



## Memorandum

### AGENDA ITEM 7

**DATE:** February 21, 2025  
**TO:** Transportation Authority Board  
**FROM:** Anna LaForte - Deputy Director for Policy and Programming  
**SUBJECT:** 3/11/2025 Board Meeting: Amend the 2023 Prop L 5-Year Prioritization Program for Muni Maintenance, Rehabilitation, and Replacement

**RECOMMENDATION**    Information    Action

Amend the 2023 Prop L 5-Year Prioritization Program (5YPP) for Muni Maintenance, Rehabilitation, and Replacement

**SUMMARY**

The Prop L Expenditure Plan requires development of a 30-year Strategic Plan and for each of the 28 Expenditure Plan programs, a 5YPP to identify the specific projects that will be funded over the next five years. Board adoption of these documents is a prerequisite for allocation of Prop L funds from the relevant programs. In December 2023, the Board approved the Muni Maintenance, Rehabilitation, and Replacement 5YPP, programming \$99.9 million in Prop L funds for projects with time sensitive funding needs and \$46.9 million in placeholders in Fiscal Years (FY) 2024/25 through 2027/28 to provide time for SFMTA to refine project priorities and strengthen funding plans for future projects. The proposed 5YPP amendment would reprogram placeholder funds to specific SFMTA fleet and facility projects, as described in Attachment 1 and detailed in the enclosed 5YPP. The amended project list reflects slower annual cash flows (i.e., reimbursement schedule) compared to the approved Muni Maintenance 5YPP and Strategic Plan Baseline, as amended, and will not result in increased finance costs for this program. We will incorporate the programming and cash flows into the final Prop L Strategic Plan which we anticipate presenting to the Board for approval in April 2025. At the CAC meeting, SFMTA staff will present on the future of the trolley bus fleet in response to questions raised by CAC members.

- Fund Allocation
- Fund Programming
- Policy/Legislation
- Plan/Study
- Capital Project Oversight/Delivery
- Budget/Finance
- Contract/Agreement
- Other: \_\_\_\_



## **BACKGROUND**

The 5YPPs result in multi-year project lists with associated sales tax programming commitments that support a steady project pipeline, enabling project sponsors to plan ahead, facilitating their ability to secure other funding sources to leverage Prop L and fully fund projects and to line up staff resources to deliver projects. The 5-year look ahead also enables coordination between projects. When a project is ready to advance, the project sponsor can request allocation of funds from the Board based on the programming commitment in the relevant 5YPP.

The 5YPPs also provide transparency about how Prop L projects are prioritized. We work in close collaboration with project sponsors eligible for Prop L funds from a particular program, as well as any other interested agencies, to develop each 5YPP. Input from the Board, sponsors, and the public inform the 5YPP process.

Each 5YPP document includes the following sections, the content for which is detailed in the [staff memorandum](#) to the Board for its July 11, 2023 meeting:

- Eligibility and Expected Fund Leveraging
- Public Engagement
- Performance Measures
- Project Delivery Snapshot
- Project Prioritization
- Project List (covering FY 2023/24 - FY 2027/28)
- Project Information Forms (e.g., scope, schedule, cost, funding)

For each project, we look closely at project readiness, whether there is full funding for the requested phase or phases, the amount of leveraging, timely use of funds requirements, and other factors that inform our recommendation to program funds to the project and whether to support advancement of funds beyond pay-go to support project delivery.

Approval of the 5YPP programs or commits funding to the projects contained therein in the fiscal year indicated. When sponsors are ready to begin work on the relevant project phase, they submit an allocation request form to the Transportation Authority with detailed scope, schedule, cost, and funding information which staff will evaluate using the same criteria noted above before bringing the request to the board for approval.

## **DISCUSSION**

Over the past several months, we have been working with the SFMTA on the proposed 5YPP amendment to program \$46.9 million in placeholder Prop L funds to specific projects in FYs 2024/25 through 2027/28. We have also worked with SFMTA to update the programming



and cash flows (i.e., reimbursement schedules) for three existing projects already included in the 5YPP that was approved in December 2023. The new projects are summarized in Attachment 1 and include nine new vehicles and facilities projects such as midlife overhauls to keep transit vehicles running safely and reliably through the end of their useful lives, procurement of new vehicles to replace vehicles that have reached the end of their useful lives, and facility projects such as Kirkland Yard Electrification.

