WRI INDIA
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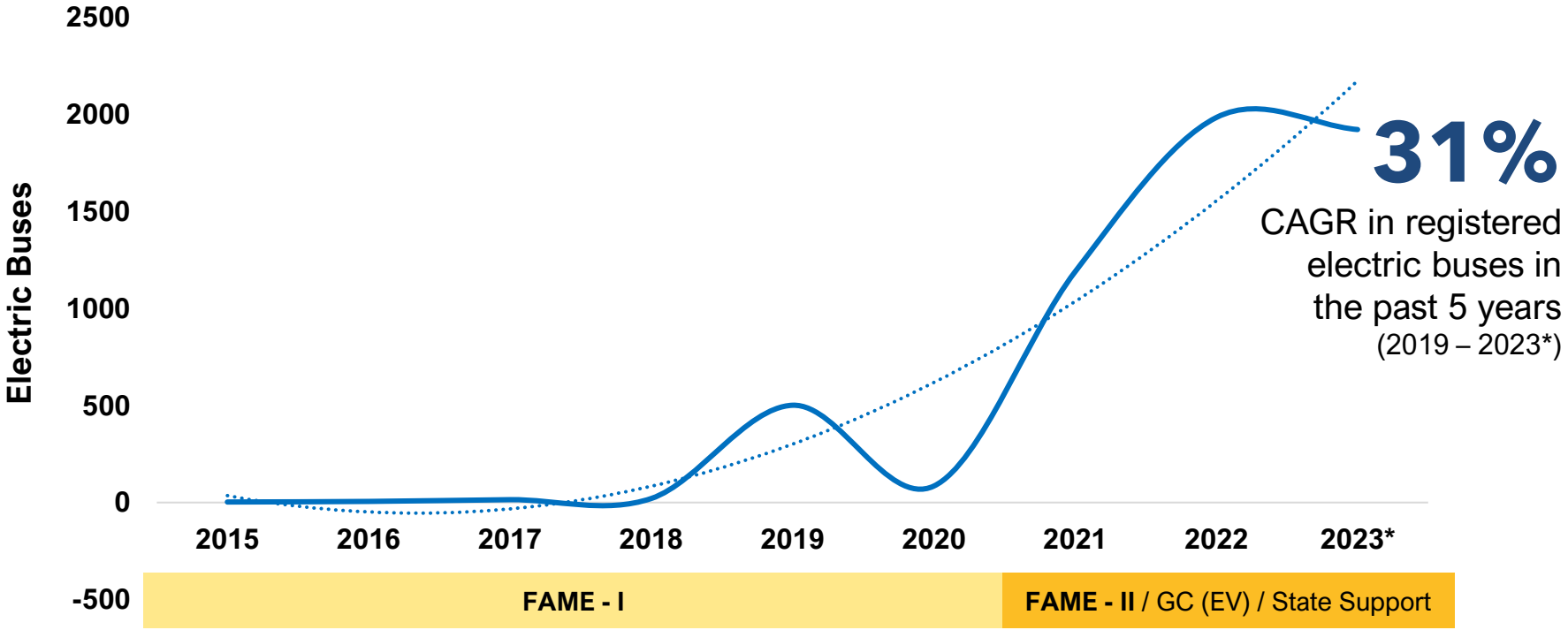
FINANCING E-BUSES IN INDIA

Pawan Mulukutla, Executive Director- Integrated Transport, Clean Air & Hydrogen



ACCELERATING ADOPTION OF E-BUSES IN INDIA

Growth in Registered Number of Electric Buses (2015 – 2023*)



