



HM Treasury

National Infrastructure Plan: finance update

March 2014



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1

National Infrastructure Plan: finance update

Introduction

1.1 As part of its long-term economic plan, the government is committed to delivering the infrastructure that the UK needs to compete in the global race. In December 2013, the Chief Secretary to the Treasury launched an updated National Infrastructure Plan (NIP 2013), which outlines the government's strategy for meeting the UK's infrastructure needs to 2020 and beyond, providing a cross-cutting and strategic approach to infrastructure planning, prioritisation, funding, financing and delivery.

1.2 It also sets out the most robust, forward-looking infrastructure pipeline to date, representing over £375 billion of public and private investment.¹ The pipeline provides a strategic and credible picture of the level of planned infrastructure investment over the rest of this decade and beyond, and is intended to enhance visibility and understanding of the potential opportunities for investors and the supply chain.

1.3 NIP 2013 provides an overview of how projects are financed in each of the key economic infrastructure sectors – transport, water, flood defences, energy, communications, waste and science and innovation.² This document seeks to build on that analysis by providing more detail on how the infrastructure planned in those sectors over the coming years is currently expected to be financed – defining the nature and extent of the potential investment opportunity, with a particular focus on the period to 2020.

1.4 In line with the government's commitment to strengthening and modernising the UK's infrastructure, this update focuses primarily on the opportunities within the infrastructure pipeline for investment in greenfield assets (i.e. new or replacement infrastructure). However, the government anticipates that there will also continue to be an active market in brownfield assets, which have historically tended to be more popular with some investors due to their lower risk profile, lower financing costs, and more predictable returns. In some cases, this brownfield investment could be used to support the financing of new infrastructure by recycling capital.

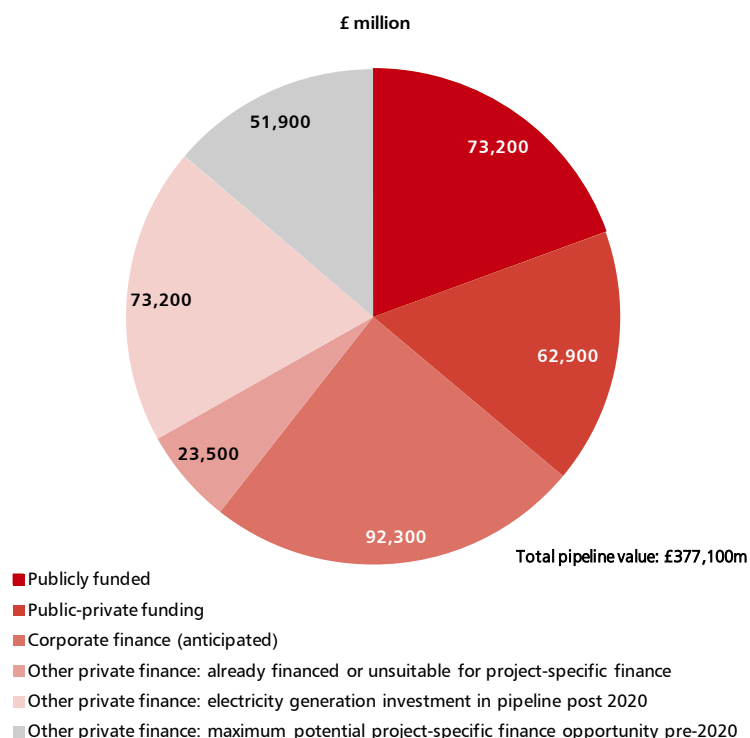
1.5 In publishing this analysis, the government is seeking to respond to demands from investors, both in the UK and globally, for greater clarity and transparency about the investment opportunities available. This document is also intended to act as a reference point for an ongoing dialogue between the government and the investment community, including as part of the future work programme of the National Infrastructure Plan Strategic Engagement Forum (NIPSEF). The government recognises that these issues are complex and there can be no 'one size fits all' approach to infrastructure financing. It is therefore keen to engage with investors and other stakeholders on these issues, to understand their view of the investment opportunities and inform the development of the National Infrastructure Plan as it continues to evolve.

¹ All pipeline figures are in 2012-13 prices unless stated otherwise.

² This document does not cover opportunities in social infrastructure, housing or regeneration.

1.6 As shown in Chart 1.A, this analysis suggests that there may be up to c. £52 billion of potential project-finance opportunities before 2020. This is set out in more detail in the sections below.