The updates to the existing 5YPP projects are summarized below:

- **Housing Incentive Pool (HIP) Grant Program Placeholder:** We delayed the year of programming from Fiscal Year 2024/25 to FY 2025/26 to better align with the funding needs for the HIP projects.
- **Woods/Islais Creek Yard Electrification Phase I:** We revised the Prop L amount to reflect the actual amount of Prop L funds allocated in 2024 (\$2,358,000, which is \$750,000 less than originally programmed).
- **Muni Metro Stations Condition Assessment (Embarcadero to West Portal):** We updated the Project Information Form to reflect the revised schedule, cost, and funding plan and increased the Prop L programming request to cover a \$750,000 increase in the estimated project cost (from \$750,000 to \$1,500,000).

The revised 5-year project list also reflects a modest advancing of Prop L funds programmed from FY 2027/28 to FY 2026/27 and slower annual cash flows (i.e., reimbursement schedule) for the specific projects compared to the placeholders in the approved Muni Maintenance 5YPP and the Strategic Plan Baseline, as amended. The net effect of this would be a minor reduction in financing costs compared to the Strategic Plan Baseline, as amended.

Attachment 1 lists the proposed projects with information such as a brief project description, amount of Prop L funds requested, proposed project phase, and fiscal year of programming. Attachment 2 summarizes leveraging. The enclosed 5YPP contains more detail, including the project information forms for all the projects in the 5YPP.

## **FINANCIAL IMPACT**

There is no impact on the FY 2024/25 agency budget. The proposed 5YPP amendment programs placeholder funds to specific projects in FYs 2024/25 to FY 2027/28. However, allocation of funds is subject to separate approval actions by the Board.

## **CAC POSITION**

The Community Advisory Committee will consider this item at its February 26, 2025, meeting.



## **SUPPLEMENTAL MATERIALS**

- Attachment 1 Muni Maintenance, Rehabilitation and Replacement 5YPP Amendment - List of Projects
- Attachment 2 Muni Maintenance, Rehabilitation and Replacement 5YPP Amendment Summary: Fund Leveraging and Advancement
- Attachment 3 SFMTA Presentation - Zero Emission Transition Plan
  
- Enclosure - Muni Maintenance, Rehabilitation and Replacement 5YPP Amendment

**Attachment 1**  
**Muni Maintenance, Rehabilitation, and Replacement 5-Year Prioritization Program Amendment - List of Projects**

#	Program: Sub-Program	Project Name (Sponsor)* [New Projects are in bold]	Brief Description	District(s)	Phase	Prop L Amount	Fiscal Year of Programming
1	Muni Maintenance: Vehicles	<b>32' Motor Coach El Dorado Midlife Overhauls (30 Vehicles)(SFMTA)*</b>	This project will fund scheduled maintenance on the 30 vehicles in the 32' hybrid motor coach fleet that were put into revenue service between 2022 - 2024, in accordance with manufacturer recommendations. Maintenance data shows that rehabilitation of the fleet significantly improves vehicle reliability, helps reduce incidents of breakdowns, and prevent service interruptions and additional and costly repairs.	Citywide	Construction	\$4,550,000	FY28
2		40' Hybrid Motor Coach Replacement (94 Vehicles)(SFMTA)	This project will replace the 94 hybrid 40' vehicles that were procured in 2013 and have reached the end of their useful life. Replacing vehicles at the end of their useful life will keep the average fleet age down, which increases the reliability of service. The original scope of work was to replace these 94 vehicles with zero emission vehicles but due to impacts from COVID, facility upgrade progress to support electric buses is delayed and the SFMTA has to purchase additional hybrid vehicles for this procurement. The intention of this procurement is to conditionally accept the vehicles in 2 years from start of procurement. This would help to lower the average age of the bus fleet, which increases service reliability. The SFMTA intends to procure these vehicles through a Cooperative Agreement on a state procurement contract. Note: The Transportation Authority allocated Prop L funds to this project in June 2024.	Citywide	Construction	\$32,300,000	FY24
3		60' and 40' Battery Electric Bus Procurement Replacing Motor Coaches (18 Vehicles)(SFMTA)	Purchase 6 60' and 12 40' battery electric buses, along with all required accessories, and deploy the vehicles in revenue service as replacements for 18 40' diesel electric hybrid buses procured in 2013. Battery electric buses generate zero greenhouse gas emissions because they are powered by a battery in their operating system rather than fuel and do not produce harmful exhaust. SFMTA intends to procure the battery electric buses from multiple manufacturers (i.e., Gillig and New Flyer) through state procurement contracts (through Virginia or Washington State), or possibly as options through existing procurement contracts. The 60' battery electric buses will be stored and operated out of the Islais Creek bus facility, and the 40' battery electric buses will be stored and operated out of the Woods bus facility. The project scope does not include the required charging infrastructure needed to accommodate the 18 battery electric buses. The charging infrastructure will be required to be installed prior to the arrival of these buses. Note: The Transportation Authority allocated Prop L funds to this project in June 2024.	Citywide	Construction	\$10,000,000	FY24

