

## **EXECUTIVE NOTE**

### **THE POLLUTION PREVENTION AND CONTROL (SCOTLAND) AMENDMENT REGULATIONS 2008 (SSI/2008/410)**

#### **Background**

1. The regulations require a permit to be obtained from SEPA for vehicle refuelling activities. Petrol vapour recovery stage II (PVR II) measures will be implemented through the application of best available techniques when determining the conditions of the permit. The purpose of PVR II is to reduce the amount of petrol vapour that escapes to the atmosphere as vehicle tanks are filled. Proposals to introduce these controls were originally consulted on in 2002 when the preferred approach was for a negotiated agreement with industry, rather than legislation. However there was no strong support for such an approach, the prevailing view being that regulations would ensure a level playing field. A further consultation, with regulations as the preferred option, was undertaken in 2005 and this time the proposals were generally accepted. Since then, discussions have been ongoing within government and with SEPA on how to proceed. Agreement was reached earlier in 2008 and the draft regulations were consulted on in November.

2. All existing service stations with an annual petrol throughput of 3,500m<sup>3</sup> or more, and new stations with an annual throughput of 500m<sup>3</sup> or more will be required to implement PVR II controls. This threshold will therefore exclude smaller stations, which are predominantly located in rural areas. The compliance date is 1 January 2012. The regulations amend the Pollution Prevention and Control (Scotland) Regulations 2000. Equivalent regulations came into force in England in 2006.

#### **Policy objectives**

3. Service stations are already regulated under the Pollution Prevention and Control (Scotland) Regulations 2000 which control volatile organic compound (VOC) emissions arising from petrol storage and distribution. These are petrol vapour recovery stage I (PVR I) controls implementing an EU Directive which controls emissions resulting from the storage of petrol and its distribution from terminals to service stations.

4. VOCs contribute to the formation of ground level ozone which can affect human health, damage plants and is a major component of summer smog. Petrol vapour also contains other substances detrimental to health, such as benzene which is a carcinogen. The major sources of VOCs, such as road transport and industrial solvents, are being effectively addressed through initiatives and legislation such as the EU Solvents Emissions Directive. Whilst the more minor sources account for a relatively small proportion of the total emissions – service stations account for about 2% - these will become increasingly significant as the major sources continue to decline.

5. The UNECE 1991 VOC Protocol aims to reduce VOC emissions and also ground level ozone concentrations resulting from these emissions. One of the obligations the UK has under the Protocol is to apply measures to control VOC emissions from vehicle refuelling. PVR II will allow this obligation to be met.

6. VOCs evaporate from liquid petrol inside the fuel tank of a vehicle, filling the air space above the liquid. When a vehicle is refuelled, the VOCs are forced out by the incoming liquid and, unless controlled, escape into the atmosphere. PVR II will require systems to be fitted to pump dispensers, which will capture up to 90% of the VOCs and return them to the pump. This has benefits both for health and for retailers who can resell the captured VOCs. Losses through VOC escape amount to approximately one litre for every 1,000 litres of petrol dispensed.

### **Financial considerations**

7. Currently there are believed to be around 1,000 petrol stations in Scotland, but numbers have been dropping significantly in recent years as the focus shifts from independent retailers to larger stations, particularly those operated by supermarkets. Numbers are expected to further decline before levelling out at approximately 800 by 2012, the time by when the PVR II controls should be in place. Around 160 of these stations would be affected by PVR II, between them accounting for about 40% of petrol sales in Scotland. However many of these stations have already installed the PVR II equipment when other improvements were being made to the petrol station.

8. A detailed Regulatory Impact Assessment accompanied the 2005 consultation paper. The annualised costs of installing PVR II technology are estimated to be between zero and £10.7 million, depending on the type of system chosen. New systems, one of which is commercially available, allows the vapour to be recovered back into liquid form at the dispenser and resold. This resale allows installation costs to be eventually recouped, therefore net cost to industry is over time is zero. Older systems return the vapour to underground storage tanks where it cannot be resold, so there will be installation costs in these cases. However, the RIA estimates that by 2010 there will be a benefit of between £0.4 and £11.8 million annually for the UK as a whole following introduction of PVR II. Take up by all UK service stations above the threshold will lead to a saving of around 15,000 tonnes of petrol per year.

9. There are also predicted benefits that cannot be easily monetised, for example reduced ozone damage to ecosystems and crops, and reduced long term human health effects. The estimated benefits are therefore likely to be on the conservative side.

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