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9 August 2012

Dear Joe

Consultation on variable user charge and a freight-specific charge

Please find enclosed the formal response of Freightliner Group to the Office of Rail Regulation (ORR) Consultation on the variable usage charge (VUC) and a freight-specific charge.

The response is detailed and I have summarised the high-level points contained therein here;

Executive Summary

- The proposals are complex and indicate an overall increase in the level of charges (as yet un-quantified) which will have a negative effect on rail's modal share and future growth in the freight transport market.
- The consultation proposals are creating considerable uncertainty and nervousness in the wider rail freight industry which could undermine modal shift and investment.
- We welcome ORR's proposal to set a cap on the average VUC based on Network Rail's figures.
- We suggest that charges are adjusted in line with long term efficiency assumptions as in CP4. A reduction in charges would assist in enabling increased modal shift to rail which would create significant benefits by further reducing road congestion and carbon emissions, as well as supporting economic growth.
- The consultation proposals are creating considerable uncertainty and nervousness in wider rail freight industry which is will undermine modal shift and investment.
- The range of proposals adds further complexity to an already complex charging structure and they will add significant transactional costs to both Network Rail (NR) and the freight operators. The pricing structure should be simplified in line with the road competition.
- The proposals represent a significant change in policy compared to the last two periodic reviews and, if implemented could have unintended consequences for the rail freight industry, its customers and for the UK economy.
- The proposals are out of step with existing government policy to reduce the burden and cost of regulation.
- None of the recent Government policy documents or the McNulty report has

suggested that a change in regulatory policy for rail freight which effectively reduces demand should be pursued.

- None of the recent documents, including the McNulty Review has produced any compelling evidence to suggest that the rail freight industry and its pricing structure is a significant contributor to the costs of the UK rail network.
- NR's cost data, particularly on structures is based on 'top down' engineering judgement which we do not support and there is a lack of transparency and rigour on the cost estimates by NR.
- Geographic charges are over complex and perverse for a freight market that operates on a national basis. Disaggregation of charges will make it more difficult to quote for new business and appear to bring no benefits or incentives.
- The ORR does not appear to have given sufficient weight to its duty to "promote the use of the railway for the carriage of passengers and freight," and to "enable persons providing railway services to plan for their business with a reasonable degree of assurance" and undue weight in its duty to "have regard to the funds available to the Secretary of State."
- The freight-specific charge sets a potential precedent for other market segments which is undermining investment confidence.
- In our view it is outside ORR's statutory duties to implement policies that will impact on coals market share in the electricity supply industry.
- We consider that setting the increase in charges for ESI Coal at a level that results in reduced demand and the consequent reduction in tonne-kilometres do not meet the test of what the market can bear.
- The proposed 10% cap on the loss of ESI coal traffic appears to be arbitrary and the approach described by ORR is unworkable.
- The proposals for ESI coal could lead to mine closures and job losses in Scotland as well as mode-shift from rail to road.
- We believe the methodology being proposed for "freight avoidable costs" is flawed; actual costs incurred rather than theoretical costs should be the starting point.
- The timescale for LEK Consulting to complete the work on "freight avoidable costs" is very short and the work appears to be based on assumption led data.

Please do not hesitate to contact me if there any questions that you have resulting from the points made in our response and I am happy to meet with ORR to discuss our response.

Yours sincerely



Lindsay Durham
Head of Rail Strategy
Freightliner Group Limited

Enclosures:
Formal response
Morgan Tucker report
DECC central forecast

Consultation on the variable user charge and on a freight-specific charge

This is the response of Freightliner Group, incorporating Freightliner Intermodal and Freightliner Heavy Haul to the Office of Rail Regulation (ORR) Consultation on the variable usage charge and a freight-specific charge.

This response is broken down into 2 main areas: 1) Freightliner's high level comments and our key concerns regarding the charging review 2) detailed comments on chapters 3-6 of the consultation including responses to ORR's specific questions (within the text).

OVERVIEW

Freightliner is disappointed that there remains considerable and multi-layered uncertainty with regard to the level and structure of freight access charges in Control Period 5(CP5). We are concerned that the overall result of the proposals will be increased charges and increased complexity that will negatively impact on rail's share of the freight transport market.

If charges increase and become more complex freight operators will find it harder to secure new business and to retain existing business and the proposed increases could also have wider consequences on the electricity supply industry.

KEY AREAS

Uncertainty and investment

The "Command Paper : Reforming Our Railways: Putting Customers First" published by the Department for Transport (DfT) in March 2012 stated in paragraph 4.46 with regard to freight "the ORR plans to give the freight industry early assurance over the level of access charges, by setting a cap on these in June 2012". We do not consider that this statement has been fulfilled and note that even the proposed cap on Variable Usage Charges will not be finalised until November 2012.

Given that certainty on access charges was part of the mooted "freight deal" we are disappointed that the certainty element of the "freight deal" has not been fulfilled. Freight operators wrote to Network Rail (NR) in November 2011 with a list of routes which are not seen as required in the foreseeable future by freight in line with paragraph 4.47 of the Command Paper.

The current situation has created uncertainty and nervousness within the wider rail freight industry and this is causing businesses, including rail freight operators, customers and other parts of the supply chain such as terminals operators to delay or cancel investment decisions. It is particularly important for the UK that there is an environment that encourages investment as the majority of companies are now multi-national and can choose to invest capital in other countries where the business environment is seen to be less hostile.

Freight operators and their customers make investments in long term assets without the support or protection of government, and increased charges and associated risks will make private sector investments harder to justify.

The ORR has a number of statutory duties under certain legislation, including the Railways Act 1993, which includes "to enable persons providing railway services to plan the future of their businesses with a reasonable degree of assurance". At the moment Freightliner feels it does not have such assurance.

Change in policy

Freightliner notes a policy shift to move to a market based approach to recover "freight avoidable costs", where the market segment can bear the increase. We are concerned about the wider message that this shift in policy is sending to customers and potential customers of the wider rail freight market. Freightliner is concerned that this consultation appears to change the definition of what the market can bear compared to the assumption used in the last control period.

Such a policy has not been applied in the last 2 control periods where it has been recognised that simple charges set at a level that enable competition with the road market were vital to enable the Governments' wider objective of increased modal shift to rail to be met.

We also note current Government policy on better (and less) regulation and reducing the burden and costs on business. The additional charges and multi-faceted changes in charging do not appear to align with government policy of not creating unnecessary burden and additional costs for industry. In April 2010, the Prime Minister said: *"I want us to be the first Government in modern history to be the first to leave office having reduced the overall burden of regulation, rather than increasing it."*

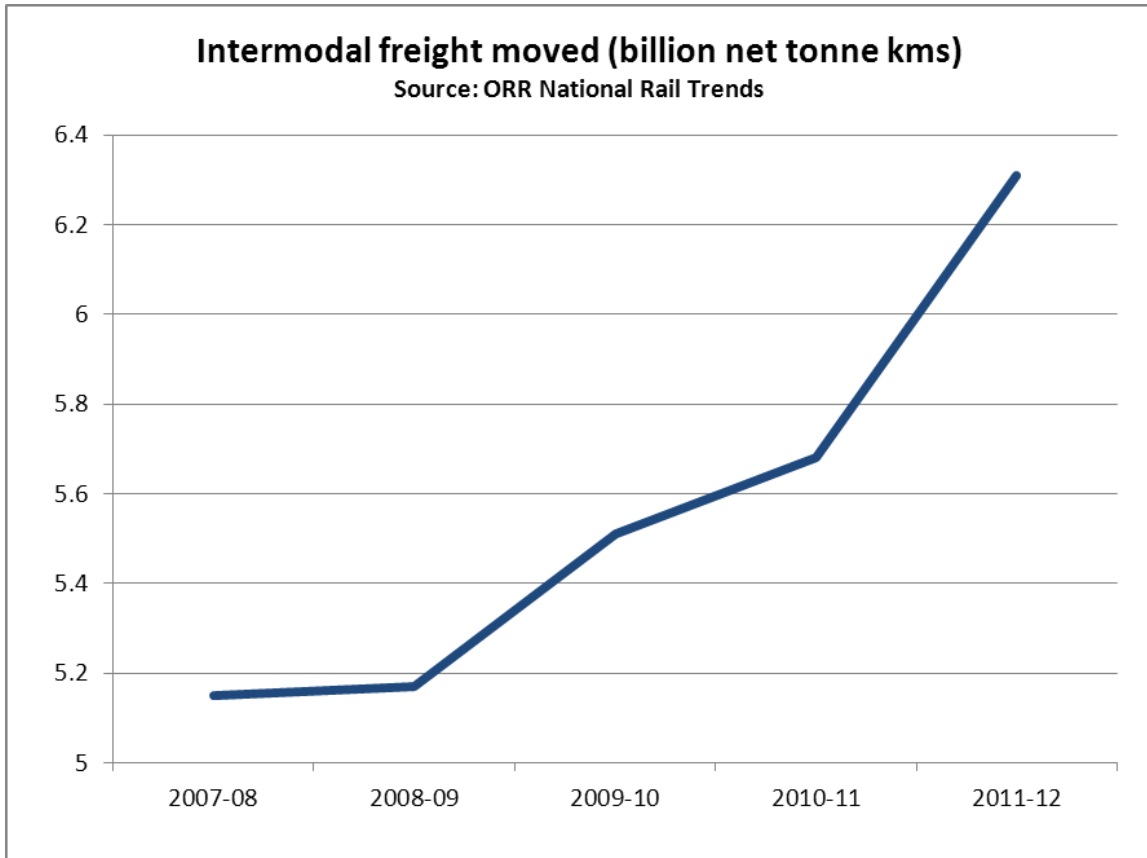
Such a fundamental proposed change for CP5 creates further uncertainty going forward and concern that for CP6 the assumptions could change again. The typical asset life in the rail freight industry is 30-35 years and investors need more certainty of an on-going and consistent policy to continue investment. Frequently investments can only be justified if long term contracts are also put in place so setting policies that enable longer term contracts to be agreed would also be enabler to further private sector investment.

We urge the ORR to set a framework of policies that gives certainty to the level of charges for freight access for at least 2 Control Periods.

Intermodal Growth Opportunity

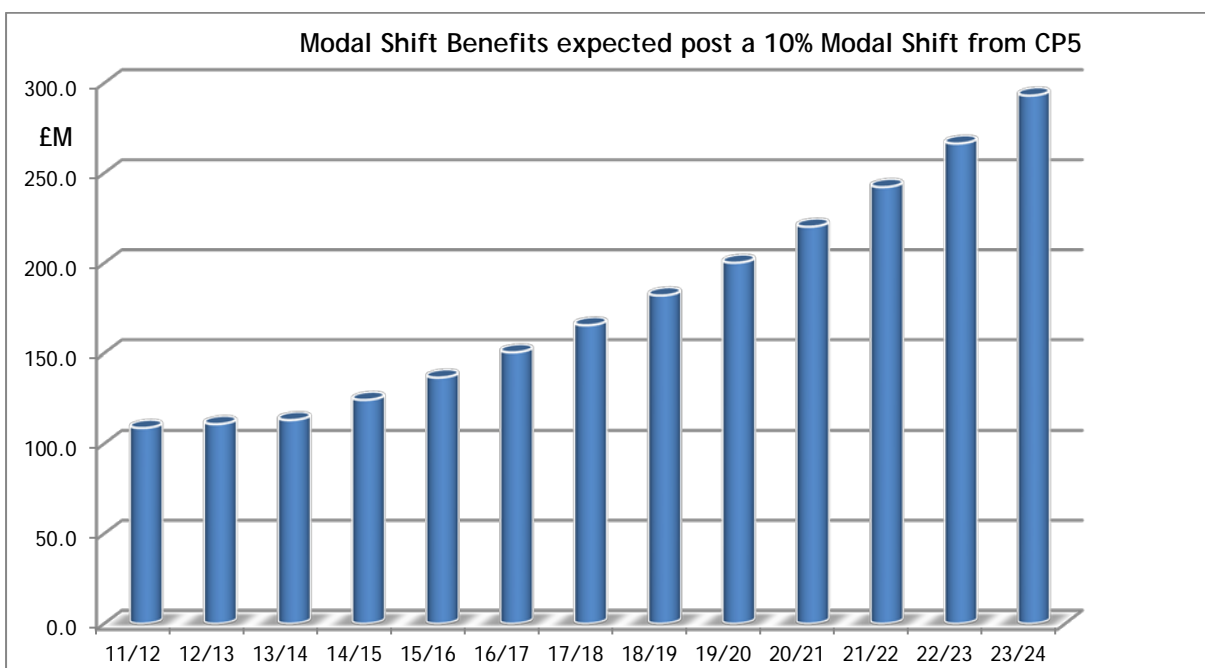
Freightliner believes that the ORR could create greatly increased value for money for the UK by considering a reduction in charges, particularly in the intermodal market which is directly competing with road. Since the last charging review intermodal freight has grown by 29%, despite the on-going economic background. There has been real modal shift to rail and the level in access charges has played a considerable part in enabling this.