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4	Muni Maintenance: Vehicles	<b>Cable Car Restoration Placeholder (SFMTA)*</b>	This is a placeholder for the Cable Car Restoration Project. This project focuses on the restoration and refurbishment of San Francisco's historic cable car fleet to preserve the iconic appearance of the cars while ensuring their safe and reliable operation. Work to be performed includes reinforcement of the car bodies, repainting, and mechanical overhauls of propulsion and brake systems. Prop L funds will be used for cable car restorations to be performed during the 5YPP period. When SFMTA is ready to request allocation of funds (expected April 2025) SFCTA will expect a fully funded phase or subphase, with appropriate leveraging.	Citywide	Construction	\$900,000	FY25
5		Housing Incentive Pool (HIP) Grant Program Placeholder (RTIP Fund Exchange with Mid-Life Overhauls)(SFMTA)	This is a placeholder for \$18.27 million in Prop L funds for one or more SFMTA projects that are eligible to receive federal Housing Incentive Pool (HIP) grant program funding. The Metropolitan Transportation Commission's (MTC) HIP Program rewards jurisdictions that have created the most qualifying housing units over the five year period ending with calendar year 2022. In March 2024, MTC awarded San Francisco \$35.8 million in HIP funds. Both MTC and SFCTA have approved programming \$18.27 million in MTC RTIP funds reserved for the HIP program to the SFMTA's Mid-Life Overhauls Phase III project in exchange for a like amount of Prop L funds for a HIP-eligible SFMTA project or projects. The benefits of this fund exchange include: earlier availability of the HIP funds than if they were in the RTIP (FY31 for RTIP funds); ability for SFMTA to use flexible Prop L funds instead of RTIP funds, which are much more restrictive; and, the mid-life overhauls project becoming a top priority for RTIP programming in the region. The \$18.27 million in MTC RTIP funds are in addition to the \$45.569 million in San Francisco RTIP funds that the SFCTA Board recommended programming to the bus overhauls. Note: This 5YPP amendment would delay the year of programming (i.e., allocation) from FY 2024/25 to FY 2025/26 to better align with HIP-eligible project schedules and funding needs.	TBD	TBD	\$18,270,000	FY26
6		<b>LRV4 Quarterlife Overhauls Phase I (99 Vehicles)(SFMTA)*</b>	This project will conduct systematic quarterlife rehabilitation and overhauls of targeted vehicle systems on up to 99 of the 219 Siemens light-rail vehicles that have already reached or will reach their quarterlife by 2029. The project serves as the first cycle of the LRV4 lifecycle management approach by conducting manufacturer recommended system overhauls and/or planned component replacements on the oldest vehicles in the fleet. Refurbishments include replacing materials (such as rubber components) which will not last the 25 years of vehicle life and overhauls include but are not limited to brakes, doors, steps, couplers, and pantograph. The first sub-system to be overhauled is the brake system.	Citywide	Construction	\$13,900,000	FY27

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#	Program: Sub-Program	Project Name (Sponsor)* [New Projects are in bold]	Brief Description	District(s)	Phase	Prop L Amount	Fiscal Year of Programming
7	Muni Maintenance: Vehicles	<b>New Flyer Midlife Overhauls Phase II (SFMTA)*</b>	Perform scheduled mid-life overhauls in accordance with manufacturer recommendations on the New Flyer fleet for vehicles put into service between 2016-2019. Phase II of the overhaul program will include substantial work to 152 40' motor coaches and 69 60' motor coaches, and replace the ISB engines in-house for 40' motor coaches. Rehabilitation of the fleet significantly improves vehicle reliability, reduces incidents of breakdowns, and prevents service interruptions and additional costly repairs. The overhaul scope of work includes engine, propulsion system, pneumatic system, surveillance camera, interior stanchion configuration, flooring, and operator area console refurbishment.	Citywide	Construction	\$12,640,000	FY26
8		<b>New Jersey PCC Streetcar Midlife Overhauls (16 Vehicles)(SFMTA)*</b>	Conduct necessary life cycle management repairs and refurbishments to ensure continuous reliability and performance of the historic streetcar fleet that serves the F line. Improvements include body work such as roof rust mitigation, upgrades to door motors, propulsion system, traction motors, gearbox and complete truck refresh and rebuild. This project will be completed over 10 years and at present, the funding plan has a significant \$22.2M gap in the construction phase. When SFMTA is ready to request allocation of construction funds, per Prop L policy SFCTA will expect a fully funded phase or subphase, with appropriate leveraging.	Citywide	Construction	\$947,000	FY27
9		<b>Paratransit Vehicle Replacement (72 Vehicles)(SFMTA)*</b>	Procure 72 replacement paratransit vehicles as vehicles currently in operation approach the end of their useful life. These modern vehicles will allow SFMTA to provide more reliable paratransit service and a more comfortable experience for people with disabilities who are unable to access the fixed route transit system. Vehicles may include gasoline or electric paratransit cutaway, sedans, and minivans. SFMTA is committed to the goal of the full transition to a zero-emission fleet and will continue to evaluate rapidly evolving technologies, strategies and necessary infrastructure upgrades throughout the transition process. Prior to allocation of Prop L funds, SFMTA shall present to the Board the results of the Paratransit EV pilot and how it has informed the transition plan to electrify the paratransit fleet.	Citywide	Construction	\$2,993,000	FY28

