



Department
for Environment
Food & Rural Affairs

Update on NRMM

14 December 2021

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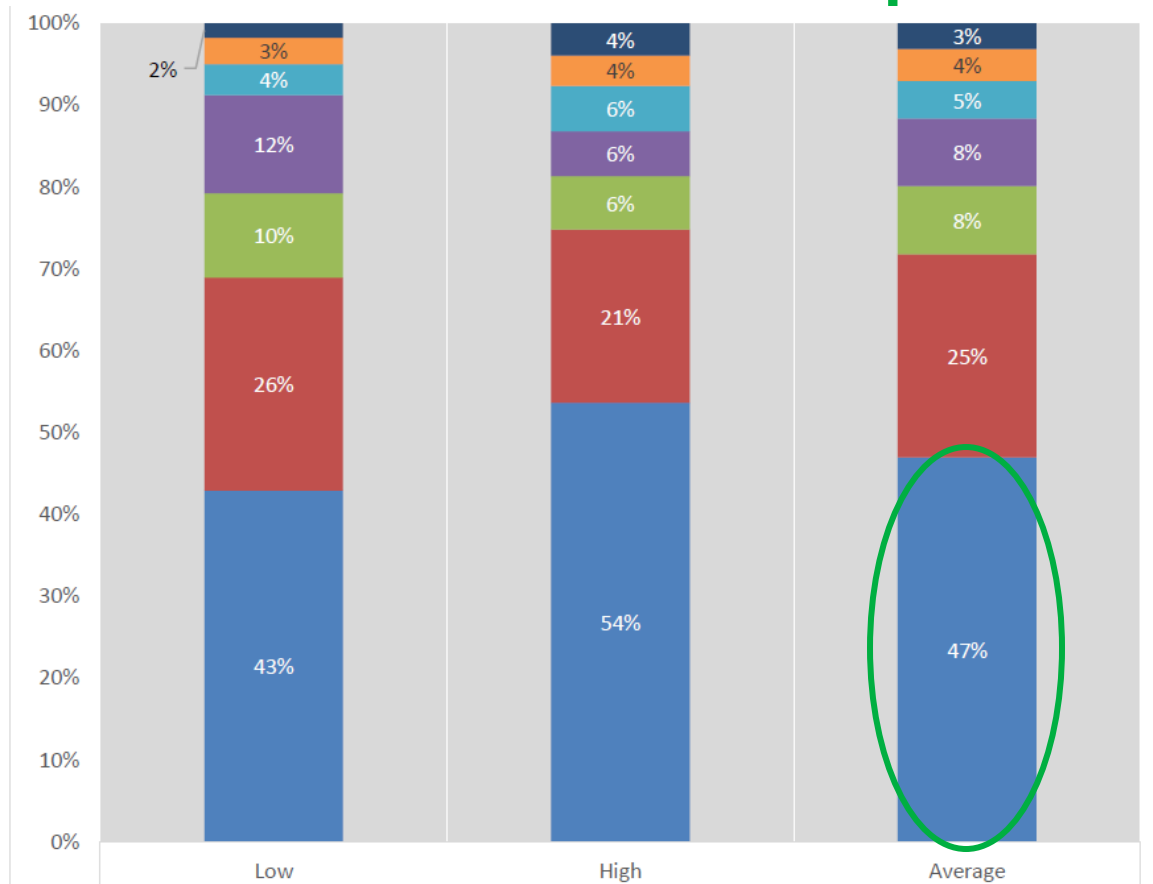
Outline

- Defra NRMM research project and next steps
 - BEIS Red Diesel Replacement competition
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Defra research project – 2019-2021