Successive governments have demonstrated real support in the growth of the intermodal sector by rail by committing to investments totalling over £600 million through the Transport innovation Fund and the Strategic Freight Network. The trend in growth is now realising the benefits of these investments as more are completed. However even in the deep-sea intermodal sector where rail market share has increased from 17% to 30% we remind the ORR that road market share remains in the region of 68% and there is considerable further opportunity for increased market share by rail. The largest barrier to rail to access this share is being able to compete on price with the simpler road product.



A further reduction in charges for intermodal services of 25% against current charges would cost approximately £2.8 million per annum at 11/12 volumes, yet this could have a further considerable impact on modal shift and would send a real message of confidence to potential investors. The modal shift benefits of this would far outweigh the value of the reduction.

The graph below shows the increased benefits from an assumed 10% increase per year in tonne miles of intermodal traffic. The benefits would increase from £113.1 million in 2013/4 to £182 million in 2018/19 (source DfT Sensitive Lorry Mile benefits).



This could perhaps be achieved by setting charges at a future efficient level, assumed end of CP6 or 7. A precedent was set in CP4 to set the Variable Usage Charge (VUC) at an assumed level of efficiency at the end of CP5 but the ORR consultation is silent on any possible similar arrangement for CP5.

ORR's duties

The consultation raises questions and concerns as to how the ORR has balanced its duties. Whilst we fully understand the need to have regard to the funds available to the Secretary of State, this should be balanced with the duty to promote the use of the railway (for the carriage of passengers and freight) and enabling industry to plan their business with a degree of reasonable assurance.

Market Affordability

We are very concerned regarding the ORR's apparent interpretation of "what the market can bear", which appears to be a reduction of up to 10% in the market directly caused by access charges. We do not agree with this interpretation and question its legal basis. We are also extremely concerned at the implication of setting a precedent for future Control Periods; the implication being that track access charges could be set at a level that results in a reduction in the market.

The proposal would result in a loss of revenue and contribution for freight operators and we are concerned that the wider impact on the rail freight industry and other markets has not been evaluated. It will be harder for the freight operators to achieve returns on the investments that have been made, based on the policies of the last 2 control periods, assuming no loss of traffic. This will have a knock on impact on future investment decisions and funding.

We urge the ORR to take into account the wider impact of its proposals, noting that the market that we operate in is a "freight transport market" not a "rail freight" market. We are concerned that the ORR is concentrating on the impact and incentives on the railway, but not fully taking into account the wider effects of their proposals on the broader freight logistics chain, noting that most of the benefit of rail freight falls outside of the railway balance sheet.

Structure of Charges

Freightliner welcomes the proposal made by the ORR to set a cap on variable access charges. However, because this is a nationally average charge the actual charge that will apply to individual customers and flows could vary considerably if geographically varied charges are also introduced. This will create "winners" and "losers" amongst the customer base which could inadvertently give the competitive advantage to road transport, which benefits from no road charges and has no complexity to consider.

It would be considerably more meaningful to set a cap against the current charging structure by individual wagon type e.g. a maximum charge of 115% of the current wagon charge.

Overall the proposals add a high degree of complexity as well as uncertainty for both us and our customers, which will undermine the rail freight offering and reduce private sector investment. Rather than simplifying the industry, the charges structure as proposed will result in the imposition of an increased and onerous regulatory burden and will increase administrative costs.

BACKGROUND

This consultation is one of many different consultations as part of the Periodic Review process; all of these consultations are proposing increased charges or potentially increased risk. Freight

operators, unlike franchised passenger operators, are already fully exposed to all changes in charges and changes to risks.

The compound effect of all the layers of these changes is considerable and the result is to create a backdrop of great uncertainty, a situation that is not borne by our road competitors. Such uncertainty is very unhelpful in attracting new customers to use rail freight or in giving customers confidence to renew their contracts, as such a complicated set of risks is not evident in the road industry.

The table below lists the charges that will potentially change. There are so many work streams, consultations and future consultations from both ORR and Network Rail that will have a potential impact on charges it is impossible to work out what the possible overall changes will be. It is particularly difficult for those who are not experts in this area to understand how the different charges fit together.

This list compares to just Vehicle Excise Duty (VED) and fuel duty paid by road lorries.

Charge	Potential Change	Comments
Variable Usage Charge	+3.54%?	Possible overall increase depending on efficiency levels Possible move to geographically base - likely to create winners and losers for each operator and customer Review of inputs that allocate charges to different wagons/commodities that could change split between passenger/freight Review of application of discounts for different bogie types
Capacity Charge	?	NR consultation - likely increase
Freight Only Line Charge	circa +£1m	ESI coal and nuclear only
Coal Spillage Charge	double	ESI coal only - NR proposal suggests level of this charge might double
Freight Specific Charge	circa £50-60m	For ESI coal, nuclear, iron ore, subject to review of avoidable costs
Electricity Asset Usage Charge	?	NR are proposing doubling of this charge due to previous miscalculation
Traction Electricity Charge	?	Change to metering from CP5, impact on rate per unit paid unknown
Route Efficiency Benefit Sharing	-£8m to +£20m	10 different schemes and risk of downside payments
New Capacity Utilisation/Scarcity Charge	?	Interface with existing capacity charge also unclear at this stage
Schedule 4 and 8	?	Recalibration and review of paying rates at < than 100% cost - impact unknown but could be negative

The overall impact is that rather than promoting modal shift to rail, existing and potential customers are finding that rail is even more complex and difficult to understand with uncertainty on cost going forward. Such proposals therefore are not aligned to the ORR's duty to promote the carriage of goods by rail.

We believe that it is the intention of the Access and Management Regulations 2005 and the EU Directive 2001/14 to consider all charges applicable when undertaking the test on what the market can bear. We would therefore expect that any affordability test will be considered against this full suite of charges, not just the Variable Usage Charge.

Rail Freight Industry Background

Rail freight has been one of the success stories of privatization, creating growth and becoming more efficient.

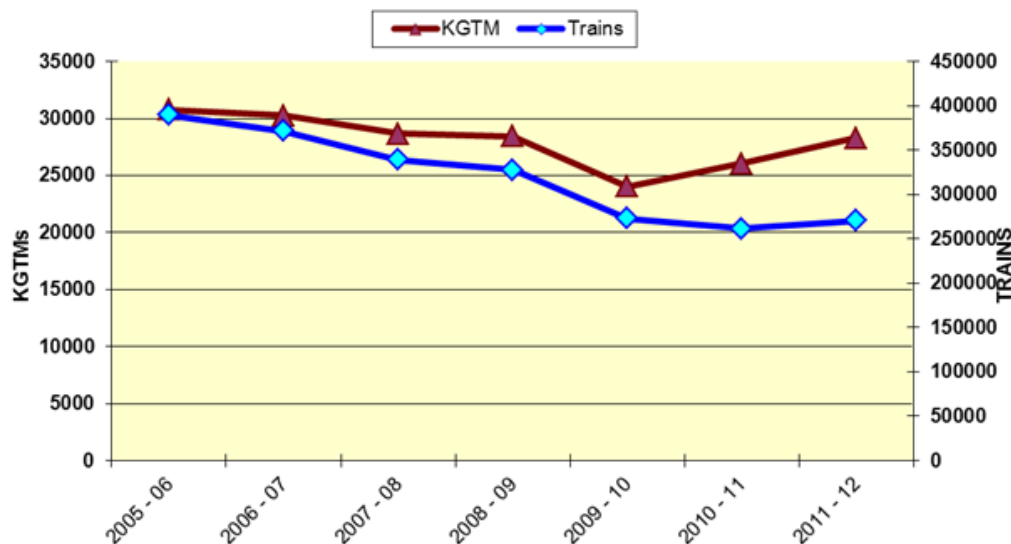
The benefits of rail freight fall outside the railway balance sheet but are significant for the economy and the road network by removing or reducing;

- £772 million per annum in congestion costs¹
- £133 million per annum in road infrastructure costs²
- £68 million per annum in CO₂ costs³
- Pro-rata 42 road deaths at a value of £78.8 million⁴
- There has been over £1.5bn of private sector investment since 1996.

The McNulty Study noted the following:

- The rail freight sector directly contributes £870 million to the UK economy and supports output of £5.9bn.
- The rail freight operators have achieved a 32 per cent improvement in staff productivity since 1998/99 and 48% growth in tonne kilometres since 1994/95 with half the number of locomotives and two thirds of the wagons employed at that time.

There has also been a considerable improvement in productivity of utilisation of train paths. The graph below compares growth in kgtm versus utilisation of train paths across all freight operators (source Network Rail).



¹ Analysis based on data contained in Mode Shift benefit Values: technical Report April 2009, DfT - 2015 values expressed in 2010 prices

² DfT's freight Mode shift Benefits Values April 2009 x Lorry Journeys (ORR national rail trends) by average mileage

³ Delivering a sustainable Transport System: The Logistics Perspective DfT December 2008

⁴ DfT's Unit 3.4 The Safety Objective values one fatality at an average of £1.876m on all road types and times of day x 284 road deaths in 2009 involving HGVs

Since privatisation government has encouraged competition in the rail freight sector. The result has been that operators have invested in more reliable equipment to deliver service quality improvements, in turn this has delivered increased modal share, benefitting the economy. However active competition has also resulted in freight operators with low margins who are less able to stand financial shocks. The table below sets out the latest published results from freight operators.

	<u>FL</u>	<u>DBS</u>	<u>GBRf</u>	<u>DRS</u>	<u>Industry Total</u>
Y/E	<u>26/03/2011</u>	<u>31/12/2010</u>	<u>31/12/2010</u>	<u>31/03/2010</u>	<u>2010</u>
(£ millions)			<u>(9 months)</u>		
Turnover	293.4	401.0	43.6	45.0	783.0
PAT/minority interests (excl. Asset Sales)	2.7	(13.0)	0.8	2.3	(7.2)
PAT Margin (excl. Asset Sales)	1.1%	(3.2%)	1.9%	5.0%	(0.84%)

Context of Government Policy

Most recently the Secretary of State for Transport issued its guidance to the Office of Rail regulation published on 16th July 2012:

“32. The Government recognises the important role that rail freight plays in the nation’s logistics and in the achievement of the Government’s sustainable distribution objectives. The Government wishes to facilitate the continuing development of a competitive, efficient and dynamic private sector rail freight industry and is committed to ensuring that policies and regulations should work to this end and should not create unnecessary transactional costs or other obstacles to the achievement of these objectives and future growth.

33. In an industry where planning and operational decision-making are increasingly devolved, the Secretary of State wishes ORR to have regard, in exercising its statutory functions, to the importance of sustaining efficient and commercially predictable network-wide freight operations, including in decisions about access rights and charging structures.

34. The Secretary of State wishes the ORR, in developing any proposals, and in making decisions in relation to rail freight, to note particularly the Government’s rail freight policy. The Secretary of State wishes to be advised by the ORR of, and to discuss with the ORR, any material measure which the ORR proposes to take or policy which it proposes to pursue which would adversely affect the competitiveness of rail freight compared to other modes.”