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10	Muni Maintenance: Vehicles	The Portal (RTIP Fund Exchange with Mid-Life Overhauls)(TJPA)	Extension of Caltrain from Fourth and King Streets to the Salesforce Transit Center at First and Mission streets, with accommodations for future high-speed rail. This programming is the result of a dollar-for-dollar fund exchange of Regional Transportation Improvement Program (RTIP) funds and Prop L. The fund exchange enables the Transportation Authority to fulfill its RTIP commitment to The Portal, which can't receive the RTIP funds directly since the project's progressive design build approach doesn't easily comply with RTIP guidelines. In October 2023, the Transportation Authority Board recommended programming the RTIP funds to the SFMTA's New Flyer Mid-Life Overhauls Project Phase III conditioned upon approval of the subject fund exchange, which was approved as part of the Muni Maintenance 5YPP adoption in December 2023.	Citywide, District 6	Construction	\$17,847,000	FY28
11	Muni Maintenance: Facilities and Guideways	<b>Cable Car Barn Rehabilitation (SFMTA)*</b>	The Cable Car Barn Rehabilitation Project will environmentally clear a program of projects to upgrade and rehabilitate various capital components at the historic facility including replacing obsolete electrical equipment, modernizing the electrical infrastructure of the cable car fleet, and improvements to the Cable Car Barn Museum. Other capital improvements include, but are not limited to, crane replacement, restroom and office upgrades, accessibility improvements, passenger and freight elevator replacement, roof replacement, and seismic retrofitting. This Prop L request will also fund design of critical upgrades to the 12kV electric power system.	Citywide, District 3	Environmental Studies	\$2,000,000	FY26
12					Planning	\$3,496,000	FY27
13		<b>Kirkland Yard Electrification (SFMTA)*</b>	The Kirkland Yard Electrification project will renovate and upgrade the Kirkland bus maintenance facility/yard to support the deployment ~110 40-foot battery-electric buses by early 2029 as part of SFMTA's overall sustainable transportation plan. This request will fund SFMTA staff labor to supplement PG&E design engineering work required for the electrification Kirkland, including design of the electrical distribution infrastructure and construction documents.	Citywide, District 3	Design Engineering	\$5,496,000	FY25



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14	Muni Maintenance: Facilities and Guideways	<b>Muni Metro Stations Condition Assessment (Embarcadero to West Portal)(SFMTA)*</b>	The proposed project is to complete condition assessment of nine Muni Metro subway stations from Embarcadero to West Portal to identify deferred subway station maintenance issues. The condition assessment will consider the structural, mechanical, and electrical components of each subway station. Work products will include an independent, prioritized review of deficiencies, estimates of repair options and a comprehensive work plan and program. The SFMTA must determine and develop a clear program of improvements to keep this infrastructure in a state of good repair. In December 2023, the Transportation Authority programmed \$750,000 in Prop L funds to this project. This proposed 5YPP amendment would program an additional \$750,000 to cover a cost increase to complete the scope of work. Note: The SFMTA is requesting allocation of \$1.5 million in Prop L funds as separate item on this meeting agenda.	Citywide	Planning	\$750,000	FY24
15						\$750,000	FY25
16		Potrero Yard Modernization (SFMTA)	The Potrero Modernization Project will rebuild the Potrero Transit Division from the ground up - replacing a 1915 building that last received major renovations in 1950 when it was converted to a trolley bus division. The new multi-floor facility will increase capacity from 93 60' and 45 40' trolley buses to 213 60' and 40' trolley buses. Joint development includes construction of up to 513 residential units adjacent and above, including ground floor commercial/active use along Bryant, 17th and Hampshire Streets. We have an existing appropriation for enhanced oversight of this complex, critical project. Note: The Transportation Authority allocated Prop L funds to the design phase of this project in December 2023.	Citywide, District 9	Design Engineering	\$12,500,000	FY24
17	Presidio Yard Modernization (SFMTA)	The Presidio Yard Modernization project is a reconstruction and modernization of a 110+ year old transit facility. The 5.4-acre site on Geary Boulevard between Presidio and Masonic avenues was last upgraded in 1950. The existing facility services 132 40' trolley buses. The new facility will service 215+ 40' and 60' Zero Emission/Electric Buses. Above the transit facility a SFMTA Paratransit operations facility may be built. Additionally, parallel development plans are to build an adjacent mixed used development to generate operating revenues for capital maintenance and transit service. The scope includes \$150,000 for SFCTA to conduct enhanced oversight of this complex, critical project. Note: The Transportation Authority allocated these Prop L funds for the planning phase of this project in December 2023.	Citywide, District 2	Planning	\$5,150,000	FY24	

