Bus Decarbonisation Taskforce

Inaugural Meeting

CONTEXT AND PROGRESS TO DATE

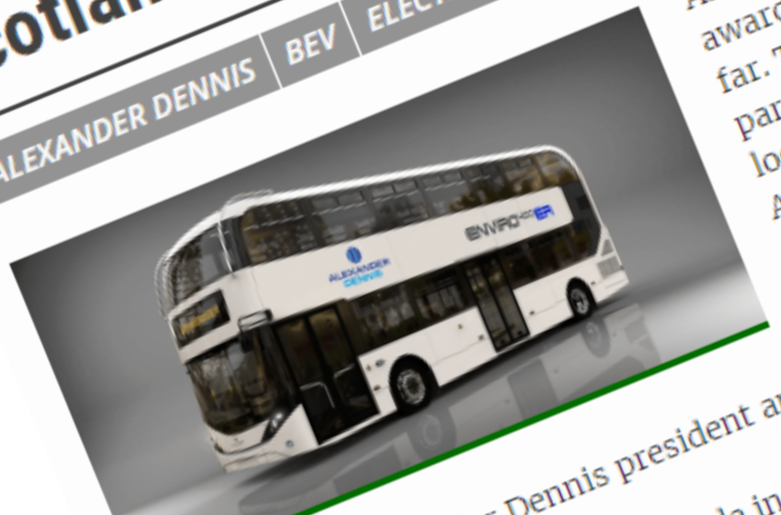
electrive.com
industry service for electric mobility

Fleets >

Sep 26, 2020 - 12:36 pm

Scotland awards £7.4 million for electric buses

ALEXANDER DENNIS | BEV | ELECTRIC BUSES | PUBLIC TRANSPORT | SCOTLAND | UK



As a part of the Scottish Ultra-Low Emission Bus Scheme, the government has awarded a total of £7.4 million for the procurement of electric passenger buses so far. This pertains to 41 electric buses across five bids.The organizers are also particularly proud that they are able to source a good deal of their vehicles locally: 35 of the vehicles will be built and provided by British manufacturer Alexander Dennis. The company also remarked on the effects of the Covid-19 crisis on public transportation and hopes for passengers to return soon: "This is a much appreciated first step in stimulating urgently needed demand for new buses and we look forward to building 35 electric buses here in Scotland," says

Dennis president and managing director.

in 2019, which demonstrates the value of our bus sector and supply chain in keeping
Transport, Infrastructure and Connectivity Michael Matheson, adding: "It also
supporting the wider vision outlined in our National Transport Strategy."
surrounding investment: "To help support bus operators and
maintain bus services and £10 million for bus priority

Progress

- Battery-electric and hydrogen fuel-cell technologies are proven, innovations and improvements continue
- 18 battery-electric, and at least ten 10 hydrogen buses currently on the road
- 41 further battery-electric buses and infrastructure coming, supported by the recent Scottish Ultra Low Emission Bus Scheme
- 12 further hydrogen buses coming as part of the JIVE 2 project with Hydrogen Refuelling Station at the Michelin Scotland Innovation Parc
- National Express committed to zero emission bus fleet by 2030
- First Group committed to zero emission fleet by 2035, & will not purchase any new diesel buses after December 2022
- IAG Green Bus Workshop held 3/3/20 identified opportunities and challenges for Scotland
- Analysis of whole life costs of battery-electric and diesel buses show costs are close but different profile – informing conversations on the subsidy & new financial models required


Sweden: Leasing agreements increasing standard for e-buses, provided by manufacturers or through specialized financing companies. Agreements commonly include a residual value and repurchase at the end of the lease term.
Birmingham: City Council purchasing hydrogen fuel cell buses to lease to National Express
London: various arrangements including HSBC leasing e-buses to operators
China: the government subsidised the upfront cost of 350,000 electric buses from 2013-2017 to encourage mass uptake (alongside developing the requisite charging infrastructure). Bus operators and manufacturers consist of state-owned enterprises.
Canada: Canada Infrastructure Bank are acting as technical and financial advisor to support the creation of its new Zero Emission Bus financing initiative which will be premised on the savings between diesel and zero emission buses.
Bogota, Columbia: technology risk mitigated by securing a battery lease from suppliers (with the cost based on distance travelled); enhanced value proposition to private bus operators by allowing them to generate revenue from bus advertising space; financing strategy used a concessional loan to "crowd-in" a combination of co-financing from the national development bank and commercial banks.
Pune, India: 133 e-buses owned, operated, and maintained by manufacturer Olectra Greentech and technical partner BYD. The local authority pays Olectra to operate the buses on a per-km basis.

