 Cr. |
| 6 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 7 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 8 | Other Security proposed | Letter of comfort from Govt. of Haryana along with Loan Agreement |
| 9 | Stipulated date of completion | 24 months from the issue of sanction letter |

III Phasing of Expenditure & Loan Schedule

| Rs. in Cr. | | | | | |
|------------|--------------------------|--|----------------|-------------------|------------------------|
| Year | Loan from NCRPB (in Cr.) | Contribution from State Govt. (in Cr.) | Tenure of Loan | Moratorium period | Phasing of expenditure |
| 2017-18 | 52.80 | 17.60 | 10 | 2 | 70.40 |
| 2018-19 | 79.20 | 26.40 | 9 | 1 | 105.60 |
| Total | 132.00 | 44.00 | | | 176.00 |



Agenda Item No. 4.7: Widening, Strengthening and Development of various roads of Alwar District, Rajasthan

Introduction

NCRPB is in receipt of a request vide letter dated 15.09.2017 from Senior Town Planner (NCR), Rajasthan for loan assistance for Widening, Strengthening and up gradation of 38 no. of roads of Alwar District having a total length of 629.67 kms. The total estimated project cost as per Government of Rajasthan administrative approval is Rs. 968.48 Cr. and IA is seeking for loan assistance to the tune of Rs. 726.36 Cr (i.e., 75% of the project cost). After initial scrutiny, the DPR cost without 13% agency charges worked out to Rs. 824.68 Cr. with loan assistance of Rs. 618.39 Cr.

Need for the Projects

The Transport Plan policies and strategies of the Regional Plan-2021 recommend that accessibility should be provided to all parts of the NCR to promote and support economic development. It further calls for linkages amongst regional centers and also sub-regional centers with efficient transport network for facilitating faster movement of traffic amongst such centers.

Project Information

| (Rs. in Cr.) | | | | |
|--------------|--|-------------------|----------------|--------------------------|
| S. No. | Project* | Total Length (km) | Estimated Cost | Tentative Loan component |
| 1. | Upgradation Strengthening & Development work on Barod to Shahjhanpur Road C.C. in VILLAGE PORTION Km 0/0 to 9/900 , 10/750 to 14/600 & 15/400 to 16/400 (MDR-206) | 14.75 | 22.78 | 17.08 |
| 2. | Upgradation Strengthening & Development Reconstruction work on NH-8 to Pahadi Km 0/0 to 11/100) | 11.10 | 15.44 | 11.58 |
| 3. | Upgradation Strengthening & Development & Re-Construction work on Behror to Bhumarika Road Km 0/0 to 12/0 | 12.00 | 13.51 | 10.13 |
| 4. | Upgradation , Strengthening and development work of Harsoli-Ramnagar- Mirka-Baskripalnagar -Kishangarhbas- Mothuka-Thanaghda- Mubarikpur road | 44.00 | 56.48 | 42.36 |
| 5. | Upgradation Strengthening & Development & Re-Construction work on Tatarpur Chouraha-Sheopur KhanpurAhir JatBhagola Alipur Road Km 0/0 to 36/500 | 36.50 | 49.30 | 36.97 |
| 6. | Padisal –Jagta Basai- Ratta Khurd- Balan Basai-Shyamka-Ismailpur- Ganj-Kishangarhbas road | 24.00 | 25.68 | 19.26 |
| 7. | Development work of Pratapgarh-Ajabgarh-Burja Tiraya Road Km 0/0 to 25/0 (SH-77) | 25.00 | 34.59 | 25.94 |



| S. No. | Project* | Total Length (km) | Estimated Cost | Tentative Loan component |
|--------|--|-------------------|----------------|--------------------------|
| 8. | Upgradation of Road (3.75 Mtr. To 7.00 Mtr. Carrriageway) From Alwar to Matsya University at Haldeena Via Madanpuri Bhajeet Nangla Charan | 15.00 | 17.62 | 13.21 |
| 9. | Upgradation Strengthening & Development work on Various Road in Alwar City | 25.70 | 34.60 | 25.95 |
| 10. | Strengthening, widening & upgradation from 3.0 Mtrs to 7.0 Mtrs from Km 0/0 to 7/0 (Govindgarh to Shemla khurd) | 7.00 | 8.45 | 6.33 |
| 11. | Strengthening, widening & upgradation from 3.75 Mtrs to 7.0m from Km 0/0 to 12/0 (Barodameo Gandura Laxmangarh) | 12.00 | 15.88 | 11.91 |
| 12. | Upgradation , Strengthening and development work of Vijay Mandir Alwar to Ghatla-Padisal & Harsoli road via Khairthal road. | 28.00 | 42.42 | 31.81 |
| 13. | Strengthening and widening from 5.50 Mtrs to 7.0 Mtrs from Km 8/00 to 38/00 on Dausa Tehla Sariska road SH-29A | 30.00 | 18.31 | 13.73 |
| 14. | Upgradation, strengthening and development work on Dausa-Kundal-Gudha Katla Bandikui-Balaheri-Mandawar-Ghorsarana-Kathumar Road K.m. 74/00 to 102/00 SH-78 (old MDR-48) | 28.00 | 31.42 | 23.56 |
| 15. | Widening & Strengthening of existing culvert on Tehla Machari road SH 25 A Km 0/0 to 23/500 | 24.Nos. | 8.12 | 6.09 |
| 16. | Strengthening and widening from 5.50 Mtrs to 7.0 Mtrs from Km 0/0 to 4/500 widening from 3.0 mtr to 7.0 mtr of 26/300 & 32/400 on Tehla Rajgarh Garhi Sawairam road SH-25A | 10.60 | 10.61 | 7.95 |
| 17. | Upgradation strengthening and Development work on Rohara to Bara_Bhadrakol Via Reni-Machari road Km 76/0 to 90/0 (MDR-151) | 14.00 | 18.88 | 14.16 |
| 18. | Upgradation, Strengthening and development work of Goth Ki Chowki Bigota Road Km o/0 to 21/0 | 21.00 | 14.87 | 11.15 |
| 19. | Upgradation, Strengthening and development work of Ghat to Rajpur Bada Via Devti Km 0/0 to 10/800 | 10.80 | 14.87 | 11.15 |
| 20. | Upgradation, Strengthening and development work of Rajgarh to Karoth road Km 0/0 to 3/0 | 3.00 | 5.74 | 4.30 |
| 21. | Strengthening, widening & upgradation from 3.0 Mtrs to 7.0 Mtrs from Km 0/0 to 3/0 (A/ R to Baldevgarh) | 3.00 | 5.30 | 3.97 |
| 22. | Strengthening, widening & upgradation from 3.0 Mtrs to 7.0 Mtrs from Km 0/0 to 2/0 (Tilwad to Tilwadi) | 2.00 | 3.54 | 2.65 |



| S. No. | Project* | Total Length (km) | Estimated Cost | Tentative Loan component |
|--------|---|-------------------|----------------|--------------------------|
| 23. | Strengthening, widening & upgradation from 3.0 Mtrs to 7.0 Mtrs from Km 0/0 to 3/500 (SH-29A to Thana) | 3.50 | 6.12 | 4.59 |
| 24. | Strengthening, widening & upgradation from 3.0 Mtrs to 7.0 Mtrs from Km 0/0 to 3/500 (A/R to Ghatra) | 3.50 | 6.17 | 4.62 |
| 25. | Strengthening, widening & upgradation from 3.0 Mtrs to 7.0 Mtrs from Km 0/0 to 3/300 (Palpur to Kankrali Rampura) | 3.30 | 5.84 | 4.38 |
| 26. | Strengthening, widening & upgradation from 3.0 Mtrs to 7.0 Mtrs from Km 0/0 to 1/900 (A/R to Bhangarh) | 1.90 | 2.83 | 2.12 |
| 27. | Strengthening, widening & upgradation from 5.5 Mtrs to 7.0 Mtrs from Km 0/0 to 2/0 (A/R to Narayani Mata Mandir) | 2.00 | 2.83 | 2.12 |
| 28. | Strengthening, widening & upgradation from 5.5 Mtrs to 7.0 Mtrs from Km 0/0 to 12/0 (Kherli to Udaipura) | 12.00 | 13.30 | 9.97 |
| 29. | Strengthening, widening & upgradation from 5.5 Mtrs to 7.0 Mtrs from Km 0/0 to 12/0 (Kherli to Bhanokhar) | 12.00 | 15.87 | 11.90 |
| 30. | Development work of Alanpur-Bansur-Pratapgarh-Dhola Tala road km 25/0 to 70/0 (SH-52) | 45.00 | 69.09 | 51.81 |
| 31. | Upgradation, strengthening and development work on Ramgarh-Govindgarh-Sikari Nagar Road SH-45 K.m. 8/825 to 27/745 (Chidwai-Govindgarh upto Distt Border Section) | 18.92 | 29.70 | 22.27 |
| 32. | Development of Thanagazi Pratapgarh Dhola Tala road Km 99/0 to 120/200 | 21.20 | 28.87 | 21.65 |
| 33. | Upgradation, strengthening and development work on Natni Ka Bara Malakhera-Laxmangarh Kathumar Road (including Kathumar Bye pass Km 0/0 to 1/400) Km 25/0 to 61/0 SH-44 (Chimravali- Maujpur -Laxmangarh -Khudiyana Bareda Kathumar Section | 37.40 | 41.16 | 30.87 |
| 34. | Upgradation, strengthening and development work on Mahuwa-Mandawar-Garhi-Sawai Ram-Laxmangarh-Govindgarh Road SH-35 Km 60/000 to 70/0 (Laxmangarh - Jaluki - Govindgarh Section) | 10.00 | 14.21 | 10.65 |
| 35. | Upgradation strengthening and Development work on Harsoli- Bibirani- Kotkasim-Budhibawal- Tapukra road Km 45/0 to 57/200, 62/900 to 64/500 & 74/0 to 76/200 | 16.00 | 23.99 | 17.99 |



| S. No. | Project* | Total Length (km) | Estimated Cost | Tentative Loan component |
|--------|--|-------------------|----------------|--------------------------|
| 36. | Upgradation , Strengthening and development work of Kotkasim Ladpur-Tijara Firojpur Jhirka District Border Km 6/0 to 40/0 | 34.00 | 48.33 | 36.24 |
| 37. | Upgradation , Strengthening and development work of Alipur -Khedi- Khanpur Dagan- Pur-Nimlaka- Kalgaon- Hingwaheda -Tizara-Firozpur -Jhirka road | 24.00 | 34.00 | 25.50 |
| 38. | Upgradation Strengthening & Development & Re-Construction work on Tapukara to Milakpur Km 0/0 to 7/500 | 7.50 | 13.96 | 10.47 |
| | GRAND TOTAL | 629.67 | 824.68 | 618.39 |

* Brief details of each project are at Appendix-1 to 38.

Point for Decision

It is proposed that PSMG-I may take a view on the submitted request from PWD Rajasthan and accord approval for financial assistance by NCRPB on the aforementioned projects subject to the fulfilment of the following:-

- Requisite administrative & financial approvals from PWD, Rajasthan.
- Land should be in the name of & possession of PWD, Rajasthan as per the land records.
- Applicable clearances should be readily available from NHAI, Railways, Forest, Irrigation, Mining etc. whichever is applicable.
- Requisite Social & Environmental Reports, as applicable.
- Any other compliance as required by NCRPB relating to the appraisal of the submitted project proposals.
- Member Secretary, NCRPB may be authorised to take a decision in case of any issue which may arise in terms of technical feasibility, compliance of Statutory and Environment & Social requirements for the aforementioned projects.
- The interest rate shall be charged as per prevailing rate of interest applicable for road projects. The present rate is 7% pa.
- The projects are proposed to be completed in 24 months from the date of sanction letter.
- The principal along with interest is to be repaid in 10 years with a moratorium of 2 years for repayment of principal.
- The loan will be subject to Govt. of Rajasthan making suitable budgetary provisions in the Annual Budget and also undertaking to complete the project as per approved DPRs.
- Any cost increase over and above the current estimates shall be borne by the agency and all efforts to complete the projects be ensured accordingly.



APPENDIX- 1 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|---|
| 1 | Project | Upgradation Strengthening & Development work on Barod to Shahjhanpur Road C.C. in VILLAGE PORTION Km 0/0 to 9/900 , 10/750 to 14/600 & 15/400 to 16/400 (MDR-206) |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Barod town (on Alwar – Behror road) and ends at Shahjahanpur town (on NH-48) in Alwar District. The total length of the road is 14.75 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 14.75 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 22.78 Crore |
| 10 | Loan from NCRPB | Rs. 17.08 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 5.70 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 22.78 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 5.12 | 1.71 | 10 years | 2 years | 6.83 |
| 2018-19 | 10.25 | 3.42 | 9 years | 1 year | 13.67 |
| 2019-20 | 1.71 | 0.57 | 8 years | | 2.28 |
| Total | 17.08 | 5.70 | | | 22.78 |



APPENDIX- 2 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Upgradation Strengthening & Development Reconstruction work on NH-8 to Pahadi Km 0/0 to 11/100 |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Behror town on NH-8 (New NH-8) and ends at Pahadi village in Alwar District. The total length of the road is 11.10 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 11.10 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 15.44 Crore |
| 10 | Loan from NCRPB | Rs. 11.58 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 3.86 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 15.44 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 3.47 | 1.16 | 10 years | 2 years | 4.63 |
| 2018-19 | 6.95 | 2.32 | 9 years | 1 year | 9.27 |
| 2019-20 | 1.16 | 0.38 | 8 years | | 1.54 |
| Total | 11.58 | 3.86 | | | 15.44 |



APPENDIX- 3 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Upgradation Strengthening & Development & Re-Construction work on Behror to Bhumarika Road Km 0/0 to 12/0 |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Behror town of Alwar district and ends at Rajasthan state border at Bhumarika village of Haryana. The total length of the road is 12.0 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 12.0 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 13.51 Crore |
| 10 | Loan from NCRPB | Rs. 10.13 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 3.38 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 13.51 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 3.04 | 1.01 | 10 years | 2 years | 4.05 |
| 2018-19 | 6.08 | 2.03 | 9 years | 1 year | 8.11 |
| 2019-20 | 1.01 | 0.34 | 8 years | | 1.35 |
| Total | 10.13 | 3.38 | | | 13.51 |



APPENDIX- 4 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|---|
| 1 | Project | Upgradation , Strengthening and development work of Harsoli-Ramnagar- Mirka- Baskripalnagar - Kishangarhbas- Mothuka- Thanaghauda- Mubarikpur road |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Harsoli town passes through Kishangarhbas town and ends at Mubarikpur town of Alwar District. The total length of the road is 44.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 44.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 56.48 Crore |
| 10 | Loan from NCRPB | Rs. 42.36 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 14.12 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 56.48 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 12.71 | 4.24 | 10 years | 2 years | 16.95 |
| 2018-19 | 25.42 | 8.47 | 9 years | 1 year | 33.89 |
| 2019-20 | 4.23 | 1.41 | 8 years | | 5.64 |
| Total | 42.36 | 14.12 | | | 56.48 |



APPENDIX- 5 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Upgradation Strengthening & Development & Re-Construction work on Tatarpur Chouraha- Sheopur Khanpur Ahir Jat Bhagola Alipur Road Km 0/0 to 36/500 |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Tatarpur Chouraha and passes through rural area of Mundawar block and ends at Haryana border near Sanchod village of Alwar District. The total length of the road is 36.50 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 36.50 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 49.30 Crore |
| 10 | Loan from NCRPB | Rs. 36.97 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 12.33 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 49.30 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 11.09 | 3.70 | 10 years | 2 years | 14.79 |
| 2018-19 | 22.18 | 7.40 | 9 years | 1 year | 29.58 |
| 2019-20 | 3.70 | 1.23 | 8 years | | 4.93 |
| Total | 36.97 | 12.33 | | | 49.30 |



