

New methodology for estimating inland deliveries of road fuels and gas oil

Background

The data for demand of road diesel, motor spirit and gas oil published in Energy Trends and DUKES is matched to tax clearance figures published by HMRC. Historically HMRC have published these data on a monthly basis. However in light of a consultation between November 2015 and February 2016 HMRC took the decision to change the publication frequency of their Indirect Tax statistical bulletins, including the Hydrocarbon Oils Bulletin, to a quarterly schedule¹. The bulletins will still include monthly data, but will be published up to 3 months in arrears.

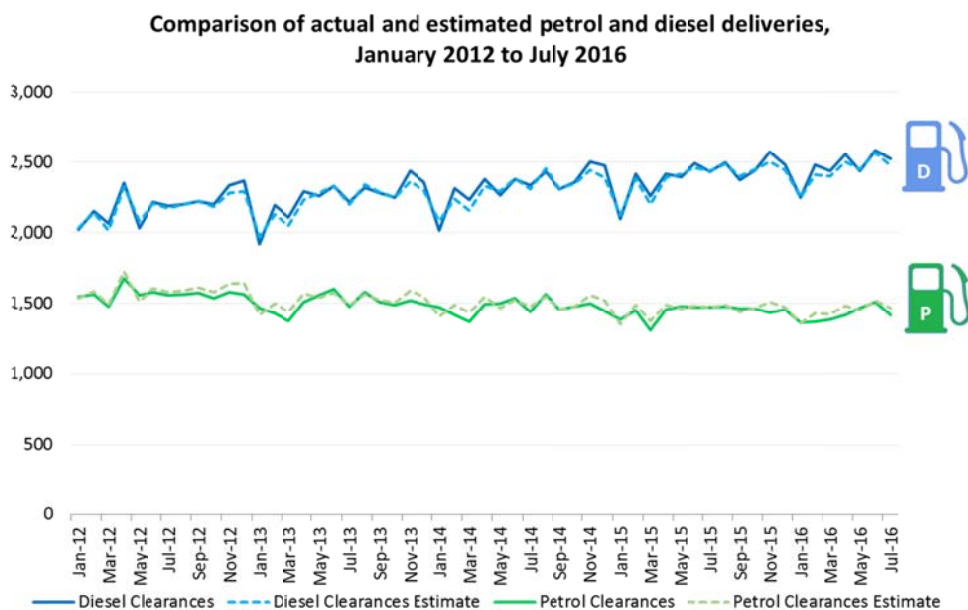
As a result of these changes, monthly demand figures published by BEIS in Energy Trends will be estimated then revised to match HMRC published figures when revisions are undertaken. Estimates will be marked to indicate they are provisional. Quarter 1 will be revised in June each year, Q2 in September, Q3 in December and Q4 in March, as per usual Energy Trends revision policy.

Method 1 Road fuels

Figures for total oil tax receipts will continue to be published on a monthly basis in the HMRC Tax and National Insurance Contributions Receipts (TNR) bulletin. The profile for petrol and diesel clearances strongly correlates with total oil tax receipts because diesel and petrol account for most of this figure, making receipts from the TNR bulletin an accurate predictor for clearances and hence our own figures of deliveries into consumption. To estimate monthly consumption:

- a moving six month average of the ratio of diesel and petrol clearances to total receipts will be calculated;
- that average ratio will be applied to monthly total receipts taken from the TNR bulletin to estimate road diesel and petrol consumption until the next quarterly Hydrocarbon Oils bulletin is released.

The chart below indicates the result of these estimates as applied to historic data. The chart indicates the methodology is expected to yield good indicative results; the maximum error in estimates is 5 per cent for petrol and 5 per cent for diesel but the average error (in absolute terms) is 2 per cent for petrol and 1 per cent for diesel.



¹ For the full response to the consultation please see www.gov.uk/government/publications/user-consultation-hmrc-indirect-tax-receipts-statistics

Special feature – New methodology for estimating inland deliveries

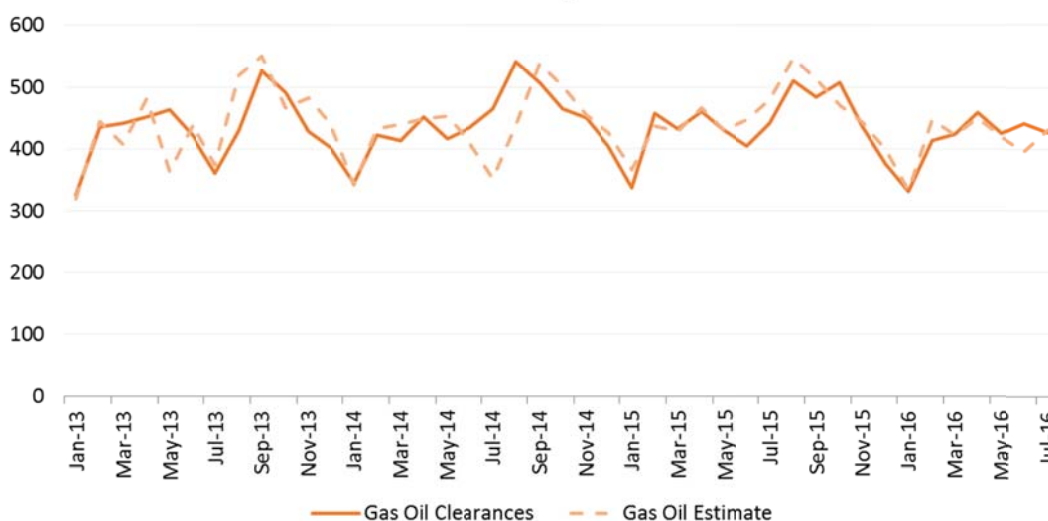
Method 2 Gas oil

The methodology used by BEIS for road fuels is not as accurate for estimating gas oil consumption because gas oil accounts for a smaller proportion of overall receipts (approximately one-fifth of diesel clearances), and follows a more seasonal pattern. A second methodology has been developed to estimate gas oil, which makes use of historic data to estimate current consumption. To estimate the monthly consumption:

- the percentage change in gas oil clearances from the same month in the previous year will be calculated using the most recent six months of data;
- the average percentage change over those six data points will be applied to the previous year's data to estimate gas oil consumption until the next quarterly Hydrocarbon Oils Bulletin is released.

The methodology used to estimate gas oil is more prone to error; the maximum error is as much as 24 per cent, due to predictions of peaks in consumption sometimes being one month different. This is caused by differences in average monthly temperatures from year to year, which will be taken into consideration when estimating gas oil consumption each month. The average error (absolute figure) is 6 per cent for gas oil.

Comparison of actual and estimated gas oil clearances, January 2013 to July 2016



Future review

We acknowledge with thanks engagement and advice from HMRC colleagues with regards to the estimation methodology. BEIS will keep the methodology under review and welcome thoughts on improvements from our user community.

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