Source: Buses Registered as per Vahan-GoI & WRI India Assessment *Till date*

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INDIA E-BUS JOURNEY

Current Status of Electric Buses in India

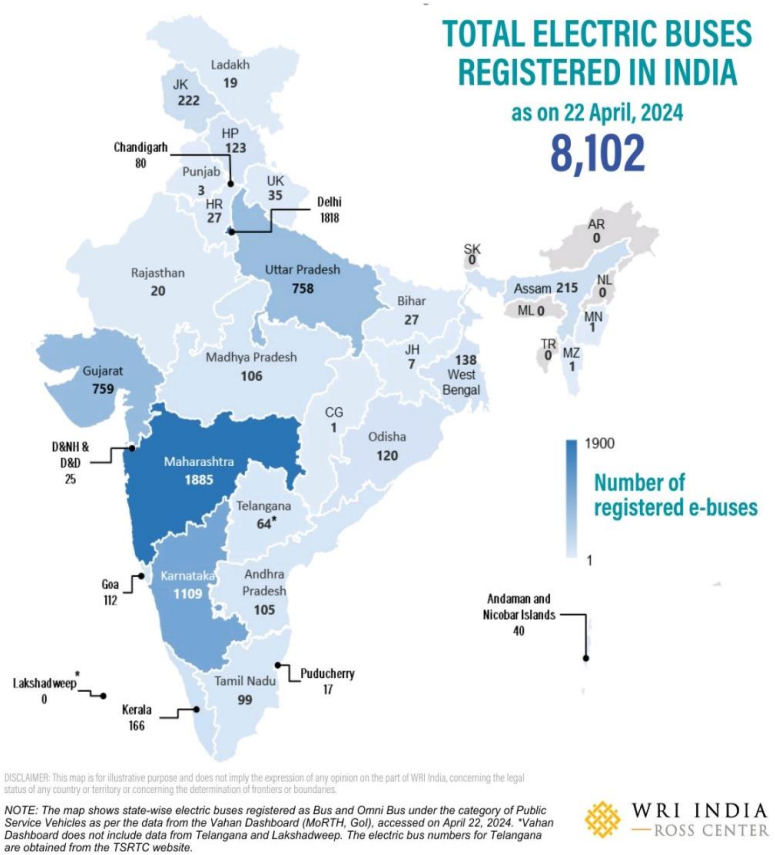
7K Registered

22K Under Procurement

50K Committed under NEBP* (by 2027)

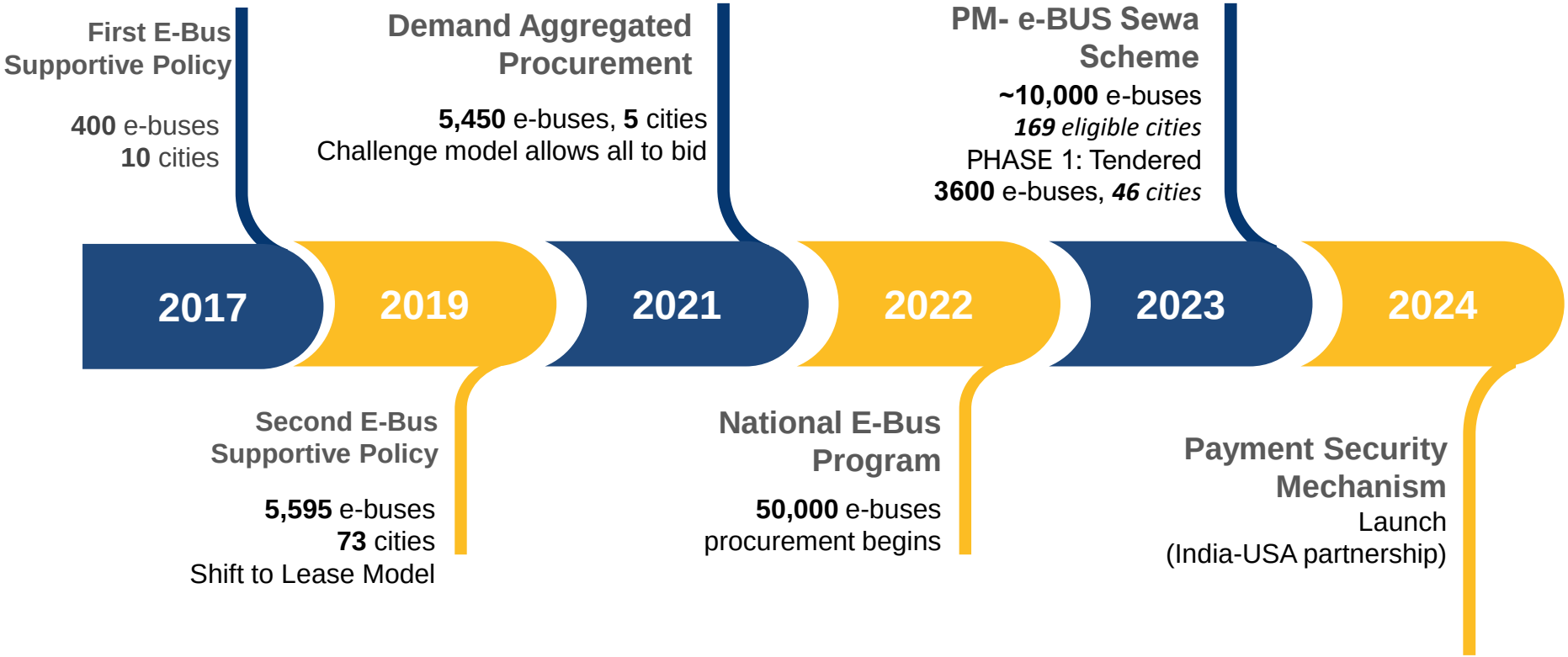
800K India's Ambition in the next 10 years