Chart 1.A: Breakdown of potential finance opportunities



Source: HM Treasury estimate based on analysis of published infrastructure pipeline. For more detail on methodology see Annex A. Figures shown are in 2012-13 prices and rounded to the nearest £100 million. Figures may not match published pipeline or sum due to rounding.

Sources of infrastructure finance

Public funding/Public-private funding

1.7 As set out in NIP 2013, the UK has been at the forefront of developing a model of infrastructure investment whereby responsibility for funding, financing and delivery is split between the public and private sectors. This means that 19%³ (£73 billion) of the investment in the infrastructure pipeline is entirely publicly funded, with a further 17%⁴ (£63 billion) representing a mix of public and private funding, and 64% being purely privately funded.

1.8 Recognising the importance of providing a long-term commitment to support that investment, the government has set out plans for over £300 billion of public investment over the next parliament. This includes a commitment to publicly fund specific projects worth over £100 billion, including the biggest programme of investment in roads since the 1970s, funding for superfast broadband in hard-to-reach areas, and long-term funding settlements for flood defence and science projects. In the case of flood defence, science and communications, public investment is complemented by partnership or matched contributions from the private sector in some projects.

³ This includes the vast majority of roads investment, local transport schemes, High Speed Rail, nuclear decommissioning, and some waste, flood defence and science projects.

⁴ This includes rail investment (except for High Speed Rail), Transport for London projects, a small number of roads and local transport projects, a small number of waste PPP projects, communications, and flood defence and research projects with an element of partnership or match funding.

1.9 This Government is also spending more than £60 billion on our railways in the ten years between 2010-11 and 2020-21 – including transformative projects such as Crossrail, Thameslink and High Speed Two. This includes more than £16 billion of funding announced by the government for the current rail network from 2014-19, known as Control Period 5, but does not include government-backed borrowing.⁵ The overall spending envelope for Network Rail in that period has been set by the Office of Rail Regulation at over £38 billion (2012-13 prices), which includes contributions from the train operating companies and government-backed borrowing. Rail investment accounts for over half of the public-private funded projects in the pipeline.

1.10 In sectors such as floods, science and communications, projects may be supported by private contributions or through partnership or match funding. Similarly, Transport for London projects and a small number of road schemes may benefit from developer contributions. None of these areas are expected to require significant project-specific finance.

1.11 The public element of the infrastructure pipeline therefore represents a funded and financed government commitment. There is currently not seen to be a significant opportunity for project-specific financing in areas of the pipeline where government provides all or part of the funding.

Corporate finance

1.12 In a number of sectors within the pipeline, most investment is currently expected to be financed on corporate balance sheets, with project-specific investment only expected to be used in exceptional cases. This covers around 25% (£93 billion) of the overall pipeline, primarily in the regulated sectors.

1.13 The UK has pioneered a system of independent regulation which – while the specific approach varies between sectors – is structured in a way that protects consumers, rewards efficiency and innovation, and gives investors the confidence to deliver the infrastructure the UK economy needs. For example, a recent World Economic Forum report highlighted the successful track record of the UK regulatory system in facilitating significant levels of investment, notably in the water and sewerage sector which has seen more than £100 billion of private investment since 1990.⁶

1.14 There continues to be appetite from both domestic and international institutions to take equity stakes in regulated companies. The government is fully committed to the system of independent regulation as the key mechanism for delivering the required infrastructure investment in these sectors, whilst protecting consumers' interests.

1.15 In the case of water, electricity transmission and distribution and designated airports, which together represent £80 billion of the pipeline, it is therefore expected that infrastructure will continue to be delivered through regulations which set a transparent and stable return on investment.

1.16 Elsewhere, where regulation is in place to ensure that competition can work as effectively as possible, there is also evidence of significant investment from companies on balance sheet. For example, nearly £13 billion of the overall pipeline is driven by telecommunications companies making strategic investments in infrastructure to meet demand in this sector.

⁵ HM Treasury figures. £60 billion comprises £30 billion from 2010/11 to 2018/19 for Network Rail (this includes the whole of CP5 and most of CP4, but strips out the element which is funded from Train Operator Companies and government-backed borrowing); £15.5 billion to 2018 for Crossrail including infrastructure and rolling stock; £16 billion in High Speed Two to 2020/21.

⁶ http://www3.weforum.org/docs/WEF_II_InfrastructureInvestmentPolicyBlueprint_Report_2014.pdf

1.17 In addition, there are also non-economically-regulated businesses such as ports and airports that have historically financed themselves on a corporate balance sheet basis and are expected to continue to do so in the future.

