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Department for Transport and the Office of Rail Regulation

Increasing passenger rail capacity

Summary

Background

1 The Department for Transport (the Department) published a 30-year rail strategy in July 2007 stating an ambition for a railway that could handle double the 1.15 billion passenger journeys made in 2006-07. This was against a background of increased demand for rail travel: passenger journeys were up from 0.74 billion in 1994-95. While capacity has also risen, crowding is widespread at peak times to, from and between major cities. For example, in 2008 nearly half of all passengers arrived into London between 08:00 and 08:59 on services that were either full or over-crowded. Other cities also experience high levels of crowding at the height of the morning peak.

2 For the five years to March 2014, the Department allocated £15.3 billion to support and improve the safety, reliability and capacity of rail services in England and Wales. The main improvement sought was in capacity, with the industry required to accommodate 17 per cent (64,900) more peak time passengers into London and 27 per cent (17,400) more passengers into other major cities without increasing average crowding. This implied extra capacity of 117,000 places into London and 38,000 into other English cities. These improvements require more and longer trains, timetable adjustments, bigger stations, longer platforms, new and enhanced depots and changes to track and signalling.

3 We examined the work of the Department and the Office of Rail Regulation (the Regulator) in specifying and securing increased rail capacity for passengers in England and Wales by March 2014. In doing so, we did not evaluate the merits of the current structure of the rail industry, but the efforts of the Department and the Regulator within it. Under that structure, the Department specifies what the Government wants from the industry and sets the level of public funding available, and secures and monitors delivery of passenger services in England, including providing extra capacity. As the railway's economic regulator, the Regulator conducts reviews to determine what Network Rail has to deliver, the incentives to secure delivery and the levels of track access charges paid by train operators. As part of the review for the period 2009-14, it scrutinised Network Rail's plans to enhance the infrastructure for capacity increases. It also monitors Network Rail's delivery with the aim of securing value for money for passengers and taxpayers.

4 We examined whether: the Department's forecasting and planning were robust; the Regulator's review of Network Rail's plans to enhance the infrastructure to carry extra capacity secured a good deal for the taxpayer; and whether the Department was on track to buy the extra capacity needed from train operating companies by March 2014.

Key findings

5 Since the Department made its plans to increase capacity:

- it committed funding for Crossrail in October 2007, which the Department expects will provide over 100,000 extra peak places across London in 2017. This reduces the viability of some improvements originally planned to happen before then;
- the recession reduced its projections of demand, with passenger kilometres travelled in 2013-2014 modelled at about 5 per cent lower than when its plans were made. There are some signs that the recession has indeed reduced the use of rail but the extent of the impact is not yet clear;
- extra rolling stock is proving more expensive than was assumed during planning. Higher costs of financing following the credit crisis, are a key factor. The increased costs have been offset by delays in delivery which have reduced payments in the period up to 2014. There is a risk that this will create affordability problems after 2014; and
- it announced in 2009 that it would electrify more of the network, which has changed the types of new carriages needed on those routes.

Against this background the Department worked with train operators and Network Rail to develop the efficiency of individual schemes. It assured itself that schemes had a positive business case before entering into contractual commitments wherever possible, and in some instances it decided not to proceed. It had not considered whether deferring investments as a whole in the light of latest demand forecasts would offer better value for money. In May 2010 the Department announced it was pausing the rest of the programme in 2010-11 as part of savings across Government and would reassess it in the light of overall spending requirements. Schemes that have already been contracted will go ahead.

6 Before this pause the Department expected to spend close to the £1.20 billion originally earmarked for securing extra capacity from train operators in the five years to 2014, but its latest plans showed it would not secure as much extra capacity as originally specified. Capacity was expected for 99,000 extra passengers into London during the three hour morning peak (7 till 10 am) 15 per cent less than the 117,000 first envisaged, and for 25,500 passengers into other cities by 2014, 33 per cent less than first envisaged. Our analysis shows the extra capacity of 44,000 for the one hour morning peak in London (8 till 9am) was 28 percent less than originally envisaged. The Department still expected that crowding would not increase above the maximum levels envisaged in the White Paper because of the fall in its projections of demand.