APPENDIX- 6 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Padisal –Jagta Basai- Ratta Khurd- Balan Basai- Shyamka-Ismaipur- Ganj- Kishangarhbas road |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Y junction at Padisal and ends at Kishangarhbas on Alwar-Bhiwadi Mega Highway in Alwar District. The total length of the road is 24.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 24.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 25.68 Crore |
| 10 | Loan from NCRPB | Rs. 19.26 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 6.42 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 25.68 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 5.78 | 1.93 | 10 years | 2 years | 7.71 |
| 2018-19 | 11.56 | 3.85 | 9 years | 1 year | 15.41 |
| 2019-20 | 1.92 | 0.64 | 8 years | | 2.56 |
| Total | 19.26 | 6.42 | | | 25.68 |



APPENDIX- 7 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Development work of Pratapgarh-Ajabgarh-Burja Tiraya Road Km 0/0 to 25/0 (SH-77) |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Pratapgarh town and ends at Y junction (Burja Tiraya) on Tehla Dausa road in Alwar District. The total length of the road is 25.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 25.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 34.59 Crore |
| 10 | Loan from NCRPB | Rs. 25.94 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 8.65 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 34.59 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 7.78 | 2.60 | 10 years | 2 years | 10.38 |
| 2018-19 | 15.56 | 5.19 | 9 years | 1 year | 20.75 |
| 2019-20 | 2.60 | 0.86 | 8 years | | 3.46 |
| Total | 25.94 | 8.65 | | | 34.59 |



APPENDIX- 8 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Upgradation of Road (3.75 Mtr. To 7.00 Mtr. Carrriageway) From Alwar to Matsya University at Haldeena Via Madanpuri Bhajeet Nangla Charan |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Alwar City Bypass and ends at Matsya University, Haldeena in Alwar District. The total length of the road is 15.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 15.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 17.62 Crore |
| 10 | Loan from NCRPB | Rs. 13.21 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 4.41 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 17.62 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 3.96 | 1.32 | 10 years | 2 years | 5.28 |
| 2018-19 | 7.93 | 2.65 | 9 years | 1 year | 10.58 |
| 2019-20 | 1.32 | 0.44 | 8 years | | 1.76 |
| Total | 13.21 | 4.41 | | | 17.62 |



APPENDIX- 9 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Upgradation Strengthening & Development work on Various Road in Alwar City |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | These project roads are main roads of the Alwar City. The total length of the road is 25.70 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 25.70 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 34.60 Crore |
| 10 | Loan from NCRPB | Rs. 25.95 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 8.65 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 34.60 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 7.79 | 2.60 | 10 years | 2 years | 10.39 |
| 2018-19 | 15.57 | 5.19 | 9 years | 1 year | 20.76 |
| 2018-19 | 2.59 | 0.86 | 8 years | | 3.45 |
| Total | 25.95 | 8.65 | | | 34.60 |



APPENDIX- 10 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|---|
| 1 | Project | Strengthening, widening & upgradation from 3.0 Mtrs to 7.0 Mtrs from Km 0/0 to 7/0 (Govindgarh to Shemla Khurd) |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Govindgarh town and ends at Shemla Khurd village on Alwar district boundary. The total length of the road is 7.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 7.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 8.45 Crore |
| 10 | Loan from NCRPB | Rs. 6.33 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 2.12 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 8.45 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 1.90 | 0.64 | 10 years | 2 years | 2.54 |
| 2018-19 | 3.80 | 1.27 | 9 years | 1 year | 5.07 |
| 2019-20 | 0.63 | 0.21 | 8 years | | 0.84 |
| Total | 6.33 | 2.12 | | | 8.45 |



APPENDIX- 11 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Strengthening, widening & upgradation from 3.75 Mtrs to 7.0m from Km 0/0 to 12/0 (Barodameo Gandura Laxmangarh) |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Govindgarh town and ends at Shemla Khurd village on Alwar district boundary. The total length of the road is 12.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 12.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 15.88 Crore |
| 10 | Loan from NCRPB | Rs. 11.91 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 3.97 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 15.88 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 3.57 | 1.19 | 10 years | 2 years | 4.76 |
| 2018-19 | 7.15 | 2.38 | 9 years | 1 year | 9.53 |
| 2019-20 | 1.19 | 0.40 | 8 years | | 1.59 |
| Total | 11.91 | 3.97 | | | 15.88 |



APPENDIX- 12 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|---|
| 1 | Project | Upgradation , Strengthening and development work of Vijay Mandir Alwar to Ghatla-Padisaal & Harsoli road via Khairthal road |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Y junction on Alwar Behror road from Vijay Mandir Dehra village and ends at Harsoli town & passes through Khairthal town in Alwar district. The total length of the road is 28.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 28.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 42.42 Crore |
| 10 | Loan from NCRPB | Rs. 31.81 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 10.61 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 42.42 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 9.54 | 3.18 | 10 years | 2 years | 12.72 |
| 2018-19 | 19.09 | 6.37 | 9 years | 1 year | 25.46 |
| 2019-20 | 3.18 | 1.06 | 8 years | | 4.24 |
| Total | 31.81 | 10.61 | | | 42.42 |



APPENDIX- 13 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|---|
| 1 | Project | Strengthening and widening from 5.50 Mtrs to 7.0 Mtrs from Km 8/00 to 38/00 on Dausa Tehla Sariska road (SH-29A) |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Alwar district boundary near Gola ka Bas town and ends at Tehla town in Alwar district. The total length of the road is 30.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 30.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 18.31 Crore |
| 10 | Loan from NCRPB | Rs. 13.73 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 4.58 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 18.31 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 4.12 | 1.37 | 10 years | 2 years | 5.49 |
| 2018-19 | 8.24 | 2.75 | 9 years | 1 year | 10.99 |
| 2019-20 | 1.37 | 0.46 | 8 years | | 1.83 |
| Total | 13.73 | 4.58 | | | 18.31 |



APPENDIX- 14 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|---|
| 1 | Project | Upgradation, strengthening and development work on Dausa-Kundal-Gudha Katla Bandikui-Balaheri-Mandawar-Ghorsarana-Kathumar Road Km 74/00 to 102/00 SH-78 (old MDR-48) |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Alwar-Dausa district boundary and ends at Kathumar town in Alwar district. The total length of the road is 28.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 28.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 31.42 Crore |
| 10 | Loan from NCRPB | Rs. 23.56 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 7.86 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 31.42 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 7.07 | 2.36 | 10 years | 2 years | 9.43 |
| 2018-19 | 14.14 | 4.72 | 9 years | 1 year | 18.86 |
| 2019-20 | 2.35 | 0.78 | 8 years | | 3.13 |
| Total | 23.56 | 7.86 | | | 31.42 |



APPENDIX- 15 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|---|
| 1 | Project | Widening & Strengthening of existing culvert on Tehla Machari road (SH 25 A) Km 0/0 to 23/500 |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Tehla town and ends at Rajgarh town in Alwar district. The total 24 CD works will be widened in the length of 23.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 24 CD works |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 8.12 Crore |
| 10 | Loan from NCRPB | Rs. 6.09 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 2.03 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 8.12 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 1.83 | 0.61 | 10 years | 2 years | 2.44 |
| 2018-19 | 3.65 | 1.22 | 9 years | 1 year | 4.87 |
| 2019-20 | 0.61 | 0.21 | 8 years | | 0.81 |
| Total | 6.09 | 2.03 | | | 8.12 |



APPENDIX- 16 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Strengthening and widening from 5.50 Mtrs to 7.0 Mtrs from Km 0/0 to 4/500 widening from 3.0 mtr to 7.0 mtr of 26/300 & 32/400 on Tehla Rajgarh Garhi Sawairam road SH-25A |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Tehla town and ends at Machari Tiraha in Alwar district. The total length of the road is 10.60 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 10.60 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 10.61 Crore |
| 10 | Loan from NCRPB | Rs. 7.95 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 2.66 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 10.61 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 2.39 | 0.80 | 10 years | 2 years | 3.19 |
| 2018-19 | 4.77 | 1.60 | 9 years | 1 year | 6.37 |
| 2019-20 | 0.79 | 0.26 | 8 years | | 1.05 |
| Total | 7.95 | 2.66 | | | 10.61 |



APPENDIX- 17 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|---|
| 1 | Project | Upgradation strengthening and Development work on Rohara to Bara Bhadkol Via Reni-Machari road Km 76/0 to 90/0 (MDR-151) |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Reni Town and ends at Machari Tiraha in Alwar district. The total length of the road is 14.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 14.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 18.88 Crore |
| 10 | Loan from NCRPB | Rs. 14.16 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 4.72 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 18.88 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 4.25 | 1.42 | 10 years | 2 years | 5.67 |
| 2018-19 | 8.50 | 2.83 | 9 years | 1 year | 11.33 |
| 2018-19 | 1.41 | 0.47 | 8 years | | 1.88 |
| Total | 14.16 | 4.72 | | | 18.88 |



APPENDIX- 18 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Upgradation, Strengthening and development work of Goth Ki Chowki Bigota Road Km 0/0 to 21/0 |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Goth ki Choki on Rajgarh Sikandra Highway and ends at Bighota village in Alwar district. The total length of the road is 21.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 21.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 14.87 Crore |
| 10 | Loan from NCRPB | Rs. 11.15 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 3.72 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 14.87 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 3.35 | 1.12 | 10 years | 2 years | 4.47 |
| 2018-19 | 6.69 | 2.23 | 9 years | 1 year | 8.92 |
| 2019-20 | 1.11 | 0.37 | 8 years | | 1.42 |
| Total | 11.15 | 3.72 | | | 14.87 |



APPENDIX- 19 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|---|
| 1 | Project | Upgradation, Strengthening and development work of Ghat to Rajpur Bada Via Devti Km 0/0 to 10/800 |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Ghat on Tehla-Rajgarh road and ends at Rajpur Bada village in Alwar district. The total length of the road is 10.80 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 10.80 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 14.87 Crore |
| 10 | Loan from NCRPB | Rs. 11.15 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 3.72 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 14.87 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 3.35 | 1.12 | 10 years | 2 years | 4.47 |
| 2018-19 | 6.69 | 2.23 | 9 years | 1 year | 8.92 |
| 2018-19 | 1.11 | 0.37 | 8 years | | 1.42 |
| Total | 11.15 | 3.72 | | | 14.87 |



APPENDIX- 20 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Upgradation, Strengthening and development work of Rajgarh to Karoth road Km 0/0 to 3/0 |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Rajgarh town Bus Stand and ends at Karoth on Rajgarh Alwar Highway in Alwar district. The total length of the road is 3.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 3.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 5.74 Crore |
| 10 | Loan from NCRPB | Rs. 4.30 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 1.44 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 5.74 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 1.29 | 0.43 | 10 years | 2 years | 1.72 |
| 2018-19 | 2.58 | 0.86 | 9 years | 1 year | 3.44 |
| 2019-20 | 0.43 | 0.15 | 8 years | | 0.58 |
| Total | 4.30 | 1.44 | | | 5.74 |



APPENDIX- 21 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|---|
| 1 | Project | Strengthening, widening & upgradation from 3.0 Mtrs to 7.0 Mtrs from Km 0/0 to 3/0 (A/ R to Baldevgarh) |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from X junction on Tehla Gola ka Bas road and ends at Baldevgarh village in Alwar district. The total length of the road is 3.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 3.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 5.30 Crore |
| 10 | Loan from NCRPB | Rs. 3.97 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 1.33 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 5.30 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 1.19 | 0.40 | 10 years | 2 years | 1.59 |
| 2018-19 | 2.38 | 0.80 | 9 years | 1 year | 3.18 |
| 2019-20 | 0.40 | 0.13 | 8 years | | 0.53 |
| Total | 3.97 | 1.33 | | | 5.30 |



APPENDIX- 22 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Strengthening, widening & upgradation from 3.0 Mtrs to 7.0 Mtrs from Km 0/0 to 2/0 (Tilwad to Tilwadi) |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Tilwar village on Tehla Gola ka Bas road and ends at Tilwari village in Alwar district. The total length of the road is 2.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 2.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 3.54 Crore |
| 10 | Loan from NCRPB | Rs. 2.65 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 0.89 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 3.54 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 0.80 | 0.27 | 10 years | 2 years | 1.07 |
| 2018-19 | 1.59 | 0.53 | 9 years | 1 year | 2.12 |
| 2019-20 | 0.26 | 0.09 | 8 years | | 0.35 |
| Total | 2.65 | 0.89 | | | 3.54 |



APPENDIX- 23 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Strengthening, widening & upgradation from 3.0 Mtrs to 7.0 Mtrs from Km 0/0 to 3/500 (SH-29A to Thana) |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Y junction on Tehla Gola ka Bas road and ends at Thana village in Alwar district. The total length of the road is 3.50 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 3.50 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 6.12 Crore |
| 10 | Loan from NCRPB | Rs. 4.59 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 1.53 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 6.12 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 1.38 | 0.46 | 10 years | 2 years | 1.83 |
| 2018-19 | 2.75 | 0.92 | 9 years | 1 year | 3.67 |
| 2019-20 | 0.46 | 0.15 | 8 years | | 0.61 |
| Total | 4.59 | 1.53 | | | 6.12 |



APPENDIX- 24 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Strengthening, widening & upgradation from 3.0 Mtrs to 7.0 Mtrs from Km 0/0 to 3/500 (A/R to Ghatra) |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Y junction on approach road and ends at Ghatra village in Alwar district. The total length of the road is 3.50 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 3.50 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 6.17 Crore |
| 10 | Loan from NCRPB | Rs. 4.62 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 1.55 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 6.17 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 1.39 | 0.47 | 10 years | 2 years | 1.86 |
| 2018-19 | 2.77 | 0.93 | 9 years | 1 year | 3.70 |
| 2019-20 | 0.46 | 0.15 | 8 years | | 0.61 |
| Total | 4.62 | 1.55 | | | 6.17 |



APPENDIX- 25 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|---|
| 1 | Project | Strengthening, widening & upgradation from 3.0 Mtrs to 7.0 Mtrs from Km 0/0 to 3/300 (Palpur to Kankrali Rampura) |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Palpur village on Tehla Dausa road and ends at Kankrali Rampura village in Alwar district. The total length of the road is 3.30 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 3.30 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 5.84 Crore |
| 10 | Loan from NCRPB | Rs. 4.38 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 1.46 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 5.84 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 1.31 | 0.44 | 10 years | 2 years | 1.75 |
| 2018-19 | 2.63 | 0.88 | 9 years | 1 year | 3.51 |
| 2019-20 | 0.44 | 0.14 | 8 years | | 0.58 |
| Total | 4.38 | 1.46 | | | 5.84 |



APPENDIX- 26 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|---|
| 1 | Project | Strengthening, widening & upgradation from 3.0 Mtrs to 7.0 Mtrs from Km 0/0 to 1/900 (A/R to Bhangarh) |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Y junction on Tehla Dausa road at Gola ka Bas and ends at Bhangarh, the heritage site in Alwar district. The total length of the road is 1.90 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 1.90 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 2.83 Crore |
| 10 | Loan from NCRPB | Rs. 2.12 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 0.71 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 2.83 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium Period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 0.64 | 0.21 | 10 years | 2 years | 0.85 |
| 2018-19 | 1.27 | 0.43 | 9 years | 1 year | 1.70 |
| 2019-20 | 0.21 | 0.07 | 8 years | | 0.28 |
| Total | 2.12 | 0.71 | | | 2.83 |



