BOARD MEETING

Consider Approval to Award and Execute the High-Speed Trainsets and Related Services Contract, HSR23-18

October 28, 2026

WITH TRACK AND SYSTEMS UNDER CONTRACT, TRAINSETS ARE THE NEXT STEP TOWARD SERVICE FROM MERCED TO BAKERSFIELD

Where do trainsets fit in the program?

Under contract or in-house | Procurement underway | Not yet procured

	Plan and design	Build or supply	Operate and maintain
Civil works	119 miles in the Central Valley: design-build contracts ongoing Extensions: design underway	Merced to Madera: builder selection	Infrastructure maintenance in-house by the Authority, already underway for completed structures
Track	Track and systems contract, June 2026: design, installation and testing of track, OCS and systems (systems suppliers to be chosen next year)[1]		
Traction power		PG&E: grid connection and power[1] Clean energy: solar and batteries[1]	
Systems			
Stations	Station design underway	Construction to be procured (Fresno early works in construction)	Station and facility operations: to be determined
Support facilities	Conceptual design underway	Construction to be procured	Facility equipment operations & maintenance: this contract
Trainsets Vehicles and maintenance	This contract: design, manufacture and 10 years of full service by Siemens Mobility		

Notes: (1) PG&E builds the 115/230 kV grid connections to the four traction power substations and supplies power (separate agreement); the track and systems contract builds the substations. Solar and battery storage are procured separately (Clean Energy Delivery Program)

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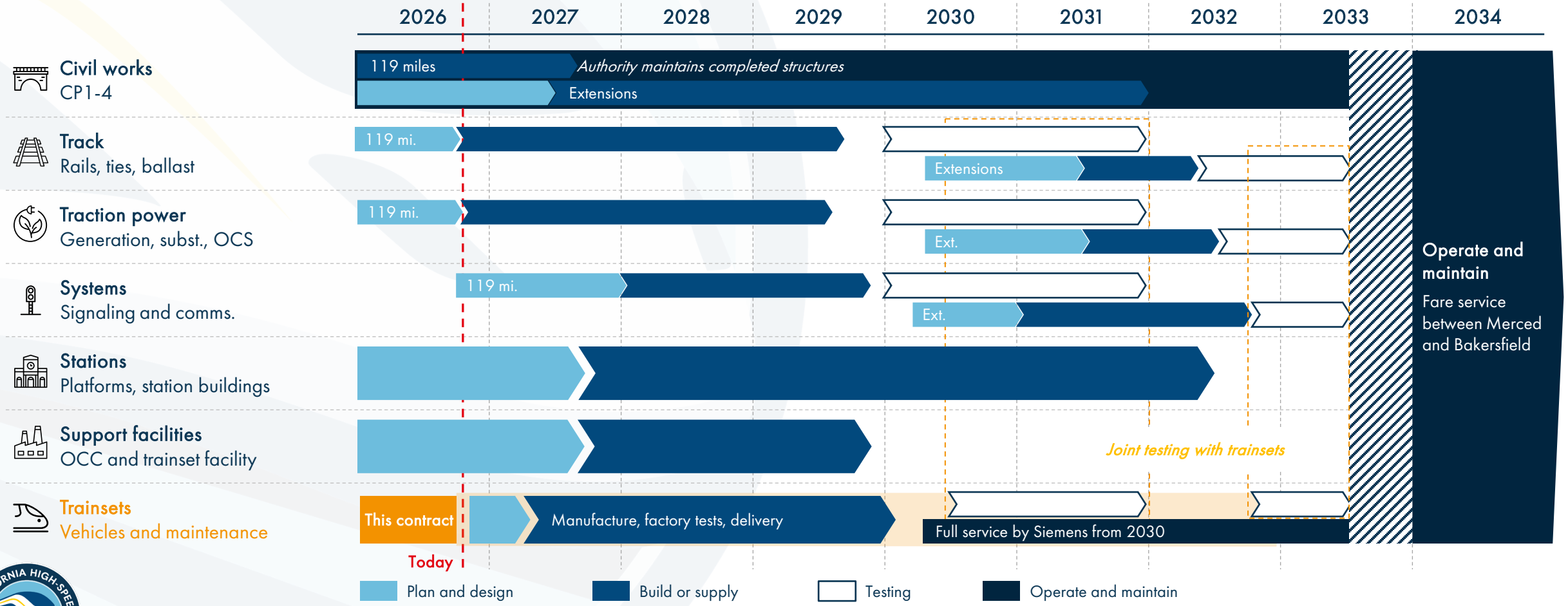
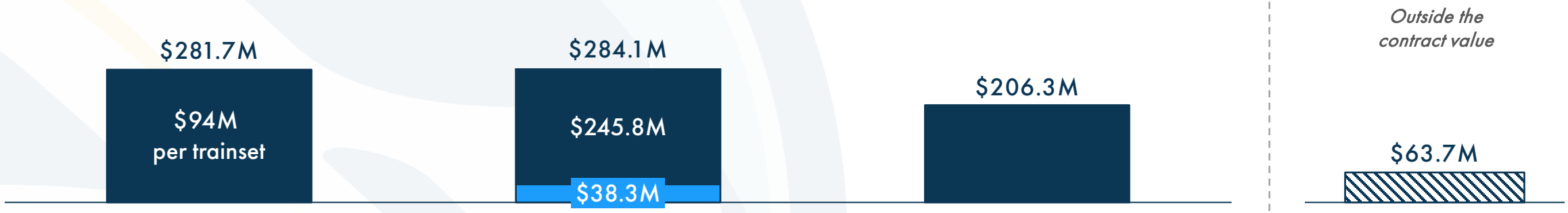