The Current Public Bus Deficit in India is 300K

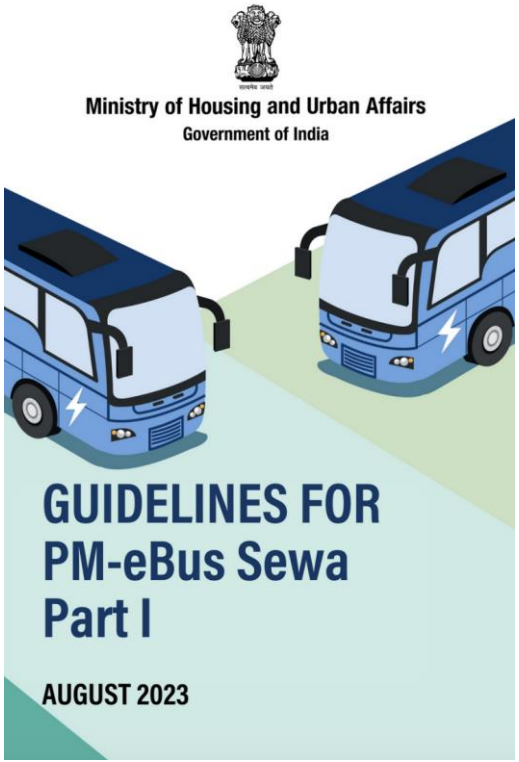


** The National Electric Bus Programme (NEBP)*

ACCELERATING ADOPTION OF E-BUSES IN INDIA



ONGOING SUPPORT FOR PUBLIC TRANSPORT ELECTRIFICATION



PM e-bus Sewa scheme

- Support to deployment of 10,000 e-buses across 169 eligible small and medium sized cities through centralized procurement
- Central Assistance (CA) in the form of operations Viability Gap Funding (VGF) of INR 20-24 per km
- CA for development of depot and upstream infrastructure (@ INR 10 crore for 50 e-buses)
- Payment Security Mechanism (PSM) for buses covered under the scheme
- Relaxation in eligibility criteria and SPV ownership conditions to spur private participation