APPENDIX- 27 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|---|
| 1 | Project | Strengthening, widening & upgradation from 5.5 Mtrs to 7.0 Mtrs from Km 0/0 to 2/0 (A/R to Narayani Mata Mandir) |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from X junction on Tehla Dausa road and ends at Narayani Mata Temple, the religious site in Alwar district. The total length of the road is 2.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 2.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 2.83 Crore |
| 10 | Loan from NCRPB | Rs. 2.12 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 0.71 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 2.83 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 0.64 | 0.21 | 10 years | 2 years | 0.85 |
| 2018-19 | 1.27 | 0.43 | 9 years | 1 year | 1.70 |
| 2019-20 | 0.21 | 0.07 | 8 years | | 0.28 |
| Total | 2.12 | 0.71 | | | 2.83 |



APPENDIX- 28 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Strengthening, widening & upgradation from 5.5 Mtrs to 7.0 Mtrs from Km 0/0 to 12/0 (Kherli to Udaipura) |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Kherli town and ends at Udaipura village on Kathumar Mandawar village in Alwar district. The total length of the road is 12.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 12.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 13.30 Crore |
| 10 | Loan from NCRPB | Rs. 9.97 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 3.33 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 13.30 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 2.99 | 1.00 | 10 years | 2 years | 3.99 |
| 2018-19 | 5.98 | 2.00 | 9 years | 1 year | 7.98 |
| 2019-20 | 1.00 | 0.33 | 8 years | | 1.33 |
| Total | 9.97 | 3.33 | | | 13.30 |



APPENDIX- 29 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|---|
| 1 | Project | Strengthening, widening & upgradation from 5.5 Mtrs to 7.0 Mtrs from Km 0/0 to 12/0 (Kherli to Bhanokhar) |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Kherli town and ends at Bhanokhar village on Kathumar Mandawar village in Alwar district. The total length of the road is 12.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 12.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 15.87 Crore |
| 10 | Loan from NCRPB | Rs. 11.90 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 3.97 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 15.87 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 3.57 | 1.19 | 10 years | 2 years | 4.76 |
| 2018-19 | 7.14 | 2.38 | 9 years | 1 year | 9.52 |
| 2019-20 | 1.19 | 0.40 | 8 years | | 1.59 |
| Total | 11.90 | 3.97 | | | 15.87 |



APPENDIX- 30 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Development work of Alanpur-Bansur-Pratapgarh-Dhola Tala road km 25/0 to 70/0 (SH-52) |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from T junction at Alanpur village on Alwar-Behror village passing through Bansur town and ends at Narayanpur town in Alwar district. The total length of the road is 45.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 45.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 69.09 Crore |
| 10 | Loan from NCRPB | Rs. 51.81 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 17.28 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 69.09 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 15.54 | 5.18 | 10 years | 2 years | 20.72 |
| 2018-19 | 31.09 | 10.37 | 9 years | 1 year | 41.46 |
| 2019-20 | 5.18 | 1.73 | 8 years | | 6.91 |
| Total | 51.81 | 17.28 | | | 69.09 |



APPENDIX- 31 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|---|
| 1 | Project | Upgradation, strengthening and development work on Ramgarh-Govindgarh-Sikari Nagar Road SH-45 K.m. 8/825 to 27/745 (Chidwai-Govindgarh upto Distt Border Section) |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Chidwai village passes through Govindgarh town and ends at Alwar-Bharatpur district border in Alwar district. The total length of the road is 18.92 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 18.92 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 29.70 Crore |
| 10 | Loan from NCRPB | Rs. 22.27 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 7.43 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 29.70 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 6.68 | 2.23 | 10 years | 2 years | 8.91 |
| 2018-19 | 13.36 | 4.46 | 9 years | 1 year | 17.82 |
| 2019-20 | 2.23 | 0.74 | 8 years | | 2.97 |
| Total | 22.27 | 7.43 | | | 29.70 |



APPENDIX- 32 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Development of Thanagazi Pratapgarh Dhola Tala road Km 99/0 to 120/200 |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Jhankri Tiyaha (Y-junction) on Thanagaji Pratapgarh road and ends at Alwar-Jaipur district border near Tala in Alwar district. The total length of the road is 21.20 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 21.20 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 28.87 Crore |
| 10 | Loan from NCRPB | Rs. 21.65 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 7.22 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 28.87 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 6.50 | 2.17 | 10 years | 2 years | 8.67 |
| 2018-19 | 12.99 | 4.33 | 9 years | 1 year | 17.32 |
| 2019-20 | 2.16 | 0.72 | 8 years | | 2.88 |
| Total | 21.65 | 7.22 | | | 28.87 |



APPENDIX- 33 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|---|
| 1 | Project | Upgradation, strengthening and development work on Natni Ka Bara Malakhara-Laxmangarh Kathumar Road (including Kathumar Bye pass Km 0/0 to 1/400) Km 25/0 to 61/0 SH-44 (Chimravali- Maujpur - Laxmangarh -Khudiyana Bareda Kathumar Section) |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Chimravali village on SH-44 passes through Laxmangarh town and ends at Kathumar town in Alwar district. The total length of the road is 37.40 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 37.40 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 41.16 Crore |
| 10 | Loan from NCRPB | Rs. 30.87 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 10.29 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 41.16 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 9.26 | 3.09 | 10 years | 2 years | 12.35 |
| 2018-19 | 18.52 | 6.17 | 9 years | 1 year | 24.69 |
| 2019-20 | 3.09 | 1.03 | 8 years | | 4.12 |
| Total | 30.87 | 10.29 | | | 41.16 |



APPENDIX- 34 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|---|
| 1 | Project | Upgradation, strengthening and development work on Mahuwa – Mandawar – Garhi – Sawai Ram – Laxmangarh - Govindgarh Road SH-35 Km 60/000 to 70/0 (Laxmangarh - Jaluki -Govindgarh Section) |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from km 60/0 on SH-35 near Jaluki village and ends at Govindgarh town in Alwar district. The total length of the road is 10.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 10.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 14.21 Crore |
| 10 | Loan from NCRPB | Rs. 10.65 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 3.56 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 14.21 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 3.20 | 1.07 | 10 years | 2 years | 4.27 |
| 2018-19 | 6.39 | 2.14 | 9 years | 1 year | 8.53 |
| 2019-20 | 1.06 | 0.35 | 8 years | | 1.41 |
| Total | 10.65 | 3.56 | | | 14.21 |



APPENDIX- 35 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|---|
| 1 | Project | Upgradation strengthening and Development work on Harsoli- Bibirani- Kotkasim- Budhibawal- Tapukra road Km 45/0 to 57/200, 62/900 to 64/500 & 74/0 to 76/200 |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Kotkasim town passes through Budhi Bawal village & Tapukara town and ends at State border near Nuh (Haryana) in Alwar district. The total length of the road is 16.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 16.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 23.99 Crore |
| 10 | Loan from NCRPB | Rs. 17.99 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 6.00 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 23.99 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 5.40 | 1.80 | 10 years | 2 years | 7.20 |
| 2018-19 | 10.79 | 3.60 | 9 years | 1 year | 14.39 |
| 2019-20 | 1.80 | 0.60 | 8 years | | 2.40 |
| Total | 17.99 | 6.00 | | | 23.99 |



APPENDIX- 36 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Upgradation , Strengthening and development work of Kotkasim Ladpur-Tijara Firojpur Jhirka District Border Km 6/0 to 40/0 |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Kotkasim town passes through Ladpur village, Tijara town etc. and ends at State border near Firozpur Zhirka (Haryana) in Alwar district. The total length of the road is 34.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 34.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 48.33 Crore |
| 10 | Loan from NCRPB | Rs. 36.24 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 12.09 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 48.33 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 10.87 | 3.63 | 10 years | 2 years | 14.90 |
| 2018-19 | 21.74 | 7.25 | 9 years | 1 year | 28.99 |
| 2019-20 | 3.63 | 1.21 | 8 years | | 4.84 |
| Total | 36.24 | 12.09 | | | 48.33 |



APPENDIX- 37 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Upgradation , Strengthening and development work of Alipur -Khedi- Khanpur Dagan- Pur- Nimlaka- Kalgaon- Hingwaheda -Tizara-Firozpur -Jhirka road |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Alipur village passes through Kheri, Pur, Nimlaka, Hingwaheda etc. villages and ends at Tijara Town in Alwar district. The total length of the road is 24.00 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 24.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 34.00 Crore |
| 10 | Loan from NCRPB | Rs. 25.50 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 8.50 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 34.00 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 7.65 | 2.55 | 10 years | 2 years | 10.20 |
| 2018-19 | 15.30 | 5.10 | 9 years | 1 year | 20.40 |
| 2019-20 | 2.55 | 0.85 | 8 years | | 3.40 |
| Total | 25.50 | 8.50 | | | 34.00 |



APPENDIX- 38 to Agenda 4.7**I. General Particulars**

| | | |
|---|---|--|
| 1 | Project | Upgradation Strengthening & Development & Re-Construction work on Tapukara to Milakpur Km 0/0 to 7/500 |
| 2 | Type of project | Infrastructure–Transportation (Upgradation of Roads) |
| 3 | Whether a project at the same Location has been earlier financed by NCRPB | No |
| 4 | Location | The project road starts from Y junction at Tapukara town and ends at Milakpur village in Alwar district. The total length of the road is 7.50 kms. |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PWD, Rajasthan |
| 7 | Length | 7.50.00 km |
| 8 | Land availability & acquisition | The land is in possession of Implementing Agency (IA). |

II. Financial Particulars

| | | |
|----|---|---|
| 9 | Estimated total cost of project | Rs. 13.96 Crore |
| 10 | Loan from NCRPB | Rs. 10.47 Crore |
| 11 | Interest rate | As applicable at the time of loan disbursement. |
| 12 | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 13 | State Government of Rajasthan funds | Rs. 3.49 Crore |
| 14 | Tenure of loan | 10 years with 2 year Moratorium period for payment of principal |
| 15 | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 16 | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 17 | Stipulated date of completion | 24 months from the issue of sanction letter. |

Rs. 13.96 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2017-18 | 3.14 | 1.05 | 10 years | 2 years | 4.19 |
| 2018-19 | 6.28 | 2.09 | 9 years | 1 year | 8.37 |
| 2019-20 | 1.05 | 0.35 | 8 years | | 1.40 |
| Total | 10.47 | 3.49 | | | 13.96 |



Agenda Item No. 4.8: Water Supply projects in Rajasthan subregion of NCR from PHED Rajasthan

The Board has received requests for sanction of financial assistance for 2 projects related to Water Supply from Public Health Engineering Department, Rajasthan.

Agenda Item No. 4.8A: Reorganization of Urban Water Supply Scheme Khairthal, Alwar District from PHED Rajasthan**Agenda Item No. 4.8B: Reorganization of Urban Water Supply Scheme Kishangarh Bas, Alwar District from PHED Rajasthan*****Background***

The existing water supply infrastructure for Khairthal and Kishangarh Bas is inadequate to provide the required service level for Water Supply. The shortcomings in existing water supply scheme necessitates the upgradation of the water supply scheme.

A large part of the towns are not covered with the pipeline network and the population not covered with piped network has to depend on hand pumps/public open wells.

The existing production from tubewells is 2256 kld in Khairthal and 2648 kld in Kishangarh Bas which falls short of required water supply level even at present water demand.

The existing storage capacities of service reservoirs are also not as per norms. A large part of piped network is fed by direct boosting.

Large numbers of pipelines in distribution network were laid long back and are presently damaged and in dilapidated condition causing recurrent leakages, water losses and increasing chances of pollution.

Projects Details

Expecting that water from Chambal Alwar Transmission system will be available to town in five years, it is proposed to provide tube wells for this period only i.e. upto year 2022. Considering the future availability of water from Chambal Alwar Transmission system, the reorganization of water supply infrastructure is planned to enable smooth dovetailing with Chambal Alwar transmission system as & when it is executed & commissioned.

A. Reorganization of Urban Water Supply Scheme Khairthal, Alwar District

Looking at future prospects, it has been proposed to have a single receiving Clear Water Reservoir (CWR) & pumping Station from where the water could be pumped to different zonal elevated service reservoirs, so that the same CWR can be used as receiving point of water from Chambal Alwar Transmission System.

The entire municipal area is divided into five zones considering the railway track as natural boundary which passes through the town bifurcating it in North-South direction i.e. Hanuman Pahadi, Gurunanak Nagar Area, Palika Area, Mandi Area and Old City. These zones will be



fed through zonal elevated Service Reservoirs. The zone (Palika Bazar) near Bus Stand is carved out so that the designed demand could be fed from existing ESR of 900 kl. Four New Elevated Service Reservoirs are proposed in Old City Zone which lies in North West of Railway Track, in Mandi ESR Zone which lies in South West of Railway track, in Gurunanak ESR Zone which lies in South East of Railway Track and in Hanuman Pahadi Zone which lies in North East of Railway Track.

| Zone | Gross Water Demand in mld for Year | | | |
|--------------|------------------------------------|--------------|---------------|---------------|
| | 2017 | 2022 | 2032 | 2047 |
| Zone I | 1.672 | 1.845 | 2.243 | 3.261 |
| Zone II | 1.612 | 1.812 | 2.298 | 3.251 |
| Zone III | .765 | .871 | 1.121 | 1.572 |
| Zone IV | 1.612 | 1.800 | 2.252 | 3.214 |
| Zone V | 1.555 | 1.746 | 2.213 | 3.132 |
| Total | 7.217 | 8.075 | 10.127 | 14.429 |

The summary of lengths of pumping mains from tube wells to proposed CWR is as follows:

| S.No. | Material | Class | Diameter (mm) | Length (m) |
|-------|----------|-------|---------------|------------|
| 1 | DI | K7 | 400 mm | 0 |
| 2 | DI | K7 | 300 mm | 600 |
| 3 | DI | K7 | 250 mm | 400 |
| 4 | DI | K7 | 200 mm | 1275 |
| 5 | DI | K7 | 150 mm | 1050 |
| 6 | DI | K7 | 125 mm | 1085 |
| 7 | DI | K7 | 100 mm | 3160 |

It has been proposed to monitor the operating data of tubewells to analyse its performance. For this purpose, it is proposed to install following instruments at each tubewells;

- Electromagnetic flow meter
- Pressure Sensor & Transmitter on Delivery Line
- Multi-Function Meter
- Panel with GPRS Modem to transfer data to PLC Panel at Pumping Station

It is proposed to install these instruments on existing 15 tubewells also.

Different parameters adopted for optimization procedure are as follows:

| S.No. | Parameter | Value | |
|-------|--|-------|--------|
| 1. | Design Period | 30 | Years |
| 2. | Pumping Hours | 16 | Hours |
| 3. | Pump Cost | 8000 | Rs/kW |
| 4. | Efficiency Pump set for submersible pumpsets | 50 | % |
| 5. | Energy Charges | 8.00 | Rs/kWH |
| 6. | Discounting Rate | 10 | % |
| 7. | Life of Pump set | 15 | Years |



CWR to ESRs:

The Water will be pumped from proposed CWR to existing & proposed Elevated Service Reservoirs of different zones e.g. Zone-I ESR Old City Area, Zone-II Palika ESR Area, Zone-III ESR Mandi Area, Zone-IV Gurunanak Nagar Area and Zone-V ESR Hanuman Pahadi. Provision of DI pipes has been taken in the proposal. It has proposed to provide three working pump sets and space for one future pump set of Horizontal split Centrifugal pump sets with one of them catering ESR of Zone II & III, second one catering to ESR of Zone IV & Zone V and third one catering to ESR of Zone I.