Additionally on 29th November 2011 the Secretary of State for Transport said *“The Government supports the transfer of freight from road to rail, where it is practical and economic to do so and fully recognises that rail freight can generate valuable benefits for society where it provides an alternative to road haulage. Rail can deliver goods quickly, efficiently and reliably and help reduce both congestion on our roads and levels of carbon emissions. To secure this longer-term growth and modal shift, rail needs to be able to compete effectively with the use of road by heavy goods vehicles”*

The Secretary of State and Sir Roy McNulty both recognised that the development of a more devolved railway created risks for rail freight and that that the changes proposed must protect the interests of freight operators on the network.

We note that Sir Roy McNulty recognised these points, concluding that;

“The Study recommends that freight access charges should continue to be:

- *administered centrally and levied on a national and homogenous basis; and*
- *compliant with European Directives”*

The Government has demonstrated their strong desire to encourage further modal shift to rail in their High Level Output Specification of July 2012. This committed to a further £200 million investment in the Strategic Freight Network as well as named schemes on key routes out of Felixstowe and Southampton.

Freightliner understands the economic context in which the consultation has been issued, with the need to improve the finances of the rail industry. However, we note that existing freight charges are less than 1% of Network Rail’s overall income and therefore there is limited opportunity to recover large amounts in this area. Small changes to freight charges could create considerable displacement and the overall result will be worse value for money.

None of the recent Government policy documents, or the McNulty Report has suggested that a change in regulatory policy for rail freight which effectively reduces demand should be pursued or have suggested that the rail freight industry and its pricing structure is a significant contributor to the costs of the UK rail network.

CHAPTER 3 - VARIABLE USAGE CHARGE

Variable Usage Charges account for 75% of the CP4 charges, but with proposals for new and increased charges such as freight avoidable charges, coal spillage charges, freight only line charges and scarcity charges, and possible changes to capacity charges it is likely that Variable Usage Charges will be a much lower percentage of the overall charges in CP5.

Proposed cap

Freightliner welcomes the proposal made by the ORR to set a cap on the average usage charge based on NR’s figures plus 15%. Whilst we welcome the message that the setting of a cap sends to our customers and investors in practise an increase of 15% on top of NR’s stated cost increase of 5-7% is totally unpalatable to us and our customers and would have a significantly adverse impact on most markets

We are disappointed that a decision on a cap has not been finalised and is being deferred until November 2012. The DfT Command Paper stated in section 4.46 that “the ORR plan to give the freight industry early assurance over the level of access charges by setting a cap on these in June 2012.”

We do not understand why a 15% uncertainty band is required on track maintenance and renewals costs, when these are based on an established model, VTISM, which was considered consistent and well-based by Arup. As these costs represent 86% of the total, setting the uncertainty band at 15% gives NR in reality some 108% flexibility on the civil and signalling costs (see below table). 15-20% variability just on the civils and signalling costs would seem a more reasonable approach.

Network Rail’s variable usage cost estimates (£million per annum at 2011-12 prices, assuming end CP4 efficiency levels) and value of 15% cap on variability

Asset type	Costs (£m per year)	Costs as % of total	Value of 15% cap (£m per year)	% variability - overall cap spread over non-track only
Track	242.4	86%	36.4	
Civils	25.5	9%	3.8	
Signalling	13.6	5%	2.0	
		<i>Total</i>	42.2	
Total non-track	39.1	14%	5.9	108.0%
Total	281.5	100%	42.2	

Network Rail (NR) model

NR have shared with us the details of their revised cost model for variable costs and we note that work is on-going by NR and ORR to refine the estimates of variable costs and how they will translate into the final Variable Usage Charges (VUC). We are concerned that too many of the cost assumptions within the model are based on “engineering judgement” particularly with regard to civils cost assumptions, rather than evidence. We note that our concerns have also been highlighted as a “red flag” area by Arup in their assessment. We would expect NR to produce further evidence in this area before a conclusion on variable costs is reached.

In particular we do not believe that NR has produced sufficient evidence to support the inclusion of brick and masonry arch structures within the VUC, which is a significant change from previous Control Periods.

In February 2012 the Rail Freight Operators’ Association (RFOA) commissioned Morgan Tucker (Consulting Engineers) to examine the assumptions made by NR with regard to the variability of costs on brick and masonry arch structures.

We would draw the Regulator’s attention to the key points made by Morgan Tucker in their Technical Review (a copy of which is appended to this response).

Modelling Techniques

- There is not sufficient technical information in any of the consultation backing up the engineering judgements that have been made in the top down assessments.
- The effects of loading on brick and masonry arch structure is complex and NR have made some very ‘straight forward’ assumptions.
- It is not appropriate for NR to suggest passenger traffic does not have any impact on brick and masonry arch structures. There is evidence available that would suggest that the resonance associated with high speed passenger trains can affect such structures.

- The use of 'top down' engineering judgement is questionable especially when ORR stated in December 2006 that their "preferred approach for calculating the VUC is through forward looking forward looking bottom up engineering analysis."

Variability assumptions

- NR has applied the same variability assumption of 20% for metallic structures to brick and masonry arch under bridges. This is not an appropriate approach; they are significantly different types of structures and the materials will act in significantly different manners.
- The Settle - Carlisle route was used as the basis for calculating the cost estimate for 'new' routes. It is noted that the £3.5m renewals cost per annum is reduced by 40% to reflect the extreme topography of the route. This figure should be reduced by more than 85% as this is one of the most extreme routes in the UK with well over 20 large viaducts in approximately 70 route miles. Alternatively NR could use a more standard route as a base model.

Vibration and Resonance

- The long term effects of vibration caused by moving loads will be influenced by **all** trains that travel over the structure. NR should investigate this area in more detail.
- RSSB as part of its on-going research programme conducted a desktop study in 2005 that looked into the complex issues and found that train velocities are as an important factor affecting bridges as axle weight.
(http://www.rssb.co.uk/SiteCollectionDocuments/pdf/reports/Research/T360_obj7_final.pdf)
- The RSSB study referenced a substantial body of research including two pieces of work commissioned by NR; one for the West Coast Route Modernisation to look at the impact of the Class 390 on under-bridges and, one for the Cross Country Route Modernisation. (WCRM Bridge Resonance Study - NR (2000-2005) and Cross Country Route Modernisation Parametric Study - NR (2001-2003) RSSB T360 Para 5.2 and 5.3, pages 15-16).
- This complex issue does not appear to have been taken into consideration during the calculation of the CP5 VUC cost estimates.

Other factors not considered by NR

- Construction materials
- Maintenance history
- Traffic constitution
- Design parameters
- Ultimate limit state, and
- Serviceability limit state

In order to ensure impartiality in the review process Morgan Tucker appointed Dr David Tann of London South Bank University to also undertake an initial appraisal of the consultation process and the technical parameters contained therein. Dr Tann's comments are appended to the report from Morgan Tucker but it is worth noting some of his observations here;

- Whilst it is recognised that increased traffic volumes could have some impact on the structural performance of brick and masonry arch structures, it is too simplistic an approach to attribute variability costs to a given percentage increase in traffic volumes

either at or below serviceability limit state, especially when such an attribution was made without convincing supporting evidence.

- If the weak brick and masonry arch structures in 98% of the existing heavy freight route (98% of 3920, or 3842 route miles) have already been strengthened as confirmed in NR's document of March 2012 (p18-19), with just 78 "new" heavy route miles that would cost £2.35m to strengthen, then the new annual spend During CP5 would be at most the annual spend in CP4 plus the £2.35m extra, i.e. £62m + £2.35m = £64.35m. However, an annual spend of £93m is estimated for CP5 which is 150% of that for CP4 value of £62m.
- The £93m annual total spending on brick and masonry arch structures is therefore considered a great overestimation. It should be a maximum of £73.3m even if 14% variability is included.

Conclusion

- NR has not provided enough information in the consultation to justify the cost increases being proposed for the VUCs.
- We propose the existing structures element of the VUC charges for the freight operators should be frozen during CP5 to enable a thorough research programme to be completed specifically on brick and masonry arch structures.
- The research programme should examine the effects of an increase of passenger traffic, high speed passenger traffic, freight traffic and heavy axle freight traffic, **specifically** on brick and masonry arch structures.

In our view NR has been selective in its approach to the impacts of different types of traffic on brick and masonry arch structures. It is our recommendation that both NR and the ORR study the reports in detail and reconsider their approach to the VUC for CP5; specifically that brick and masonry arch structures should not be included in the VUC pending further research.

Modelling of future wagon mix

Aside from the lack of evidence NR do not appear to have modelled the future changes in wagon mix which will use the rail network. Due to existing Government policy coal which is transported in 100t wagons is expected to decline by 6% by the end of CP5, whilst intermodal volumes, with a typical wagon weight of some 46t are forecast to increase by 23%. Even biomass which may to a certain extent replace lost coal volumes is expected to have an average loaded weight of 85-92t (depending on the density of the product) and will consequently have a considerable lower impact at the most vulnerable point on bridges than 100t wagons.

These sophistications have not to date been included in the NR model. There are industry agreed forecasts for each commodity and we will expect NR to re-run their model to take into account the future expected wagon weight profile in line with the forecast for CP5, though they have not yet accepted this point or agreed to re-run the model.

Basis of Settle-Carlisle Line for modelling

We also note that NR used the Settle-Carlisle line actual costs to base their modelling on. The Settle-Carlisle line is renowned as a route with a significant number of old and vulnerable bridges with an extreme topography which had a very long "maintenance and renewal holiday" under British Rail (on the basis that it was expected to close) and it would be expected to be at the extreme end of routes with bridge damage. We contend that much of the deterioration on this route has been caused by lack of regular maintenance over several decades, as well as the climate rather than the impact of coal wagons. We would expect Network Rail to base their modelling on a

more representative sample of routes, including at least 2 other routes in different parts of the country, with different topography.

With regard to the choice of the Settle and Carlisle line we also note that traffic on this route has already considerably declined compared to its peak 5 years ago and also that given the other proposed policies of the ORR with the introduction of freight avoidable costs paid by the electricity coal market that volumes on this route could markedly decline or disappear in CP5 and therefore the choice of this route for modelling purposes could become irrelevant.

Impact of increase in Variable Usage Charges

Any rise in the VUC is unwelcome and would be a stark contrast in policy to the treatment of road given the announcement by the Chancellor on 27th June 2012 that increases in fuel duty have been deferred yet again.

We note you are proposing a national average cap on the freight charge of £1.68 (£1.46 plus 15%), which is pre any efficiency target.

You have used an illustrative calculation adjustment to show the actual charge which assumes a 15% efficiency target on NR by end of Control Period 5 (CP5). The charges that we pay in Control Period 4 (CP4) already include a brought forward 12% efficiency assumption from the end of CP5. This is not clear in your consultation and it is very difficult to follow through the logic of the figures in the consultation because the CP4 figures are not the charges being raised today.

Paragraph 3.47 (b) states that the CP4 charge quoted by NR should be reduced by 16.5% to give the actual CP4 average Charge. We are confused as to why this adjustment is not 12% and would be grateful to understand the logic to this calculation.

Paragraph 3.57 says that on the assumption of a 15% efficiency target, charges would reduce; however, this does not appear to take into account the 12% brought forward efficiency from end CP5 applied in CP4. By our calculations the net result of NR's increased variable costs plus an assumption of 15% efficiency would be a 3.5% increase in VUCs. Could ORR please confirm whether or not the assumptions in the below table are correct? If it is incorrect it would be very helpful if the ORR could clarify what the correct assumptions are. Clarity on these calculations was requested at the workshop on the 5th July but has not yet been made available yet.

Variable Usage Costs and relationships to Variable Usage Charges				
		kgtm	kgtkm	increase
CP4 estimated NR costs: 11/12 prices & end CP4 efficiency		£2.19	£1.36	
CP4 average 11/12 charge assuming 12% b/f efficiency?	12%	£1.93	£1.20	
CP5 estimated NR costs: 11/12 prices & end CP4 efficiency		£2.35	£1.46	
CP5 estimated NR costs: 11/12 prices & assumed 15% efficiency	15%	£2.00	£1.24	3.54%

Any increase in the Variable Charges would be very difficult for us and our customers to manage and would impact on the competitiveness of the rail sector versus road. In order to continue competing with road, freight operators need to be ever more efficient, a 3.5% increase in charges would result in a step backwards for freight operators as this is a considerable amount to regain from efficiencies, noting that 32% efficiency gains in staff productivity have already been achieved, plus 48% growth with 50% of the rolling stock resources at privatisation.