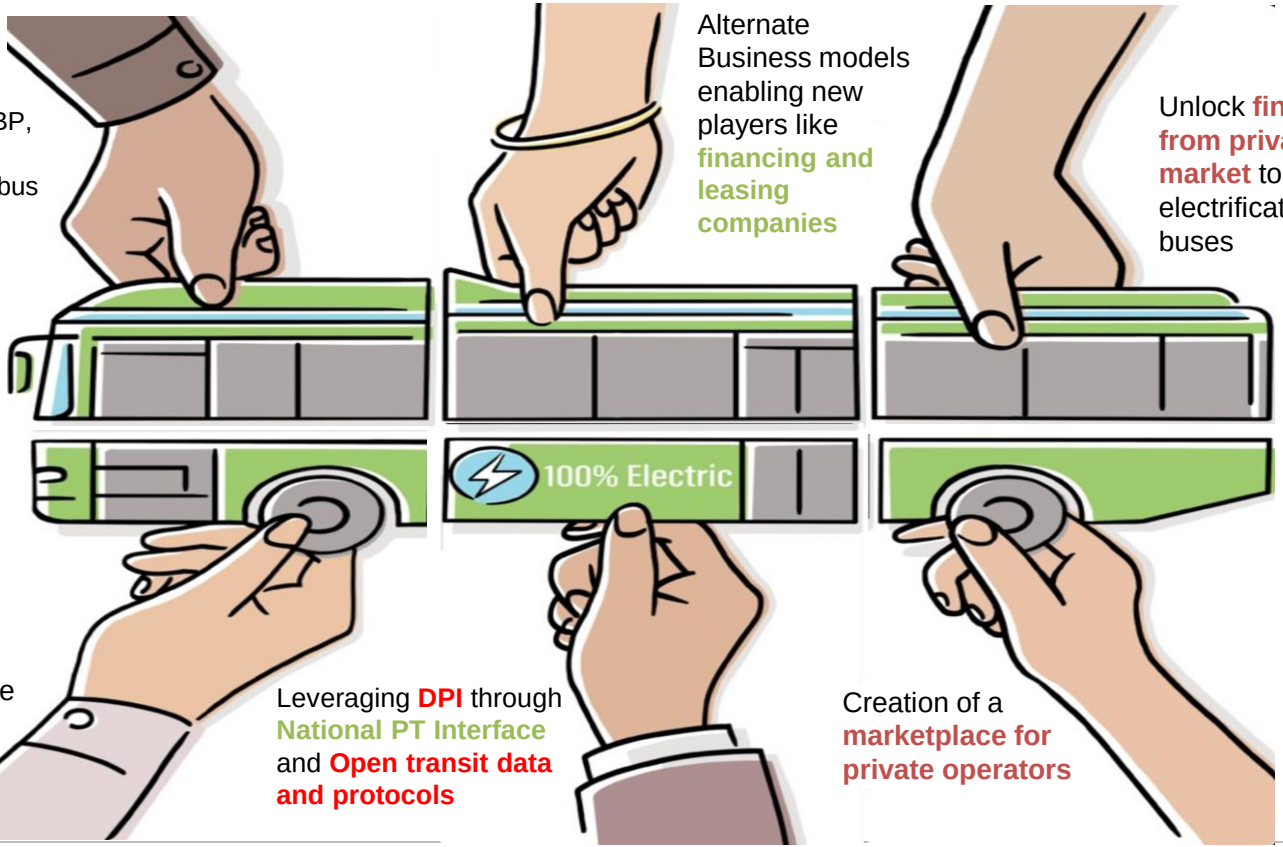
GoI backed Payment Security Mechanism (PSM)

- USD 150 mill Payment Security Fund through GoI, US Government and philanthropic monies being set up to provide payment guarantees for buses procured under scheme
- Proposed PSM expected to address counterparty risks and improve bankability of contracts for smaller cities

Roadmap for e-buses being developed by MHI

- Ministry of Heavy Industries (MHI), the nodal ministry for EVs conducting industry consultation to device roadmap for higher adoption across segments

PARADIGM SHIFT IN THE E-BUS LANDSCAPE



Aggregating e-bus demand through NEBP, PM e-Bus SEWA and **institutionalizing** e-bus adoption

Alternate Business models enabling new players like **financing and leasing companies**

