



HYTRAINS

Zero emission trains for the Highlands
and Islands

Frank Roach HITRANS– The Regional Transport
Partnership for H&I

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Scottish Public Policy

- ▶ No new petrol or diesel cars and vans from 2032
- ▶ 2045 net zero
- ▶ Transport 25% of Scottish emissions
- ▶ No new gas connections from 2025
- ▶ Renewables roll-out- a lot in the north!
- ▶ Rail use growing- 90m pax
- ▶ Where does that leave our train fleet?

Current rail in HITRANS area– Diesel do

- ▶ Central Belt-Inverness 125 trains: 2x 1700kW (2200hp) MTU engines, with 1000 gallon fuel tanks, dating from 2005 (engines), 1976 (rest)
- ▶ Class 170s 3x MTU 315kW (422 hp) 1998
- ▶ Kyle, Wick: Class 158 2x Cummins 260 kW (350 hp) 1989
- ▶ Oban Fort William Mallaig: 156 2x Cummins 213 kW (285 hp) 1987



Coming down the line

- ▶ Electrification: wiring only to Dunblane
- ▶ But new Azuma IET East Coast London-Inverness- bi-modes north of Edb late 2019-20



HITRANS

- ▶ Early enthusiasts for Class 230
- ▶ Consultants appointed to investigate feasibility of Vivarail battery train Wick-Thurso- where there is a huge electricity resource (wind, wave) and rail capacity
- ▶ Visit to Bremerhaven to see Hydrogen train- 14 from 2021, 27 now ordered for Rhein-Main 2022



But: Open Access, Freight, Charter ?



Future policy

- ▶ Need to expand electrification north to Inverness- new fleet of InterCity trains
- ▶ Need for alternatively powered rural train
- ▶ Both by 2030?
- ▶ Use renewables off peak for battery storage or hydrogen creation
- ▶ New trains here need to be : very light (to minimise track wear) but capable of 75 mph plus as journey time is significant, comfortable seating, big windows, two toilets, able to carry cycles, catering trolley