The consultation does not address how freight access charges will be adjusted to take into account Network Rail's assumed long run efficient costs. This was a specific policy in PR08 to set freight charges at the assumed 10 year long run efficient level in 2019. We suggest that a consistent methodology is used in PR13 and an assumed end point 2024 efficient cost levels are used as a basis for freight charges in CP5.

Geographically based charges

In respect of the proposal to introduce a geographically disaggregated VUC this would in all likelihood mean some individual charges being higher than the national average and some lower. This would create "winners" and "losers" within the customer base. Whilst the "winners" will be happy to benefit from lower transport costs the "losers" will not be happy to accept higher charges and it will be difficult for freight operators to pass on such increases, particularly if the headline figure is lower. This policy risks displacement of existing traffic and modal shift away from rail, but in itself will not lead to overall higher charges or a reduction in Government funding.

We are struggling to understand the benefits of geographically based freight charging given that freight Variable Usage charges are < 1% of Network Rail's income. Implementation of geographic charges would create unnecessary transactional costs for both operators and NR for no overall benefit. We do not think that geographical charges would change operator behaviour for 99% of traffic flows.

As freight traffic flows typically traverse several routes, the introduction of such a geographically based charge would add to the complexity of not just the charging for but also in quoting for new business. Road can quote almost instantaneously for new business and rail operators are attempting to compete with this, with a much more complex product. An expensive and complicated front end system would need to be developed by NR to enable freight operators to quote quickly. We do not consider the development of such a system as value for money as it will not achieve any significant reduction in Government funding.

Consideration would also be needed in respect of the impact that geographically based charges would have on routing policy. Rules would have to be worked out to deal with planned and unplanned diversions of traffic. The DfT's Strategic Rail Freight Network: The Longer Term Vision September 2009 a publication includes a policy "to optimise the pattern of freight trunk routing to minimise/passenger freight conflicts". This has resulted, for example, in the development of the Ipswich to Nuneaton via Peterborough route and the Peterborough to Doncaster Joint Line. It would not offer the best value for money if a scenario developed whereby geographically based charges incentivised freight operators to continue to use the routes which were designed to be by-passed by the routes invested in.

We understand that the ORR wishes each Network Rail Route to have separate and transparent cost base information, however at under < 1% of the costs caused by freight are not material. We suggest that freight charges are ring-fenced from this policy change and continue to be charged on a simple national policy.

We note that the Rail Delivery Group has written to the ORR with regard to geographic based charging and scarcity charging; Freightliner supports this letter.

Disaggregation by Vehicle Class

The VUC is already complicated because charges are disaggregated by vehicle class and commodity. In publishing these figures it would be helpful if only the commodities that can be moved by certain wagon types are included. For example it is pretty unlikely that coal will be transported in tank wagons or oil products in hoppers. The inclusion of every commodity multiplied by every wagon type results in a spread sheet with 4000 odd cells, which is very confusing, in particular for customers and new users. Simplification of the rates paid for locomotives should also be an aim with perhaps a reduced number of commodity categories. The objective should be to simplify the rail freight product for customers not to add complexity. Freightliner would be happy to assist in work to simplify the current structure.

We note that NR is leading a separate consultation with regard to proposed changes to the wagon suspension factor adjustment going forward. We are disappointed that NR has only undertaken work to make the input side of measuring vertical forces more accurate but have not carried out further work on tangential forces or on the cost savings actually achieved by NR because of different bogie types.

What is essential in this area is a long term consistent approach that enables operators and customers to purchase the bogie type with the best overall industry business case. There is no point investing in very expensive bogies if NR is not realising the savings that could be made. Given the approximately 30-35 years asset life of a wagon we support NR's most recent proposal to keep the adjustments on current wagons as now and only apply the new adjustments to new wagons. We expect NR to undertake further work to enhance their understanding before CP6, but again any revised charges should only apply to wagons introduced after a new methodology has been implemented and care in this area is needed not to undermine future investment.

CHAPTER 4. - FRAMEWORK FOR A FREIGHT SPECIFIC CHARGE

Overview

The proposal that the Electricity Supply Industry (ESI) coal sector (as well as nuclear and iron ore) should pay higher track access charges was not unexpected; however, we are surprised by the high level of charge that is now being considered. Even modelling by ORR's own consultation suggests that the proposed level of charges cannot be borne by the market and we are very concerned about the wide reaching impacts of the very large increase proposed.

Whilst in CP5 the ORR is only proposing to levy higher charges for certain market sectors we are very concerned in future Control Periods the precedent of CP5 will be used to justify higher charges being applied in other markets. This is creating uncertainty across the rail freight market. We urge the ORR to make a strong and clear statement that it does not intend to levy higher charges against other markets in the future. It is a major commitment for a new customer to swap his logistics chain to be rail based and the assets both customers and freight operators need to invest in have typical life spans of 30-35 years. It is very important in planning our business that we have some certainty of policy going forward, and this aligns with the ORR's duty "to enable persons providing railways services to plan their business with a reasonable degree of assurance."

Legal Framework

Freightliner is concerned that the proposals made by the ORR may not comply with the Access and Management Regulations 2005, EU Directive 2001/14, the Competition Act 1998 and the Enterprise Act 2002. (Noting that Schedule 3 paragraph 2. of the Access and Management Regulations 2005 does not appear to accurately reflect the language of the Council Directive which they are designed to implement.)

Schedule 3 paragraph 2. (1) states that “in order to obtain full recovery of the costs incurred by the infrastructure management, with the approval of the Office of Rail regulation under the access charges review...may levy mark-ups on the basis of efficient, transparent and non-discriminatory principles, whilst guaranteeing optimum competitiveness...” Freightliner is concerned that the proposals being made are not on the basis of an efficient network (see next section) or fully transparent e.g. the VTISM model. Additionally the proposal made does not “guarantee optimum competitiveness” as it will cause considerable displacement in the ESI coal market and result in some ports and mines struggling to compete against others.

Schedule 3 paragraph 2. (2) states that “the effect of sub-paragraph (1) must not be to exclude the use of infrastructure by market segments which can pay at least the cost that is directly incurred as a result of operating the railway service, plus a rate of return which the market can bear”. An increase from £2.24 per net tonne km to £12.24 per net tonne km, some 546% increase must surely be in excess of the rate of return envisaged by the Directive.

Freightliner considers that the £10 per ktkm increase proposed which according to the MDS report would result in a 23% reduction in coal tonne miles by rail is in direct contradiction to this regulation as it will have the effect of excluding access for certain market segments such as Scottish Coal to English power stations. Additionally ORR’s proposal to allow charges to be set at a level that will have the effect of up to 10% fall in freight moved (tonne km) is also in direct contradiction to this regulation. The 10% figure appears to be an arbitrary number with no known equivalent in other EU countries and is not in line with the regulation or the spirit of the EU regulation 2001/14.

There is also a risk that ORR are in effect asking NR to implement charges that are abusing a dominant position as laid out in the Competition Act 1998 and the Enterprise Act 2002.

NR is subject to the rules laid down in Chapter II on the Competition Act 1998 such that it is under an obligation not to abuse its dominant position. As the infrastructure manager in Great Britain Network Rail is in a dominant position which it is therefore under an obligation not to abuse.

Section 18(2) gives examples of abuse of a dominant position and paragraph (c) states that the application of dissimilar conditions to equivalent transactions with other trading parties may be an abuse if they place them at a competitive disadvantage. If NR were to apply the proposed charging structure to recover its fixed cost from ESI coal traffic and spent nuclear fuel only that would be discriminatory and an abuse of a dominant position.

ORR's proposals entitle NR to levy a charge on that basis but do not require it to; therefore NR would not have a defence under Schedule 3, paragraph 5, Competition Act 1998 if it implemented the charges policy as directed.

It would therefore be inappropriate for ORR to propose a structure for freight charges which would put NR in abuse of the Chapter II prohibition.

Historical development of the structure of freight charges

The ORR consultation lays out the history of access charges but does not explain why there has been a fundamental shift in policy with regard to the recovery of avoidable costs for certain commodities.

Costs to be funded through the charge

Freightliner does not agree that the infrastructure costs allocated to freights operators - either for direct funding by freight operators, or explicitly funded by Government - should be freight

avoidable costs. Not all freight avoidable costs are real costs but are highly theoretical costs based on an unrealistic scenario of commercial freight being removed from the network. We agree that the costs of maintaining and renewing freight only lines and NR's freight staff are real costs that are incurred. We would also not object to other costs being included that could be demonstrated as being directly saved if there was no freight, but we do not support the more subjective approach that over a 35 year period the network could be remodelled and that there would be savings from a simplified network.

The existing charges for coal spillage and freight only lines are directly avoidable costs and should be included in the freight avoidable cost calculation. We strongly urge the ORR to amalgamate these charges into the freight specific charge and have one overall freight specific charge for each commodity. This would enable simplification of the charges rather than 3 separate charges.

The key reason that ORR gives for the introduction of freight avoidable costs is to "improve focus of NR and freight operators to work together to identify ways to improve cost efficiency". It will not be possible to do this for costs that are not real, but are theoretical costs that would be saved if no commercial freight was to operate. Freightliner is of the strong view therefore that the costs should be real and current costs not future costs. For example it will not be possible to improve focus and efficiency of the costs of an assumed Strategic Freight Network Fund in CP6 that does not actually exist today.

Allocating costs between freight market segments

Freightliner notes that it is ORR's intention to allocate freight avoidable costs on a fairly detailed basis, at strategic route section level. However the work that is currently being undertaken by LEK on behalf of NR to calculate freight avoidable costs is not taking this detailed approach and relies for a large part on NR's VTISM modelling which appears to provide one national result. This is an unacceptable approach as the end result will be layer upon layer of assumptions multiplied together to reach a highly un-evidenced conclusion.

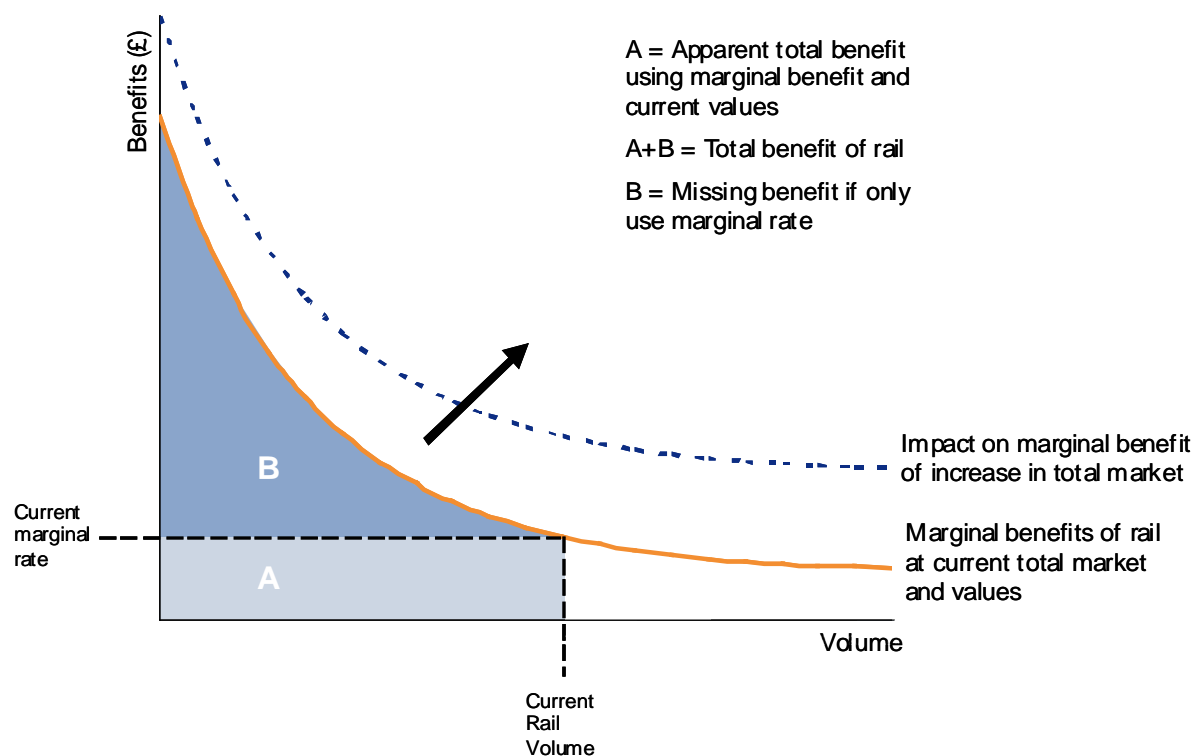
We are concerned that efficiency has not been properly considered in the proposed methodology being adopted by LEK, under instruction from NR. We believe that the instructions given by NR in this regard do not comply with the Access and Management Regulations 2005 Schedule 3 paragraph 2. (1) that demands that any mark-ups are on the basis of efficient, transport and non-discriminatory principles. Freight avoidable costs are being calculated on the basis of the rail network as now, not an efficient network in the future. The result of this is that freight avoidable costs will be deemed to be higher than they otherwise would because infrastructure will be included that would not exist in an efficient network and likely to be removed at the next opportunity of renewal or remodelling. For example if there are 2 sets of points in a location currently both used by freight services, but the infrastructure was to be remodelled or renewed, only one set of points would be replaced and the other removed because freight services only required one set of points. We do not agree that the 2nd set of points is actually a freight avoidable cost but a cost caused by history, which would in any event be eliminated at the next opportunity.

