



**GOVERNMENT OF THE PUNJAB
PLANNING & DEVELOPMENT BOARD
(TRANSPORT SECTOR)**

WORKING PAPER FOR PDWP

PART - A

PROJECT PROFILE:

1.	Project Title	Development of Urban Bus Depots & Allied Infrastructure, Bahawalpur (GS # 3481)	
2.	Location	Bahawalpur	
3.	Sponsoring Agency	Transport & Mass-transit Department (T&MD), GoPb	
4.	Executing Agency	i. Communication & Works Department (C&W) ii. Punjab Transport Company (PTC)	
5.	Operations & Maintenance	Punjab Transport Company	
6.	Name of the Relevant department(s) and Stakeholder(s) invited in Pre-PDWP	1) T&MD / PTC / C&W 2) Bahawalpur Development Authority 3) Local Government & Community Development Department 4) Finance Department 5) PERI / Financial Analyst P&DB 6) DG M&E 7) Urban Unit 8) Consultancy Wing, P&D Board 9) Energy Deptt / Energy Section, P&DB, Lahore 10) Environment Deptt / Environment Section, P&DB 11) University of Engineering & Technology, Lahore 12) District Traffic Officer, Bahawalpur	
7.	Sector's Specialist invited in Pre-PDWP	1) Technical Section of P&DB / Consultant ID, P&DB 2) Urban Unit 3) Consultancy Wing, P&D Board 4) Energy Deptt / Energy Section, P&DB, Lahore 5) University of Engineering & Technology, Lahore	
8.	Cost	As indicated in ADP 2024-25	Rs. 800 Million
		Cost of the PC-I	Rs. 1,445.002 Million
9.	Source of Financing	Annual Development Program 2024-25	
10.	Allocation in ADP	Rs 242.424 Million at GS # 3481	
11.	Gestation Period	Till December, 2025.	

12. (A) BRIEF BACKGROUND JUSTIFICATION AND DESCRIPTION OF THE PROJECT:

In order to provide an ecofriendly mode of public transport in Bahawalpur, the Government of the Punjab included two schemes in the ADP 2024-25 under GS No. 3480 and 3481. These schemes pertain to the induction of electric buses and the development of urban bus depots along with allied infrastructure in Bahawalpur. The scheme for the induction of electric buses (GS No. 3480 of ADP 2024-25) has already been approved by the PDWP in its 39th meeting held on 25.10.2024, at a cost of Rs. 2,600 million. Under this scheme, a total of 34 electric buses (nine-meter), are being inducted.

Currently, the PC-I for the scheme regarding the establishment of bus depots and allied infrastructure is under process. The Punjab Transport Company (PTC) has proposed the development of one depot for electric buses, along with the necessary allied infrastructure at land parcel measuring 40 Kanals within General Bus Stand, Bahawalpur. C&W has prepared the layout

map of the electric buses depot. The proposed facility has the capacity to accommodate 78 buses (34 current provision + 44 future provision). The layout map of the proposed facility is at **Annex-A**. Major components of the electric buses depots are as under:-

Description	Floors / Number
Operators Building	G+2
Driver's Building	G+2
Maintenance Store	Ground
Automatic Bus Washing Plant	1
Bus Parking / Charging Bays	78
Solar system for energy production	1 MW
Gensets (1000 kVA)	1
Transformers (2000 kVA)	2
Electrical Room	Ground
Firefighting system	√
Guard Rooms	2 number
Watch Tower	4 number

PTC has also included provisions for the establishment of its divisional office (Ground + 1 floors) at the Depot site. Similarly, provisions for the establishment of 95 bus stop shelters and 234 flag posts have been made in the cost estimates.

13. **COST ESTIMATES:**

Rs in Million

Sr. No.	Description	Units	Unit Cost	Amount
1	Estimated cost of Depot + PTC Divisional Office with Command & Control Center + Allied Infrastructure	1	1336.925	1336.925
2	Vehicle Procurement Cost (i.e. 1600 cc)	3	7.3	22.500
3	Consultancy Services/TPV	-	-	30.000
4	Contingency (2%)	-	-	27.780
5	PTC Service Charges (2%)	-	-	27.780
Total				1445.002

14. **SECTOR ISSUES**

Lack of decent public transport system.

15. **SECTOR STRATEGY / MISSION**

- Provision of decent public transport
- Prioritize road safety and preserve environment

16. **RELATIONSHIP OF THE PROJECT WITH THE SECTOR POLICY / GROWTH STRATEGY, 2023**

The project is linked with sectorial policy of provision of decent public transport. Furthermore, it is also linked with following goals of Punjab Growth Strategy, 2023.

