Access charging framework for use of Network Rail infrastructure: user guide

Variable Usage Charge (VUC)

What is the purpose of this charge?

The VUC is a charge designed to recover the operating, maintenance and renewal costs that vary with marginal changes in traffic (The Railways (Access, Management and Licensing of Railway Undertakings) Regulations (AMRs) 2016, Schedule 3, paragraph 1). In practice, rail infrastructure operating costs are widely understood not to vary materially with traffic and the charge was set in CP4 to recover variable maintenance and renewal costs only. It does not reflect the costs of providing or changing the capability or capacity of the network.

It is intended to provide incentives for operators to: (1) use more track friendly vehicles; and (2) only operate services where the additional benefit is greater than the marginal costs imposed on the infrastructure.

What costs are recovered through this charge?

The VUC recovers costs relating to three types of activity: track, civil engineering and signalling. Track wear and tear costs make up approximately 84% of the expenditure that is recovered through this charge whilst civil and signalling costs make up around 13% and 3% of the charge respectively. For more details, see Network Rail's consultation on variable charges and station charges in CP7, and a PR13 report by SERCO ('VTISM Analysis to Inform the Allocation of Variable Usage Costs to Individual Vehicles').

Who is subject to this charge?

The VUC is paid by all operators who run services on the network i.e. passenger operators on concession-style agreements, freight operators, open access operators and charter operators.
How is the charge structured?

The VUC is disaggregated by vehicle class and, in the case of freight services, also by commodity. Typically, heavier and faster vehicles incur a higher VUC, reflecting the relatively higher levels of damage that they cause to the network (note that both vehicle characteristics and the commodity carried contribute to the effective vehicle weight that has to be supported by the infrastructure). The rates are averaged across the network as a whole, resulting in a single price for each permutation of vehicle type and commodity across the network. The CP7 VUC price list contains about 1,800 vehicle rates.

Passenger and freight VUCs are specified, respectively, on a pence per vehicle mile and pound per thousand gross tonne mile (kgtm) basis.

How is the level of the charge calculated?

The methodology for calculating VUC rates is based on a combination of:

- forecasts of maintenance and renewal expenditure as a function of changes in traffic (both passenger and freight)
- periodic review forecasts of maintenance and renewal expenditure over the next control period
- engineering models used to calculate the relative amount of infrastructure damage caused by different types of vehicle

The VUC methodology involves estimating the total annual wear and tear costs based on a 35 year average cost. In PR23 this was constrained to broadly match the expected control period expenditure. Through a combination of the Vehicle Track Interaction Strategic Model (VTISM) and engineering judgement, these costs are used to calculate the national average VUC rate in pounds (£) per kgtm, taking into account the relevant efficiency overlays and adjusting to exclude indirect costs. The national average VUC rate in conjunction with the damage formulae and individual vehicle characteristics such as weight and speed then determine a vehicle’s individual VUC rate.

A calculator is available on Network Rail's website which can be used to determine the charge applicable for a specific type of vehicle and commodity by inputting all of the relevant vehicle characteristics.

In PR23, we reviewed our capping and phasing-in policy to limit the increase in VUC that freight and charter operators would otherwise experience in CP7. Freight and charter operators were forecast to incur material increases in their (uncapped) total variable charges in CP7. The policy does not apply to passenger operators on concession-style agreements nor to open access passenger operators. Operators on concession-style agreements are compensated by their funders under the terms of their contracts and open access passenger operators were not forecast to incur a material increase in their total variable charges in CP7.

Considering the CP7 freight growth targets set in our PR23 final determination (7.5% in England & Wales and 8.7% in Scotland), and our duty to protect the interests of users of the railway, we decided to maintain the capping arrangements set in PR18 for VUC rates paid by freight (and charter) traffic in CP7 (instead of increasing to new (higher) cost-reflective rates). This saved freight operators around £33 million in VUC payments (2023 to 2024 prices) over CP7.

In our PR23 final determination, we said that VUC rates will increase further in CP8 with a view to being fully cost-reflective by the end of CP8 (i.e. the remaining caps would be unwound over CP8). This means that freight (and charter) users are on a pathway to paying the full directly incurred cost of network use by the end of CP8.