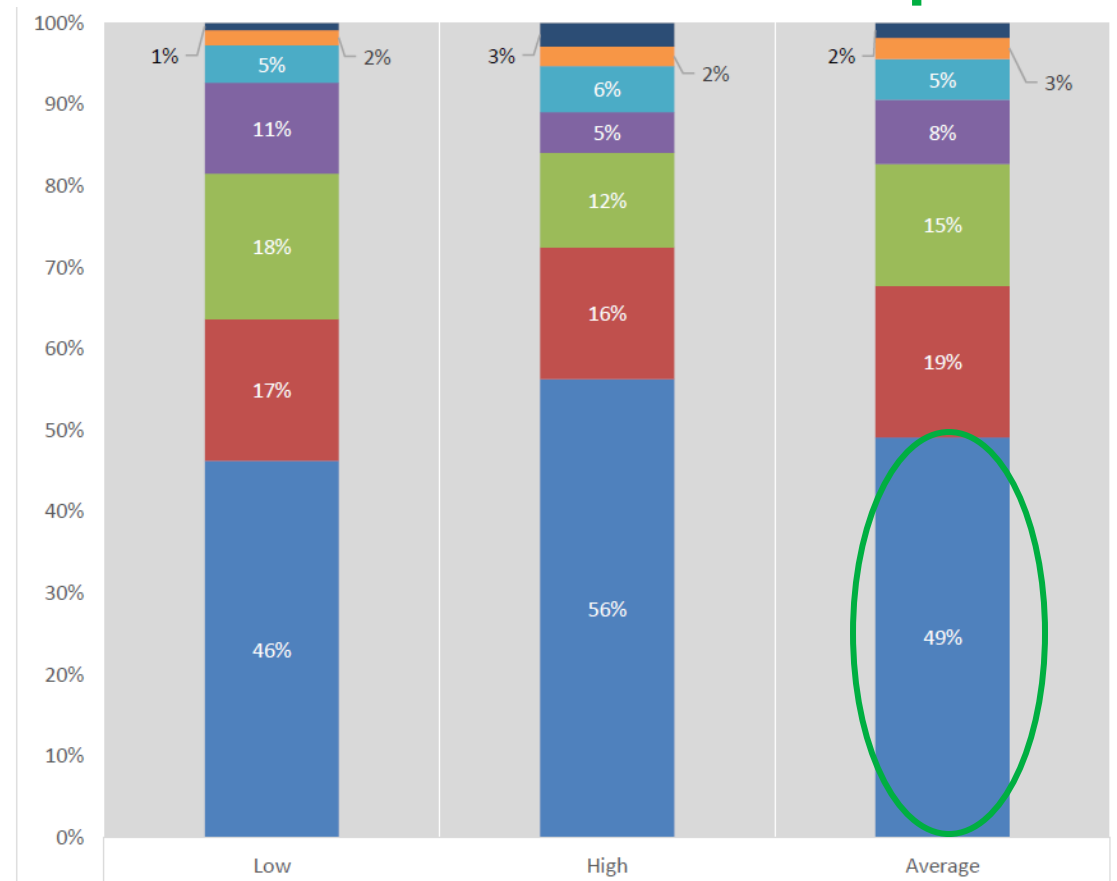
- Clean Air Strategy commitment on NRMM
 - Research project commenced in 2019, and concluded in May 2021
 - Focus on refining NRMM emission assumptions in NAEI
 - Out of scope: agriculture, fishing, rail and non-commercial heating
 - Multiple tranches of stakeholder engagement and wider data collection