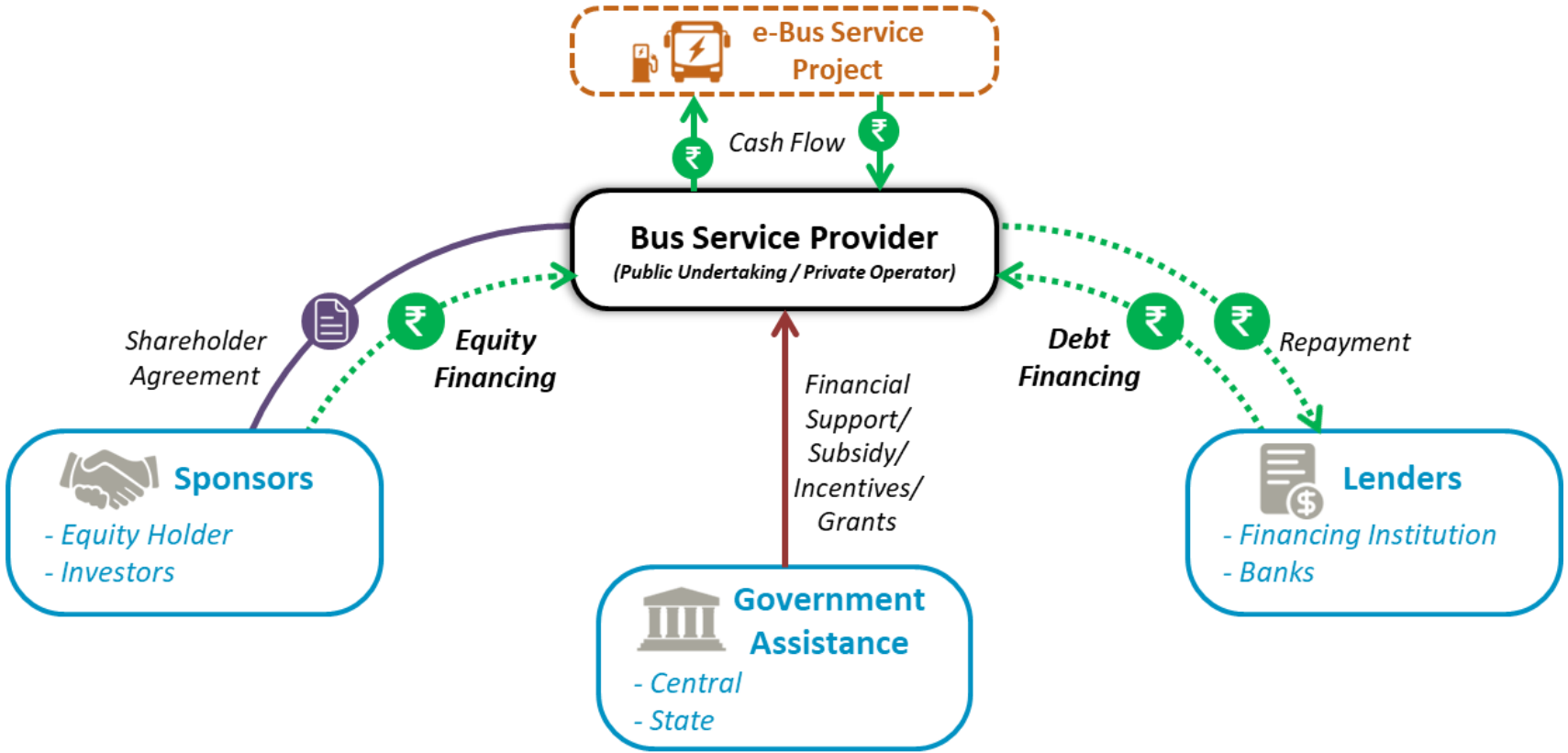
Unlock **financing from private capital market** to scale electrification of buses

Creating **viable long-term bankable contracts** with the **India-US PSM**

Leveraging **DPI** through **National PT Interface** and **Open transit data and protocols**

Creation of a **marketplace for private operators**

FINANCING SOURCES



FUNDING AND FINANCING CHALLENGES FOR SCALING UP

Funding

(Authorities ability to pay back for project)