The details of pumping mains are as under: -

(i) From CWR to ESR-II Old City & ESR-III Mandi area

| S.No. | Material | Class | Diameter (mm) | Length (m) |
|-------|----------|-------|---------------|------------|
| 1 | DI | K-7 | 300 | 950 |
| 2 | DI | K-7 | 250 | 60 |
| 3 | DI | K-7 | 200 | 920 |

(ii) From CWR to ESR-IV Gurunanak Nagar & ESR-V Hanuman Pahadi

| S.No. | Material | Class | Diameter (mm) | Length (m) |
|-------|----------|-------|---------------|------------|
| 1 | DI | K-7 | 350 | 1450 |
| 2 | DI | K-7 | 250 | 2265 |

(iii) From CWR to ESR-I Palika Area

| S.No. | Material | Class | Diameter (mm) | Length (m) |
|-------|----------|-------|---------------|------------|
| 1 | DI | K-7 | 250 | 700 |

It has been proposed to provide flow meters at inlet of all Overhead Service Reservoirs and Clear Water Reservoirs to assess the losses in Pumping system. It has also the proposal to install flow control valves for Overhead Service Reservoirs where more than one service reservoirs are connected to single pumping stream.

Distribution Network

The distribution network of the town is proposed to reconfigure on District Metering Area (DMA) Basis.

The DMA created in different zones is as follows;

| S.No. | Zone Number | Number of DMAs |
|-------|-------------|----------------|
| 1 | Zone I | 3 |
| 2 | Zone II | 3 |
| 3 | Zone III | 2 |
| 4 | Zone IV | 3 |
| 5 | Zone V | 3 |



At entry of each DMA, it has proposed to install a flowmeter to assess the water quantity supplied to DMA. This flow data at inlet of each DMA is regularly captured and communicated to PLC at Pumping Station using GPRS Modems.

It has also proposed to install two pressure sensors & transmitters at two critical pressure points in each DMA to monitor the performance of distribution system. The pressure reading from these pressure control points have been proposed to be communicated to PLC at Pumping stations using GPRS Modems.

For CWR

| S.No. | Location | Type | Discharge (LPM)2032 | Head (m) | kW |
|-------|-----------------------------|-------------|---------------------|----------|----|
| 1 | Pump sets - For Zone-II,III | Centrifugal | 3561.54 | 30 | 37 |
| 2 | Pump sets – For Zone-IV, V | Centrifugal | 4650.97 | 36 | 55 |
| 3 | Pump sets – For Zone-I | Centrifugal | 2336.90 | 36 | 30 |

The 2 Hour Capacity of Clear Water Reservoir for Year 2047 flows considering the pumping hours as 16 comes to be 1804 kL. The Capacity of CWR adopted is 1900 kL.

For OHSR

The proposed staging of the OHSR's are as follows:-

| S.No. | Zone | Zone Description | Proposed Storage Volume (kL) | Staging, (m) |
|-------|------|------------------------------|------------------------------|--------------|
| 1 | Z-1 | Zone for Old City | 1,000 | 15 |
| 2 | Z-2 | Zone for Palika Existing ESR | - | 18 |
| 3 | Z-3 | Zone of Mandi Area | 500 | 20 |
| 4 | Z-4 | Zone for Gurunanak ESR | 1,000 | 18 |
| 5 | Z-5 | Zone for Hanuman Pahadi | 1,000 | 18 |

Replacement of Pipelines:

| S.No. | Replacement Pipe Size | Original Pipe | Length (m) |
|-------|-----------------------|----------------------|------------|
| 1 | 110 mm HDPE | uPVC 90mm/AC 80 mm | 5000 mtr |
| 2 | 125 mm HDPE | uPVC 110mm/AC 100 mm | 3000 mtr |
| 3 | 140 mm HDPE | uPVC140 mm/AC 125 mm | 1500 mtr |
| 4 | 160 mm HDPE | uPVC160 mm/AC 150 mm | 1500 mtr |

It has estimated that the total numbers of connections to be provided are around 6500 Nos. The size wise tentative distribution of these connections are as follows:

| S.No. | Water Connection Size to be shifted | Number of Connections |
|-------|---|-----------------------|
| 1 | 15 mm:- For Connection upto 5 M | 4410 |
| | For Connection more than 5M and upto 10 M | 1890 |
| 2 | 20 mm :- For Connection upto 5 M | 140 |
| | For Connection more than 5M and upto 10 M | 60 |



It has been proposed to provide required automation in operation of created assets under these proposals. It is proposed to provide following automation arrangement at various assets.

1. Ultrasonic Level Sensor & Transmitter: It is proposed to install Ultrasonic Level sensor & Transmitter at all the 5 Zonal ESRs. The water level in all the ESR shall be continuously monitored and this data shall be transmitted to Control room at pump house. This will enable to regulate operation of pumps to avoid overflowing of ESRs
2. Electro Magnetic Flow Meters: It is proposed to provide the Electro Magnetic Flow Meter at Inlet of CWR for pumping mains, outlet of each pumping manifold and inlet of each ESR.
3. GSM/GPRS Module: At the four ESR locations, GSM/GPRS modules will be provided which will collect data from Level Sensor and flow meter and transmit this data to Control Room at Pump House.
4. Instrumentation Control Panel: An Instrumentation Control Panel is proposed to be installed in the control room which will be connected to the flow meters of CWR Inlet, Pumping Manifold, ESR Level Sensor & Flow meter at head-works. Moreover, it will receive data from all the four Zonal ESRs.
5. Each DMA will be provided with a flowmeter at its inlet pipe along with a GPRS modem to communicate this data to PLC at Pumping Station. Moreover, each DMA shall be provided with two pressure sensors & transmitters along with GPRS modem.

CWR at PHED Campus has water demand of 10.127 mld & 14.429 mld for Year 2032 & 2047 respectively. It has proposed to install a non-electricity based chlorine dioxide system at Main Campus.

It has proposed to provide Multi jet magnetic type domestic water meter to every household of this water supply scheme. Hence, a provision of 6500 water meters is adopted in this proposal.

Provision for T&P like chain pulley blocks, pipe wrenches, spanner sets etc. are also included in the scheme.

A provision of following civil works has been taken in this scheme:-

1. Construction of new Pump House at PHED campus.
2. Construction of A.En Office Building at PHED Campus.
3. Construction of Store room at PHED Campus.
4. Construction of Boundary wall at PHED Campus.
5. Dismantling of CWR (600kl) at PHED Campus.
6. Construction of Railway Crossing at crossing of Railway line for rising main pipe line.
7. Repair of Existing A.En Office Building at PHED Campus.
8. Rain Water Harvesting Structures – 2 Nos

B. Reorganization of Urban Water Supply Scheme Kishangarh Bas, Alwar District

For water distribution purpose, the Kishangarh Bas town is divided in Five Zone. The town is divided into zones considering the natural and man-made boundaries such as Highways, River/Canal/Nallah etc. In Kishangarh Bas, town is divided in zone by the man made zone



boundary. Mainly town is divided in eastern part and western part. The whole eastern part of town is zone 3 which lies in Dayalpura. Further the western part is divided in 4 zones the western part is zone 5 lies in Bas Kripal Nagar, North-west part of town is zone 4 lies in fort ESR area, south-western part is zone 1 lies in Nagar Palika area and the middle part of the town is zone 2 lies in PHED campus area. Also for western part, zoning is decided based on the capacity of existing ESR i.e. 500 kL at Nagar Palika and corresponding area it can cover based on normative storage requirements.

The total production from the existing sources is 2648 KI and the total water demand for the year 2032 and 2047 are 5157 and 7280 KI respectively.

| Zone | Gross Water Demand in mld for Year | | | |
|--------------|------------------------------------|--------------|--------------|--------------|
| | 2017 | 2022 | 2032 | 2047 |
| Zone I | 0.478 | 0.525 | 0.644 | 0.890 |
| Zone II | 0.639 | 0.715 | 0.895 | 1.266 |
| Zone III | 0.869 | 1.016 | 1.330 | 1.975 |
| Zone IV | 1.136 | 1.217 | 1.452 | 1.937 |
| Zone V | 0.573 | 0.654 | 0.837 | 1.212 |
| Total | 3.694 | 4.128 | 5.157 | 7.280 |

The summary of lengths of pumping mains from tubewells to proposed CWR is as follows:

| S.No. | Material | Class | Diameter (mm) | Length (m) |
|-------|----------|-------|---------------|------------|
| 1 | DI | K7 | 300 mm | 600 |
| 2 | DI | K7 | 250 mm | 400 |
| 3 | DI | K7 | 200 mm | 1275 |
| 4 | DI | K7 | 150 mm | 1050 |
| 5 | DI | K7 | 125 mm | 1085 |
| 6 | DI | K7 | 100 mm | 3160 |

Different parameters adopted for optimization procedure are as follows:

| S.No. | Parameter | Value | |
|-------|--|-------|--------|
| 1. | Design Period | 30 | Years |
| 2. | Pumping Hours | 20 | Hours |
| 3. | Pump Cost | 8000 | Rs/kW |
| 4. | Efficiency Pump set for submersible pumpsets | 50 | % |
| 5. | Energy Charges | 8.00 | Rs/kWH |
| 6. | Discounting Rate | 10 | % |
| 7. | Life of Pump set | 15 | Years |

CWR to ESRs

The Water will be pumped from proposed CWR to existing & proposed Elevated Service Reservoirs of different zones. From CWR of PHED Campus water pump to Zone-I ESR Nagar Plika ESR, Zone-II PHED Campus ESR Area, Zone-III ESR Dayalpura Area, and Zone-IV



Fort Area. From second CWR at Bas Kripal Nagar water pump to Zone-V ESR Bas Kripal Nagar. Provision of DI pipes has been taken in the proposal. It is proposed to provide three working pump sets and space for one future pump set of Horizontal split Centrifugal pump sets with one of them catering ESR of Zone I & IV, second one catering to ESR of Zone II & Zone III and third one catering to ESR of Zone VI.

The details of pumping mains are as under: -

(i) From PHED Campus CWR to ESR-I Nagar Palika & ESR-IV Fort Area

| S.No. | Material | Class | Diameter (mm) | Length (m) |
|-------|----------|-------|---------------|------------|
| 1 | DI | K-7 | 250 | 100 |
| 2 | DI | K-7 | 200 | 1050 |
| 3 | DI | K-7 | 125 | 1030 |

(ii) From PHED Campus CWR to ESR-II PHED Campus & ESR-III Dayalpura

| S.No. | Material | Class | Diameter (mm) | Length (m) |
|-------|----------|-------|---------------|------------|
| 1 | DI | K-7 | 250 | 60 |
| 2 | DI | K-7 | 200 | 1600 |

(iii) From Bas Kripal Nagar CWR to ESR-V Bas Kripal Nagar

| S.No. | Material | Class | Diameter (mm) | Length (m) |
|-------|----------|-------|---------------|------------|
| 1 | DI | K-7 | 200 | 100 |

It has been proposed to provide flowmeters at inlet of all Overhead Service Reservoirs and Clear Water Reservoirs to assess the losses in Pumping system. It is also proposed to install flow control valves for Overhead Service Reservoirs where more than one service reservoirs are connected to single pumping stream.

Distribution Network:

It is proposed to install two pressure sensors & transmitters at two critical pressure points in each Zone to monitor the performance of distribution system. The pressure reading from these pressure control points is also proposed to be communicated to PLC at Pumping stations using GPRS Modems.

For CWR

| S.No. | Location | Type | Discharge (LPM) ²⁰³² | Head (m) | kW |
|-------|-----------------------------|-------------------------|---------------------------------|----------|----|
| 1 | Pump sets - For Zone-I,IV | HSC | 2183.29 | 40 | 30 |
| 2 | Pump sets – For Zone-II,III | HSC | 2317.44 | 36 | 30 |
| 3 | Pump sets – For Zone-V | Submersible Centrifugal | 871.49 | 32 | 11 |

It has been proposed to provide RCC CWRs for capacity equal to two hours of pumping capacity against the designed daily demand in design year 2047. It is proposed to provide a two Clear Water Reservoirs for whole of the town catering all the five zonal ESRs.



The water demand for whole of the town is as follows;

| S.No. | Zone | Zone Description | Water Demand, KLD for | | |
|-------|------------------|------------------------|-----------------------|--------|--------|
| | | | 2017 | 2032 | 2047 |
| 1 | PHED Campus | Zone- I, II,III and IV | 3121.4 | 4320.7 | 6068.7 |
| 2 | Bas Kripal Nagar | Zone- V | 572.9 | 836.6 | 1211.8 |

The 2 Hour Capacity of Clear Water Reservoir at PHED Campus for Year 2047 flows considering the pumping hours as 16 comes to be 758 kL. As per decision at Agenda Item No 3 of TC No 607 Dated 18-11-2014, the Capacity of CWR at PHED campus adopted is 800 kL.

The 2 Hour Capacity of Clear Water Reservoir at Bas Kirpal Nagar for Year 2047 flows considering the pumping hours as 16 comes to be 151 kL. As per decision at Agenda Item No 3 of TC No 607 Dated 18-11-2014, the Capacity of CWR at PHED campus adopted is 200 kL.

For EHSR:

The Proposed staging of ESR's arrived from the distribution network designs. So the proposed staging of the OHSR's are as follows:-

| S.No. | Zone | Zone Description | Proposed Storage Volume (kL) | Staging, (m) |
|-------|------|--------------------------------|------------------------------|--------------|
| 1 | Z-1 | Zone for Existing Nagar Palika | - | 18 |
| 2 | Z-2 | Zone for PHRD Campus | 400 | 22 |
| 3 | Z-3 | Zone of Dayalpura | 600 | 22 |
| 4 | Z-4 | Zone for Fort | 600 | 18 |
| 5 | Z-5 | Zone for Bas Kripal Nagar | 400 | 18 |

Replacement of Pipelines

| S.No. | Replacement Pipe Size | Original Pipe | Length (m) |
|-------|-----------------------|----------------------|------------|
| 1 | 110 mm HDPE | uPVC 90mm/AC 80 mm | 2500 mtr |
| 2 | 125 mm HDPE | uPVC 110mm/AC 100 mm | 1500 mtr |
| 3 | 140 mm HDPE | uPVC140 mm/AC 125 mm | 750 mtr |
| 4 | 160 mm HDPE | uPVC160 mm/AC 150 mm | 750 mtr |

It has been estimated that the total numbers of connections to be provided are around 5540 Nos. The size wise tentative distribution of these connections are as follows;

| S.No. | Water Connection Size to be shifted | Number of Connections |
|-------|--|-----------------------|
| 1 | 15 mm :- For Connection upto 5 M | 3738 |
| | 15 mm :- For Connection more than 5M and upto 10 M | 1602 |
| 2 | 20 mm :- For Connection upto 5 M | 140 |
| | 20 mm :- For Connection more than 5M and upto 10 M | 60 |



It has been proposed to provide required automation in operation of created assets under these proposals. The automation is proposed to be provided for reducing the water losses & to enable water auditing for improves management of water supply scheme. It is proposed to provide following automation arrangement at various assets;

1. Each tubewell shall be provided with an ultrasonic flow meter, a pressure sensor & transmitter to monitor the water production and hydraulic energy. Each tubewell will be provided with Electric Multi Function Meter (MFM) for continuous monitoring of voltage, current, energy consumption at each source. All these data will be captured and shall be communicated to PLC at Pumping Station.
2. Ultrasonic Level Sensor & Transmitter: It is proposed to install Ultrasonic Level sensor & Transmitter at all the 5 Zonal ESRs. The water level in all the ESR shall be continuously monitored and this data shall be transmitted to Control room at pump house. This will enable to regulate operation of pumps to avoid overflowing of ESRs
3. Electro Magnetic Flow Meters: It is proposed to provide the Electro Magnetic Flow Meter at Inlet of CWR for pumping mains, outlet of each pumping manifold and inlet of each ESR.
4. GSM/GPRS Module: At the four ESR locations, GSM/GPRS modules will be provided which will collect data from Level Sensor and flow meter and transmit this data to Control Room at Pump House.
5. Instrumentation Control Panel: An Instrumentation Control Panel is proposed to be installed in the control room which will be connected to the flow meters of CWR Inlet, Pumping Manifold, ESR Level Sensor & Flow meter at head-works. Moreover, it will receive data from all the four Zonal ESRs.
6. Each Zone will be provided with a flow meter at its inlet pipe along with a GPRS modem to communicate this data to PLC at Pumping Station. Moreover, each DMA shall be provided with two pressure sensors & transmitters along with GPRS modem.