- Goal 3: Ensure healthy lives and promote well-being for all at all ages.
- Goal 5: Achieve gender equality and empower all women and girls.
- Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable.
- Goal 13: Take urgent action to combat climate change and its impact.

17. **ALIGNMENT WITH PUNJAB SPATIAL STRATEGY, 2047**

The project is linked with strategic objective 3 of PSS 2047:- transformation of cities into smart, competitive & livable by improvement of mobility through efficient public transport.

18. **OTHER MAJOR ONGOING & POTENTIAL PROJECTS IN THE SECTOR**

Induction of Eclectic Buses and Development of Depots in Lahore, Multan, Rawalpindi, and Faisalabad.

19. **UNIT COST:** As at serial # 13

20. **EIRR:** Not Indicated in instant PC-I. EIRR mentioned in E Buses PC-I is 12.52%

21. **B/C RATIO:** Not Indicated in instant PC-I. B/C ratio mentioned in E-Buses PC-I is 1.01

22. **PERIOD OF IMPLEMENTATION:** Till December, 2025.

23. **ANNUAL OPERATING COST:** Not indicated in instant PC-I

24. **ANNUAL INCOME AFTER COMPLETION:** It is stated in the PC-I that for Operations & Maintenance budget would be required from Finance Department.

25. **REQUIREMENT OF VEHICLES / CONSULTANCY / STAFF:**

- i. Provision of Rs. 22.500 million have been proposed by the PTC for purchase of three 1600cc vehicles for PTC divisional office.
- ii. PTC included a lump sum provision of Rs 30 million in the PC-I for consultancy services/TPV. PTC stated that the consultancy services will be engaged, if deemed necessary by the C&W Department, and same shall be subject to approval of the competent authority.
- iii. PTC has stated in the PC-I that the overall implementation and execution of the scheme shall remain the responsibility of the C&W Department. However, being the client agency, PTC will oversee the project's progress. For this purpose, PTC has assigned specific monitoring roles to its staff, comprising the following officers. PTC further stated that additional project allowances may be granted to PTC staff after approval of the competent authority. A provision of Rs. 27.780 million has been included in the cost estimates under the head "Service Charges of PTC (2%)" for this purpose.

Sr. No.	PTC Designation	Project Role
i.	Chief Executive Officer	Project Director
ii.	Chief Technical Officer	Director Implementation
iii.	Sr. Manager Technical	Senior Manager Technical
iv.	Sr. Manager Planning	Senior Manager Planning
v.	Assistant Manager Planning	Assist. Manager (Coordination)
vi.	Assistant Manager Planning	Assist. Manager Implementation

- iv. PTC has also proposed the constitution of a Technical Working Group, comprising the following members, to review project progress and provide strategic direction for the successful implementation of the project:

Sr. No.	Designation	Project Role
i.	Secretary, Transport & Mass-transit, GoPb	Convener
ii.	Secretary Finance, Government of the Punjab	Member
iii.	Secretary C&W Department, Government of the Punjab	Member
iv.	Chief Executive Officer, Punjab Transport Company	Secretary
v.	Chief Engineer, C&W Building Department (Central)	Member
vi.	Any Other member (as co-opted by the Convener)	Member

PART-B

26. TECHNICAL APPRAISAL:

The PC-I of the scheme was appraised in Pre-PDWP meeting held on March 27, 2025. The meeting was attended by representatives of all relevant departments. The minutes of the Pre-PDWP meeting are attached at **Annex-B**. In response to the recommendations of the Pre-PDWP, the PTC / Transport & Mass Transit Department has furnished its annotative response. The recommendations of the Pre-PDWP, response of the PTC / Transport & Mass-transit Department and remarks of the section are juxtaposed in the following table:-

SR NO	RECOMMENDATIONS	T&MD RESPONSE	REMARKS
i.	The guidance of the Provincial Development Working Party (PDWP) shall be sought regarding the enhanced cost of the PC-I as compared to the cost reflected in the ADP 2024-25.	Noted	Since the cost of the PC-I is more than the cost of scheme indicated in ADP 2024-25, T&MD may obtain approval of Provincial Cabinet regarding increased cost of the scheme.
ii.	The matter, whether the establishment of the PTC Divisional Office and the construction of bus stop shelters and flag post signs align with the nomenclature of the scheme, shall be placed before the PDWP for decision.	Noted	PDWP may decide
iii.	The executing agency shall separately provide the water demand for depot and other areas and share the details with the Technical Section of P&DB.	A 10,000-gallon (40,000 liters) OHR is proposed to meet the daily washing requirement of 34 buses (1,000 liters per bus), with one-day reserve storage to cover any filtration plant downtime. Additional water will be reserved for fire-fighting, with the final capacity to be determined based on consultant recommendations. Complete water demand details will be shared separately with the Technical Section of P&DB.	The Technical Section of P&DB had demanded facility wise water requirement within each depot, which is awaited. The same may be provided to the Technical Section of P&DB during the cost clearance process.