- ***Insufficient Farebox revenue:*** In 2020, STUs were operating with a gap of **26%** and loss of **19,400 cr.**
- ***Support to STUs not institutionalized:*** Gap met by State/ULB, however usually on an annual basis or an ad-hoc manner.
- ***Payment Delays:*** STU/PTAs face liquidity issue leading to payment delays for private contracts

Financing

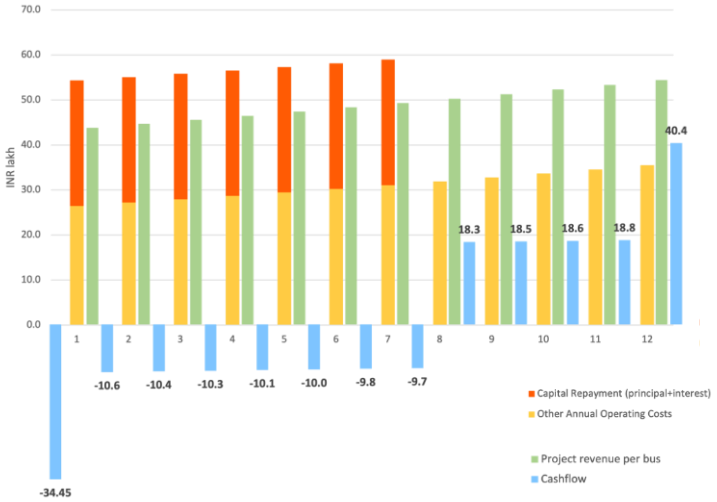
(Projects ability to raise debt/equity-based capital)

- ***Recourse based corporate financing:*** Commercial lending in the form of corporate debt taken on balance sheet of OEM/operator. Limitation to debt carried and hence ability to finance new projects.
- ***No access to low-cost long-term financing:*** Infrastructure financing against project revenues for long term unavailable to the sector.
- ***Lack of credit history of STUs:*** Most STUs lack credit ratings and unable to extend rating to the projects. Lenders take comfort in corporate guarantees in its absence.

CURRENT MODEL OF RECOURSE LENDING LIMITS OPERATORS' ABILITY TO SCALE TO MEET PUBLIC E-BUS DEMAND

- Borrowers offer corporate guarantees and collateral with projects assets on their balance sheets. Operator's ability to raise financing at feasible terms hampered as debt levels increase.
- Project financing with longer tenure loan unavailable as in other infrastructure sectors. Shorter tenure loans increase need for working capital.
- Most STUs lack credit ratings and unable to extend rating to the projects. Lenders take comfort in corporate guarantees in its absence.

Estimated per 12m e- bus operator cashflows



Source: WRI India estimates based on NEBP tender conditions and awarded bid rates

KEY CHALLENGES FROM STAKEHOLDER'S PERSPECTIVE

Financers	- Asset risk persists due to technology, performance and lack of secondary market. Debt tenures in line with first battery life. - Banks assess payment risks from e-bus project counterparties ie PTAs - Lack of data on asset performance and PTA financial data
OEMs/ Operating subsidiaries	- Newly formed operating subsidiaries limited in their capacity to raise financing without backing from parent OEM - All project and product related risk accumulated (bus performance, depot civil works, manpower, payment delays, debt servicing). Risk appetite for new projects limited. - High bank guarantees (performance/subsidy and against debt for projects)
Traditional GCC Operators	- Project sizes have increased 2-3x as compared to ICE contracts, qualification for tenders based on net worth difficult - 20-30% upfront equity and size of collateral demanded by financers high for operators

Source: Excerpts from industry consultation by WRI India

RECOMMENDATIONS TO EASE FINANCING

Banking and Regulatory Reforms

- Inclusion of e-bus and charging infrastructure under **infrastructure sub-sector** to ease access to longer debt financing and other instruments for retail (eg infrastructure debt funds) and institutional investors (bonds, insurance and pension funds)
- **Priority Sector Lending (PSL)** status to e-mobility for lowering cost of borrowing funds (by upto 200 bps)

Enabling data and transparency in the sector

- Enabling **data management and sharing for e-bus performance** for improving efficiencies and boosting investor confidence
- Publishing financial data including periodic sector specific **ratings for PTAs** similar to integrated credit ratings of discoms published by PFC.