As the ground water has been adopted in the scheme, it is proposed to disinfect water by chlorination at the Clear Water Reservoir. Chlorine dioxide is proposed to be adopted for disinfection in these proposals.

Civil Works:

A provision of following civil works has been taken in this scheme:-

1. Construction of new Pump House at PHED campus.
2. Construction of Boundary wall at all structure and PHED Campus.
3. Construction of new Panel room with electro chlorination room at Bas Kripal Nagar Headworks.
4. Construction of Road Crossing at crossing of State Highway for distribution main pipe line.



The Project Cost & Financing

The component-wise break up of cost estimate of the projects are as under:

A. Reorganization of Urban Water Supply Scheme Khairthal, Alwar District.

| Sl. No. | Particulars | Amount (Rs. In Lakhs) |
|----------------|---|------------------------------|
| 1 | Provision for providing, laying and joining of rising mains pipe line including cost of jointing materials, specials and valves | 289.50 |
| 2 | Provision for providing, laying and joining of distribution pipe line including cost of jointing materials, specials and valves | 1697.50 |
| 3 | Electromechanical equipment for Tubewells and Pump house | 60.15 |
| 4 | Provision for construction of RCC CWR and SR including specials | 511.00 |
| 5 | Provision for construction of Civil works | 124.75 |
| 6 | Replacement of pipe line work | 120.91 |
| 7 | Shifting of utilities | 20.00 |
| 8 | Shifting of water connections | 229.11 |
| 9 | Provision for Disinfection of Chlorine Dioxide System | 5.15 |
| 10 | Provision for electric connections | 15.00 |
| 11 | Provision for automation | 147.41 |
| 12 | Provision for tools and plant for maintenance of scheme | 0.50 |
| | A : Total | 3220.98 |
| | B: Contingency @ 2% | 64.42 |
| | C: Total (A+B) | 3,285.40 |
| | D : Supervision charges @ 1.5 % of C | 49.28 |
| | E : Escalation of (C+D) @ 8.75 % | 291.78 |
| | Total (C+D+E) | 3,626.46 |

B. Reorganization of Urban Water Supply Scheme Kishangarh Bas, Alwar District

| Sl. No. | Particulars | Amount (Rs. In Lakhs) |
|----------------|---|------------------------------|
| 1 | Provision for providing, laying and joining of rising mains pipe line including cost of jointing materials, specials and valves | 113.80 |
| 2 | Provision for providing, laying and joining of distribution pipe line including cost of jointing materials, specials and valves | 891.90 |
| 3 | Electromechanical equipment for Tubewells and Pump house | 39.00 |
| 4 | Provision for construction of RCC CWR and SR including specials | 322.00 |
| 5 | Provision for construction of Civil works | 117.80 |
| 6 | Replacement of pipe line work | 37.64 |
| 7 | Shifting of utilities | 15.00 |
| 8 | Shifting of water connections | 195.35 |
| 9 | Provision for Disinfection of Chlorine Dioxide System | 10.30 |



| Sl. No. | Particulars | Amount (Rs. In Lakhs) |
|---------|---|-----------------------|
| 10 | Provision for electric connections | 22.50 |
| 11 | Provision for automation | 104.37 |
| 12 | Provision for tools and plant for maintenance of scheme | 0.50 |
| | A : Total | 1870.08 |
| | B: Contingency @ 2% | 37.40 |
| | C: Total (A+B) | 1,907.49 |
| | D : Supervision charges @ 1.5 % of C | 28.61 |
| | E : Escalation of (C+D) @ 8.75 % | 169.41 |
| | Total (C+D+E) | 2,105.51 |

Drawl Schedule and Sharing Pattern

The target date of completion of both the projects has been proposed as 24 months i.e. from 01.04.2018 to 31.03.2020 and PHED Rajasthan shall be implementing the project through financial assistance from NCRPB as per the following phasing and schedule. The loans components has been restricted at 75% of the project cost excluding O&M charges.

A. Reorganization of Urban Water Supply Scheme Khairthal, Alwar District

(Rs. in Cr.)

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of Expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2018-19 | 14.00 | 4.75 | 15 years | 3 years | 18.75 |
| 2019-20 | 13.19 | 4.32 | 14 years | 2 year | 17.51 |
| Total | 27.19 | 9.07 | | | 36.26 |

B. Reorganization of Urban Water Supply Scheme Kishangarh Bas, Alwar District

(Rs. in Cr.)

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2018-19 | 07.00 | 2.00 | 15 years | 3 years | 09.50 |
| 2019-20 | 08.78 | 3.27 | 14 years | 2 year | 11.55 |
| Total | 15.78 | 5.27 | | | 21.05 |

Appraisal of DPRs

- The submission with regard to ESMS has been viewed and assumed that project may be site specific adverse environmental impacts (medium type), and is considered as “E2 Category” on Environmental aspect for which Initial Environmental Examination (IEE) report is required. As far as social aspect is concerned, the project has been considered “S3 Category”.



- IA was informed to revise the project cost estimates as the cost related to construction of tubewells and O&M cost were not eligible for financial assistance by NCRPB. The cost has been revised by the IA and re-submitted the project cost estimates for Khairthal and Kishangarh Bas as Rs. 36.26 cr for and Rs. 21.05 cr respectively.
- Clarification on the pro rata charges indicated in the costing were also sought for from IA and also informed that the same may not be eligible for loan. IA has rectified the same vide letter dated 04.07.2017.
- IA was informed that since Project Implementation Plan was missing, the same is required both in physical and financial terms.
- IA was intimated to submit the loan drawl schedule and EIRR/FIRR calculation, since the same was not available in the first submission made. Loan drawl schedule has been received. IA has submitted the same vide letter dated 04.07.2017 and subsequently SE, Alwar has resubmitted the loan drawl schedule with some minor changes on 7.11.2017 in NCRPB. However, IA has confirmed that detailed Loan drawl schedule will be made available at the time of approval.
- In case of direct loan to state government, a letter of comfort with regard to budget provision for repayment of loan and interest, as security was sought for.
- While PHED ultimately plans to provide water to Khairthal & Kishangarh Bas and in surrounding areas under a project titled “Chambal Alwar Water Transmission System, which is under feasibility stage, it has proposed providing 135 lpcd water supply to the town through tubewells in the current project uptill year 2022. The horizon year of the proposed system, needed clarification from IA whether it is 2022 or for 20-30 years.
- No mention regarding sewerage network and STP (based on 80% of total water supply) was made although it should necessarily be planned along with the water supply project.
- IA was duly informed that 200 mm dia tubewells with 200 meter depth proposed in the DPR, were not as per CGWA guidelines.
- Khairthal and Kishangarh Bas being in Alwar District have been identified as Dark Zone (over exploited zone in RP 2021). However, in the absence of other sources of water, ground water extraction needs to be supplemented with artificial recharge of ground water such as through rain water harvesting structures within the premises. Rain water harvesting was missing in the submitted proposal. However, implementing agency has informed vide letter dated 4.7.2017 that:
 - a) Rain water harvesting structures have been incorporated in this proposal at all head works as per guidelines.
 - b) Rain water harvesting structures have been incorporated in this proposal to recoup / recharge the adjoining tubewells.



Additional Observations

Regarding Chambal Alwar Water Transmission System, which is under feasibility stage IA has confirmed that it is just a proposal and it is not yet decided but within 20 years IA will be going for surface water source either from Chambal or Yamuna.

IA has informed that Sewerage system works shall be carried out by Municipal body.

Rain water harvesting structures have been incorporated in the proposal to recoup/recharge the adjoining tube wells.

IA has informed that required Environment Management plan will be followed during project implementation. Detailed EMP will be submitted before execution of project.

According to summary record of Decisions of Technical Committee of Rajasthan Water Supply and Sewerage Management Board with reference to 649th meeting, the following scheme were accorded technical clearance with the below mentioned riders:

- A. Reorganisation of UWSS Khairthal, district Alwar technical clearance to the scheme for Rs. 47.96 cr,
 - B. Reorganisation of UWSS Kishangarh Bas, district Alwar technical clearance to the scheme for Rs. 30.40 cr,
- *“As there is decline in water level of Dist. Alwar and Ground Water is over exploited, therefore sustainability of source shall be ensured”* and
 - *“the infrastructure under the scheme shall be developed in such a way that the same can be dovetailed in future from source of Chambal river water supply.”* However, the proposal is not detailed out.

Grant in aid

The water supply projects on completion are eligible to apply for grant-in aid of the sanctioned project cost, subject to the fulfilment of terms and conditions laid down by the Board. The project will be eligible for grant by NCRPB as per the rules and regulations/provisions of the NCRPB.

Point for Decision

The State Govt. of Rajasthan is seeking loan of 75% of its share from the NCRPB. The loan amounts for the projects scheduled to be released as per project eligibility, will carry interest rate as applicable on the date of release of loan instalment. The principal amount along with interest is to be repaid in 15 years with a moratorium period of 3 years. Accordingly, PSMG-I may sanction loan amount of **Rs. 2719.85 lakhs** for the project of **“Reorganization of Urban Water Supply Scheme Khairthal, Alwar District”** (details are at Appendix-1) and loan amount of **Rs. 1578.00 lakhs** for the project of **“Reorganization of Urban Water Supply Scheme Kishangarh Bas, Alwar District”** (details are at Appendix-2) with the following conditions:



- Requisite administrative approval from PHED, Rajasthan.
- Land should be in the name of & possession of PHED, Rajasthan as per the land records.
- Applicable clearances should be readily available from NHAI, Railways, Forest, Irrigation, Mining etc. whichever is applicable.
- Requisite Social & Environmental Reports, as applicable.
- Any other compliance as required by NCRPB relating to the appraisal of the submitted project proposals.
- Member Secretary, NCRPB may be authorised to take a decision in case of any issue which may arise in terms of technical feasibility, compliance of Statutory and Environment & Social requirements for the aforementioned projects.
- The interest rate shall be charged as per prevailing rate of interest applicable for road projects. The present rate is 7% pa.
- The projects are proposed to be completed in 24 months from the date of sanction letter.
- The principal along with interest is to be repaid in 10 years with a moratorium of 2 years for repayment of principal.
- The loan will be subject to Govt. of Rajasthan making suitable budgetary provisions in the Annual Budget and also undertaking to complete the project as per approved DPRs.
- Any cost increase over and above the current estimates shall be borne by the agency and all efforts to complete the projects be ensured accordingly.



APPENDIX-1 to Agenda 4.8

I. General Particulars

| | | |
|---|---|--|
| 1 | Project | Reorganisation of Urban Water Supply Scheme Khairthal Distt Alwar (Rajasthan) |
| 2 | Type of project | Ugradation of Water Supply Infrastructure |
| 3 | Whether a project at the same location has been earlier financed by NCRPB | No |
| 4 | Location | Town Khairthal Distt Alwar Situated at Delhi-Alwar Railway Line. 45Km North East of Distt Hq Alwar |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PHED Govt of Rajasthan |
| 7 | Land availability & land acquisition | Land is available with PHED, Rajasthan. No land acquisition is involved. |

II. Financial Particulars

| | | |
|-----|---|---|
| 8. | Estimated total cost of project | Rs. 36.26 Crore |
| 9. | Loan from NCRPB | Rs. 27.19 Crore |
| 10. | Interest rate | As applicable at the time of loan disbursement. |
| 11. | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 12. | State Government of Rajasthan funds | Rs. 9.06 Crore |
| 13. | Tenure of loan | 15 years with 3 year Moratorium period for payment of principal |
| 14. | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 15. | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 16. | Stipulated date of completion | 24 months from the issue of sanction letter |

Rs. 36.26 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2018-19 | 14.00 | 4.75 | 15 years | 3 years | 18.75 |
| 2019-20 | 13.19 | 4.32 | 14 years | 2 year | 17.51 |
| Total | 27.19 | 9.07 | | | 36.26 |



APPENDIX-2 to Agenda 4.8

I. General Particulars

| | | |
|---|---|--|
| 1 | Project | Reorganisation of Urban Water Supply Scheme Kishangarhbas Distt Alwar (Rajasthan) |
| 2 | Type of project | Upgradation of Water Supply Infrastructure |
| 3 | Whether a project at the same location has been earlier financed by NCRPB | No |
| 4 | Location | Town Kishangarhbas Distt Alwar Situated at Delhi— Bhiwadi-Alwar Highway. 37Km North of Distt Hq Alwar |
| 5 | Borrowing agency | Rajasthan Government |
| 6 | Implementing agency | PHED Govt of Rajasthan |
| 7 | Land availability & land acquisition | Land is available with PHED, Rajasthan. No land acquisition is involved. |

II. Financial Particulars

| | | |
|-----|---|---|
| 8. | Estimated total cost of project | Rs. 21.05 Crore |
| 9. | Loan from NCRPB | Rs. 15.78 Crore |
| 10. | Interest rate | As applicable at the time of loan disbursement. |
| 11. | Provision in State Budget of Principal & interest | To be provided by Govt. of Rajasthan in the budget of corresponding financial year. |
| 12. | State Government of Rajasthan funds | Rs. 5.27 Crore |
| 13. | Tenure of loan | 15 years with 3 year Moratorium period for payment of principal |
| 14. | Provision of State Govt. Guarantee | Not required as loan is to be given to State Govt. |
| 15. | Other Security proposed | Letter of comfort from Govt. of Rajasthan along with Loan Agreement. |
| 16. | Stipulated date of completion | 24 months from the issue of sanction letter |

Rs. 21.05 in Cr.

| Year | Loan from NCRPB | Contribution from State Govt. | Tenure of Loan | Moratorium period | Phasing of expenditure |
|---------|-----------------|-------------------------------|----------------|-------------------|------------------------|
| 2018-19 | 07.00 | 2.00 | 15 years | 3 years | 09.50 |
| 2019-20 | 08.78 | 3.27 | 14 years | 2 year | 11.55 |
| Total | 15.78 | 5.27 | | | 21.05 |



Agenda Item No. 5: Review of Projects financed by the NCR Planning Board

As on date, the Board has provided financial assistance to **299** infrastructure development projects with an estimated cost of Rs. **29287** Crore, out of which an amount of Rs. **13520** Crore has been sanctioned as loan. The Board has released a loan amount of about Rs. **9941** Crore till September 2017. The sector wise break up of estimated cost of projects and the loans sanctioned by the NCRPB are shown in Figure 1 and Figure 2 below, respectively.