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18	Muni Maintenance: Facilities and Guideways	Woods/Islais Creek Yard Electrification Phase I (SFMTA)	The project consists of the installation of inverted pantograph battery electric bus charging infrastructure and related charging equipment at two SFMTA bus yards for the purpose of transitioning Muni's bus fleet of bio-diesel/hybrid buses to battery-electric. The project entails the installation of 12 charging stations and 6 charging stations at the Woods and Islais Creek facilities, respectively, that will be supported by a structural steel frame and overhead gantry infrastructure, electrical distribution equipment, and an elevated platform for the electrical equipment. Note: The Transportation Authority allocated Prop L funds for the design phase of this project in October 2024.	Citywide	Design Engineering	\$2,358,000	FY24

\*Bolted project name with an asterisk indicates a new project in the proposed Muni Maintenance, Rehabilitation, and Replacement 5YPP Amendment

**Attachment 2**

**Muni Maintenance, Rehabilitation, and Replacement 5-Year Prioritization Program Amendment Summary: Fund Leveraging and Advancement**

#	Program	Programming Amount Requested	Amount of Prop L Cash Flow Advanced in 5YPP	Expected Leveraging	Anticipated Leveraging	Notes
1	Muni Maintenance, Rehabilitation, and Replacement	\$146,847,000 (previously programmed in the Muni Maintenance 5YPP)	\$54.8 million (previously approved in the Strategic Plan Baseline)	90.1%	92.6%	This proposed 5YPP amendment would reprogram \$46,922,000 in placeholder funds to specific SFMTA projects, as described in Attachment 1 and detailed in the enclosed 5YPP. We recommend advancing \$9.5 million in programming (with no advancement in cash flow) from FY 2027/28 to FY 2026/27 so that SFMTA can avoid splitting allocations for the same projects over multiple fiscal years. The overall cash flows (i.e., reimbursement schedules) in the 5YPP are slower than what is shown in the current Strategic Plan Baseline as amended, so there is no increase in financing costs as a result of this amendment. We will incorporate the revised programming and cash flows in the proposed 5YPP amendment into the final Prop L Strategic Plan which we anticipate presenting to the Board for approval in April 2025.



# Zero Emission Transition Plan

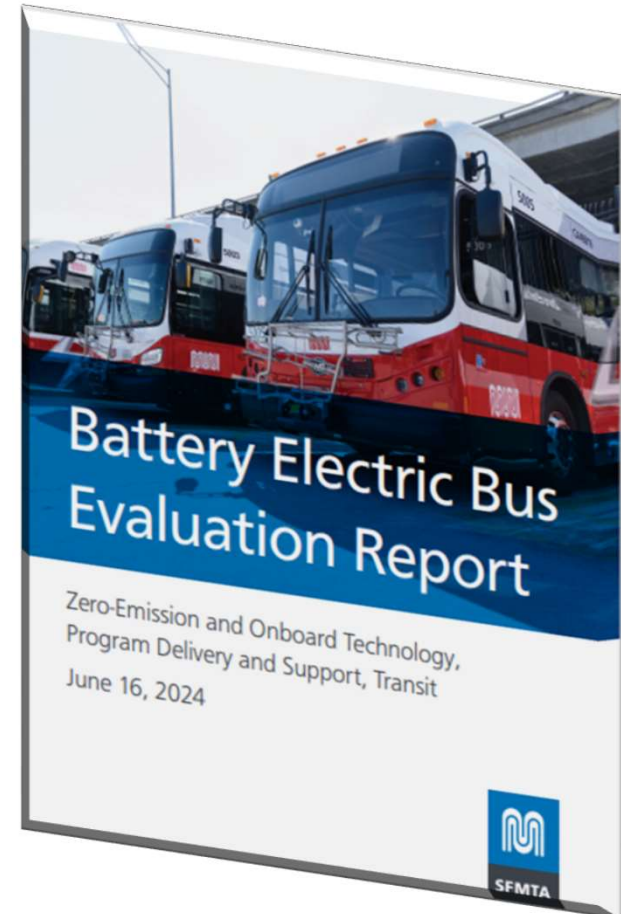
Briefing – SFCTA Community Advisory Committee

February 26, 2025

Attachment 3

# Pilot Evaluation Results

- The SFMTA should seek to procure buses from multiple manufacturers.
- New Flyer and Gillig are currently the only viable US manufacturers for the SFMTA's future battery-electric bus (BEB) procurements.
- Solaris, the largest zero-emission bus manufacturer in Europe, is planning to establish a presence in the US market.