BUDGET AUTHORIZATION FOR THE MANUFACTURING, DELIVERY, COMMISSIONING, MAINTENANCE AND FULL SERVICE OF THREE TRAINSETS

What is the board asked to approve?



Three Trainsets

Milestone payments across 2027-2029:

- Final design and manufacturing
- Initial testing in Germany
- Delivery, commissioning and acceptance in California

10-year Maintenance and Full-Service Agreement

- **Maintenance & Full service for 10 years** (2030 to 2040), paid monthly: full service, preventive & corrective maintenance, scheduled overhauls and all spare parts ($245.8M)
- Initial *spare parts* order and *pre-mobilization* for team & system set-up, and alignment of facility interfaces ($38.3M)

Provisional sum

This provision is for known costs that will occur, but the amounts are not specified at this time such as:

- Euro exchange-rate changes
- Index-based price escalation and potential sales taxes
- Support for testing and commissioning through regulatory process and related interface activities

Contingency

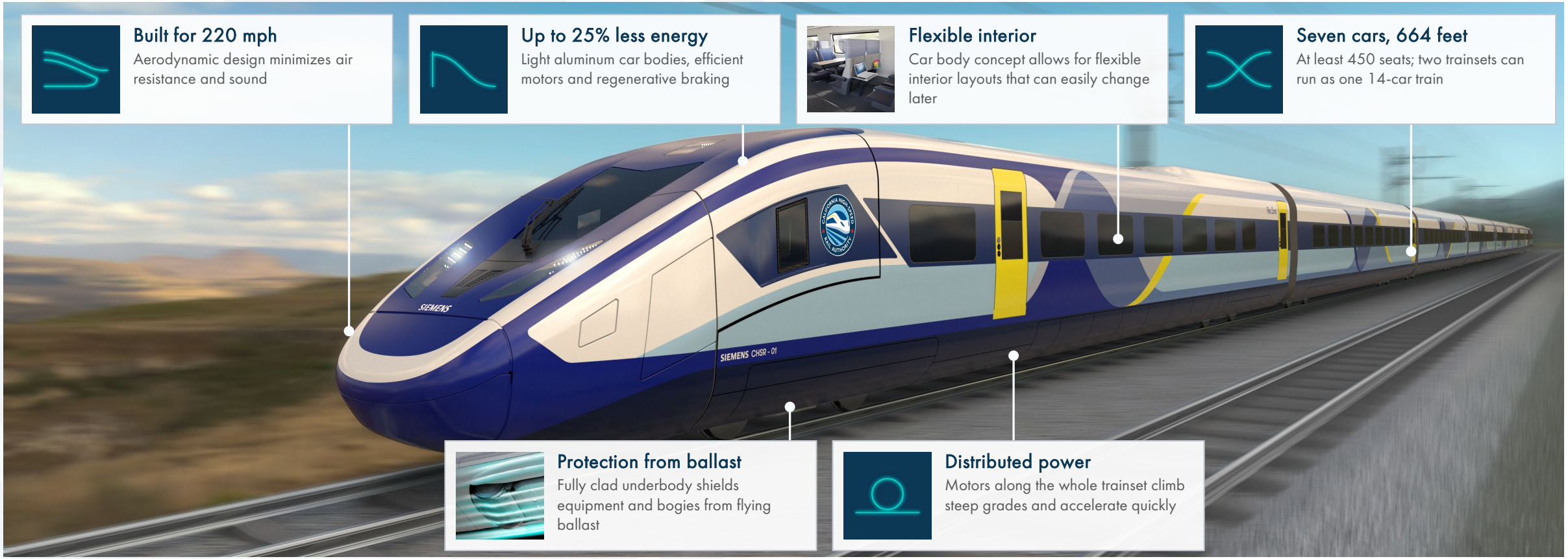
- Import duties and tariffs
- Paid directly to the U.S. government or through a customs broker