1.18 Within any of these sectors, there may occasionally be exceptional projects which have such an unusual risk profile or require such significant capital investment that they may require a bespoke and project-specific finance solution. The government is currently working with Thames Water and Ofwat to determine the appropriate financing arrangements for the Thames Tideway Tunnel, with an estimated cost of around £4 billion. The government has consulted on the option of the project being financed and delivered by an independent Infrastructure Provider (IP) with its own licence from Ofwat, which would have an equity opportunity of c. £1 billion. This equity would be procured competitively to secure the best value for money.

Supporting diverse sources of private finance

1.19 In the aftermath of the global financial crisis, new regulations (Basel III) and a greater drive towards recapitalisation meant that commercial banks, previously a key source of long-term debt for infrastructure projects, were less willing or able to lend. The government recognised that new and diverse sources of finance would be required – both in terms of new forms of debt to replace bank lending, and measures to stimulate demand for infrastructure projects from equity investors. In addition to directly financing projects through a strong public funding commitment and supporting a world-class regulatory regime, the government has therefore taken a number of steps to stimulate a range of different types of private investment.

1.20 With the creation of the £40 billion **UK Guarantees Scheme**, the government has taken direct action to help provide certainty to investors. Using the strength of its credit rating to facilitate the provision of debt, the government has sent a strong signal to the market that it is here to help, giving sponsors confidence to proceed with developing projects. 3 projects have been provided with a UK Guarantee and 40 projects with a capital value of £37 billion are now prequalified for the scheme.

1.21 The **Green Investment Bank (GIB)** is the world's first investment bank dedicated to accelerating the transition to a green economy. With committed funding of £3.8 billion, the GIB is providing debt solutions to innovative, environmentally friendly sectors where the risk profile, particularly in innovative technologies, means there is currently a lack of sufficient support from private markets. Since starting operations in October 2012, the GIB has backed a total of 25 projects that will mobilise a total of £3.2 billion when fully deployed.⁷

1.22 The **European Investment Bank (EIB)** is another valuable source of debt finance for infrastructure projects, and HM Treasury has worked hard to encourage more investment. The EIB is in the process of lending £1.4 billion to National Grid to secure delivery of a programme of key projects such as the Western Link, which will help bring renewable energy from Scotland to homes and businesses in England and Wales.

1.23 At the same time, the government has been keen to encourage new and underused sources of equity investment to enter the market. This includes supporting the establishment of the **Pensions Infrastructure Platform (PIP)**, which is helping to make infrastructure investment more accessible to pension funds. The PIP reached a major milestone in February, with the unveiling of its first £500 million fund, to be managed by Dalmore Capital.

1.24 Following the establishment of the **Insurers' Infrastructure Investment Forum**, the government has made further progress in encouraging institutional investment with the

⁷ <http://www.greeninvestmentbank.com/what-we-do/transactions-to-date.html>

successful outcome of Solvency II negotiations. This paves the way for increased infrastructure finance from the insurance industry into both economic and social infrastructure.

1.25 Sovereign Wealth Funds are another major source of equity, and the UK has attracted more than £15 billion of foreign capital investment into infrastructure since 2010.⁸ The government has dedicated additional resources in UK Trade & Investment to the relationship management of major overseas financial institutions and has developed relationships with key investors holding combined global assets of more than \$5 trillion.

1.26 Infrastructure investment funds offering debt and equity are increasing their participation in the UK market. In particular, privately-placed debt is beginning to make a significant contribution to the infrastructure finance market. Funds with combined assets of over £40 billion under management globally already have at least some exposure to UK infrastructure.⁹

1.27 A diversity of financing sources has emerged to complement bank debt in supporting investment in UK infrastructure. The government expects the infrastructure investment market to remain buoyant in facilitating future projects.

1.28 In addition, the **availability of commercial bank debt has improved** since the start of 2013, with lending increasing, especially for project-specific finance – with volumes for the full year 2013 up overall in the EMEA¹⁰ (by c.19%) when compared to the equivalent period in 2012.¹¹ This trend is likely to continue, with new banks and investors entering the infrastructure finance market to compete with existing players, demand for loan assets increasing, and terms for borrowers improving.

Project-specific finance opportunities

1.29 Beyond exceptional, one-off projects in the sectors outlined above, the main opportunity for project-specific finance in infrastructure – i.e. finance through separate vehicles where the return is directly related to the performance of a specific asset or subset of assets – is likely to lie in the remainder of the pipeline. This means a small number of waste projects (with a pipeline value of around £100 million before 2020) and, primarily, electricity-generation schemes.