On the Department's forecasting and planning

7 To specify its requirements for the railway and set the level of funding available the Department had to assess demand. Its approach to the original forecasting and planning was robust in that it was based on a good knowledge of the network and on the whole used reasonable assumptions. Inevitably it had to make some assumptions to simplify the real world and some of these distorted estimates of demand. For example, the model does not allow passengers to switch to an alternative train if their "preferred" service is too crowded. Neither we nor the Department can say whether and how these assumptions distorted judgements on the scale of new investment needed, as data on actual passenger numbers is limited so forecasts cannot be fully checked against reality. More extensive data on actual passenger numbers would improve the evidence base for calibrating and validating the forecasting model.

8 The Department did not test widely the sensitivity of the model's demand forecasts to changes in assumptions. It modelled economic growth scenarios in line with Treasury guidance, but did not test the sensitivity of its forecasts to variations in the relationship between economic growth and rail demand.

9 To assess value for money, the Department assessed a set of specimen options for new schemes in accordance with Government guidelines, and concluded that the benefits over 60 years would outweigh the costs by 53 per cent. Achieving value for money was always going to be a challenge however, as for nearly half of the new schemes the costs outweighed the benefits. Moreover, 86 per cent of the overall benefit of new schemes is accounted for by the value placed on reducing crowding, and the Department did not test the sensitivity of costs and benefits to changes in this valuation.

10 The Department is assessing each scheme again for value for money before approving them. This is good but Northern Passenger Transport Executives felt they had lost out unreasonably relative to their expectations as plans for their areas developed.

11 More generally there needs to be greater transparency for passengers and funders about where and when extra capacity will be delivered, where this can be provided without commercial damage. The Department set itself and the rail industry city-wide requirements for increasing capacity. This allows requirements to be met without putting all new capacity on the busiest routes. This can be sensible in value for money terms as the industry can plan to add capacity in the most readily achievable ways and, since the Department has to approve train operators' proposals there is still a check that plans do meet pressing needs. It is nevertheless important that the rationale for decisions, and their consequences for forecast and actual levels of crowding, are available to passengers and funders as plans are committed and implemented.

12 The Department's planning focused on securing extra carriages to meet forecast demand in the peak periods. It explored the broad feasibility of shifting demand away from the peak, and is conducting limited trials of this approach. But it did not rely on this option or refitting of existing stock to carry more passengers to accommodate demand prior to 2014.

On the Regulator's scrutiny of Network Rail's infrastructure plans

13 The Regulator scrutinised Network Rail's plans to increase capacity of the infrastructure as part of its review of the track access charges to be paid by train operators to Network Rail from 2009 to 2014. Its approach to the review was consistent with normal regulatory practice.

14 There is a growing body of evidence that rail infrastructure costs more in Great Britain than in other countries. This includes work by the Regulator comparing Network Rail's costs and processes in operations, maintenance and renewals against other countries' railways and other infrastructure companies, and concluded that there was "a very large potential for Network Rail to improve its efficiency."

15 The Regulator did not specifically seek international benchmarks for new infrastructure schemes to enhance capacity. It reduced costings by removing schemes it deemed unnecessary to fully meet the Department's requirements, rephasing costs to match more realistic delivery timescales, and imposing efficiency savings on the remaining plans. These efficiency savings were based on evidence from industry-wide trends and by reading across from assessments of operating, maintenance and renewal activities. The Department and the Regulator have commissioned a review examining the overall cost structure of the rail industry with the express purpose of increasing value for money. We welcome this development.