Strengthening PTA finances and capacity

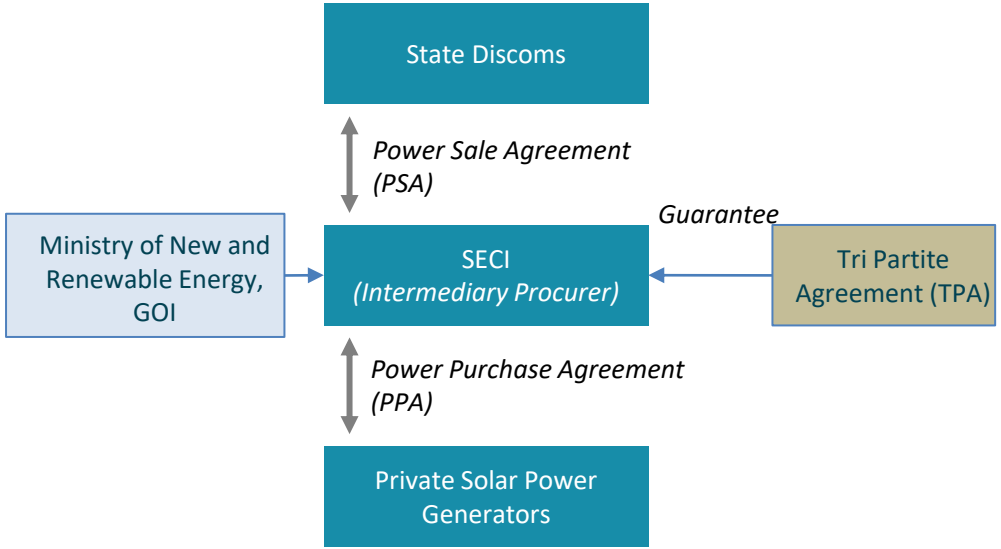
- Reforms to capitalize PTAs and sustained funding support. PSM support needs to extend beyond PM e-bus Sewa scheme.
- **Digitized contract management** and improving institutional capacity to manage bus contracts.
- Testing of **alternative business models** such as leasing, separation of operations and infrastructure to cater to PTA requirements including deployment of existing manpower.

Source: Stakeholder consultations

STRUCTURES TO ENABLE PRIVATE FINANCING: SECI MODEL

Introduction of SECI as AAA rated intermediary procurer has spurred private investment in the renewable generation sector

- Solar Energy Corporation of India ("SECI," and now renamed Renewable Energy Corporation of India) in 2011 has been one of the key enablers to the growth witnessed in the RE power sector.
- SECI directly issues RFPs for establishing solar power projects on Build-Own-Operate basis.
- Successful bidders enter into a long-term Power Purchase Agreement with SECI; simultaneously SECI and various state buying utilities enter into a back-to-back Power Sale Agreement.
- SECI, empowered by RBI has the ability to drawdown funds from the account where state budgetary support is deposited.