Freightliner supports the CP4 method of allocating costs of freight only lines that are used by more than one commodity. We do not support the costs of one commodity being cross-subsidised by another commodity. We note that ORR states in paragraph 3. of the Executive Summary its desire to reduce cross-subsidy, to introduce a new cross-subsidy of freight only lines would contradict this policy aim.

A cap on the impact of the charge on freight traffic

The proposal to set the charge at a level which will lead to up to 10% traffic reduction in the market is in our view in direct contradiction with the EU Directive 2001/14 Article 7 which states that “the level of charges must not, however, exclude the use of infrastructure by market segments which can pay at least the cost that is directly incurred as a result of operating the railway service, plus a rate of return that the market can bear”. We therefore do not support this approach but are of the view that the intention of the directive is that charges should be set at a level that does not result in material decline on freight gross tonne miles in a market segment. If a market is going to decline as a direct result of the access charges it is being asked to pay then it clearly is unable to bear those charges.

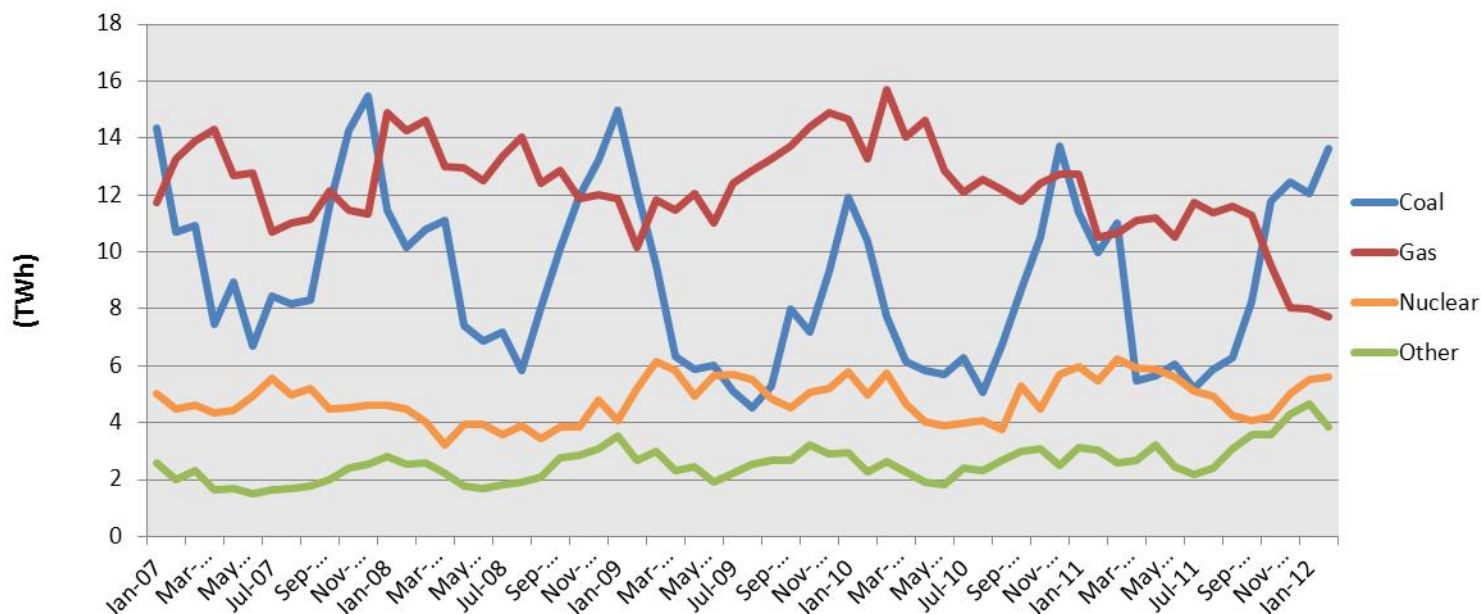
This is a very important point of principle as we are concerned that in future Control Periods it could be deemed by a future ORR that access charges could be set a level that would allow, for example, the intermodal market to decline by up to 10%, indeed this appears to be the implication of Table 4.2. We are very concerned that these calculations have been done by considering the upside of additional access charges and reduced subsidy but without looking at the wider impact, i.e. without taking into account the values that the DfT assign to modal shift to rail through the Sensitive Lorry Mile calculations. (Noting that these values only consider the marginal benefits of removing additional traffic but do not take into account the higher costs of the impact of removing all traffic from the rail network onto the road network, see graph below.)



These decisions will not only impact on the businesses which operate coal power stations but will also have a far reaching impact on the rail freight operators and the rail freight market. If the coal market’s decline is accelerated by this decision, certain fixed costs and services that are required to run a rail freight business will have to be recovered from other parts of the portfolio and this could have the result of increased charges for other customers. The ORR position on other elements of access charges is likely to exacerbate this position, particularly if other charges also increase such as the VUC, Scarcity charges, Capacity Charges etc.

Freightliner does not believe that the cap proposed by the ORR in paragraph 4.41 is a viable proposal. We just do not see how the ORR will be able to model the impact on coal or nuclear markets of increases in track access charges versus other changes in what is a very volatile and complex market. The graph below shows the energy mix in the UK from 2007 to 2011 (source Nigel Yaxley, Coal Imp); the fluctuations in coal burn can clearly be seen.

Monthly UK Electricity Generation by Fuel



The table below shows the volatility in coal gross tonne miles moved by train over the last 10 years (data from ORR web site):

Year	Coal	Year on year change
2002-03	5.66	
2003-04	5.82	3%
2004-05	6.66	14%
2005-06	8.26	24%
2006-07	8.56	4%
2007-08	7.73	-10%
2008-09	7.91	2%
2009-10	6.23	-21%
2010-11	5.46	-12%
2011-12	6.41	18%

Clearly there is considerable volatility well over 10% per annum, however it should be noted that the market volatility is positive and negative, not purely negative.

The consultation is unclear but the implication is a cap of a 10% reduction per annum of for a whole control period; an annual cap would equate to a 34% reduction over the 5 year control period (as only 4 years would be modelled). It would be helpful if ORR clarified its intention here.

This section seems to imply that the freight specific charge would be reset every year depending on the coal volume moved and whether it over or under recovered the deemed freight specific charge. The adjustment would be based on what has happened rather than taking into account the predicted forward curve, which could be quite different, in what is predicted to be a period of considerable change in this market. There is a risk therefore that the impact of the adjusted charge could be exacerbated.

This approach, where the level of charge would be annually reset is wholly unacceptable and we urge the ORR to reconsider their proposal and set a flat charge throughout CP5. The ORR has a duty to enable operators to reasonably plan their business and this proposal is in direct contradiction with this duty.

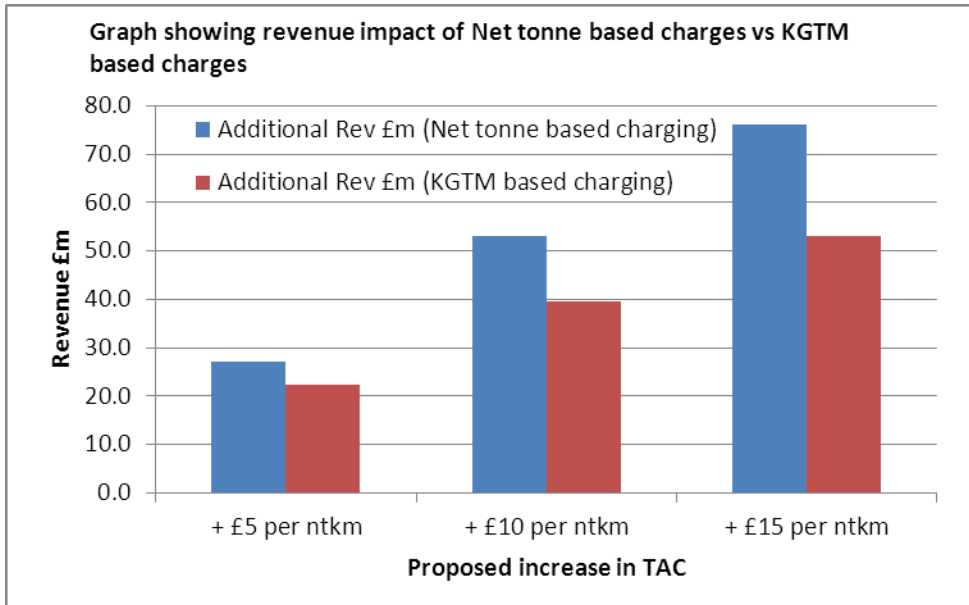
On a practical level we do not understand how the ORR would operate the capping proposal. When does the data become available for the previous year's coal burn and/or coal moved by rail? How would ORR model the changes could by track access charges versus the changes that would have incurred in the market anyway. At best this would require the annual employment of expert consultations; this does not seem to be value for money. By the time the data had been collected and any modelling completed this would be at best several months into a new financial year, there would then need to be a consultation period before revised charges could be finalised. How can the freight operators be expected to manage such a complicated and retrospective contractual arrangement with their customers?

The implications of such an adjustment in a declining market is that the remainder pays an ever greater share and that traffic falls again the following year, in a spiral of decline. Destroying the market in such a way seems to be in direct contradiction to the aim of reducing the subsidy paid by the Government. We urge the ORR not to introduce policies that interfere in the workings of the energy market, but leave this to the appropriate department within Government.