Figure 1

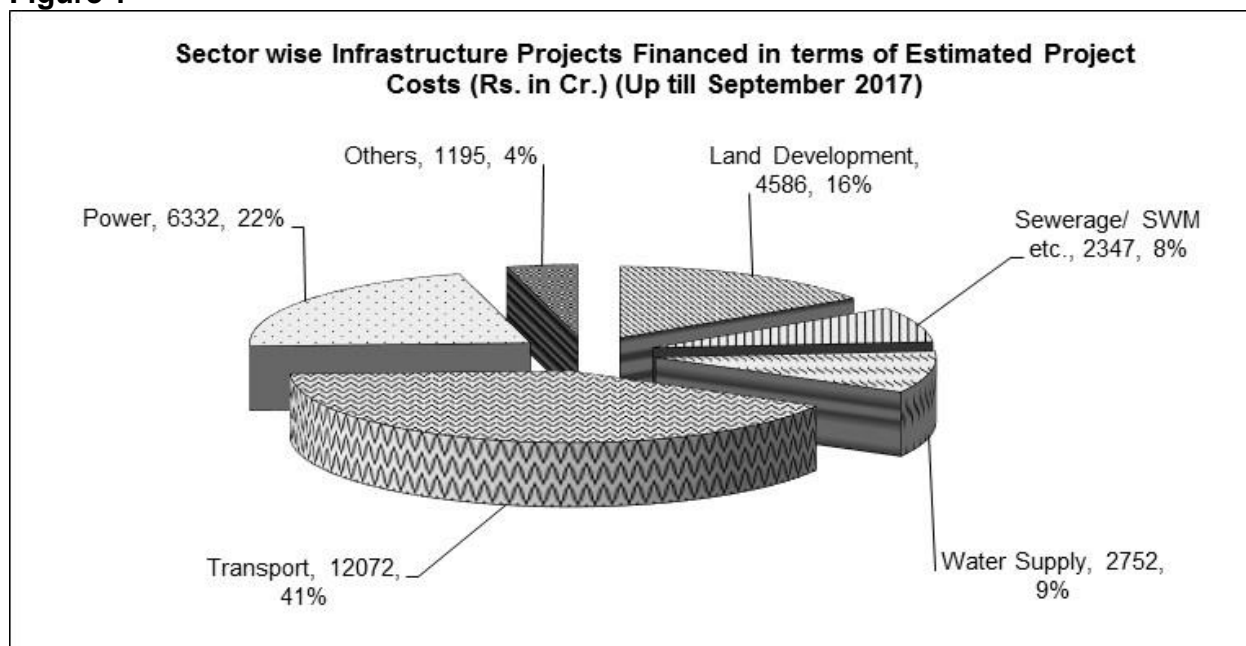
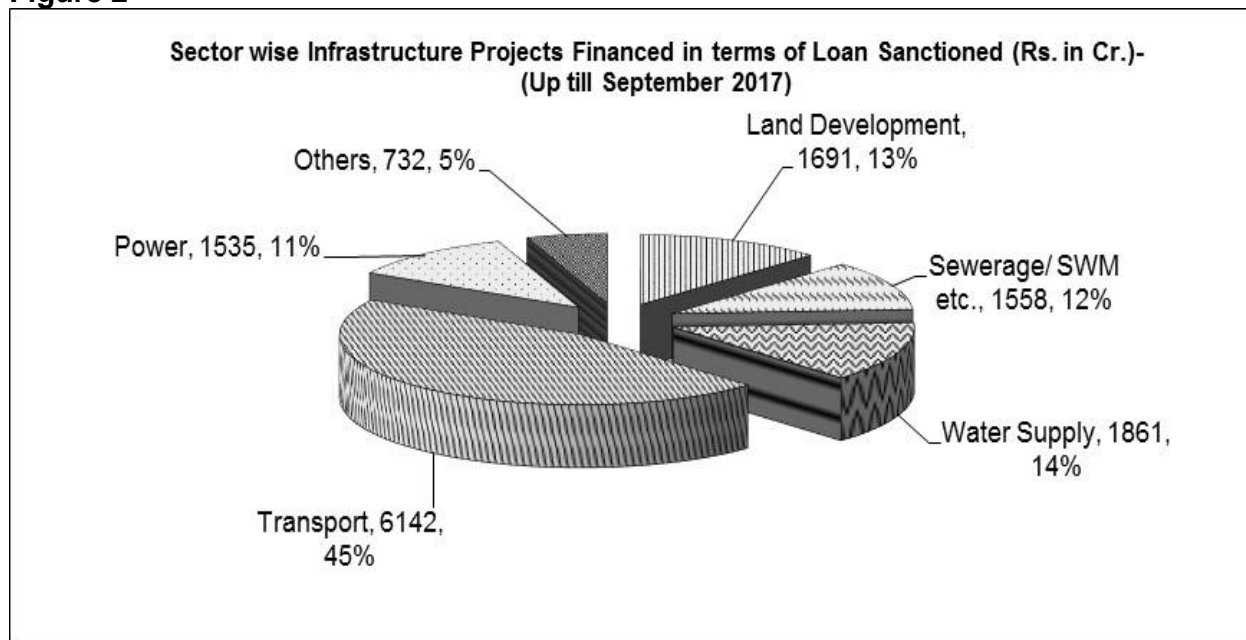


Figure 2



Out of **299** projects for which loans have been sanctioned by the Board, **250** projects have been completed and balance **49** are at various stages of implementation. State-wise analysis of **49** ongoing projects is as under:-

| Project Description | | Haryana | Uttar Pradesh | Rajasthan | Delhi | Madhya Pradesh | Total |
|---|---------------------|-----------|---------------|-----------|----------|----------------|-----------|
| Delayed | | | | | | | |
| Delayed > 1 Year | Extensions approved | 3 | - | - | - | - | 3 |
| | No extensions | 1 | 1 | | | | 2 |
| Delayed < 1 Year | Extensions approved | - | - | - | - | - | - |
| | No extensions | 4 | 1 | | | | 5 |
| Ongoing Within Sanctioned Time | | 5 | 5 | 13 | - | - | 23 |
| Reported Completed | | | | | | | |
| Completion Certificate Received | | 8 | - | - | - | - | 8 |
| Completion Certificate/ Clarification Awaited | | 3 | 2 | - | - | 1 | 6 |
| Nonstarter | | 1 | - | - | 1 | - | 2 |
| Total | | 25 | 9 | 13 | 1 | 1 | 49 |

- **5** projects from the ongoing list of projects have been delayed by more than one year from the original date of completion and have been given extensions. Out of these 5 projects, **two (2)** have not even sought extensions and continue to be delayed (refer **Appendix-I**). Out of these, **2** projects have sought fresh extensions, and one project has been reported as completed but completion certificate awaited.
- **8** of the ongoing projects have been reported as completed and Completion Certificates received (List at **Appendix-II**).
- Another **6** have either reported completed or foreclosed but are yet to submit the necessary Completion Certificates or related clarifications (List at **Appendix-III**).
- One **(1)** Office Building Project and One **(1)** Water supply project pertaining to EDMC, Delhi and HSIIDC, Haryana are the two non-starter projects despite loans sanctions in December 2013 and May 2015 and thereafter first instalments released September 2014 and March 2016 respectively. The matter was taken up in last PSMG and then at Member Secretary Level in February 2017 wherein agencies had assured of work award by April 2017. In this regard, this is to update the Group that EDMC has informed vide letter dated 1.11.2017 that “*work has been awarded to M/s SAM (India) Builtwell Pvt. Ltd. on 3.10.2017*”. Further, EDMC while seeking extension uptill March, 2021, has further informed that “*the main reason for delay in starting of work was that tenders were called five times either due to no response to the NIT or the bidders were not found eligible according to primary eligibility criteria*”. However, no information has been received from HSIIDC Haryana till date.



Point for Decision

- Agencies need to adhere the project completion schedules. The Board should be kept apprised with regard to the delays and the reasons thereof and necessary action that is being taken to avoid further delays.
- Agencies who foresee delays in project completion need to make the necessary extension request with appropriate justification in a timely manner.
- All projects that have been reported completed and completion certificates received since last PSMG may be shifted to List of Completed projects.
- Ganga Nagar Residential Scheme, Bulandshahar (BKDA) may also be considered as completed on as is where basis.
- The Transport Nagar Scheme, Bulandshahr of BKDA may be treated as withdrawn/dropped as agency has already refunded all funds and it does not require any further loan and it will complete the works from own resources.
- EDMC need to submit the fresh implementation schedule along with the revised loan phasing schedule in the light of the latest development.
- HSIIDC need to ascertain and confirm to the Board regarding intent to take up the project as no action is being seen on ground even after 2 years of loan approvals regarding their respective nonstarter project.
- The respective agencies need to expedite submission of the completion certificates and related clarifications for the projects that have been reported completed pending submission of completion certificates. They may ensure that the assets proposed under the project have been actually created and are functional on ground as envisaged.



Appendix-I

Ongoing Projects - ongoing but delayed by more than a year from original date of completion

| Project Description | Haryana | Uttar Pradesh | Total |
|--------------------------|---------|---------------|-------|
| Delayed more than 1 Year | 4 | 1 | 5 |

(Rs. in Cr)

| S.No. | Name of the Projects | Type of Project | Implementing Agency | Date of sanction | Original completion Date / revised date | Estimated cost | Loan Sanctioned | Loan released | Reported Expenditure |
|-------|---|------------------|-------------------------|------------------------|---|----------------|-----------------|---------------|----------------------|
| | Haryana | | | | | | | | |
| | Extensions Approved | | | | | | | | |
| 1. | Water Supply scheme for Nalhar Medical College and Nuh Town* | Water Supply | PHED | Aug-11/May-15 | Jul-14/ Mar 2015, Aug 2016 | 150.00 | 112.50 | 90.13 | 92.19 |
| 2. | Augmentation of Water Supply for Pataudi and adjoining town of Haily Mandi along with surrounding seven villages* | Water Supply | PHED | Nov-11/May-15 | Jul-16 | 41.15 | 30.86 | 16.90 | 24.51 |
| 3. | Augmentation of Water Supply for Farrukh Nagar Town & Five Villages, Gurgaon District. | Water Supply | PHED | Nov-11/May-15 (Feb-14) | Feb-16/ Jun-16/Jun-17 | 13.90 | 10.43 | 6.78 | 7.46 |
| | No Extensions Sought | | | | | | | | |
| | Uttar Pradesh | | | | | | | | |
| 4. | Ram Ganga Nagar residential scheme in Bareilly | Land Development | Bareilly Dev. Authority | Dec-04 | Mar-10/ Mar-17 | 99.37 | 37.00 | 37.00 | 256.83 |
| | Haryana | | | | | | | | |
| 5. | Two lane ROB at Sonapat Purkhas road near sugar mill on Delhi Ambala Railway line L/C No. 29 | Transport | PWD (B&R) | Dec-12 | Dec-15 | 40.37 | 16.42 | 13.210 | 27.61 |

* Fresh extensions requested and taken up separately.



Appendix-II

Projects Reported Completed & Completion Certificate Received

Following projects have been reported completed through completion certificates by respective agencies:-

| Project Description | Haryana | Total |
|---------------------------------|---------|-------|
| Completion Certificate Received | 8 | 8 |

(Rs. in Cr.)

| S.No. | Name of the Projects | Implementing Agency | Date of sanction | Final Completion Cost |
|-------|---|---------------------|------------------|-----------------------|
| 1. | Improvement by way of four laning of Rewari Kot Kasim Road upto NH-8, Shahjahanpur Rewari road upto 6 km., Rewari Narnaul Road (SH26), Rewari Mohindergarh Road, Rewari Dadri road upto proposed bypass-25.61km | PWD (B&R) | Nov-08 | 96.30 |
| 2. | Widning & upgradation of Gurgaon-Chandu-Badli-Bahadurgarh Road | PWD (B&R) | Dec-12 | 187.32 |
| 3. | Providing sewerage scheme for Punhana Town in Mewat Distt. | PHED | Aug-11 | 12.76 |
| 4. | Providing sewerage scheme and treatment plant for Pataudi, Gurgaon District | PHED | Aug-11 | 20.06 |
| 5. | Providing sewerage scheme and treatment plant for Hathin Town, Palwal District | PHED | Aug-11 | 12.30 |
| 6. | Development of Sewerage System and Construction of two STPs at Rohtak town | PHED | Feb-06 | 62.20 |
| 7. | Establishment of Technical Institutions at Rohtak | DTE, GoH | May-10 | 215.41 |
| 8. | Scheme for strengthening power infrastructure in NCR area of Haryana – Augmentation of Transmission Works | HVPN | Nov-08 | 52.97 |



Appendix-III

Projects Reported Completed but Completion Certificate Awaited

Following projects have been reported as completed by the agencies but the Completion Certificates are still awaited. The details are as follows:-

| Project Description | Haryana | Uttar Pradesh | SADA Gwalior | Total |
|--|---------|---------------|--------------|-------|
| Completion Certificate/Clarification Awaited | 3 | 2 | 1 | 6 |

(Rs. in Cr)

| S. No. | Name of the Projects | Type of Project | Implementing Agency | Date of sanction | Original / Revised Date of completion | Estimated cost | Loan Sanctioned/ released | Completion cost |
|--------|--|-----------------|---------------------|-------------------|---|----------------|---------------------------|-----------------|
| | Haryana | | | | | | | |
| 1. | Providing sewerage facilities in village kosli, Bhakli and Railway station area of Kosli, Dist. Rewari | Sewerage | PHED | Oct-07 | Oct-10/Aug-13/ Sep-14/Jun-16/ Mar-17 | 8.70 | 6.53/ 5.22 | 9.15 |
| 2. | Water Supply at Sohna Town & Rojka Meo Industrial Area, Sohna | Water Supply | PHED | Nov-08 | Dec-11/ Dec-12 / Dec-14 / Sep-15 / Mar-16 | 65.34 | 24.50/ 24.50 | 65.84 |
| 3. | Construction of 2 lane ROB at Hodal Hassanpur road on Delhi Palwal Mathura Railway line at L/C No. 553 | Transport | PWD (B&R) | Dec-12 | Dec-15 | 24.10 | 13.76/ 10.88 | 27.68 |
| | Uttar Pradesh | | | | | | | |
| 4. | Ganga Nagar residential scheme, Bulandshahr* | LD | BKDA | Nov 04/ May 10 | May-08/ Mar-09/ Mar-13 | 69.14 | 48.09/ 35.09 | 81.16 |
| 5. | Transport Nagar Scheme, Bulandshahr** | Transport | BKDA | Nov-04 | Mar-08/ Mar-09 | 33.71 | 20.65/ 17.79 | 65.43 |



| S. No. | Name of the Projects | Type of Project | Implementing Agency | Date of sanction | Original / Revised Date of completion | Estimated cost | Loan Sanctioned/ released | Completion cost |
|--------|--|-----------------|---------------------|------------------|---------------------------------------|----------------|---------------------------|-----------------|
| | SADA Gwalior | | | | | | | |
| 6. | Infrastructure Development of Residential Schemes* | LD | SADA, Gwalior | NOV 09 | Dec-11/ Jun-14/ Sep-15 | 76.07 | 42.05/ 31.54 | 92.71 |

* Reported foreclosed indicating no more loan required. Balance works to be taken up from own sources on availability of land