Future Options: up to 19 more trainsets at $62.1M per unit[1]; service extensions in five-year steps, up to a 30-year total

Notes: (1) Assuming continuous production after first three trainsets in the same configuration

THE AMERICAN PIONEER 220 BRINGS THE NEWEST HIGH-SPEED TECHNOLOGY TO CALIFORNIA, BUILT FOR SPEEDS UP TO 220 MPH AND LOWER ENERGY USE

What trainsets are we buying?



Notes: Energy saving as stated by Siemens, compared with conventional high-speed trainsets
Source: Siemens Mobility proposal; preliminary livery design – specific livery to be selected by the Authority

THE AP220 BUILDS ON FIVE GENERATIONS OF HIGH-SPEED TRAINS

The Velaro family are proven high-speed trainsets

CHSRA

Fifth generation — **Velaro Novo:** the newest generation. The American Pioneer 220 (AP220) is its U.S. version and the basis for California's trainsets.

AP220

Velaro Novo

AP220

Fourth generation

Velaro D

Velaro EU

Velaro TR

ICE 4

Velaro MS

Velaro Egypt

Velaro Italo

Third generation

Velaro E

Velaro CN

Velaro RUS

Second generation

ICE 3

First generation

ICE 1

ICE 2

1990 1995 2000 2005 2010 2015 2020 2025 2030

Power cars

Distributed traction: motors spread along the train

Notes: Years show the start of passenger service; open markers show planned delivery/service starts

VELARO TRAINSETS RUN IN EUROPE AND ASIA WITH OVER 2 BILLION REPORTED MILES, AND THE NEWEST GENERATION IS ON ORDER IN THE U.S. AND VIETNAM

Who already runs Velaro trainsets?

												Fifth generation		CHSRA
	ICE 3	Velaro E	Velaro CN	Velaro RUS	Velaro D	Velaro EU	Velaro TR	ICE 4	Velaro MS	Velaro Egypt	Velaro Italo	AP220	Velaro Novo	AP220
Countries of operation														
Trainsets	67	26	>900[1]	16	17	17	19	137	90	41	26	10	10	3
Cars per trainset	8	8	8 or 16	10	8	16	8	7, 12 or 13	8	8	8	7	7	7
In service since	2000	2006	2008	2009	2013	2015	2015	2017	2022	2026	2028[2]	2029[2]	2029[2]	2030-33[2]
Approved speed	205 mph 330 km/h	217 mph 350 km/h	217 mph 350 km/h	155 mph 250 km/h	~200 mph 320 km/h	~200 mph 320 km/h	186 mph 300 km/h	165 mph[3] 265 km/h	~200 mph 320 km/h	143 mph 230 km/h	~200 mph 320 km/h	186 mph[2] 300 km/h	217 mph[2] 350 km/h	220 mph[2] 354 km/h
Service	n/a	Full Service	Spare parts	Full Service (not active)	Spare parts	TSSSA	Full Service	n/a	Spare parts	Full Service	Full Service	Full Service	Full Service	Full Service

Notes: (1) Includes trainsets built in China under license; (2) planned; (3) 12- and 13-car trainsets; 7-car trainsets 155 mph. Top speed is the approved or design speed.
Source: Procurement Team Research (October 2026); company announcements

MEETS ALL U.S. REGULATIONS, KEEPS SYSTEM COSTS DOWN, AND IS FUTURE-PROOF FOR THE FULL PHASE 1 BUILDOUT

What does the technology mean for the Authority?