16 We are concerned that the Regulator's ability to assess whether Network Rail is providing value for money is limited by the level of detail available on Network Rail's costings. Network Rail has incentives to become more efficient, for example, it can keep 25 per cent of underspends to use in the future and it must absorb the first £50 million of overspend on infrastructure enhancement projects (including capacity enhancements). For these incentives to work effectively they must be based on realistic and challenging estimates of costs, but the level of detail available is not always enough to judge these. We are also concerned that the Regulator had not agreed with Network Rail the programme of works necessary to deliver the infrastructure enhancements or the process for agreeing changes to that programme by the start of the control period.

On the Department's procurement of extra capacity from train operators

17 By March 2010 the Department had secured operation of 526 extra carriages, with a further 106 ordered and due to be committed for operation in 2012. While there had been some delays in individual project milestones, the Department expected to have additional capacity in place by March 2014.

18 The Department looked to secure the majority of its extra carriages by negotiating with incumbent train operators, but this creates specific risks to value for money which the Department recognises and is managing. It is keeping Network Rail informed of changes in plans, thus avoiding the risk of abortive investment if there was a rethink on longer trains on a particular route. At the time of our work, Network Rail believed it could still deliver all the enhancements required by March 2014.

Conclusion on value for money

19 The Department and Regulator are pursuing value for money in a complex and unique industry structure. It is too early to say whether they have achieved value for money in seeking extra capacity from the rail industry between 2009 and 2014. There are, however, a number of warning signs which indicate that it is at risk.

- The Regulator's own work and that of others indicate that infrastructure costs within the rail industry are high. While the Regulator reduced Network Rail's costings and established incentives for it to improve efficiency, we are concerned that the level of detail available to the Regulator on costs restricts its ability to judge the potential for efficiency gains by Network Rail looking forwards, or its realisation of that potential looking back.
- The costs of rolling stock are increasing.
- The recession reduced the Department's modelled levels of future demand. While the Department assured itself that the whole programme and individual interventions should still achieve positive returns over 60 years, it had not considered whether delaying the programme until after 2014 would offer better value for money.
- Moreover, the Department's latest plans would have delivered significantly less capacity during the morning peak by 2014 than originally specified, though the taxpayer would have provided almost as much extra support to train operators over the next five years as was originally envisaged.

Recommendations

20 To address the risks to achieving value for money up to 2014:

a the Department should:

- ask bidders for a priced option to bear the risk of meeting specified crowding limits within invitations to tender for future franchises, where initial assessment indicates such risk transfer may offer value for money.

b the Regulator should:

- alert the Department to big changes in estimates that might compromise the value for money of individual schemes even if their scope is unchanged.

21 To clarify for taxpayers, passengers and other funders what is actually being delivered, the Department should:

a report annually on progress towards meeting capacity requirements and the likely taxpayer support required with justifications for variances from plans. This should be at the level of London as a whole and other regional centres to avoid compromising individual negotiations with train operators, but should comment on the targeting of extra capacity, its rationale, and the actual experience of crowding on specific routes.

22 To improve future planning rounds so that there is a better basis for securing value for money:

a the Regulator should:

- use the current phase of enhancements to develop a shared cost database with Network Rail and independent benchmarks so that it can challenge future investments; and
- establish a baseline enhancement plan and change control process before the start of the next control period.

b the Department should:

- pursue vigorously its efforts to require the rail industry to collect, verify and make available comprehensive data on passenger numbers;
- review the sensitivity of benefit-cost ratios in its appraisals to variations in factors such as the valuation of crowding and the levels specified for those factors that have the greatest influence on the overall assessment; and
- in future use the techniques it is applying to finalise the current round of interventions during initial planning as well by:
  - comparing modelled demand with actual demand from passenger count data and reviewing significant areas of variance;
  - reviewing the sensitivity of demand forecasts and crowding levels to national and regional variations from latest central economic forecasts; and
  - evaluating further the costs and benefits of demand management as well as capacity enhancement approaches to tackling peak time crowding on the railway.