 - More robust and accurate evidence base to consider policy options from
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Contribution to 2018 NO_x emissions by sector for three different lifetime assumptions



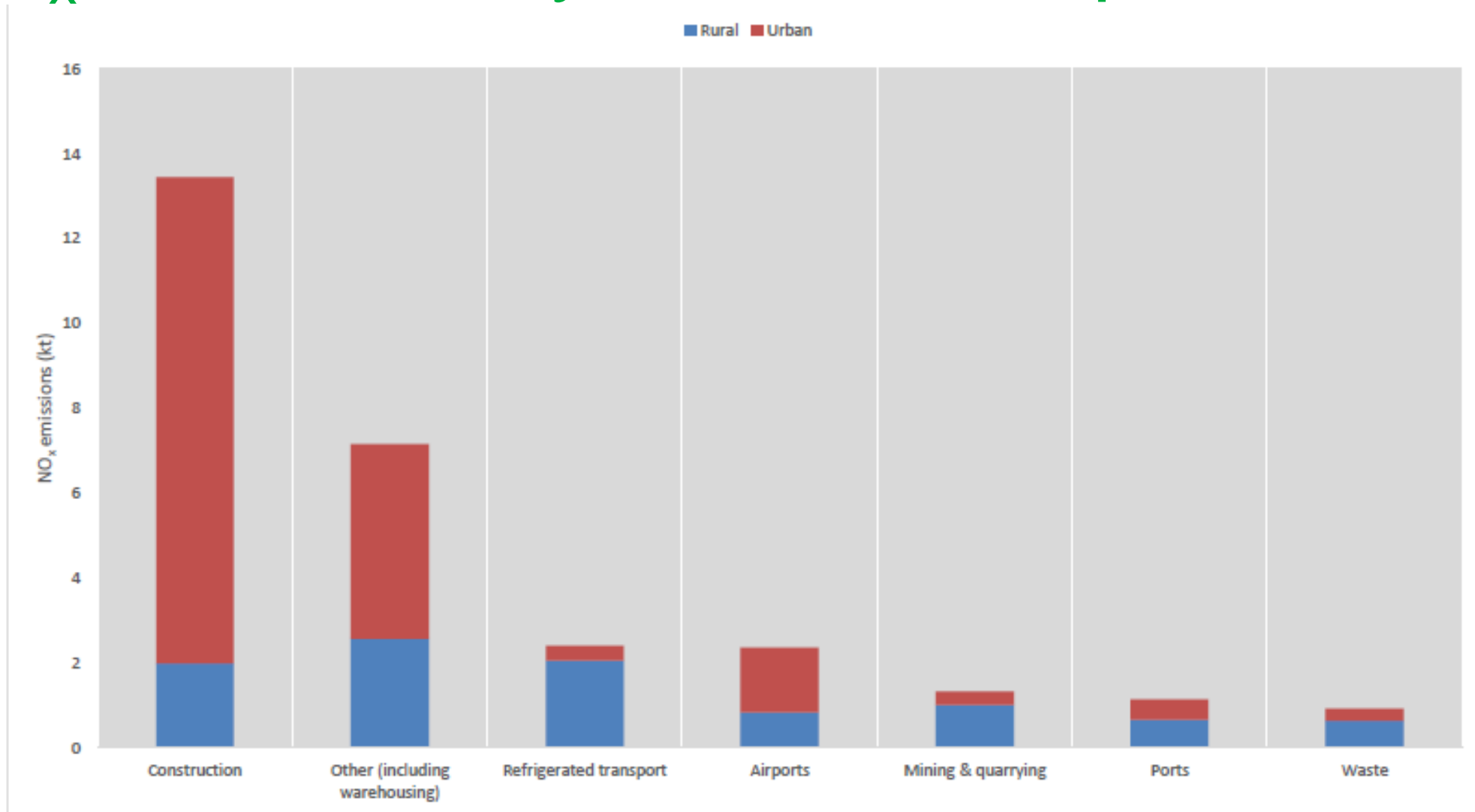
■ Construction ■ Other (including warehousing) ■ Refrigerated transport ■ Airports ■ Mining & quarrying ■ Ports ■ Waste