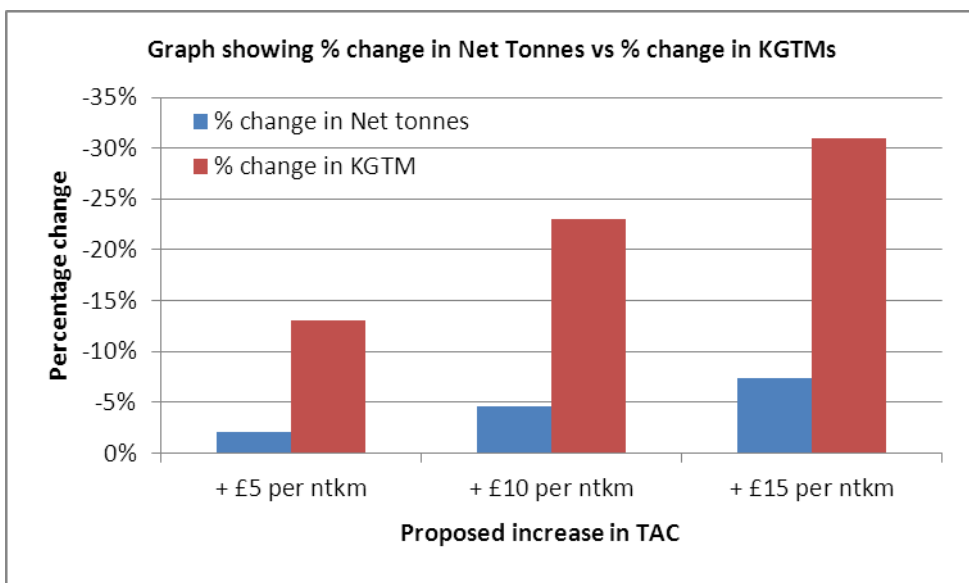
Charge unit

Although Freightliner does not support a level of increase in charge that materially reduces the market, Freightliner strongly supports any freight specific charge being levied as a per tonne charge. This will make the charge transparent and easy to understand for all customers, and would enable freight operators to clearly show this in invoices to customers, so that they can identify the charge as a specific levy for coal. It would also have the strong advantage that it will not distort the market. In particular a charge per kgtkm would cause structural changes in the routes for coal traffic and would alter competition between different ports and mines as well as having a considerable impact on the location of freight operator staff.

In our view using tonne miles as the measure for the freight specific charge will cause very considerable dislocation of traffic onto shorter routes and would actually led to a larger decline of coal moved by rail. The result would be less certainty of additional charges being recovered and returned to the Department of Transport. This is demonstrated by comparing the results of the Nera report, which didn't take into account for the impact of changes in source/power station routeings and the MDS Stage 2 report, which did (see below graph).



A per tonne charge would not have such distorting displacement effects (although a large increase in per tonne charge would have an impact on the whole market). The graph below shows that when MDS stage 2 report considered the impacts on specific routing of increases in the net tonne/km charge the impacts were considerably higher than when distance was not considered by Nera.



As demonstrated in the MDS Stage 2 report the base line proposal of a £10 per net tonne km will result in a 23% reduction in tonne miles moved by rail. This clearly exceeds the ORR proposal to cap the impact on freight moved. We would like to understand how the ORR is going to model different charging options to reach a figure whereby the impacts could be more acceptably borne by the market?

The impact of displacement in the MDS report is so considerable that we think that the £5-15 per net tonne km options should not be introduced. A proper impact assessment on the effect on individual port and mine businesses as well as rail freight operators must be carried out before a final option is proceeded with.

A net tonne km charge would have a very major impact on the Scottish open-cast industry, as it will increase the costs of the transport of Scottish mined coal moving to the English power stations

considerably versus imported coal. The mines in Ayrshire are a very significant part of the local economy and employment available in a rural area and there will be considerable political fallout if as a consequence of the structure of the charges levied mines have to close and jobs are lost. There could also be a further impact on freight operator staff working in Ayrshire, who it would be difficult to re-allocate to other flows of traffic.

The presence of Scottish mines also is a very important source of coal in terms of security supply of UK energy. Some 5.9 million tonnes of coal are produced in Scotland out of a total indigenous volume of £17.9 million tonnes. Over 50% of this coal is transported to English power stations, all of it by rail currently.

Coal mined in Scotland is particularly vulnerable to modal shift to road because it is mainly transported by road to the rail terminal for transfer on to rail, so it already bears higher transport costs than other sources of coal through the requirement for a road leg and the costs of modal transfer. We understand the current difference in cost between road throughout and rail for flows to Scottish power stations is about £1 per tonne so very little increase in costs can be borne. Indeed, a significant volume of Scottish mined coal is already transported by road direct to power station due to the relative costs of transport.

The principle of each coal customer not paying the costs that are caused by their particular flow is already in place as the current freight only charge is a standard charge per kgtkm whether a particular freight customer uses a freight only line or not. We believe that it is simpler and fairer that all customers pay the same charge rather than differentiating on the basis of their location on a historic rail network.

CHAPER 5 - FREIGHT AVOIDABLE COSTS

Introduction

Freightliner agrees that it is not appropriate that costs common to passenger and freight services are used as a basis to calculate rail freight charges as this would create a completely uneven field with road charges.

As discussed in Chapter 4 Freightliner does not agree with the proposal on freight avoidable costs as the methodology being proposed includes theoretical costs that could be avoided rather than actual costs incurred.

PR08 analysis of freight avoidable costs

We do not consider that the AEA Technology report "Recovery of Fixed Costs" published in October 2005 is a suitable basis to make even an estimate of 'freight avoidable costs.' We do not consider that any of the work that has been shared with us is of sufficient quality to be used as an assumed base.

We make the following points and observations with regard to the AEA report:

- The scoping exercise used NR's Great Western territory and route. The work and outputs focussed primarily on the franchised TOCs. The report therefore does not appear to be relevant to freight.
- AEA looked at the existing ORR work and tried to find a better model but were unable to identify inputs to produce a more cost-reflective model. We have seen no further report or evidence that demonstrates that the 2005 model has since been developed to improve understanding of costs or methodology.

- AEA found, as a general principle the further services are disaggregated, the lower the total of avoidable costs is likely to be - more costs being left as common costs, reflecting a higher level of shared use of resources. The converse is true with the subsequent move to larger TOCs during franchising remapping which results in a higher level of avoidable costs.
- However it is unclear from the report if this principle holds for freight avoidable costs. The report stated that the model needs specific “freight-related characteristics” to be considered in the context of the sector. AEA concluded that for freight the results should be considered “as only indicative”. However no freight figures are included in the results tables so we are unable to make a judgement on the “freight avoidable costs” estimated sums discussed at the workshop.
- In the assumptions for sections of running lines AEA assumed that in the timeframe examined if no freight traffic ran then the removal of a freight operator on that section would not result in any avoidable costs. Conversely it was assumed if other traffic was removed; the infrastructure would not be retained on the basis of freight access rights that had not been exercised for over a year. We accept the logic of this but would argue that if a passenger TOC ceased to run trains the resultant ‘surplus’ capacity is likely to be taken up by another TOC and the ‘surplus’ running lines would still be required. The current franchise process is driven by demand forecasts that require, in general more capacity to be provided. Therefore this makes the argument of ‘avoidable’ costs’ somewhat tenuous.
- In respect of freight (Page 29, Para 2.3.5) AEA say the model was developed in connection with a review of fixed costs and charges for franchised TOCs. Freight specific issues were not considered in any depth. AEA carried out “high-level netting off’ of non-franchise cost elements, including those relating to freight.” Because the costs were not considered fully in the methodology and the model output the results are not included in the results tables. It is not clear or transparent how this report has been used as evidence to support the current proposals on “freight avoidable costs” and therefore in support of a “freight specific charge” or if other evidence has been used that we have not seen
- AEA concluded that more work was required on freight issues in order to assess the avoidability of freight costs. Was more work carried out at that time and if so we request that it is published?

Given that further work was required on freight metrics in 2005 it is only now that ORR has asked NR to carry out a study into ‘freight-avoidable’ cost (and appointing LEK). The timescales that LEK have been given to complete the exercise is very short and this will inevitably impact on the level of work they are able to undertake. As this work is on-going we will respond to the LEK report once it is available and in the meantime we are attending briefings led by them.

Estimating freight avoidable costs for PR13

We do not agree that the costs of any asset that would no longer required, or assets that would be maintained at a lower capability are actual costs being incurred. We will have no way of working with NR to make these costs more efficient as they don’t actually exist today.

We have some comments with regard to the remit that NR has given to LEK in respect of this work:

LEK has been asked to assume that the Network remains as now and not to assume a future efficient network. This is a fundamental point and seems to be in conflict with the Access and Management Regulations which states that charges should be set on an efficient basis (see above).

LEK has been asked to model costs on a 35 year cycle. We do not think that this is appropriate for structures, many of which are over 150 years old. We note that Serco have chosen to use a 60 year life cycle for their work on allocating costs to different vehicle types.

We also believe that great care is needed in the allocation of the freight avoidable costs to commodity groups to ensure that there is no cross subsidy, for example the Strategic Freight Network investments have been predominantly to encourage intermodal traffic and should not be allocated to coal.

CHAPTER 6 - MARKET ANALYSIS

Freightliner considers that any increase in charges should be sufficiently low that it can reasonably be absorbed without any significant loss of volume, and so that second order impacts are minimised. We consider that only a minimal impact option can be considered to be in line with Access and Management Regulations 2005 and the EU Directive 2001/14 in terms must not be to exclude the use of infrastructure by market segments which can pay at least the cost that is directly incurred as a result of operating the railway service.

Given that the usual measure of rail freight volumes is tonne miles we believe that it is appropriate to use this measure to assess what the market can bear, not tonnes lifted. To set a policy that excludes longer distance flows is excluding market segments from using infrastructure.

The assessment of what the market can bear should take into account all charges in total and not just certain elements of charging, for example the Capacity Charge or any future Scarcity Charge should not be excluded from this calculation.

Electricity Coal Market

The ESI coal sector is of strategic national importance. In 2011 coal generation supplied 30% of the UK's generation with about 95% of coal being delivered to power stations by rail. At times during the winter the % of coal burn can provide over 50% of UK electricity generated.

Freightliner understands the DfT's wish to recover higher charges from markets that are able to pay them and note that access charges for the ESI coal sector were considerably higher than now at the time of privatisation. However the energy supply market has changed considerably since this period and in particular coal power stations will be paying considerable sums in carbon taxes to the Government, and these are set to increase over time. Additionally there are now much more stringent emissions targets on coal power stations which have considerably increased the costs of coal burn versus other energy types so the higher levels of affordability of the 80/90s no longer apply.

The energy market is facing a challenging future to both continue to provide reliable and secure electricity to the nation whilst reducing carbon output and other emissions. The Department of Energy and the Environment have put in place under the Electricity Market Reform programme. These have been designed to both provide security and to diversify of supply, whilst also taking into account affordability of electricity and decarbonisation of the sector. There is already a complex array of Government policies and initiatives in the energy sector are already being

- The Large Combustion Plants Directive (LCPD) will lead to the closure of several coal-fired power stations by the end of 2015 at the latest;
- The Industrial Emissions Directive (IED) will come into effect in 2016; plant may opt in or out of the Directive or pursue a 'Transitional National Plan' approach, entailing differing consequences for operating hours, closure dates and levels of investment required on abatement equipment (principally for NOx);

- Carbon Price Support - essentially a carbon tax - coming into force in 2013, will make coal-fired generation less economic compared to gas;
- A Capacity Mechanism - part of the EMR programme - still has to be set out in detail, but may enable existing coal-fired plant to provide secure back-up for intermittent renewables generation;
- UK Renewables Obligation Banding Review future subsidy arrangements for biomass co-firing; the proposed level means that investment decisions will be finely balanced

As a consequence of these policies the coal market is already forecast to decline; the ORR proposal will accelerate this decline. The role of the ORR is to regulate the rail market, not the energy market; this is the role of OfGem and decisions in this market should be made by OfGem and the Department of Energy and Climate Change.

We note that the ORR is suggesting that charges should be set a level whereby the impact will be an up to 10% decline in coal moved, this appears to be in direct conflict to the ORR duty "to promote the use of the railway network in Great Britain for the carriage of passengers and goods". We are very concerned that by setting charges at a level that will lead to a reduction in the market that ORR is overstepping its statutory duties.

Biomass

We agree that this market should not be subject to the freight avoidable charge in CP5. Whilst MDS have reviewed the market to date, this cannot be considered as a comprehensive review, as the market is only in its infancy. The MDS report highlights the many unknowns that remain in this emerging market.

However we are concerned with the reference to CP6 and the implication that the Department of Energy and Climate Change (DECC) may pay more subsidies to cover increased track access charges; this seems unlikely, especially when considering that the DECC announcement in July 2012 on Renewable Obligations Credits (ROCs) has resulted in a reduced level of subsidy. The DECC announcement made no cross-reference to possible future changes to track access charges or how this would be taken into account in future decisions and we therefore conclude that these changes are not on the radar of DECC.

