

Subject:	BHCC Cleaner Taxis Project national pilot		
Date of Meeting:	November 2014		
Report of:	Licensing Committee		
Contact Officer:	Name:	Tim Nichols/Sam Rouse	Tel: 29-2256
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Ward(s) affected:	All		

FOR GENERAL RELEASE

Informative shared with the press office and Brighton's latest TV

1. PURPOSE OF REPORT AND POLICY CONTEXT

- 1.1 Report on 2014 successful bid to Department of Transport's (DfT) Clean Vehicle Transport Scheme

2. RECOMMENDATIONS:

- 2.1 That the report is noted

3. CONTEXT/ BACKGROUND INFORMATION

Brighton & Hove City Council has been successfully awarded £195,000 for the retrofit of up to thirty larger taxis or minibuses with compact Selective Catalytic Reduction (SCR) Technology (200mm and smaller). The award follows similar funds awarded for the retrofit of older buses in 2013. The technology prioritises reduction of emissions of oxides of nitrogen in and around the cities' air quality management area, on school runs and for taxis that provide assisted transport for the disabled and elderly. Sensors on the tail-pipe of selected vehicles will monitor for exhaust temperature and emissions of oxides of nitrogen gas. SCR is fitted in the vehicles exhaust pipe and works in the following way:

- Selective Catalytic Reduction (SCR) is an engine after treatment fitted to a vehicle's exhaust pipe
- It has been tried and tested on buses and trucks, and is now being adapted for medium sized vehicles like minibuses
- Ad Blue mix (urea and water from a tank) is injected to the exhaust before gases pass through the SCR unit
- When Ad Blue mix is hot the water evaporates and the urea breaks into gaseous ammonia
- The ammonia gas reacts with the vanadium catalyst (SCR) to destroy oxides of nitrogen (NOx)

- NO_x is made up of nitric oxide (NO) and nitrogen dioxide (NO₂)
- Ammonia is prevented from passing to the atmosphere
- The on board computer adjusts the dose of ad-blue mix and monitors exhaust temperature and NO_x emissions
- System performance displays on windows friendly graphics and car dash lights

Temperature probes have already been fitted to wheel chair accessible vehicles such as Ford's and Peugeot taxi to assess suitability for SCR in conjunction with existing silencers and diesel particulate traps. The project is funded by DfT's Clean Vehicle Transport Fund (CVTF) and is scheduled to run from October 2014 through to mid-2015. The project is also considering automatic engine shut-off technology for taxis waiting for passengers in order to avoid engine idling emissions and nuisance.

Informative

- Next to slow moving transport corridors NO₂ is consistently the most plentiful pollutant in local air
- Studies have found that both day-to-day variations and long-term exposure to NO₂ are associated with mortality and morbidity (Quoted Defra webpages)
- Adjacent to urban roadsides people can be exposed to a mixture of pollutants in the gaseous and particulate form
- Where people are repeatedly exposed to air pollution the impact on respiratory and cardiovascular health can have some similarities to primary or secondary smoking
- Smoking prevalence is 23% in Brighton & Hove and 2 to 3% of the city's population (6,000 to 9,000) are exposed to air pollution on a day to day basis
- Inhalation dose and exposures vary depending on residential location, housing quality, the amount of time spent close to traffic and personal activity levels
- People with sedentary lifestyles are most vulnerable to the health effects of airborne pollutants
- Like many towns and cities Brighton has an Air Quality Management Area for NO₂, therefore as a health benefit city policy is to prioritise reduction of NO₂

4. ANALYSIS & CONSIDERATION OF ANY ALTERNATIVE OPTIONS

- 4.1 Alternative technologies considered include; regenerative braking or flywheel, compressed natural gas (CNG methane stored at high pressure) and Liquefied Petroleum Gas (LPG propane). Compared with diesel CNG has much lower gas emission that effect local air quality and climate change. That said the autogas fuels require additional infrastructure to make any significant market penetration. Brighton's Taxi drivers have tried and tested gas fuel in the past and are not convinced on its durability after 130,000 miles. Diesel cabs can be required to cover 250,000 miles. Biofuels have been used, but there is a risk these will invalidate the vehicle warrantee. In addition to Selective Catalytic Reduction (SCR) in 2014 application was made to DfT for funding to fit regenerative braking to taxis. DfT preferred the SCR options and have funded this as a project. Regenerative braking is a renewable technology that scores highly on fuel and CO₂ savings, On this occasion SCR was selected ahead of this to target NO_x reduction and local air quality improvement.

5. COMMUNITY ENGAGEMENT & CONSULTATION

5.1 Brief outline sent to the BHCC's media team

Media coverage can be found at:

<http://thelatest.co.uk/brighton/2014/10/10/brighton-taxis-go-green/>

6. CONCLUSION

- 6.1 Action to maximise opportunities for air quality improvement and make a stronger case for cities new air quality improvement and make a stronger case for the cities new air quality action plan (2015) to maximise funding opportunities for air quality improvement and make a stronger case for the cities new air quality action plan (2015).

7. FINANCIAL & OTHER IMPLICATIONS:

Financial Implications:

Income for this project in current financial year £195,000

- 7.1 The costs associated to the Cleaner Taxis project will be funded by the DfT Clean Vehicle Technology Fund of which £0.195m has been awarded to the council. Associated costs in supporting the contract, largely officer time, will be funded from the existing revenue budget within the Public Protection service.

Finance Officer Consulted: Name Steve Bedford

Date: 23/10/14

Legal Implications:

- 7.2 There are no direct legal implications. 'The council's use of the Department for Transport funding as set out in this report is subject to the terms of a Memorandum of Understanding which has been signed by both parties and is dated 8th October 2014.'

Lawyer Consulted:

Rebecca Sidell Date: November-2014

Equalities Implications:

- 7.3 Low grade housing at roadside locations with poor fenestration and unmanaged ventilation are more likely to suffer ingress of airborne pollutants. Deprived populations are more vulnerable to poor air quality due to aggravating factors such as; poor diet, smoking, lack of exercise and other determinants of health inequalities. The said in some places high rents can accompany areas of traffic & concentrated economic activity so that a mixed cross section of society is actually affected.

Sustainability Implications:

- 7.4 The project is likely to be neutral for carbon as it does not prioritise fuel savings. However automatic engine cut-off technology as part of this project could avoid; fuel consumption, CO₂ release, oxides of nitrogen and noise from idling taxis.

Any Other Significant Implications:

None.

SUPPORTING DOCUMENTATION

Appendices:

Presentation on compact SCR for taxis from Green Urban Technologies Ltd

Documents in Members' Rooms

1. Autumn 2014 Presentation to members on Air Quality

Background Documents

2. 2014 Air Quality Progress Report <http://www.brighton-hove.gov.uk/content/environment/air-quality-and-pollution/air-quality-management-city> and related information

Crime & Disorder Implications:

None

Risk and Opportunity Management Implications:

None

Public Health Implications:

Project agenda is public health see above

Corporate / Citywide Implications:

Air quality Action Plan, Taxis Licencing Policy, Annoyance - nuisance