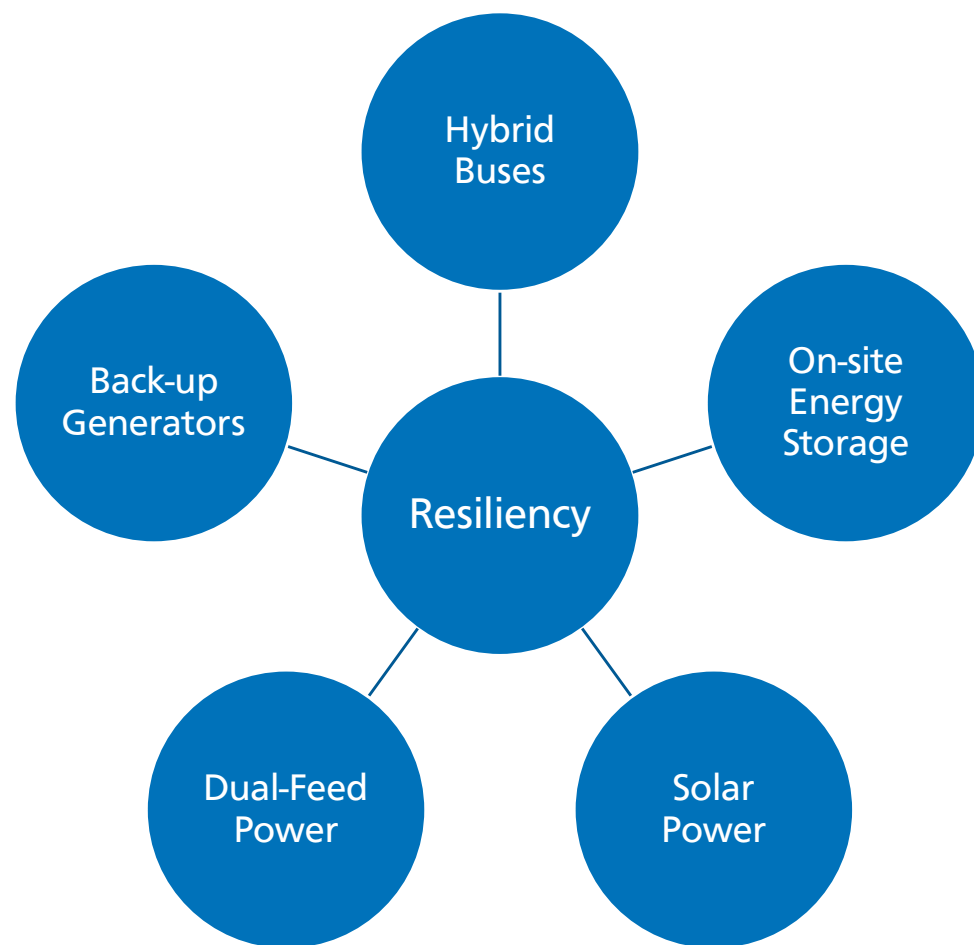
# Lessons Learned

## BEBs and Resiliency

- Role of BEBs in a natural disaster are unknown.
- Microgrids, dual-feed power, and back-up generators may be key to resiliency in future.

## Procurement Strategy

- Procure buses from multiple manufacturers.
- Work with industry to mitigate risk and uncertainty.



# Trolley Bus Future



- Trolleys are an important part of the SFMTA's ZEV Program.
- In Motion Charging trolleys are promising, Pilot in progress
- The SFMTA will continue to procure trolley buses.
  - Formed a consortium of North American trolley bus operators.
  - Partnering with Solaris, leading OEM of trolleys in Europe.

# Lessons Learned

## Training & Workforce Readiness

- Minimal training needed to transition staff
- Expanded workforce for infrastructure maintenance

Labor Task	Union
BEB Maintenance	Local 1414
Trolley Maintenance	IBEW Local 6
Overhead & Charging Infrastructure	IBEW Local 6
Electronic Component Repair	IBEW Local 6





# Lessons Learned

## On-board Battery Capacity

- Analysis of pilot vehicles shows we can reduce battery capacity in future procurements.

