

2024 NGEC Annual Meeting

FLIRT H₂ Multiple-Unit Trainset Procurement Updates

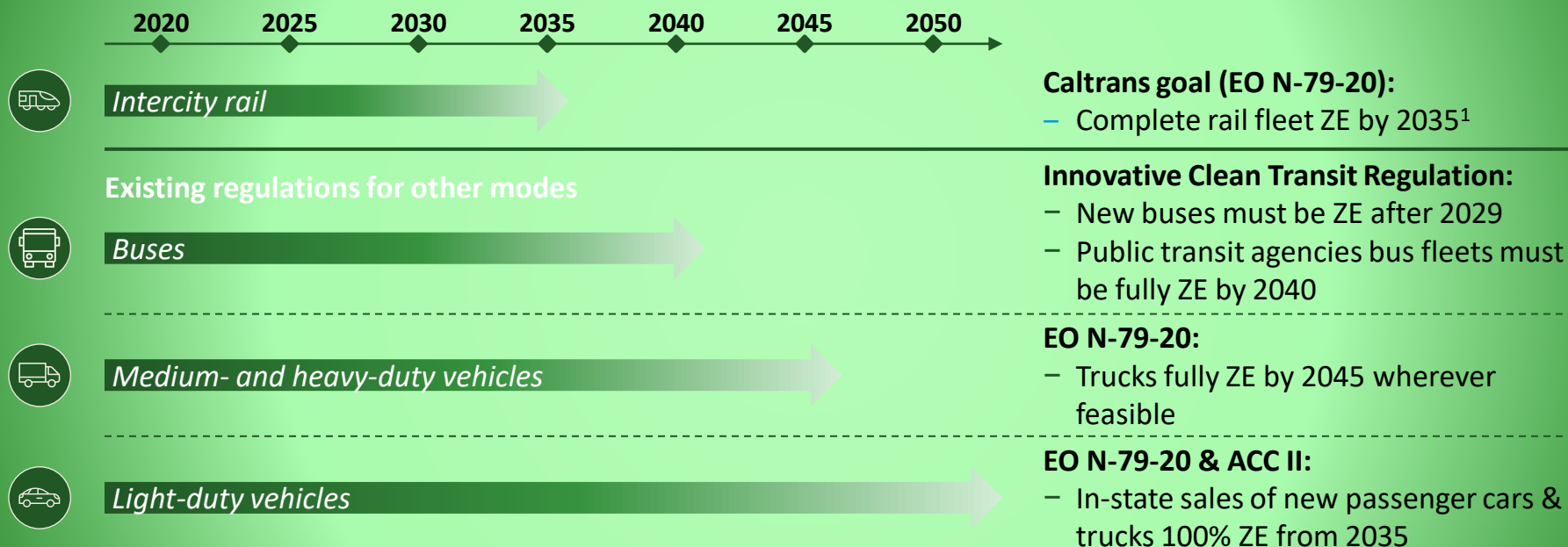
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The NGEC will provide national leadership
in standardization, acquisition, and
management of passenger rail equipment.

Regulatory environment: Off-road vehicle fleets, including passenger trains, must be 100% emissions-free by 2035



(1) Off-road vehicle fleet must be zero-emission by 2035 according to the EO N-79-20

Strategy: State's first ZE equipment procurement for deployment on Valley Rail



Existing intercity routes	Length	Stations
Capitol Corridor	168 miles	18 stations
San Joaquins	315 miles	16 stations
Pacific Surfliner	351 miles	31 stations
New routes to be ZE		
Valley Rail	118 miles	1 existing, 15 planned
Future ZE routes		
Central Coast	320 miles	5-12 stations
Antelope Valley	76 miles	12 existing, 1 planned