Contribution to 2018 PM_{2.5} emissions by sector for three different lifetime assumptions

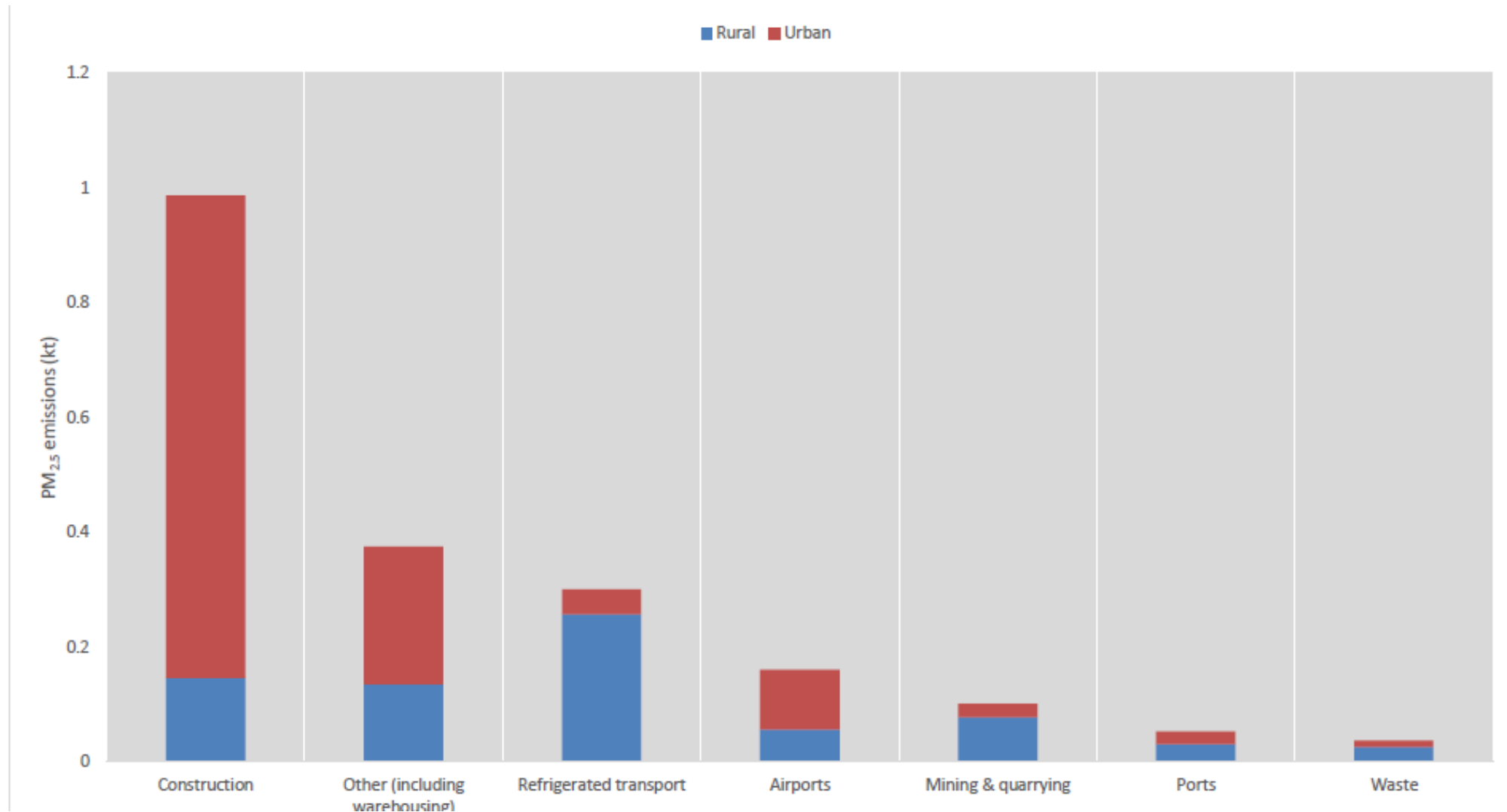


■ Construction ■ Other (including warehousing) ■ Refrigerated transport ■ Airports ■ Mining & quarrying ■ Ports ■ Waste

NO_x emissions by urban/rural split



PM_{2.5} emissions by urban/rural split



Next steps

- We are undertaking further work to address some remaining evidence gaps and to prepare for the integration of the new activity data and model from the Defra NRMM Research Project into the NAEI
- Consideration of policy options – e.g. possibly supporting the wider rollout of London NRMM scheme (Cleaner Construction for London) and development of an accompanying NRMM register/IT system

Wider NRMM Landscape

- Government will remove the entitlement for many NRMM sectors to use red diesel from April 2022.
- Red Diesel Replacement competition – *BEIS*
- Stage V engine standard - In January 2017 new legislation with more stringent emissions standards for engines used in NRMM came into force.
- Public consultation – Future of transport regulatory review: modernising vehicle standards
- Cross-government working

Net Zero Innovation Portfolio: Red Diesel Replacement Programme

14 December 2021



Department for
Business, Energy
& Industrial Strategy

Red Diesel Replacement Innovation Programme

A £40m fund developed in response to the partial removal of the entitlement to use red diesel and rebated biofuels from April 2022, to encourage the red diesel sector to decarbonise

Aim:

To promote and develop low-carbon fuels and systems at a price that is **competitive with fossil fuels** for the **construction, mining and quarrying** sectors. The programme will produce **full system demonstration** of vehicles and energy storage, distribution, and energy delivery for both these sectors.



Objectives

Develop commercially viable and globally applicable low-carbon alternatives to red diesel, looking at long-term solutions

Demonstrate an integrated, low-carbon solution at a moderate scale on site for the mining and quarrying sector, and the construction sector

Disseminate the learnings and results of the Red Diesel Replacement programme to international stakeholders, industry and other sectors which utilise middle distillate fuels

Inform policy teams on the potential of these low-carbon alternatives and create awareness of the spin-off opportunities for other sectors (e.g. aviation and Heavy Goods Vehicles)

Deliver match funding from industry

Accelerate the commercialisation of low-carbon Red Diesel alternatives



Programme overview

Phase 1: Separate development of component technologies

- **Lot 1:** Distribution, storage and energy delivery systems development
- **Lot 2:** Development of equipment (components/sub-systems) and fleet management infrastructure (facilities for maintaining, hosting and servicing equipment)
- **Lot 3:** Fuel development

£9.2m, up to £460k per project

11 months duration
(Q1 – Q4 2022)

Phase 2: System integration and demonstration

- Full system demonstration of the integrated solution on construction and mining & quarrying sites
- Open to all organisations, not just those that entered into Phase 1
- Programme ends on 31 March 2025

£30m, up to £10m per project

22 months duration
(Q2 2023 – Q1 2025)

Technology scope

- **TRL 4 to 7** at the start of the project
- Underlying technology must be suitable for a full system demonstration at moderate scale at a **mining and quarrying or construction site by Phase 2**
- Technologies must have a **clear progression pathway in reducing:**
 - greenhouse gas emissions;
 - air pollution emissions;
 - reliance on biomass (long-term solution must not be a biofuel).

1. Projects must support or align to a technology that uses one of the following long-term solutions:

Electricity (direct or battery)	Hydrogen	E-diesel
E-methanol	E-methane	Ammonia

2. Eligible fuels that are not hydrogen or electricity-based:

RTFO Development Fuels*	RCF Recycled carbon fuels*
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*At 100% concentrations (excluding additives) without blending with any fossil fuel derived fuels

Thank you for listening

Get in touch: RDR@beis.gov.uk



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