## Preferred ZE Technology for Hybrid Replacement

- BEBs are similar in design, operation, training, and versatility.



# Upcoming Procurements

- The SFMTA is seeking approval for the following procurement:
  - **4 40-ft and 3 60-ft BEBs from New Flyer**
- By the end of Q1 2025, the SFMTA will also seek approval for the following procurements:
  - 5 40-ft BEBs from Gillig
  - 3 40-ft and 3 60-ft BEBs from Solaris



# IMC Program Update

- Two existing 40' and 60' trolley buses each converted to IMC
- Pilot Goals: Test validate upgraded Battery Pack
- Existing Battery manufacturer is Obsolete
- Only one manufacturer in NA, technical support and part supply is out of Germany.



# IMC Program Update

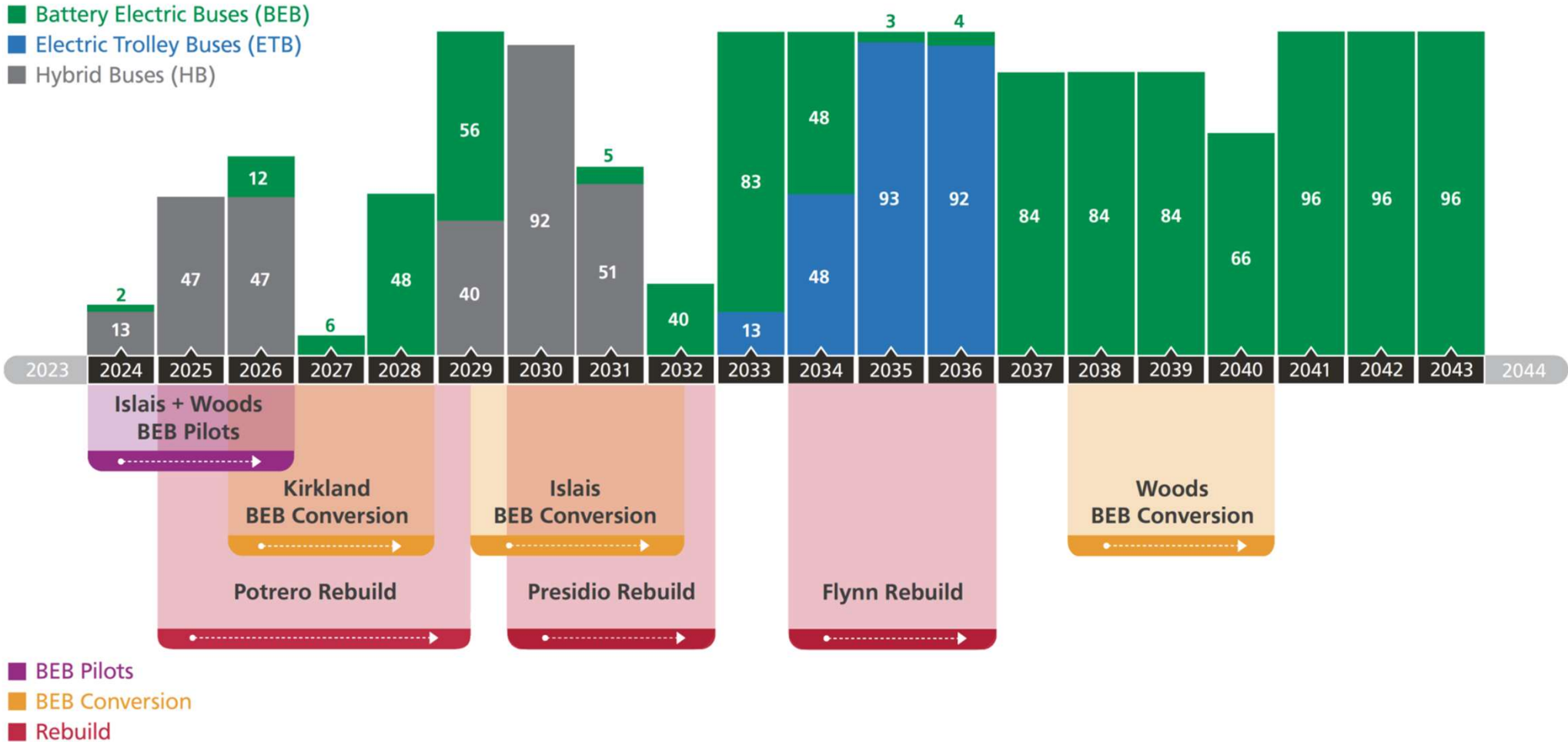
- IMC buses need more time to mature before they can be deployed at large scale in SF's operating environment
- IMC Preliminary Recommendations report in progress.
- Convert existing Trolley buses to IMC buses during mid-life.
- Need to conduct further analysis before large scale IMC deployment.