iv.	Since the C&W Department has agreed to rationalize the provisions earmarked for additional items, the resultant cost impact shall be shared with P&DB and be incorporated in the PC-I.	Noted for Compliance	The requisite cost impact is awaited and may be communicated to the Technical Section of P&DB during the cost clearance process.
v.	The C&W Department shall share the geotechnical investigation reports from BRS directorate.	Noted for Compliance	Noted
vi.	The provision for PTC service charges shall be deleted.	PTC agrees with the recommendation of the Pre-PDWP. The 2% service charges initially proposed under the head of "Service Charges of PTC" will be deleted from the cost estimates. Moreover, as per the recommendations of the Pre-PDWP the cost provision for "Resident Supervision" will be reflected under the head of PTC, as PTC will be responsible for supervision of construction activities and/or hiring of any consultancy firm for supervision purposes.	Noted. Provision for Service Charges of PTC (2%) may be deleted during cost clearance process.
vii.	The provision for Third-Party Validation (TPV) shall be deleted.	Noted for Compliance	Compliance is awaited. The provision may be deleted from the cost estimates during the cost clearance process
viii.	The proposed generator capacity shall be finalized in consultation with the Energy Department. Relevant quotations for the gensets shall be attached with the PC-I.	The proposed generator capacity is finalized by the consultant, quotation for Genset is attached	The provision has not been finalized after consulting Energy Department. The provision may now be finalized in consultation with

			Energy Section during cost clearance process.
ix.	An option analysis of various charging solutions, including Battery Energy Storage Systems (BESS), shall be carried out. This analysis shall also include tentative subsidy requirements for each option. Based on the analysis, the most viable energy solution shall be determined duly endorsed by the Energy Department. The analysis shall take into account potential revisions in the net metering policy currently under deliberation by the Government of Pakistan. This analysis shall be shared with P&DB for presentation before PDWP and also be incorporated in PC-I document.	The preliminary analysis carried-out by the consultant shows that for the life cycle of the project (12 years) Grid + 1 MW solar with net metering is the most economical option. The same is incorporated in the PC-I. Preliminary analysis is attached.	The assumptions used in the option analysis and the detailed workings have not been shared. Furthermore, the analysis has not been vetted by the Energy Department. PTC / T&MD may obtain and submit a clear recommendation from the Energy Department in this regard.
x.	Operational plan shall be shared with P&DB and shall be incorporated in the PC-I.	Noted for Compliance. (Preliminary Operational Plan attached)	Noted.
xi.	Provision for emergency bus exits shall be incorporated into depot layout. Updated layout plan, with appropriate legends, shall be shared with P&DB for presentation before PDWP and included in the PC-I document.	Noted. Provision for emergency bus exit is incorporated into depot layout. Updated layout plans is attached.	The provision for emergency exit have been incorporated in the depot layout. Updated layout shared by the PTC is attached with this working paper as Annex-A .
xii.	The District Traffic Police Officer, Bahawalpur, shall review the traffic circulation plan of the proposed depot site to ensure proper bus entry and exit, to avoid congestion on adjacent roads and inconvenience to surrounding establishments.	Noted. The request for review of the traffic circulation plan has been formally communicated to the District Traffic Police Officer, Bahawalpur through an official letter.	Noted.
xiii.	The matter of provision of Rs. 22.500 million for the procurement of three vehicles	Noted for Compliance	PDWP may decide.

	shall be placed before the PDWP for consideration/decision.		
xiv.	Environmental approval for the project shall be obtained in accordance with the provisions of the Punjab Environmental Protection Act, 1997 (Amended 2012), prior to the commencement of construction activities at the site.	Noted for Compliance	Noted.
xv.	The T&MD shall ensure uniformity in the scope of work across various depot being developed by both PMA and PTC in Punjab.	Noted for Compliance	Noted.
xvi.	The fund flow mechanism, along with accurate and complete budget code details, shall be incorporated into the PC-I.	Noted for Compliance	Noted
xvii.	A signed and duly vetted copy of the complete and accurate cost estimates, amended in accordance with discussions and agreements reached during the Pre-PDWP, shall be shared with P&DB and incorporated into the PC-I. These should be accompanied with a comparative statement highlighting the changes between the PC-I reviewed during the Pre-PDWP and the amended version prepared by PTC/C&W Department.	Noted for Compliance	Compliance is awaited. The Department may now provide the amended copy of the PC-I as per approvals made by PDWP and the cost clearance by Energy & Technical Sections of P&DB.