DECC's announcement on ROC subsidy appears designed to discourage new build biomass, (which would lock in a long term subsidy commitment) and favours enhanced co-firing or full conversion. Of course to co-fire, the power station requires another fuel in addition to biomass and that fuel is almost certainly to be coal. So the review of track access charges for coal and biomass traffic needs to support DECC's energy strategy, not conflict with it. The energy mix, in relation to coal and biomass, has major implications for port and rail capacities and future investment decisions. DECC's announcement to reduce the level of co-firing ROC makes investment decisions even more marginal and uncertainty over biomass TACs could shift the balance of risk too far.

The use of 2011 biomass burn capabilities to justify a statement that 'biomass usually makes up only a small proportion of fuel burned' is somewhat odd and misplaced given the acknowledged evolving of this market.

The policies set by DECC we are sure have been carefully thought through so that subsidies are set at a level to encourage investment at the desired level. We therefore do not consider it appropriate that ORR policy impacts on investment decisions in this area. Considerable extra analysis should be undertaken in this market area before any decisions to increase future charges are made.

We think it would be more appropriate for the ORR to state that it will commit to not change charges for at least the next 2 Control Periods to enable private sector investment. Once the market is established and there is more knowledge this policy could be reviewed, if appropriate for implementation in CP7.

Iron Ore

This is a market which Freightliner has been unable to penetrate, however, Freightliner understands that iron ore is in effect a captive market to rail and therefore demand for transport is inelastic. However we note the precarious state of the steel industry in the UK and the fact that foreign ownership means that the business in the UK will only continue if it is competitive with other countries. To increase track access charges, just because the transport mode is inelastic will not give confidence to investors looking to move to the UK. Additionally higher transport charges could contribute to the demise of the plant at Scunthorpe with wider implications for employment in the region.

We note ORR's comments from PR08 and are unable to understand what if any changes to circumstances there might have been, especially in view of economic conditions since 2008:

We note ORR's comments from PR08 and are unable to understand what any change to circumstances might have been:

"However we are concerned about the ability of the iron ore market to bear a cost increase of £2.9 million per year, if costs are allocated using gross tonne-km. A cost increase of this scale would increase the risk that the whole iron ore flow from Immingham to Scunthorpe could transfer to road. It could also adversely affect the international competitiveness of steel production at Scunthorpe, particularly as many competitors are served directly by sea."

NERA Report

Methodology

The model used to estimate the effects on generation is accepted as reasonable in principle. We note that the main output from the report is the impact on coal burned, not coal lifted by rail. Because the report assumes "that the proportions of coal that each power station sources from and transports via different routes remain unchanged" it does not assess the impact on different mines or ports. It is therefore of limited assistance in assessing the impact on freight moved (tonne km), or the impact on additional revenue raised.

The report does not take account of the port or shipping costs that affect the delivered price of coal to the power stations. For example, the cost of delivering a cape-sized vessel of coal into Hunterston or Redcar will be significantly different to the cost of a panama sized vessel into Immingham or Liverpool or a handy-sized vessel into Hull. We note that the MDS Stage 2 report considers these inputs.

Base assumptions

We have serious concerns about the base assumptions upon which the model is based. Figure 3.2 shows the base case forecasts before any impact of changes in track access charges, this does not align with the DECC central forecast by a considerable margin: the NERA forecast for 2012 shows 146 TWH versus the DECC forecast of 105.6 and the NERA forecast shows an increase in demand in years 2015, 2017 & 2019 compared to whilst the DECC forecast shows a decline over this period. The DECC central forecast is attached as an appendix. The NERA forecasts show a coal demand of over 40mt in 2020, this is not consistent with the forecast we recognise. Our concern here is that if the base case is flawed we have serious concerns about the accuracy of the modelling.

Impact on Scottish mines and ports

There is speculation that some of the potential track access charges can be absorbed by coal producers, specifically in Scotland. There does not appear to have been any analysis of the profitability of the various Scottish mining companies (or English coal producers). Given the impacts on all Scottish flows according to the MDS Stage 2 report it is very important that the direct and the wider impacts are properly assessed before any final proposal is made.

Impact on FOCs

Section 4.4.2 speculates about the possibility of some of the increases being absorbed by FOCs, but no analysis on the ability of FOCs to do this has been undertaken. The report states that "If such developments were to lead to a reduction in competition between FOCs, either because a FOC exits the market (either voluntarily or because of financial distress or through consolidation, this could have far-reaching consequences both for rail freight customers and also for Network Rail...". The figures on the accounts of the freight operators show that there is no margin headroom for absorption of increased charges and the implication of NERA's comment is considerable. The analysis undertaken is purely subjective and given the conclusions stated it is clear that further work is needed to fully understand the possible impacts.

We note that the references to biomass (especially about subsidies) and the future investment decisions of generators (and others) appear to be highly subjective and casual and cannot be used as a basis for decisions.

MDS Stage 2 Report

ESI Coal

Freightliner is pleased that the ORR asked MDS to model the impact of proposed increase in charges on freight moved (tonne km). We do not think that the MDS model is perfect but recognise how difficult it is to produce a model in this market and therefore we think it is probably the best possible in the time available.

We note with serious concern the conclusion that ORR's "base" option increase of £10 per thousand net tonne kilometres would result in a 23% reduction in tonne miles. Even the option of £5 per thousand net tonne kilometres would result in a 13% reduction in tonne miles and does not therefore even pass ORR's proposed test of "no more than a 10% fall in the freight moved (tonne km) for each market segment." We therefore assume that ORR is now considering an increase in charges somewhat less than £5 per thousand tonne kilometres.

The MDS shows a considerable impact on Scottish businesses, not only the mines but also Scottish ports. At the £10 per thousand tonne kilometres increase level the 4 forecast largest decreases are Leith Port at 33%, Hunterston Port at 41%, Ayrshire mines at 24% and Ravenstruther mine at 19%. Indeed, if coal originated from Scotland was considered as a separate market segment the resultant reduction in tonne miles would be 34%

As previously stated Freightliner does not agree with ORR's proposed test on what the market can bear but it would have perhaps been helpful to ask MDS to model what increase per thousand net tonne kilometres would result in a 10% fall in the coal moved (tonne km) and also a 5% fall. We suggest that MDS are asked to also model these options.

We note that MDS do not appear to have been asked to model the impacts of increasing charges on a per tonne basis. We believe that this option is a lot less likely to cause wholesale displacement in

the market and given it is one of ORR's options it is disappointing that this hasn't also been modelled. We suggest that MDS are asked to also model this option for comparison.

We note in Table 5. and other similar tables, that increases in production are assumed in existing pits (which have shorter distances flows to power station). We think that this is an inaccurate assumption as mine output for these pits is unlikely to be constrained by transport costs but by other more physical and commercial constraints. We also note that assumptions are made about reduction in volumes from other pits such as Ayrshire ports and Ravenstruther. Pits have a very high % of fixed costs and reductions in volumes of 24% or 19% would have a fundamental effect on the viability of the remainder of the business of these mines as it would not be possible to also achieve a 24% or 19% reduction in costs. There is a risk that such reductions in volumes could lead to a spiral of decline and make these businesses unviable. Further work to assess the impact of these changes on these businesses would be needed before this could be implemented.

Biomass

The analysis by MDS is helpful analysis of what has happened in the market so far but it is clear there is considerable doubt about how the market will develop. The ROC announcement by DECC only a couple of weeks ago has not resulted in a clear way forward for the market and it will take some time before market development becomes clearer.

Other coal flows

We do not agree with MDS's assumptions on HGV rates in this section. We assume the rates shown are very simplistic rates not assuming any back loads. In reality in the open trailer market there would always be backloads over these long distances which would drastically change the rates charged. A lorry from Redcar to Port Talbot would typically pick up a load of aggregates in Wales and deliver it to the Midlands and another load in the Midlands for delivery in somewhere like Leeds before returning to Redcar and as a consequence we would estimate that a realistic rate per tonne from Redcar to Port Talbot would be more like £14-18 per tonne not £50!

We would also expect in reality that competition to rail would not just be the exactly same flow by road but coal moved by road from other sources, though the sources available would depend on specific requirements to meet emission targets. As the report states other alternative energy sources could also compete directly with the movement of coal by rail if the costs increased.

Additionally as MDS states the relative rail and road rates stated also do not take into account the costs of the fixed infrastructure required to operate rail services, which in these cases are not used to anywhere near full capacity. It is likely that if one flow of traffic ceased due to increased prices others could follow as the fixed costs of both infrastructure and other fixed costs such as wagons and drivers would increase due to not be fully utilised, inevitably resulting in increased prices for customers.

Conclusions from the market analysis

ESI coal

We do not understand how ORR can conclude that the new charge that would be levied on ESI coal should recover the market segment's share of freight avoidable costs when this amount is not currently known. We note that ORR propose that this will charge will be subject to a cap whereby the charge could be adjusted if traffic falls below 10%. As explained in Chapter 4 we believe such a proposal on a cap is both not in align with the EU Directive and totally impractical.

Freightliner considers that any increase in charges should be sufficiently low that it can reasonably be absorbed without any significant loss of volume, and so that second order impacts are minimised. As noted above we also urge the ORR to ask MDS to model further options based on charging per tonne and to model outputs that would result in a 5 and 10% reduction in tonne miles.

Iron ore

For reasons given above we do not support the conclusion that a new charge should be levied on iron ore.

Non-electricity coal

We do not consider that it would be appropriate to levy a new charge on non-electricity coal. This market is now very small (having once been very considerable) and is in direct competition with road with similar characteristics to aggregates traffic. An increase in charges in this market would in our view have the likely effect of destroying this niche market for rail and would therefore not be in accordance with the EU Directive.

Biomass

We think it would be more appropriate for the ORR to state that it will commit to not change charges for 2 Control Periods to enable private sector investment. Once the market is established and there is more knowledge this policy could be reviewed, if appropriate for implementation in CP7. It would be inappropriate for ORR policy to be the factor that puts off investors in this new market.

Nuclear

This is a market we have been unable to penetrate however our understanding is that there would be little impact on this market if additional charges were raised due to its position as a base provider of electricity because most of the costs are fixed.

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Annex E	Total electricity generation by source
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Scenario Name	Scenario Description
Central Scenario	Based on central estimates of growth and fossil fuel prices. Contains all agreed policies where decisions on policy design are sufficiently advanced to allow robust estimates of impact
Low Prices	Assumptions similar to central scenario but with lower projected fossil fuel prices
High Prices	Assumptions similar to central scenario but with higher projected fossil fuel prices
Low Growth	Assumptions similar to central scenario but with lower projected economic growth
High Growth	Assumptions similar to central scenario but with higher projected economic growth
Baseline Policies	Contains central price and growth assumptions but only policies that existed before the Low Carbon Transition Plan

Click on the scenario name to go to the sheet containing the corresponding data

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Notes on generation mix tables

This covers all generation including autogeneration, this is defined as in the Digest of UK Energy Statistics 2011, section 5.66 et seq.

Electricity supply is defined here as gross generation less the amount of electricity used on station sites (own use). It therefore corresponds to the term 'Supplied (gross)' used in DUKES Table 5.6.

The results shown reflect a set of assumptions on fossil fuel and carbon prices and costs. They do not reflect a desired or preferred outcome for Government.