1.30 Within the electricity-generation sector, the government recognises that large-scale investment is required in order to achieve security of energy supply as the UK makes the transition to a low-carbon economy. This is why it has passed the Energy Act to implement Electricity Market Reform (EMR) which, through legally-binding Contracts for Difference (CfDs), will provide generators with protection from fluctuations in the wholesale electricity price and give greater certainty about future revenues. The strike prices used in CfDs will be consistent with the limits on electricity policy levies set out in the Levy Control Framework. The availability of CfDs should also help address some of the issues that have faced independent renewable generators in securing commercially viable Power Purchase Agreements in recent years. DECC has also sought views on the key design features of the Offtaker of Last Resort, which will provide eligible renewable electricity generators with a guaranteed 'backstop' route to market at a specified discount to the market price.

1.31 Most electricity-generation projects have historically been financed on balance sheet by large utility companies using a combination of equity and debt. Throughout the financial crisis, this

⁸ See Table 6.A in 'National Infrastructure Plan 2013', HM Treasury, December 2013

⁹ Source: Inframation Group

¹⁰ Europe, Middle East and Africa

¹¹ Source: Dealogic

model has held up well, with investment in power generation actually increasing in the period since the financial crisis, from just £4.6 billion in 2008 to more than £7.5 billion in 2012.¹²

1.32 However, the scale of investment required in future may test the ability or willingness of the utilities to continue to finance all projects on balance sheet. This is particularly true at a time when a negative market outlook across the EMEA region means they may be committed to consolidating their credit ratings. As a result, in the short term, many utilities are in the process of reinforcing balance sheets through asset sales, boosting equity with share issues and cutting capital expenditure costs.¹³ Therefore, there may be increasing opportunities for both debt and equity investment in energy infrastructure through project-specific finance.

1.33 The rest of this update therefore focuses on these **potential project-specific finance opportunities in electricity generation before 2020**. What follows provides a sector-by-sector breakdown of where the key project-specific finance opportunities are likely to lie, taking into account the areas where significant finance has already been identified, including through government support. This analysis is used to identify the maximum potential opportunity for project-specific investment in debt and equity by non-utility investors – while recognising that utilities may in practice continue to finance a significant proportion on balance sheet. It does not seek to pre-judge the balance of equity and debt in each case, which will depend on decisions made by the corporate entities involved, and choices about the finance route for individual privately-funded projects will continue to be made by the project owners.

Technology-based analysis

1.34 The figures used below represent the total value of projects for each technology in the pipeline for the period up to 2020, excluding those in construction or part of an active programme. The total capital value will exceed this for technologies with projects expected to run beyond 2020.

1.35 Nuclear: The renewal of the UK's nuclear plant is essential to ensure the UK has a secure, low-carbon electricity supply. To give investors the confidence to commit the billions of pounds required to develop these projects, the government is providing price certainty through CfDs. The large scale and long construction periods associated with nuclear generation may challenge the market's lending capacity for individual projects, however secure the income stream may be. To ensure that financing constraints do not delay the Hinkley Point C project, the first plant in the renewal programme, the government is also providing support through the UK Guarantees Scheme. HM Treasury is working with the project's sponsors to structure a long-term debt financing package that can benefit from a UK Guarantee, while also accommodating other sources of debt finance. Depending on their risk-return requirements, debt providers may invest in the guaranteed debt or explore the unguaranteed debt option. However, the primary project-specific finance opportunity is likely to lie in a potential equity stake of up to 15% (c. £2.4 billion) in this project, all of which is expected to be available for finance before 2020 – though this is a working assumption and the exact finance mix remains subject to the decision of the project owners.¹⁴

1.36 Building on the experience gained on Hinkley Point C, the government has signed a cooperation agreement with Horizon Nuclear Power and Hitachi to develop a financing structure and work towards an in-principle agreement by 2016 for a UK Guarantee to support the Wylfa

¹² 'Powering the UK – Investing for the future of the Energy Sector and the UK', Energy UK/Ernst & Young, 2012. Figure for 2012 is an estimate.

¹³ 'Industry outlook, EMEA electric and gas utilities', Moody's Investors Service, 20 November 2013

¹⁴ <http://edfenergy.presscentre.com/News-Releases/Agreement-reached-on-commercial-terms-for-the-planned-Hinkley-Point-C-nuclear-power-station-82.aspx>

Newydd nuclear plant in Anglesey. There is £5 billion of investment planned in this project before 2020, all of which is expected to be available as either debt or equity.