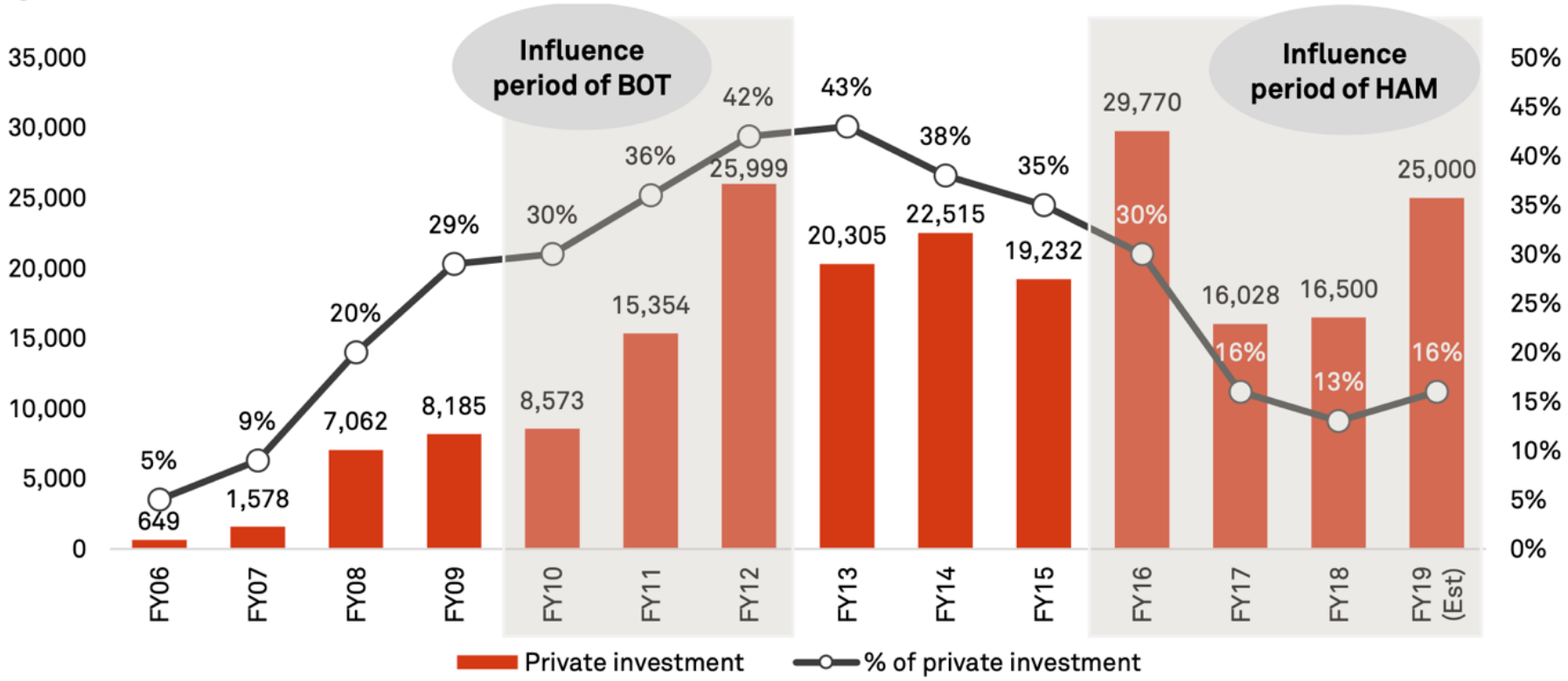
LEARNINGS FROM HIGHWAY PROJECTS

- The road sector is one of the first sectors to implement PPP in highway construction and witnessed over three decades of policy evolution to attract private investments
- Evolution of the sector in two phases: Initial experiment phase (1996-2006) and the Maturity phase (2006-2016)
- Early adoption of PPP in the sector was limited to small upgradation project with twenty highway projects awarded between 1996 and 2000.
- A national program for four-laning 13000 km of highways was lunched in 1999.
- However, with limited competition and an immature market, only 22 projects for toll-based concessions and 27 annuity-based concessions were awarded of the 322 road projects undertaken to upgrade the highways under the program.

LEARNINGS FROM HIGHWAY PROJECT

- In 2006, model concession agreements for toll, grant and annuity-based highway projects incorporating past learnings were approved by the Central Government. This commenced the maturity phase which witnessed the private investment grow from INR 649 crore in FY06 to INR 25,999 crore in FY12.
- Hybrid Annuity Model (HAM) for highway construction was introduced. This model, a cross between EPC and BOT (Annuity), reallocated risks between developers and the authority and revived investments in the sector
- Since its introduction in 2016, the share of HAM projects quickly grew to 46% of overall projects awarded by value by 2018.
- Under the Hybrid Annuity Model, the National Highways Authority of India (NHAI) pays 40% of the total project expenditure. This payment is released in ten equal instalments based on the completion of targeted project milestones. The remaining 60% amount has to be arranged by the road developer

LEARNINGS FROM HIGHWAY SECTOR



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THANK YOU

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