

RIBBLE VALLEY BOROUGH COUNCIL REPORT TO COMMUNITY SERVICES COMMITTEE

meeting date: TUESDAY 12 MARCH 2024
title: HYDROTREATED VEGETABLE OIL (HVO) FEASIBILITY
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1 PURPOSE

1.1 A report was presented to January Committee recommending the use of HVO in all qualifying vehicles. This report provides further environmental information regarding HVO which was requested by Committee.

1.2 Relevance to the Council's ambitions and priorities

- Community Objective – To help make peoples lives healthier with a cleaner environment.
- To protect and enhance the existing environmental quality of our area.
- Other Considerations – The introduction of HVO in our fleet will be a significant step in achieving our Climate Change Strategy objectives.

2 BACKGROUND

2.1 In January 2024, a report was submitted to the Community Committee recommending the use of HVO in all qualifying vehicles. Committee requested further information on both the positive and negative impact of switching the majority of our vehicles to HVO.

2.2 In summary the report recommended requesting additional recurring revenue funding from Policy and Finance Committee of approximately £100k per annum to fund the more expensive HVO and a further £15k of capital to install a small fuel tank for diesel which would still be required for a small number of vehicles.

2.3 Technical Specification of HVO that would be used:

Hydrotreated Vegetable Oil is generally animal fats, vegetable oils or used cooking oils that undergo a hydrogenation process. This results in the oil reacting with the hydrogen and removes impurities such as sulphur and nitrogen. Overall, this results in a cleaner and more stable fuel.

Our current fuel supplier is able to provide HVO that is produced purely from used cooking oil. The oil will not contain any Palm Oil or traces of Palm Oil and will be certified accordingly. The certificate is included in appendix 1. The oil will be certified from its producer and also certified by the UK distributor supplying it to ourselves, Nationwide Fuels. Random testing will also take place by Nationwide Fuels to ensure it is as specified. The fuel could be imported from Europe or North America, currently supplies are primarily from the Netherlands.

The technical specification for the HVO to be used is in Appendix 2.

2.4 Pros and Cons of HVO

2.4.1 Benefits of HVO

- HVO is considered one of the cleanest fuels available and also carbon neutral as the carbon dioxide released by combustion in the vehicle is roughly equivalent to the Carbon Dioxide absorbed by the original plants used as feedstock.
- The Association of Public Service Excellence (APSE) quotes the motor industry figures for HVO emissions as:
 - Reducing net Carbon Dioxide (CO₂) by 90%.
 - Reduction of up to 30% in particulate matter.
 - Reduction of up to 27% in net Nitrogen Oxide (NO_x)
 - Reduction of up to 24% in Carbon Monoxide (CO)
- Our vehicle manufacturer has indicated that ten of our vehicles are Euro 6 compliant and therefore suitable to use HVO, two are not but these are being replaced in the next twelve months with compliant vehicles.
- Our current Carbon Dioxide emissions for the Council overall are just over 1.5 tonnes per annum. Our vehicle fleet accounts for 43% of these emissions. Switching to HVO would reduce our overall Council emissions by over 35% and is the biggest single step we can take as a council to reduce our emissions.
- Many authorities have switched to HVO fuel and have not reported any issues.

2.4.2 Possible Drawbacks of switching to HVO

- The cost of producing HVO is higher than diesel due to the complicated hydrotreatment process. This results in a price that is currently around 30 percent higher. Example prices seen recently are £1.179/litre for diesel and £1.55 for HVO. On current usage of 196,000 litres per annum this means an additional annual cost of £72,700 at this time. Prices fluctuate continually, meaning that the increased cost of HVO could be higher than this. For example, in January of this year the increased annual cost would have been £95,000. For this reason it is suggested that a maximum allowable cost ceiling of a 100k increase over current costs is implemented. If prices rise above this, a switch will be made back to Diesel until prices drop.
- The introduction of new waste regulations will take place over the next two years, this could prove more costly than the current total waste collection cost and needs to be factored in when adding to cost pressures with the introduction of HVO.
- HVO is advised only as a transition fuel and not a long term solution. Longer term solutions are electric or hydrogen vehicles, once they become affordable.
- The availability of feedstock for the fuel, whether waste cooking oil or plants grown specifically for HVO could be in limited supply in the future. Planting for fuels also has a possible impact on deforestation, changes in land use and competition with food production.
- The production of HVO is energy intensive and overall environmental impact depends heavily on the fuel used for production.
- We have received detailed specification information from the supplier, however there is likely to remain uncertainty about the sustainability of every aspect.

- A smaller tank will have to be installed to supply the remaining diesel vehicles. This will cost 15k.
- The implementation of HVO will demonstrate the Council's commitment to reducing its Carbon Dioxide emissions, however members will need to consider whether the increased spend to achieve this is acceptable.

3 RISK ASSESSMENT

3.1 The approval of this report may have the following implications.

- Resources – Switching to HVO will cost the council up to an additional £100,000 per annum which is not currently budgeted for. The budget for 24/25 has been approved by Full Council. Any further addition to the budget would need to be considered as a supplementary estimate and would need to be approved by this committee and Policy and Finance Committee.

Any approval of a move to HVO would require the installation of a smaller fuel tank for continued use of standard diesel, as not all vehicles can currently use HVO. This would cost £15K for installation.

- Technical, Environmental and Legal – HVO is a “drop-in” biofuel and does not require any modification to vehicles, it can be mixed with diesel if an immediate switch back is required.
- Political – No implications identified.
- Reputation – The introduction of biofuel will enhance the Council's sustainability credentials, but the public may criticise the additional spend when spend is limited.
- Equality & Diversity – No implications.

4 RECOMMENDED THAT COMMITTEE

4.1 Consider the pros and cons associated with the introduction of HVO and decide whether they wish to:

1. Retain the current fleet on Diesel and move to electric or hydrogen vehicles when they become affordable and when the necessary infrastructure is in place; or
2. Request that Policy and Finance consider increasing the overall Council budget by £100k per annum and provide a one off £15k capital allocation to finance the introduction of HVO in the next financial year. No funding is currently identified; or
3. Request that officers examine whether HVO can be affordable as part of the wider waste review taking place over the next two years, when additional government funding for food waste is factored in.

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BACKGROUND PAPERS – None

For further information please ask for Adam Allen, extension 4461.