Vehicle decarbonisation

World’s first net zero aviation region by 2040

Zero emission railways by 2035

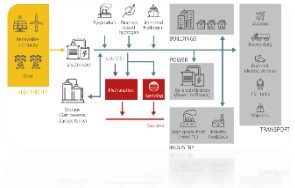
Road vehicles:

- Heavy Duty Vehicle programme (evidence, supply chain, innovation, infrastructure)
- Phase out of petrol & diesel cars by 2032 (date under review)
- Phase out petrol and diesel cars from public sector fleet by 2025
- Create at least 20 Electric Towns across Scotland by 2025
- Create Scotland’s first electric highway on the A9

Whole system approach

ENERGY GENERATION (INC. HYDROGEN)

NETWORK (ENERGY/TRANSPORT/DIGITAL) INTEGRATION AND INVESTMENT



DEPOT INVESTMENT (INC. CHARGING/SKILLS/REFUELING)

MANUFACTURING/SUPPLY CHAIN/PRODUCT INNOVATION

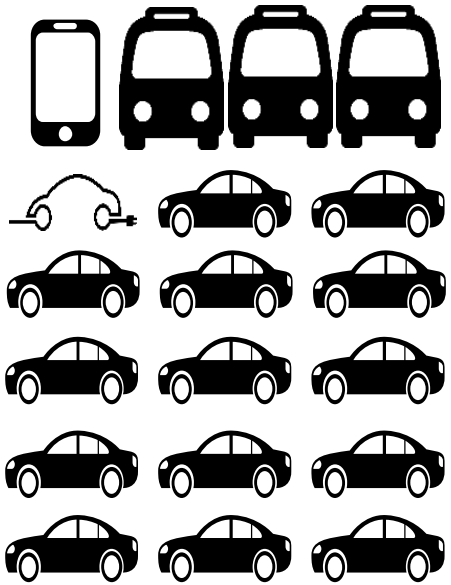
ANCHORED SERVICE SECTOR JOBS (MAINTENANCE/ WARRANTY)

DESIGN (BM AND TECH.) FOR <u>REDEPLOYMENT</u>, REMANUFACTURE AND RECYCLING

BOLD FLEET STRATEGIES CAN CREATE VIRTUOUS INVESTMENT CYCLES

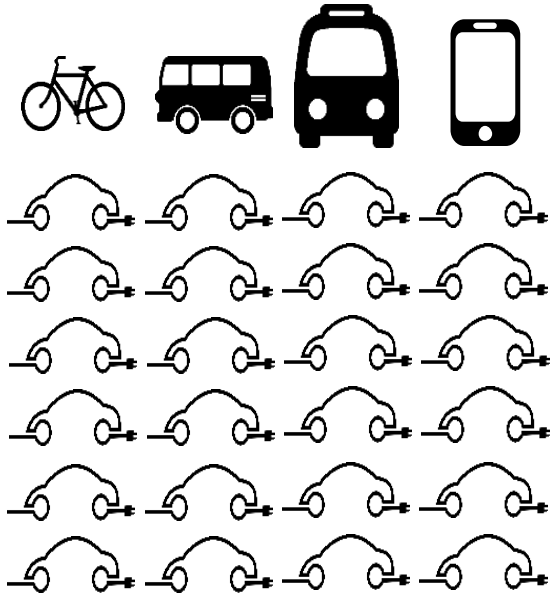
Zero emission isn’t just about electrification…

UNSUSTAINABLE



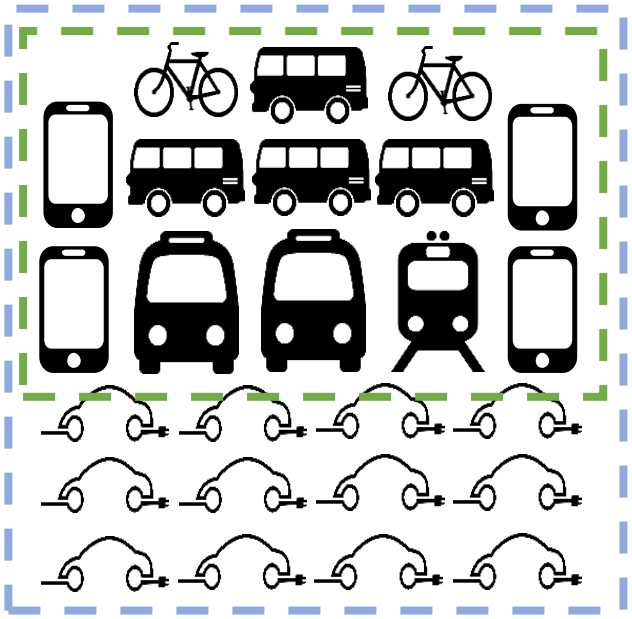
Today

SUB-OPTIMAL



EV dominated future, slow CAV and MaaS progress.