27. **RECOMMENDATIONS:**

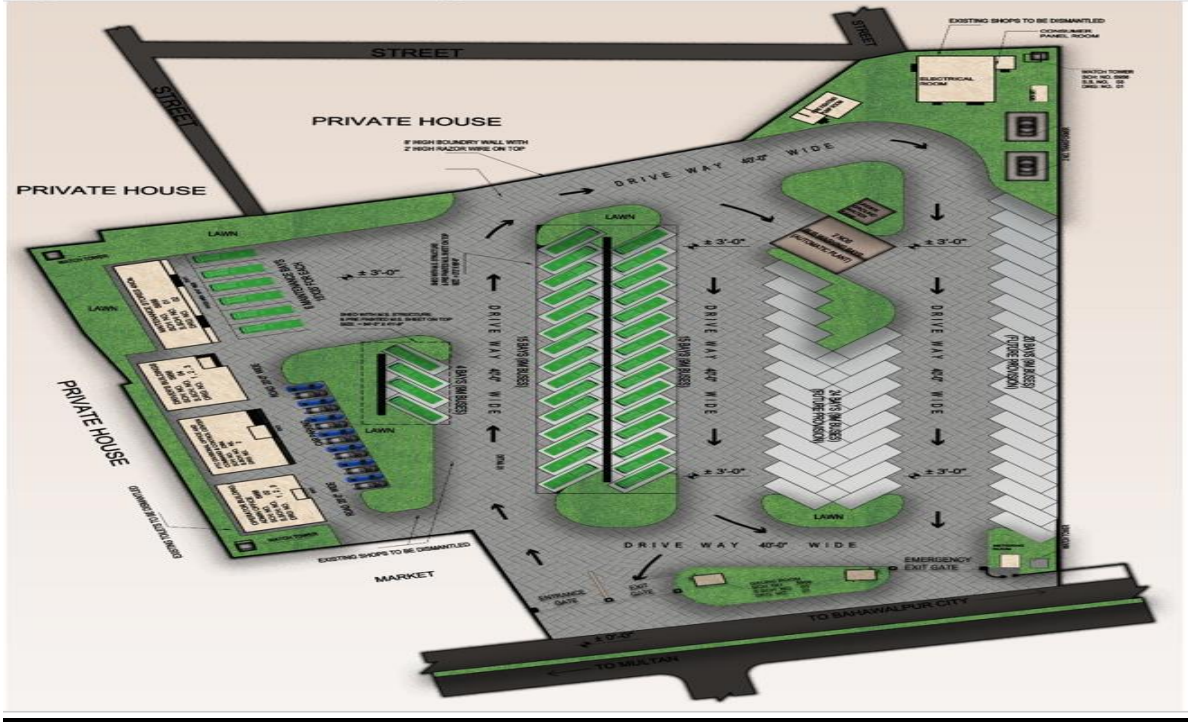
In view of foregoing, the scheme is placed before PDWP for consideration with following submissions:-

- i. The Cabinet, in its meeting held on April 23, 2025, approved the proposal of the Transport and Mass Transit Department to enter into a contract with Wah Industries Limited (WIL) for the procurement, operation, and maintenance of 500 electric buses in the cities of Lahore, Rawalpindi, Multan, Faisalabad, and Bahawalpur. The approval of the cabinet includes the development and operationalization of corresponding EV

depots. The original PC-I for the development of bus depot in Bahawalpur had been prepared and submitted to the Planning & Development (P&D) Board prior to the Cabinet's decision. The administrative department is requested to clarify whether the cost estimates provided in the PC-I have been shared with WIL and whether WIL concurs with the specified requirements and associated costs for the depot. In accordance with the decisions of the Cabinet, the Department may clearly indicate the executing agency and same may accordingly be incorporated in the PC-I.