** Persistent land issues have led to little action on ground apart from land acquisition. Agency request for foreclosure indicating no more loan required and assuring works to be taken up from own sources



Agenda Item No. 5.1: Request for extensions of completion dates of projects

Request for extension of completion dates for following ongoing projects were made by implementing agencies as per details given below:-

| S. No. | Name of the Projects | Estimated cost (Rs. In Cr.) | PSMG Date of approval | Original/ Revised Date of completion | Requested revised date of completion | Reasons for delay |
|--------|---|-----------------------------|------------------------|--------------------------------------|--------------------------------------|---|
| 1. | Water Supply scheme for Nalhar Medical College and Nuh Town | 150.00 | Aug-11/May-15 | Jul-14/ Mar-15/ Aug-16/ Mar-17 | Dec-17 | <ul style="list-style-type: none"> The three projects are linked as they have common water source and its related works. |
| 2. | Augmentation of Water Supply for Pataudi and adjoining town of Haily Mandi along with surrounding seven villages. | 41.15 | Nov-11/ May-15 | Jul-16/ Jun-17 | Dec-17 | <ul style="list-style-type: none"> Private land was notified by the Government under Haryana Underground Pipeline Act 2008 on June 2016 to lay 300 meter pipe for which award was announced on 17.03.2017. Now the pipeline has been laid. |
| 3. | Augmentation of Water Supply for Farrukh Nagar Town & Five Villages, Gurgaon District. | 13.90 | Nov-11/May-15 (Feb-14) | Feb-16/ Jun-16/Jun-17 | Sep-17 | <ul style="list-style-type: none"> Delayed permission from GAIL India Ltd. for laying of 150 mm i/d & 800 mm i/d water pipeline across its LPG. Delay in release of electric connection with 280 KW load for Boosting Station at village Babra Bakipur. Construction of 66 KV S/S at village Jamalpur by DHBVN, which will provide 11 KV independent feeder to project is likely to be delayed due to some land dispute resulting in delay of commissioning of B/S at Babra Bakipur. |
| 4. | Raw Water Conveyance Main from | 183.19 | Oct-13 (Feb-16)* | Oct-15 (Feb-18) | Jun-18 | Although land had been acquired by GNIDA in 2009-10 and |



| S. No. | Name of the Projects | Estimated cost (Rs. In Cr.) | PSMG Date of approval | Original/ Revised Date of completion | Requested revised date of completion | Reasons for delay |
|--------|--|-----------------------------|-----------------------|--------------------------------------|--------------------------------------|--|
| | Intake at Dehra (Ghaziabad) to WTP site at Palla (Greater Noida) Clear Water Main from WTP site to Master Reservoir (under KfW line of credit) | | | | | about 80% owners had accepted the compensation, an amount of balance 20% was deposited in the treasury by GNIDA. Farmers are now seeking compensation as per new land acquisition and not allowing work. Anticipating the issue being resolved soon, agency has sought extension uptill June 2018 for project completion. |
| 5. | Development of Six lane Elevated Road (Hindon) in Ghaziabad, Uttar Pradesh by GDA | 1147.60 | Jan-16 | Apr-17 | Dec-17 | Delay in shifting of electric transmission line. Land issues at site of rotary junction of Karhera approach (now resolved). Delayed approvals from Railways & compliance of NGT requirements. |
| 6. | Construction of Multi-storied office building at Karkardooma Institutional area at Shahdara South Zone by EDMC | 101.65 | Dec-13 | Jan-17 | Mar-21 | The main reason for the delay in starting of the work is that 'tenders were called five times either due to no response to the NIT or the bidders were not found eligible according to primary eligibility criteria. Each time publicity to call of tenders took considerable time'. |

* The PSMG-I Group in its 54th meeting accorded approval for the proposal regarding treating "date of start of project" as "date of award" in respect of projects being implemented by GNIDA under KfW line of credit.

Point for Decision: The Group may approve the requested extensions directing the respective Implementing Agency to complete the pending works within the sought extensions and take necessary steps to avoid such delays in the projects.

Matter is placed before the PSMG for information & Approval.



Agenda Item No. 6: Review of terms & conditions of sanctioning of Grant by NCRPB to promote Water Supply, Sanitation and Solid Waste Management projects in the National Capital Region & Counter Magnet Areas(CMAs)

In accordance with Rule 34 and 35 of NCRPB Rules, 1985 and decision taken in 32nd Board Meeting held on 22.3.2012, Board provides **Grant upto 15% of the sanctioned project cost**, in addition to long term soft loans for water supply sewerage and drainage & solid waste management projects in the NCR & CMA towns for implementation of Sub-Regional Plans and Project Plans or for developing the counter magnet areas. The power to sanction grant has been delegated to PSMG-I.

2. The operational guidelines and terms & conditions of sanctioning of Grant by NCRPB were circulated to all the participating states / borrowing agencies vide Boards letter No. G-20017(2)/GIA/NCRPB/2012-13 dated 1.4.2013 (refer Appendix-I). As per these guidelines:-

- Only those projects (in the sectors mentioned above) will be eligible for the grant, which have been executed within stipulated time and cost and have adhered to the norms of execution in each phase including ESMS guidelines as stipulated in the initial terms of loan sanction letter of NCRPB.
- Further, the release of Grant shall be made after approval by the Project Sanctioning and Monitoring Group (PSMG) of the Board and shall be disbursed as reimbursement of expenditure already incurred on the project.

3. These Guidelines are based on financial prudence and were prepared to encourage and incentivize States/ULBs to provide better water supply system, sewerage and drainage services so as to ensure the execution of projects by states, in the NCR in a time-bound and cost effective manner and compliance with the Environmental and Social Policy of NCRPB /ADB /Kfw.

4. It has been experienced that till date none of the agencies have been able to avail this incentive. However, it has been observed that Board is now having huge inflow of new projects from states and CMAs and out of which some of the projects are of very large financial value. Further, since the Government of India has reduced its budgetary support, the available resources with the Board may not be adequate to cater the arising grant liability of the Board, particularly of the large magnitude projects.

5. In view of foregoing and considering the financial constraints of the Board and with the Boards intention to distribute the benefit of grant equally amongst all the three participating states and CMA's, it is proposed to fix a upper ceiling on sanctioning and release of grant component by NCRPB for water supply, sewerage and drainage & Solid Waste management projects in the NCR & CMA towns.

6. Accordingly, sanction and release of grant shall be subject to following revised / other terms & conditions as given below:-

- a. The grant component shall not exceed 10% of the sanctioned project cost, subject to a maximum ceiling of Rs.10 crores for a single project and further subject to total of Rs. 50 crores for a participating state /CMA during one financial year. Grant shall be released by NCRPB in a single instalment as reimbursement of bonafide expenditure



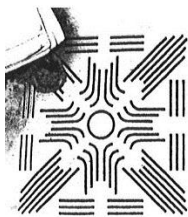
already incurred on the project, subject to fulfilment of all terms & conditions of loan sanction.

- b. Only those projects will be eligible for the grant which have been executed within the approved stipulated time and cost by PSMG.
- c. The beneficiary agency should submit request for grant in prescribed application format along with necessary documents / Utilization Certificate for loan amount, after the successful completion of project within a period of **Nine months** from the date Completion of Project. In case the request for grant is received in the last quarter during December to March, the grant amount shall be disbursed in the next financial year.
- d. The beneficiary agency should contribute minimum 25% of actual project cost as its counterpart share from its own sources/state funds, before release of Grant by NCRPB.
- e. The grants shall be governed by provisions of NCRPB Rules / provisions of GFR 2017, as amended from time to time.
- f. These guidelines will be applicable on the new projects sanctioned & for which loan installment released from 2017-18 (1.4.2017). Provisions made by Board in annual Accounts 2016-17 shall remain unchanged.

The above matter given in para-5 & 6 above is submitted before PSMG for approval.



Appendix-I



राष्ट्रीय राजधानी क्षेत्र योजना बोर्ड

NATIONAL CAPITAL REGION PLANNING BOARD

प्रथम तल, कोर-IV बी/1st Floor, Core - IV B

भारत पर्यावास केन्द्र/India Habitat Centre

लोधी रोड, नई दिल्ली-110 003 / Lodhi Road, New Delhi-110 003

शहरी विकास मंत्रालय/Ministry of Urban Development

दूरभाष/Phone : 24642284, 24642287, फैक्स/Fax : 24642163

Dated: 1.4.2013

No.G-20017(2)/GIA/NCRPB/2012-13

To,

As per list

Subject: New Financing Pattern for environment friendly social infrastructure development projects in NCR & CMA towns.

Sir,

I am directed to inform that the NCR Planning Board in its 32nd Meeting held on 22.3.12 has approved providing Grant-In-Aid upto 15% of the sanctioned project cost for water, sewerage and drainage projects in the NCR & CMA towns. In this regard the Guidelines and Terms & Conditions for sanctioning of Grant by NCRPB is enclosed at Annexure-I for your information and necessary action.

Yours faithfully,

(P.K. Jain)

Finance & Accounts Officer

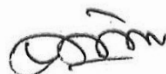
Encl. as above.



NCR Planning BoardGUIDELINES AND TERMS & CONDITIONS FOR SANCTIONING OF GRANT BY
NCRPB

- 1 **Name of Scheme:**
Grant-In-Aid to promote civic infrastructure projects in the National Capital Region.
- 2 **Operative Period**
New projects in water, sewerage and solid waste sector sanctioned by PSMG after 1.4.2012 as well as for projects sanctioned by PSMG where loans have not been disbursed for the projects sanctioned after 46th PSMG meeting.
3. **Eligible agencies**
State Government Departments preferably ULB's, PHED's and Development Authorities
4. **Financing Pattern/ Grant component**
Up to 15% of sanctioned project cost
5. **Eligibility Criterion**
 - Only those projects (in the sectors mentioned above) will be eligible for the grant, which have been executed within stipulated time and cost and has adhered the norms of execution in each phase including ESMS guidelines as stipulated in the initial terms of loan sanction letter of NCRPB.
 - The grant-in-aid will be regulated in accordance with the provisions contained in the Guidelines of GoI, NCRPB Rules and is also subject to Chapter-9 of the General Financial rules, 2005 as amended from time to time (Rule -206 to 215 of GFR).
6. **Disbursement of Grant:-**

The release of Grant shall be made after approval by the Project Sanctioning and Monitoring Group (PSMG) of the Board and shall be disbursed as reimbursement of expenditure already incurred on the project.




Agenda Item No. 7: Proposal on making NCR Planning Board (NCRPB) an instrument for creating Smart Cities - Tapping funds from multilateral and bi-lateral funding agencies

1.1 National Capital Region Planning Board

The National Capital Region Planning Board was constituted in 1985 by an Act of Parliament with the following major objectives:

- Preparation of a plan for the development of the National Capital Region;
- Coordinating and monitoring the implementation of the said Plan; and
- Evolving harmonized policies for control of land uses and developing infrastructure in the Region so as to avoid any haphazard development of the Region.

1.2 Constituent Areas

NCR is a unique example of inter-State regional planning for the development of the region with NCT Delhi as its core. The constituent areas of the NCR were firstly notified under THE SCHEDULE of the NCRPB Act, 1985 consisting the whole of Union Territory of Delhi and some parts of State of Haryana, Uttar Pradesh and Rajasthan. Further, certain areas were included in the NCR vide Government of India Gazette Notification dated 23.04.2004, 01.10.2013 and 24.11.2015. Subsequent to these notifications, as on 31.03.2017, the total area of the NCR is about 53,817 sq. km. the NCR constituent State/sub-region wise area details are as under:

| Sub-Region | Name of the Districts | Area in sq. kms. |
|---------------|--|------------------|
| Haryana | Faridabad, Gurgaon, Mewat, Rohtak, Sonapat, Rewari, Jhajjar, Panipat, Palwal, Bhiwani, Mahendragarh, Jind and Karnal | 25,327 |
| Uttar Pradesh | Meerut, Ghaziabad, Gutam Bhuh Nagar, Bulandshahr, Baghpat, Hapur and Muzaffarnagar | 13,560 |
| Rajasthan | Alwar and Bharatpur | 13,447 |
| Delhi | NCT of Delhi | 1,483 |
| Total | | 53,817 |

1.2.1 Counter Magnet Areas

The NCRPB Act, 1985 under Section 8 (f) empowers the Board to select any urban area outside the NCR having regard to its location, population and potential for growth as a 'Counter Magnet Area' (CMA), in consultation with the concerned State Government, for development in order to achieve the objectives of the Regional Plan. As on 31.03.2017, there are total 09 Counter Magnet Areas of NCR. The details of the CMAs is as under:

- Hissar in Haryana
- Ambala in Haryana
- Bareilly in Uttar Pradesh
- Kanpur in Uttar Pradesh
- Kota in Rajasthan
- Jaipur in Rajasthan
- Patiala in Punjab
- Gwalior in Madhya Pradesh
- Dehradun in Uttarakhand



These CMAs are envisaged to play two distinctive mutually complementary roles, i.e.:-

- a) As interceptors of migratory flows into NCR, which may escalate, as the accelerated development of NCR would provide a pull to migrants from the less developed adjoining areas; and
- b) As Regional growth Centres, which would be able to achieve a balanced pattern of urbanization in the Region of their own setting over a period of time.

1.3 Financing Function

1. Section 7 of the NCRPB Act, 1985 lays down the functions of NCRPB. In terms of section 7(e), one of the functions of the **NCRPB is to arrange for, and oversee, the financing of selected development projects in the National Capital Region through Central and State Plan funds and other sources of revenue**. Further, as per section 8 (e) of the NCRPB Act, the Board can select and approve comprehensive schemes and provide assistance for the implementation of these schemes.

2. The Board under the provisions of the above sections has been providing soft loans for various projects prepared and submitted by the state government agencies within the National Capital Region and Counter Magnet Areas with the over-arching goal of achieving the balanced development of the Region. These projects cover wide spectrum of Basic Infrastructure Development, Sewerage, Drainage and Solid Waste Management, Water Supply, Power, Transport, Social infrastructure like Hospitals and others and Metro rail Projects. The pattern of loan assistance provided by the NCR Planning Board is 25:75; 25% being the borrowing agency's contribution and a maximum 75% of the project cost being the loan from the NCR Planning Board. The Board presently provides long term loan of 10-20 years tenure with two to five years moratorium in payment of principal and the loan carries interest rate as prevailing at the time of disbursements.

3. The Board has majorly financed in the following sectors:

| S. No. | Infrastructure Sub-Sectors |
|--------|--|
| I | Water Sub-Sector- Bulk water supply, Water Distribution, Water Conservation |
| II | Sanitation, Effluents, LCS, Drainage and Solid Waste Disposal - Sewage Treatment Plants, Sewage Lines, Storm Water Drainage, Low Cost Sanitation, Solid Waste disposal |
| III | Transportation-Transport Facilities, Roads, RoBs, Flyovers, Bye-passes, Metro Rail |
| IV | Power Sector –Generation, transmission and distribution |
| V | Land development & Housing projects |
| V | Social infrastructure dispensaries, hospitals, school and colleges. In situ slum rehabilitation and resettlement schemes, sports infrastructure |

As of September, 2017, the Board has provided financial assistance to 299 **infrastructure projects across the various sectors**, out of which 250 projects with an estimated cost of **Rs. 16909 crore** and loan sanctioned cost of Rs. 7324 crore has got completed and 49 infrastructure projects with an estimated cost of Rs.12378 crore and loan sanctioned cost of Rs.6196 crore are on-going. The Board has released a loan amount of Rs. **9941** crore till September, 2017.