OPTIMAL?

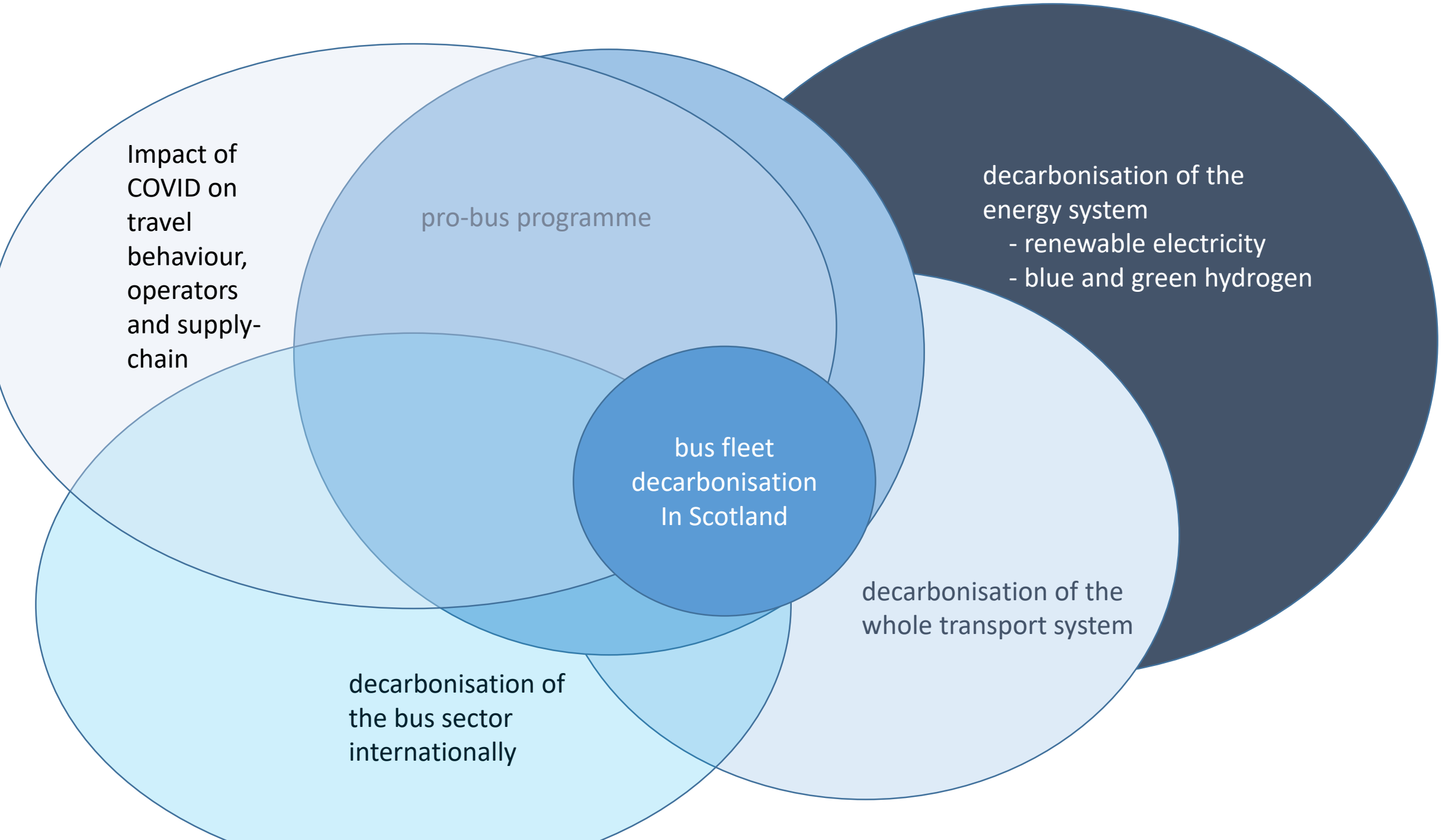


A more sustainable future

Mode shift from cars to buses

- £500 million Bus Partnership Fund

https://vimeo.com/476350142/4a41e50c32


Impact of COVID on travel behaviour, operators and supply-chain
pro-bus programme
decarbonisation of the energy system
- renewable electricity
- blue and green hydrogen
bus fleet decarbonisation In Scotland
decarbonisation of the whole transport system
decarbonisation of the bus sector internationally