- ii. The PDWP may deliberate and decide whether the establishment of the PTC Divisional Office and the provision of bus stop shelters/flag posts fall within the definition of allied infrastructure and are consistent with the nomenclature of the scheme and make decision vis approval of their plan and cost estimates.
- iii. The PDWP may deliberate and decide on the request of PTC regarding the provision of three vehicles (1600 cc) at a total cost of Rs. 22.500 million for the PTC Divisional Office.
- iv. The provision of Rs. 27.780 million under the head "Service Charges of PTC (2%)" may be deleted from the cost estimates.
- v. The provision of Rs. 30 million for Consultancy Services/Third Party Validation (TPV) may be deleted from the cost estimates.
- vi. The proposed generator capacity may be finalized in consultation with the Energy Section of P&DB.
- vii. The assumptions used in the option analysis regarding optimal energy solution and the detailed workings have not been shared. Furthermore, the analysis has not been vetted by the Energy Department. PTC / T&MD may obtain and submit a clear recommendation from the Energy Department in this regard.
- viii. The District Traffic Police Officer, Bahawalpur, may review the traffic circulation plans for all proposed depot sites at the planning stage, with the objective of preventing potential congestion on adjacent roads and avoiding inconvenience to nearby facilities.
- ix. The T&MD shall ensure uniformity in the scope of work across various depot being developed by both PMA and PTC in Punjab.
- x. The fund flow mechanism, along with accurate and complete budget code details, shall be incorporated into the PC-I.
- xi. The scheme may be approved subject to vetting of the cost estimates by the Technical Section and Energy Section of P&DB, and subsequent approval by the Provincial Cabinet regarding the increased cost of the scheme vis-à-vis the cost indicated in the ADP 2024-25.
- xii. T&MD shall submit PC-I in accordance with the approval of PDWP and cost clearance by Energy & Technical Sections of P&DB.

ANNEX-A: LAYOUT OF DEPOT



ENERGY ANALYSIS

Rs. In Million

The consultant has carried out an option analysis of different charging options and has recommended the Option Grid + 1 MW Solar System through Net Metering as it offers the best Benefit to Cost Ratio from amongst the evaluated options.

Energy Solution	Expense of electricity From Grid (Option-1)	Expense of Electricity from Grid + 1 MW Solar System (GRID-TIED) - (Option-2)	Expense of Electricity from Grid + 1 MW Net Metered Solar System & 250 KW OFF-GRID System (1 MWH Battery Backup) (Option-3)	Expense of Electricity From Grid + 1.25 MW Solar System For BESS (5 MWH Battery Backup) (Option-4)
Nominal Value (Operational Subsidy)	9,735.00	7,824.00	7,399.00	7,698.00
Difference (Operational Subsidy)		1,911.00	2,336.00	2,037.00
NPV (Operational Subsidy)	3,931.00	3,169.00	3,000.00	3,119.00
NPV Difference (Operational Subsidy)		761.00	931.00	812.00
Capex	5,858.00	5,974.00	6,159.00	6,756.00
Difference (Capex)		115.00	301.00	897.00
Operational Subsidy per Rider (12 Years)	73.00	59.00	56.00	58.00
NPV Operational Subsidy per Rider (12 Years)	30.00	24.00	23.00	23.00
Benefit to Cost (B/C)		6.61	3.09	0.90

OPERATIONAL PLAN

Route	Route Length (Km)	Bus Type	Headway (Min)	No. of Buses Per Direction	Total Buses	No. of Trips Per Bus	Depot Location	Dead Mileage Per Bus From Depot to Start Point (Km)	Dead Mileage Per Bus From Depot to End Point (Km)	Dead Mileage for Buses Starting from End Point (Km)	Dead Mileage for Buses Starting from Start Point (Km)	Total Dead Mileage Per Day for Whole Buses (Km)	Operational Kilometer Per Bus	Total Operational Kilometers	Dead Mileage Ratio
Route 1	28.4	9m	18	6	12	10	GBS Bahawalpur	18.4	9.3	111.6	220.8	332.4	284.0	3,408.0	10%
Route 2	18.4	9m	18	4	8	14		7.5	12.4	99.2	60.0	159.2	257.6	2,060.8	8%
Route 3	12.2	9m	15	4	8	16		6.0	6.5	52.0	48.0	100.0	195.2	1,561.6	6%
Route 4	10.6	9m	15	3	6	22		3.6	6.0	36.0	21.6	57.6	233.2	1,399.2	4%

	As Per Operational Plan		Depot Capacity	
Depot / Bus Type	12m	9m	12m	9m
GBS Bahawalpur		34		34