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Central Scenario

Scenario Assumptions	Prices	Growth	Policies
	Central	Central	Current

Projection of electricity generation by source (TWh)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Coal	118.1	97.8	102.3	103.7	111.3	105.6	109.7	100.2	87.3	76.0	63.8	61.5	61.2	53.5	48.9	44.2	37.1	33.5	30.4	27.7	25.4	21.4	15.3
Coal CCS	0.0	0.0	0.0	0.0	0.0	0.0	1.6	2.2	2.2	2.2	5.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Oil	5.9	5.4	4.4	3.7	3.9	3.7	3.7	3.5	3.0	2.9	2.8	2.8	2.9	2.8	2.7	2.7	2.6	2.6	2.6	2.6	2.5	2.5	2.5
Gas	173.0	163.5	171.8	148.7	129.1	126.7	113.2	106.9	105.5	122.4	120.1	120.5	129.9	135.9	132.7	136.3	151.1	147.3	140.9	136.6	130.8	125.9	127.7
Gas CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.7	2.7	2.7	2.6
Nuclear	47.7	62.8	56.5	60.6	60.6	57.9	57.9	57.9	57.9	43.9	50.0	42.2	24.7	24.7	33.0	36.0	28.9	37.6	49.3	61.1	73.0	84.9	92.7
Renewables	21.3	24.9	25.7	31.1	37.8	46.5	54.4	67.3	81.1	89.8	97.5	106.7	114.1	118.9	121.8	124.6	126.8	126.6	130.4	132.2	134.0	135.8	137.6
Other	2.4	2.3	1.6	3.9	4.1	4.4	4.5	4.7	4.8	5.0	5.0	5.1	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Imports	12.3	6.6	7.1	7.1	7.5	7.8	8.1	12.3	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
Storage	4.1	3.7	3.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Total	384.7	366.8	372.5	362.9	358.5	356.6	357.2	361.1	360.2	361.1	363.4	364.9	363.9	366.9	370.3	375.0	377.9	380.9	384.9	391.4	397.1	401.7	407.0

1 Coal includes generating capacity of coal - derived fuels such as coke oven gas and blast furnace gas
 2 Oil includes generating capacity of oil - derived fuels such as refinery gas

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Low Fossil Fuel Price Scenario

Scenario Assumptions	Prices	Growth	Policies
	Low	Central	Current

Projection of electricity generation by source (TWh)		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
All power producers	Coal	118.1	97.8	102.3	112.7	83.0	51.2	44.5	34.9	26.6	25.7	24.6	25.3	31.2	28.3	24.1	22.1	21.8	18.6	15.6	13.9	11.5	10.4	9.0	
	Coal CCS	0.0	0.0	0.0	0.0	0.0	0.0	1.6	2.2	2.2	2.2	5.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	
	Oil	5.9	5.4	4.4	2.8	2.6	2.5	2.5	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.3	2.3
	Gas	173.0	163.5	171.8	145.0	168.0	193.1	188.4	183.5	175.6	181.2	166.3	162.0	164.5	165.8	170.6	176.1	192.3	193.6	188.8	181.9	173.9	165.9	159.1	
	Gas CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.6	2.7	2.7	2.8	2.9	2.9	2.9	2.9	4.7	8.3	11.9	16.2	21.2	27.0		
	Nuclear	47.7	62.8	56.5	60.6	60.6	57.9	57.9	57.9	43.9	50.0	42.2	24.7	24.7	24.7	24.7	8.8	9.8	15.9	26.5	36.6	44.1	50.3		
	Renewables	21.3	24.9	25.7	28.9	34.4	42.6	50.6	64.2	78.5	87.7	97.6	108.3	115.8	120.3	123.2	126.0	128.2	130.0	131.8	133.6	135.4	137.2	139.0	
	Other	2.4	2.3	1.6	3.9	4.1	4.4	4.5	4.7	4.8	5.0	5.0	5.1	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	
	Imports	12.3	6.6	7.1	7.1	7.5	7.8	8.1	12.3	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	
	Storage	4.1	3.7	3.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	
	Total	384.7	366.8	372.5	365.1	364.4	363.5	362.2	366.1	366.4	367.1	370.2	371.5	370.1	373.0	376.6	382.8	385.1	387.7	391.4	398.7	404.5	409.7	415.5	

1 Coal includes generating capacity of coal - derived fuels such as coke oven gas and blast furnace gas
 2 Oil includes generating capacity of oil - derived fuels such as refinery gas

DECC Updated Energy & Emissions Projections - October 2011

High Fossil Fuel Price Scenario

Scenario Assumptions	Prices	Growth	Policies
	High	Central	Current

Projection of electricity generation by source (TWh)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Coal	118.1	97.8	102.3	103.7	122.2	115.2	111.8	90.8	79.1	70.3	77.5	73.9	73.7	61.2	59.8	53.6	44.6	40.3	37.5	33.6	30.4	23.8	19.2
Coal CCS	0.0	0.0	0.0	0.0	0.0	0.0	1.6	2.2	2.2	2.2	5.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Oil	5.9	5.4	4.4	2.7	3.5	3.5	3.4	3.2	2.9	2.9	3.0	3.0	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.6	2.5	2.5	2.4
Gas	173.0	163.5	171.8	149.6	117.2	116.6	109.4	116.6	112.1	125.7	103.3	95.9	102.5	104.3	104.0	103.3	125.9	125.7	119.5	116.8	112.0	109.5	109.9
Gas CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Nuclear	47.7	62.8	56.5	60.6	60.6	57.9	57.9	57.9	57.9	43.9	50.0	50.5	36.0	44.7	47.9	56.7	44.0	50.0	61.4	73.0	84.9	96.8	104.6
Renewables	21.3	24.9	25.7	31.2	38.0	46.9	55.1	68.3	82.2	90.8	98.6	107.8	115.2	119.9	122.9	125.7	127.9	129.6	131.4	133.3	135.1	136.9	138.7
Other	2.4	2.3	1.6	3.9	4.1	4.4	4.5	4.7	4.8	5.0	5.0	5.1	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Imports	12.3	6.6	7.1	7.1	7.5	7.8	8.1	12.3	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
Storage	4.1	3.7	3.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Total	384.7	366.8	372.5	362.9	357.3	356.3	356.0	360.1	359.6	359.8	361.6	362.2	361.5	364.2	368.5	373.2	376.3	379.4	383.7	390.4	396.1	400.7	406.0

1 Coal includes generating capacity of coal - derived fuels such as coke oven gas and blast furnace gas
 2 Oil includes generating capacity of oil - derived fuels such as refinery gas

DECC Updated Energy & Emissions Projections - October 2011

Low Economic Growth Scenario

Scenario Assumptions	Prices	Growth	Policies
	Central	Low	Current

Projection of electricity generation by source (TWh)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Coal	118.1	97.8	102.3	103.7	111.3	105.6	109.6	100.2	87.3	75.9	63.8	61.5	60.9	52.0	48.1	43.2	37.1	33.2	30.4	27.3	25.0	20.3	15.2
Coal CCS	0.0	0.0	0.0	0.0	0.0	0.0	1.6	2.2	2.2	2.2	5.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Oil	5.9	5.4	4.4	3.7	3.9	3.7	3.7	3.5	3.0	2.9	2.8	2.8	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.6	2.5	2.5	2.4
Gas	173.0	163.5	171.8	148.7	129.0	126.1	112.0	107.1	104.0	119.8	117.1	116.2	125.3	131.0	127.6	130.3	143.6	140.2	133.9	129.6	123.1	117.6	117.9
Gas CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.7	2.6	2.6	2.7	2.6	2.6	2.6
Nuclear	47.7	62.8	56.5	60.6	60.6	57.9	57.9	57.9	57.9	43.9	50.0	42.2	24.7	24.7	32.7	35.6	28.3	36.3	46.7	58.1	69.9	81.8	89.6
Renewables	21.3	24.9	25.7	30.8	37.2	45.8	53.6	66.4	79.9	88.4	96.2	105.4	112.8	117.5	120.4	123.3	125.5	127.2	129.0	130.8	132.7	134.5	136.3
Other	2.4	2.3	1.6	3.9	4.1	4.4	4.5	4.7	4.8	5.0	5.0	5.1	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Imports	12.3	6.6	7.1	7.1	7.5	7.8	8.1	12.3	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
Storage	4.1	3.7	3.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Total	384.7	366.8	372.5	362.6	357.8	355.3	355.2	358.3	357.5	357.1	359.1	359.2	357.6	359.1	362.8	366.2	368.4	370.6	373.7	379.6	384.3	387.8	392.6

1 Coal includes generating capacity of coal - derived fuels such as coke oven gas and blast furnace gas
 2 Oil includes generating capacity of oil - derived fuels such as refinery gas

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High Economic Growth Scenario

Scenario Assumptions	Prices	Growth	Policies
	Central	High	Current

Projection of electricity generation by source (TWh)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Coal	118.1	97.8	102.3	103.7	111.4	105.6	110.0	100.2	87.3	76.5	63.8	61.5	63.0	53.6	50.2	45.0	37.5	33.8	30.9	28.3	25.4	21.4	16.5
Coal CCS	0.0	0.0	0.0	0.0	0.0	0.0	1.6	2.2	2.2	2.2	5.1	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Oil	5.9	5.4	4.4	3.7	3.9	3.7	3.7	3.5	3.0	2.9	2.8	2.8	2.9	2.8	2.8	2.8	2.7	2.6	2.6	2.6	2.5	2.5	2.4
Gas	173.0	163.5	171.8	149.0	129.8	127.8	114.5	110.9	108.5	125.5	124.3	125.3	133.6	141.7	138.6	144.0	159.5	156.9	151.0	147.3	143.1	139.0	140.6
Gas CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.8	2.8	2.7	2.7
Nuclear	47.7	62.8	56.5	60.6	60.6	57.9	57.9	57.9	43.9	50.0	42.2	24.7	24.7	33.0	36.0	28.9	37.6	49.3	61.1	73.0	84.9	92.7	
Renewables	21.3	24.9	25.7	31.1	37.9	46.6	54.7	67.9	81.7	90.4	98.2	107.3	114.7	119.5	122.4	125.2	127.5	129.2	131.0	132.8	134.6	136.5	138.3
Other	2.4	2.3	1.6	3.9	4.1	4.4	4.5	4.7	4.8	5.0	5.0	5.1	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Imports	12.3	6.6	7.1	7.1	7.5	7.8	8.1	12.3	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
Storage	4.1	3.7	3.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Total	384.7	366.8	372.5	363.2	359.2	357.8	359.1	363.6	363.8	365.4	368.3	370.3	370.0	373.4	378.2	384.1	387.4	391.4	396.0	403.5	410.1	415.5	421.7

1 Coal includes generating capacity of coal - derived fuels such as coke oven gas and blast furnace gas
 2 Oil includes generating capacity of oil - derived fuels such as refinery gas

DECC Updated Energy & Emissions Projections - October 2011

Baseline Policies Scenario

Scenario Assumptions	Prices	Growth	Policies
	Central	Central	Baseline

Projection of electricity generation by source (TWh)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Coal	118.1	97.8	102.3	105.7	114.4	115.1	113.7	109.5	99.2	88.1	74.0	67.6	65.1	57.1	55.5	47.7	35.8	32.6	30.4	26.0	22.9	22.7	15.0
Coal CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oil	5.9	5.4	4.4	3.7	4.0	3.8	3.7	3.6	3.1	3.0	2.9	2.8	2.8	2.8	2.7	2.7	2.5	2.5	2.5	2.4	2.4	2.4	2.3
Gas	173.0	163.5	171.8	158.7	148.4	152.5	158.1	165.4	180.8	210.9	224.9	243.0	264.3	275.0	281.1	293.7	321.9	328.3	333.2	342.5	348.8	351.4	362.3
Gas CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nuclear	47.7	62.8	56.5	60.6	60.6	57.9	57.9	57.9	57.9	43.9	50.0	42.2	24.7	24.7	24.7	24.7	8.8	8.8	8.8	8.8	8.8	8.8	8.8
Renewables	21.3	24.9	25.7	31.0	33.9	37.1	40.0	42.8	45.8	49.0	52.1	55.1	58.7	61.1	61.5	61.9	62.1	62.5	62.9	63.4	63.8	64.2	64.7
Other	2.4	2.3	1.6	3.9	4.1	4.4	4.5	4.7	4.8	5.0	5.0	5.1	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Imports	12.3	6.6	7.1	7.1	7.5	7.8	8.1	12.3	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
Storage	4.1	3.7	3.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Total	384.7	366.8	372.5	374.8	376.8	382.6	390.1	400.3	408.1	416.4	425.4	432.3	437.2	442.3	447.3	452.2	452.9	456.5	459.6	464.8	468.5	471.4	474.8

1 Coal includes generating capacity of coal - derived fuels such as coke oven gas and blast furnace gas
 2 Oil includes generating capacity of oil - derived fuels such as refinery gas