# Considerations for Trolley Expansion

- May be able to run IMC trolley buses on routes with partial overhead coverage
  - Further detailed analysis is required to understand the impact on the overhead wire infrastructure and existing substations
- Focus on ensuring availability of trolleys in North America market
- State of good repair needs for trolley network should be prioritized over expansion
- Massive build-out of trolley network would be costly and be met with public resistance
- Still working on reliable and quick process for reconnecting with overhead wires after off-wire segments

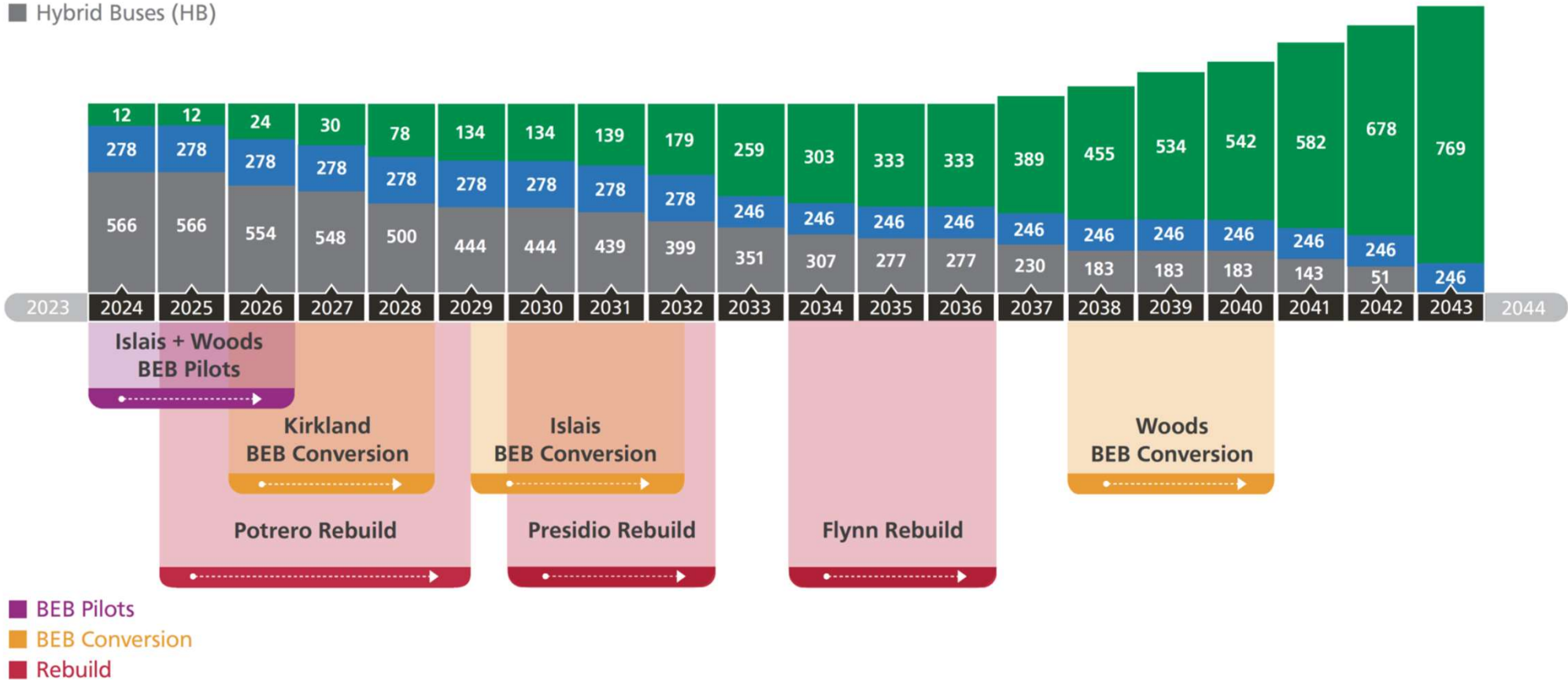
# Hybrid and ZEV Procurements





# Future Fleet Composition

- Battery Electric Buses (BEB)
- Electric Trolley Buses (ETB)
- Hybrid Buses (HB)



A blue-tinted photograph of a bus stop. A bus is stopped at the curb with its front door open. Several passengers are walking on the sidewalk. The bus has "9R SAN BRUNO RAPID Downtown" on its destination sign and the number "8801" on its front. The license plate is "169 055".

Thank you