AP220 California High-Speed Rail, preliminary livery design

Top speed	220 mph
Length	664 feet, seven cars
Seats	At least 450
Power	8,200 kW (about 11,000 hp)
Temperatures	-13°F to 122°F
Recyclable	95% by weight
Design life	30 years, 12.5 million miles

Built for federal rules and California

- Designed to meet federal Tier III crash and fire safety rules
- Battery keeps air conditioning running if overhead power fails and emergency propulsion of the train
- Compatible with other electrified rail corridors

Built to lower system cost

- Light weight and aero-dynamic design cuts peak power demand, so substations and power supply cost less
- Motors along the whole trainset climb steep grades, so mountain crossings can be optimized
- The compact 664-foot trainset fits shorter stations and maintenance buildings

Built for California's future

- Designed for the mountain crossings: long climbs, tunnels and altitudes up to 4,600 feet
- Accommodates future communication and integration with Caltrain, Metrolink, and other High-Speed Project systems
- Flexible interior concept allowing for future innovation

Source: Siemens Mobility proposal

THE FIRST THREE TRAINSETS START WITH A STANDARD 2+2 SEATING ARRANGEMENT, BUT THE CONCEPT ALLOWS FOR CHANGE IN THE FUTURE

What will passengers experience?

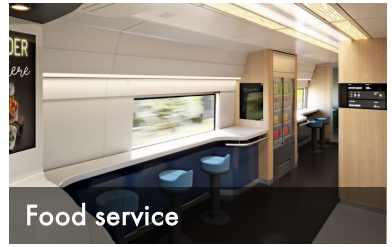
At delivery: first three trainsets

Standard 2+2 seating

- At least 450 seats (2+2 rows)
- 39-inch seat pitch and reclining seats
- Power and USB-C at every seat
- An accessible restroom in every car
- Wi-Fi[1]

Future customization

Flexible seating


Food service

Premium seating

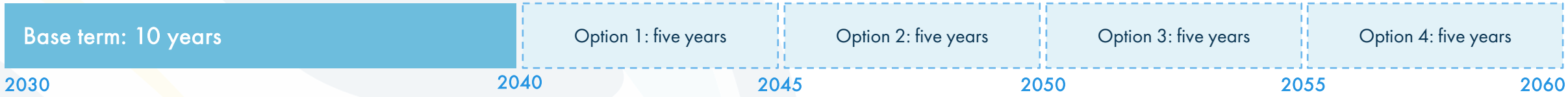
- Flexible design: technical equipment (cable, WIFI) sits in the ceiling and end walls, so seats and fittings mount on rails and layouts can change without structural work
- Other seating concepts, food service, family and bicycle areas may be developed with Siemens for option trainsets, using Authority mock-ups and testing to finalize concepts

At delivery	2+2 seating	2+2 seating	2+2 seating	2+2 seating	2+2 seating	2+2 seating	2+2 seating
Future	Premium	2+2 seating	2+2 seating	Food service	2+2 seating	Flexible seating	Other amenities

Notes: Illustrative layout; images are Siemens Mobility concept renderings; (1) Train communication solution to be aligned with Track and Systems
Source: Siemens Mobility proposal

SIEMENS WILL KEEP THE TRAINSETS MAINTAINED AND RUNNING FOR AN INITIAL PERIOD OF 10 YEARS WITH AN OPTION TO EXTEND

Who keeps the trainsets maintained?



What Siemens covers

- Preventive and corrective maintenance and scheduled overhauls
- All spare parts and special tools, including replacing parts that go out of production
- Failure investigations, reporting and training of maintenance staff
- Option: maintenance of facility equipment

What keeps the trainsets running

- Monthly payment tied to trainset availability and reliability, with performance incentives
- Authority able to buy spare parts directly from original manufacturers
- Final transfer of spare parts, tools, manuals, and maintenance plans upon contract expiration
- Parent-company guaranty for the full-service period