Options

1
FLIRT H₂ procurement

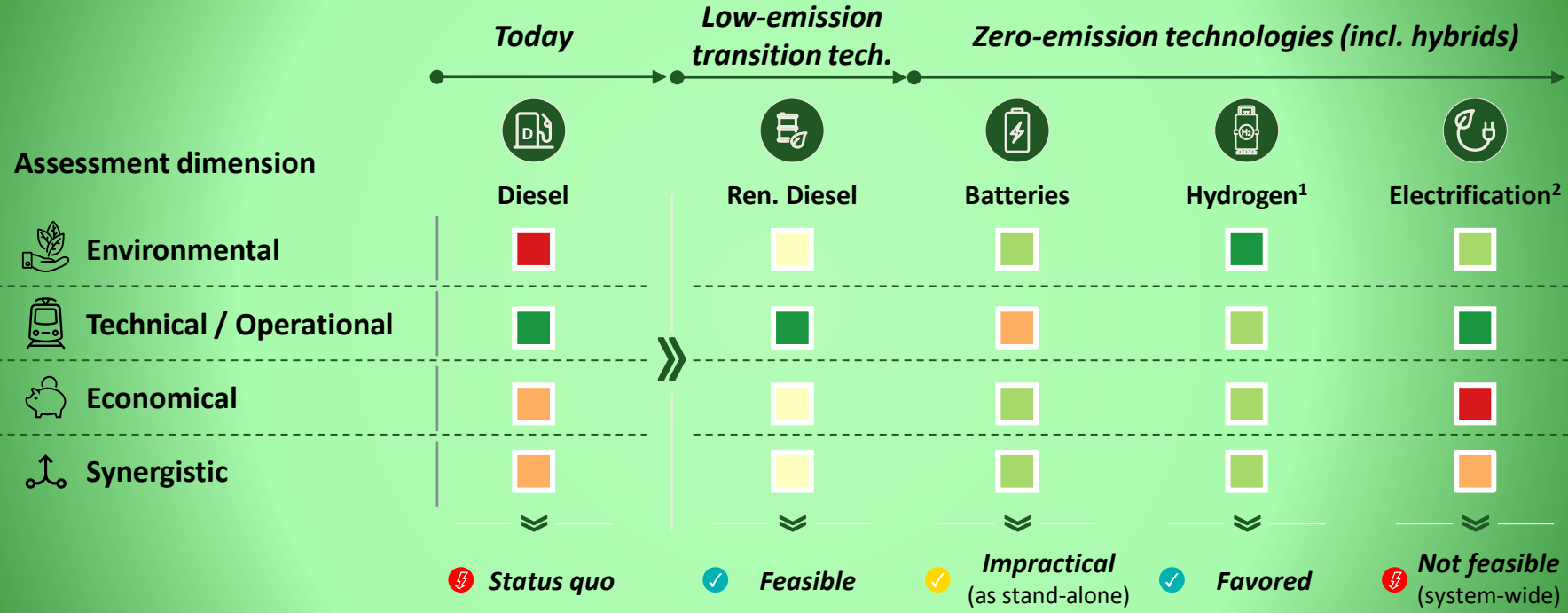
2
Pursue Hydrogen Fuel Cell locomotives



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1

Range: Hydrogen will serve as the long-term primary power source for the Caltrans intercity fleet to achieve ZE



Rating: ■ Excellent ■ Good ■ Mediocre ■ Inferior ■ Requirements not fulfilled

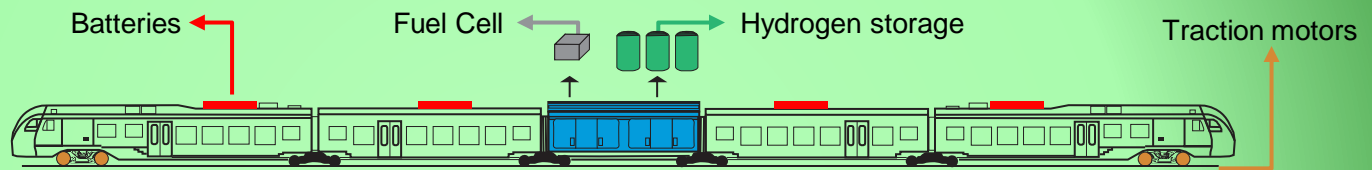
(1) Please note that hydrogen is a solution for the intercity fleet; it is not intended to serve as a general recommendation. (2) Considering system-wide electrification
Source: DB assessment



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New opportunities: FLIRT H₂ vehicles will be used to expand passenger rail service in California

Expected FLIRT H₂ configuration¹



Illustrative Example¹

Caltrans targeted characteristics

- **FLIRT H₂** : Zero-emission operation
- **Hydrogen**: long range, fast fueling
- **Batteries**: power & regenerative braking-enabling
- **Deployment**: Expand passenger rail service in California
- **Passenger capacity**: ~250 seats
- **Max vehicle speed**: 90 mph
- **Max vehicle range**: ~1000 miles (4-car)

(1) General illustrative concept based on SBCTA FLIRT H₂

Project Status & Accomplishments

Successful contract signing & Notice to Proceed (NTP)

- Caltrans signed a contract to procure four (4) Stadler FLIRT H₂ in October of 2023
- Caltrans recently exercised options to expand the initial procurement with six (6) additional FLIRT H₂ trainsets
- NTP issued for all ten (10) sets in January of 2024
- First design reviews expected to begin in September of 2024
- Drafted high-level Preliminary Hazard Analysis (PHA)
- Drafted initial preferred refueling concept
- Drafted general stakeholder plan



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Questions

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