New Initiative

- The Board has increased the tenure of loan for priority infrastructure projects viz. Water Supply, Sewerage, Sanitation, Drainage and Solid Waste Management from 10 years to 15 years including 3 years moratorium for re-payment of principal amount and from 10 years to 20 years (with moratorium of 5 years for re-payment of principal amount for Metro/RTS projects). In order to further encourage and incentivize States/ULBs to provide water, sewerage and drainage services in the NCR in a time-bound manner, NCRPB approved 15% of the project cost as Grants. To encourage Transport, Water and Sanitation sector projects which have long gestation period and low returns, the Board has reduced interest rate from 7.50% p.a. to 7.00% p.a. Further, to promote power sector projects, it has been placed under priority sector and the rate of interest have also been reduced from 9.25% to 7.50%.

1.4 Present Sources of Funds

- Budgetary support from Government of India
- **Bonds:** It is pertinent to point-out that the Board had raised *funds from the capital market through the instrumentality of Private Placement Bonds*. In the last decade, the Board has raised about Rs. 1100 crore through this process. The Board has a creditable loaning performance in as much as it has 100% recovery and no NPA. *The Board's fund-raising operations are rated by CRISIL ICRA and Fitch (now India ratings) and it has been securing AAA standalone rating for the last 10 years.* This is the highest level of rating given by these rating agencies for such type of organizations.
- **Multilateral/Bilateral Funding:** The Board managed to obtain separate credit lines of USD: 60 million & Euro:100 million from ADB & KfW respectively. The entire loan of USD 60.00 million from Asian Development Bank has been fully utilised by the Board
- All expenditure in excess of the Grants/budgetary contribution was met from the borrowings from multilateral & bi-lateral agencies i.e. ADB & KfW, loan repayments & Board's own internal accruals.

As on date 12 Projects under KfW line of credit are ongoing. The loan utilization date is December, 2018. Out of Sanctioned Euro, 100 million loan, Board has already utilized Euro 65.04 million (Appx.) upto September, 2017.

1.5 Readiness for new initiatives/new ventures

NCRPB is ready to participate and play a pivotal role in the infrastructure development of the Present and future smart cities especially Kanpur, Kota, Jaipur, Dehradun, New Delhi, Karnal and Faridabad, which come under its access area. The low cost funding by NCRPB will definitely be able to remove the major financial roadblocks of the projects and enable the Implementing Agencies (IAs) for the smooth implementation of the project. It is imperative to mention that this office has vast experience in getting the Water, sewerage and road projects implemented through the Implementing Agency.

Further, NCRPB has experience of successfully dealing with Multilateral/Bilateral (lending) Agencies i.e., ADB & KfW and it enjoys close co-ordination with the lending agencies. Being familiar with the lending processes and its sound proof loan management is an added advantage to this office.



By transforming the high cost debt into low cost debt, Board will be able to augment the infrastructure development in the “Flagship scheme of creating Smart City falling in NCR Region& the Counter Magnet Area, in a sustainable manner.

Financing pattern:

National Capital Region Planning Board (NCRPB) will be the Borrowing Agency i.e., Financial Intermediary i.e., The Board will borrow the loan from the lending agencies (Multilateral/Bilateral Agency) and will extend the loan to the IAs as a long term soft loan at cheaper rates.,

Policy direction and strategic oversight for NCRPB's operation and the implementation of projects under the aforesaid facility will be provided by the Board. The oversight committee for the projects under the facility will be the Project Sanctioning and Monitoring Group (PSMG), headed by the Secretary, Ministry of HUA, and Government of India. The PSMG is the focal point for subproject appraisal, approval and overall guidance.

Proposal for consideration

1. It is proposed that NCRPB may request DEA through Ministry of HUA to accord approval to avail fresh loan/new credit line from Multilateral/Bilateral Agency to participate in the infrastructure development of present and future smart cities.
2. Ministry of HUA may be requested to expedite proposal declaring NCRPB to work as National Financing Intermediary (NFI) for funding of Smart Cities through Multilateral funds.
3. NCRPB shall be permitted to fund upto the 75% of the Smart City project cost.



Agenda Item No. 8: Empanelment of National Institutes (NIs) for providing Appraisal Services on Recurring Price Contract Basis (Three Years)

1. Introduction

The purpose of empaneling the National Institutes (NIs) is to appraise the Detailed Project Reports related to infrastructure development [*Power Sub-Sector, Water Sub-Sector and Sanitation, Effluents, LCS and Solid Waste Disposal, Land development & Construction of Buildings, Social infrastructure dispensaries, hospitals, schools and colleges. In situ slum rehabilitation and resettlement schemes, sports infrastructure, Landscaping Greens, Monument Conservation & Tourism, Industrial Estates and Technology Parks, IT Park, Bio Tech Park, Transportation and Informal Sub-Sector Markets*] sector in a professional manner so that all planning, technical, financial and environmental & social aspects are thoroughly scrutinized before loan assistance is provided for its implementation.

2. Background

NIs were empanelled by the board for undertaking the appraisal work from May, 2007 to March, 2013. However, M/S. CDM Smith was selected as consultant for providing Project Management Consultancy Services to the board for the project “National Capital Region Urban Infrastructure Financing Facility (NCRUIFF-1)”. The consultant was to support NCRPB in undertaking management and monitoring functions of the project and in developing/preparing a sub-project pipeline for seeking future funding support from the multi-lateral/bi-lateral donor agencies. In this regard, NCRPB engaged this consultancy firm in accordance with ADB’s Guidelines on the use of Consultants to support NCRPB. The implementation support by M/S CDM Smith was for a period of three years from January 2012 to July 2016. This was related to projects which were funded by NCRPB from the line of credit available from ADB.

Further, Lahmeyer GKW Consult GmbH was selected for providing consultancy services to NCRPB for the KfW Project “Environment-Friendly Urban Development Programme Accompanying Measures”. They started rendering their services w.e.f. from December 2013 and shall continue till December 2018. However, due to their commitment towards the ongoing KfW projects, they have expressed their inability to continue to provide appraisal services for the new projects to the Board. Subsequently, it was decided to empanel National Institutes (NIs) for providing appraisal services to the Board.

3. Scope of Work for National Institutes (NIs)

The scope of the work includes that the National Institutions (NIs) are required to appraise the DPRs through interactive process including visits to the proposed sites. The detailed appraisal shall broadly cover the following aspects:

- (a) Project Demand Assessment
- (b) Technical feasibility & design criteria,
- (c) Quality of structural design,
- (d) Reasonability of cost estimates & Financial Viability,(EIRR, FIRR)
- (e) Impact on environment (as per Environment & Social Management System (ESMS) adopted by NCRPB),
- (f) Rehabilitation, Statutory compliances, Social Safeguards (as per Environment & Social Management System (ESMS) adopted by NCRPB)
- (g) Statutory Compliances



The deliverables expected are as follows:

- a) The NI is required to discuss the preliminary observations / comments on Detailed Project Reports (DPRs) with the NCRPB and the Implementing Agency within two weeks of award of work for clarification/compliance by the implementing agency.
- b) NI is required to submit a Draft Project Appraisal Report within two weeks of the aforesaid presentation at the NCRPB office, detailing status of feasibility of all the five aspects and the methodology adopted to arrive at the conclusions made.
- c) The Final Project Appraisal Report along with the proper certification of the technical, financial, environmental and Quality wise feasibility as per a format & appraisal guidelines as provided, shall have to be submitted within a week after the approval of draft appraisal report by NCRPB.
- d) Based on the NCRPB approved Final Appraisal Report, a summary of the appraisal in a separate agreed format to be submitted for the consideration of PSMG Meeting.
- e) To provide clarifications and assistances, if required by the NCRPB till the sanction of the said project(s) by the Project Sanctioning and Monitoring Group (PSMG) of the Board.

4. Price Negotiation Process

NCRPB on receipt of rates against its request made to various National Institutes to give a suitable quote for the project appraisal works had decided to have a meeting with the objective to have various Appraisal Agencies at a common platform for empanelment.

The process for empanelment of National Institutes for providing Project Appraisal Services on Recurring Price Contract Basis (three years) had been initiated and the first meeting regarding negotiation with the NIs was held on 29.8.2017.

The National Institutes who participated in the meeting included Housing and Urban Development Corporation Ltd. (HUDCO), Engineers India Limited (EIL), RITES Ltd. and WAPCOS Ltd. Apart from these NIs, Building Materials and Technology Promotion Council (BMPTC) and National Environmental Engineering Research Institute (NEERI) also submitted their proposal to participate in the empanelment process but they were not invited for the meeting held on 29.08.2017 since the rate quoted by them in their respective sectors are already minimum in comparison to rest of the NIs in their respective sectors.

In the meeting the NIs were requested to provide their inputs/suggested modifications to enable NCRPB to finalize the scope of work and deliverables; so that the agreed scope of work including the fee, payment pattern and NI empanelment for each sector & category may be finalized. The NIs were also asked to match with the lowest rates in all the sectors in which they are willing to participate.

5. Framing of In-house Committee

An in-house committee was framed to look into all related aspects of NI Empanelment, right from finalization of the running contract document for project appraisal works after inputs from NIs, point of award of work to NIs, acceptance of the reports and release of payments to NIs etc. The committee constituted by Member Secretary included Director (A&F) as chairman while Jt. Director (technical), Finance & Accounts Officer, Assistant Director (Finance) as members and DD (T), PMC as member convener.

On receiving the revised rates from NIs, the in-house committee meeting was held on 18.09.2017.



rites has expressed their inability to work stating reasons that the rates they were asked to match with, are very low. While, EIL has submitted the revised proposal with certain conditions. EIL has been informed with the recommendations of the in-house committee in line with the conditions put forward by them in the revised proposal.

6. Final rates received from the NIs

| Sl. No. | Name of Sector | Project Cost-Wise Slab (Rs. in cr) | Rates to be matched | Rates for appraisal sector wise (Rs. In Lakhs) | | | | |
|---------|--|------------------------------------|---------------------|--|---------------|--------|---------------|---------------|
| | | | | EIL | HUDCO | WAPCOS | NEERI | BMPTC |
| 1. | Power Projects | < 50 | 5.00 | 5.00 | Did not Quote | 5 | Did not Quote | Did not Quote |
| | | 50 -150 | 6.39 | 6.39 | | 6.39 | | |
| | | >150 | 6.39 | 6.39 | | 6.39 | | |
| 2. | Water Supply | < 50 | 1.65 | Did not Quote | 1.6 | 1.65 | 1.65 | Did not Quote |
| | | 50 -150 | 2.15 | | 2.1 | 2.15 | 2.15 | |
| | | >150 | 2.8 | | 2.8 | 2.8 | 2.8 | |
| 3. | Sanitation, Effluents, LCS and SWM | < 50 | 1.65 | Did not Quote | 1.6 | 1.65 | 1.65 | Did not Quote |
| | | 50 -150 | 2.15 | | 2.1 | 2.15 | 2.15 | |
| | | >150 | 2.8 | | 2.8 | 2.8 | 2.8 | |
| 4. | Land Development and Construction Buildings | < 50 | 4.00 | 4.00 | 4.00 | 4.00 | Did not Quote | 4.00 |
| | | 50 -150 | 5.00 | 5.00 | 5.00 | 5.00 | | 5.00 |
| | | >150 | 6.00 | 6.00 | 6.00 | 6.00 | | 6.00 |
| 5. | Social Infrastructure | < 50 | 4.00 | 4.00 | 4.00 | 4.00 | Did not Quote | 4.00 |
| | | 50 -150 | 5.00 | 5.00 | 5.00 | 5.00 | | 5.00 |
| | | >150 | 6.00 | 6.00 | 6.00 | 6.00 | | 6.00 |
| 6. | Land Scaping Greens, Monument Conservation and Tourism | < 50 | 5.00 | 5.00 | 5.00 | 5.00 | Did not Quote | Did not Quote |
| | | 50 -150 | 6.39 | 6.39 | 6.39 | 6.39 | | |
| | | >150 | 6.39 | 6.39 | 6.39 | 6.39 | | |
| 7. | Industrial Estates, Techno Park and IT Parks | < 50 | 5.00 | 5.00 | 5.00 | 5.00 | Did not Quote | Did not Quote |
| | | 50 -150 | 6.39 | 6.39 | 6.39 | 6.39 | | |
| | | >150 | 6.39 | 6.39 | 6.39 | 6.39 | | |
| 8. | Transportation | < 50 | 5.00 | 5.00 | 5.00 | 5.00 | Did not Quote | Did not Quote |
| | | 50 -150 | 6.39 | 6.39 | 6.39 | 6.39 | | |
| | | >150 | 6.39 | 6.39 | 6.39 | 6.39 | | |
| 9. | Informal Sub-sector Markets | < 50 | 5.00 | 5.00 | 5.00 | 5.00 | Did not Quote | Did not Quote |
| | | 50 -150 | 6.39 | 6.39 | 6.39 | 6.39 | | |
| | | >150 | 6.39 | 6.39 | 6.39 | 6.39 | | |

7. Recommendations of the In-House Committee

The recommendations of the committee are as follows:

1. The payment schedule:

| Sl. No. | Description | Amount (%age of the total cost) |
|---------|--|---------------------------------|
| a. | On submission of Draft Appraisal Report | 40 |
| b. | On submission of Final Appraisal Report | 50 |
| c. | On approval of financial assistance in the PSMG* | 10 |



**if reasons of non-approval of a project is linked to appraisal works carried out by NI, then the condition will be applicable. However, if the appraisal work is treated as complete and project is not approved owing to some other factors the payment for last stage may be released.*

2. The last stage payment will be payable to NIs in case:
 - a. The project gets approved by PSMG.
 - b. The project is held up by PSMG for reasons not pertaining to appraisal aspects.
3. No extra payment to be given to NIs in case they are hiring External Sub Consultant / Domain Experts. Appraisal work shall be awarded for only those sectors where in fee has been quoted for by NIs & it is presumed that NI has quoted for sector in which it has the expertise.
4. In case of any change in the project cost wise slab owing to certain changes in the project cost, the committee will review and take decisions and only then the NIs will be informed regarding the revised fee if any, accordingly.
5. Criteria for assigning DPRs for appraisal amongst NIs will be decided by the in house committee with equitable distribution and sector expertise as main basis.
6. To ensure that the Implementing Agency (IA) provides a prompt response and avoids a significant delay while co coordinating with NCRPB during the appraisal process, 40 percent of the appraisal cost will be taken from IA in the form of security deposit. The amount will be refunded, once the project is taken up in the PSMG meeting. However, in case the IA is withdrawing the project, the security deposit will not be refunded. Instead, the amount will be used to pay the NIs till the last deliverable submitted by them.
7. On the proposal of 'liquidity damages' it was decided that no Liquidity Damages shall be levied on the NI in respect of any delay in execution of services envisaged under the contract. However, in case of poor performance by the NI, necessary action will be recommended by the committee.
8. On the proposal of 'Site Visits' it was decided that the Project will be appraised in an interactive manner with appropriate visits to the site, if necessary. The NI may make necessary arrangements for site visits in consultation with IAs including travel and stay as applicable. Their certification from appropriate finance authority for the expenditure incurred on the travel should suffice for the related payments subject to entitlement and ceiling of Director level officer of NCRPB.

8. Points for Decision

- a) The rates for providing Appraisal Services on Recurring Price Contract Basis (Three Years) to the NIs may remain unchanged.
- b) The recommendations of the In-House Committee as stated above shall be applicable throughout the contract period.