THE PROCUREMENT KEEPS SIEMENS' STANDARD PRODUCT GIVING EACH RISK TO THE PARTY BEST ABLE TO CARRY IT

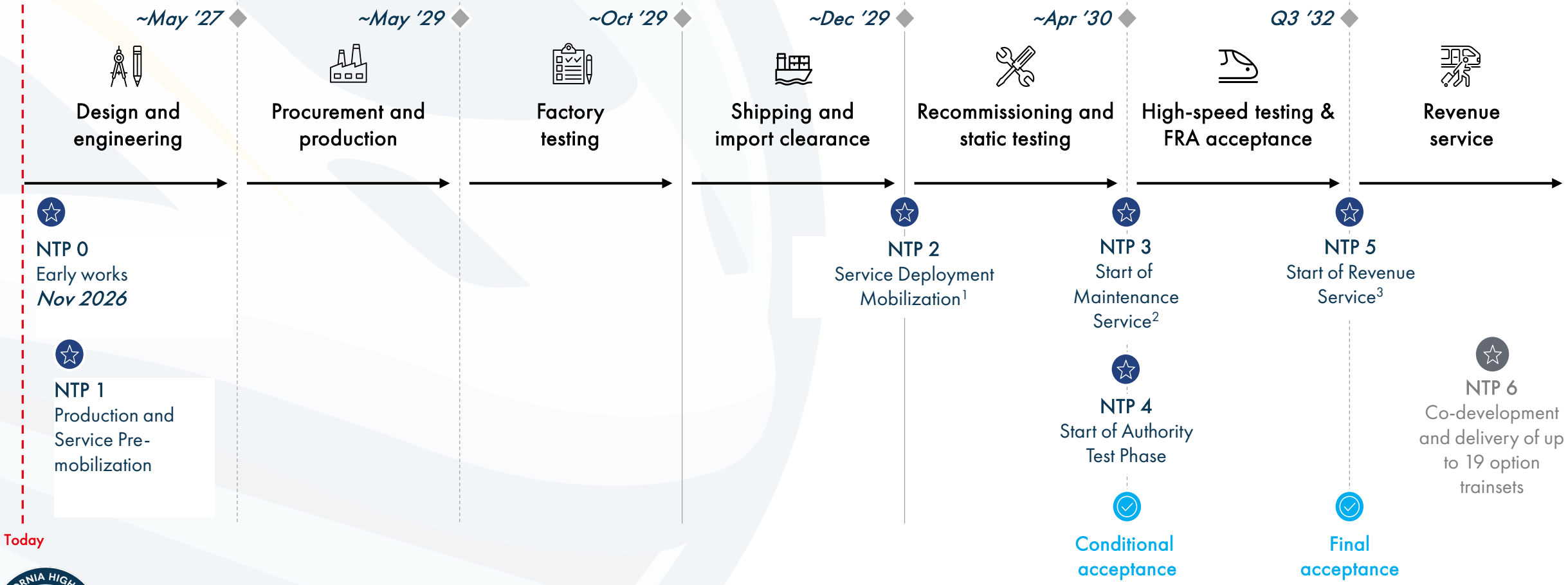
How the procurement controls the price

	Procurement details		Impact
	Kept Siemens' standard configuration: choices limited to livery, colors and some materials	〉	Proven design, no re-engineering
	Three trainsets now, with prices set for 19 options	〉	Commitment sized to the first segment, with room to grow at locked-in prices
	Manufacturing and initial testing at Siemens' existing plant and test center in Germany	〉	Proven facilities
	Authority holds currency and tariff risk in its own budget	〉	No currency or tariff risk in the price
	High-speed testing paid at agreed rates, under a ceiling	〉	Flexible dynamic testing phase
	Price adjustments tied to published U.S. and German price indices	〉	Transparent, predictable escalation

Notes: (1) If initial order-sized was changed to three trainsets based on the original procurement conditions

AFTER APPROVAL, SIEMENS BUILDS THE TRAINSETS – TESTING ON AUTHORITY TRACK STARTS IN SPRING 2030

What happens after board approval?



Notes: (1) 12-month notice, around December 2028; (2) first 10-year service period; (3) six-month notice

THE BOARD IS REQUESTED TO AWARD CONTRACT HSR23-18 TO SIEMENS MOBILITY AND AUTHORIZE ITS EXECUTION

Resolution

The Authority's Board of Directors approves **award and execution of contract HSR23-18** with Siemens Mobility for:

- **$281,700,000** for three trainsets;
- **$284,100,000** for initial spare parts, service mobilization and full service with 10 years of maintenance
- **$206,300,000** in provisional sums for testing, escalation, foreign exchange, taxes, and other items;

and approves the Authority for:

- **$63,700,000** for related import duties and tariffs (paid to US Govt or customs broker)

The board authorizes the Chief Executive Officer or designee to execute the contract and issue Notices to Proceed 0 to 5 at their discretion; NTP 0+1 one month after approval

The Board hereby approves an increase to the Program Baseline and Budget in the amount of $195,900,000 associated with the award of the HSR23-18 Trainsets Contract.