1.37 Further fleet renewal is likely to be beyond 2020 and it will be only become clear nearer the time whether or not market conditions will mean support for the financing of those projects is required.

Value to 2020: £14 billion; of which maximum potential opportunity: £7.4 billion

1.38 Offshore wind: Utility company finance on balance sheet has been the dominant method for offshore wind farms to date.¹⁵ However, the recent examples of the Lincs and Walney offshore wind farms have demonstrated that project-specific finance can be used, opening up the possibility of further involvement for investors in future in a technology which potentially offers the largest investment opportunity pre-2020.

Value to 2020: £18.3 billion; of which maximum potential opportunity: £18.3 billion

1.39 Onshore wind: A well-understood technology, with an established investment model (primarily using debt markets), onshore wind has historically been the main avenue for project-specific finance in electricity-generation investment. There remains a very healthy pipeline for onshore wind, with over 50 projects (around 75% of which are in Scotland) with consents already approved or in the process of obtaining them.

Value to 2020: £10.4 billion; of which maximum potential opportunity: £10.4 billion

1.40 Other small-scale renewables: Although small-scale renewable projects (including solar, wind and anaerobic digestion) comprise a significant element of the electricity-generation pipeline in aggregate, they are generally considered to be too small individually to be suitable for project-specific finance solutions, unless bundled up into portfolio sales. The government continues to support finance for individual projects through measures such as Feed-in-Tariffs. There are therefore unlikely to be project-specific finance opportunities before 2020.

Value to 2020: £10 billion; unlikely to be significant project-specific finance opportunity before 2020

1.41 Other large-scale renewables: The government has historically supported large-scale solar through the Renewables Obligation regime and will continue to do so under EMR through Contracts for Difference. In comparison to smaller renewable projects, large-scale renewable technologies, including large-scale solar, may provide suitable investment opportunities for project-specific finance.

Value to 2020: £3.2 billion; of which maximum potential opportunity: £3.2 billion

1.42 Combined-Cycle Gas Turbines (CCGT): As part of EMR policy, the first Capacity Market auction will take place in December 2014, subject to state aid clearance being received. Capacity will be in place by the winter of 2018. In advance of this, the government has already announced that it will also run two transitional auctions for demand side capacity in 2015 and 2016. This will help grow the demand side industry and ensure effective competition between traditional power plants and new forms of capacity; driving down future costs for consumers. To support new investment, DECC has today confirmed:

¹⁵ 'Where's the money coming from? Financing offshore wind farms', European Wind Energy Association, November 2013

- 15 year capacity agreements will be available to new capacity. This will provide sufficient certainty to unlock investment in new gas plant, which we expect will include a range of new independent providers.
- Existing capacity will be able to access rolling 1-year agreements – although 3-year agreements will also be on offer to plant needing significant refurbishment. This will ensure we get the best out of our existing assets for the consumer.
- Penalties for unreliable capacity will be set at a rate of £3,000/MWh, at the top of the range DECC consulted on, and capped at 200% of a provider's monthly income. This will provide a strong incentive for capacity to be there when we need it.
- The capacity auction will be capped at £75/kW to protect consumers from excessive costs.

Value to 2020: £4.2 billion; of which maximum potential opportunity: £4.2 billion

1.43 Carbon Capture and Storage (CCS): CCS is the only way we can significantly reduce carbon dioxide emissions and keep fossil fuels (coal and gas) in the UK's electricity supply mix. Fossil fuels are an important source of the electricity generation mix (and will remain so for some time to come) because they can balance the characteristics of wind and nuclear. The government is providing £1 billion of public funding for this emerging technology through a commercialisation competition. Two shortlisted projects (Peterhead and White Rose) recently signed contracts to undertake FEED¹⁶ studies to proceed to the next stage of the competition. In late 2015 the companies will take final investment decisions with the government taking decisions shortly after on proceeding to the construction of the projects. The pipeline also includes a small number of other CCS projects.

Value to 2020: £2.6 billion; of which maximum potential opportunity: £1.6 billion

1.44 Marine (tidal/wave): The UK is the most technologically advanced place in the world for the testing and development of offshore renewable energy and the government is providing support through demonstration projects such as the publicly-owned Wave Hub in Cornwall, and the European Marine Energy Centre in Orkney. There is £2.6 billion of marine investment in the pipeline up to 2020 and tidal and wave power may prove their commercial viability on a larger scale in the longer term.

Value to 2020: £2.6 billion; of which maximum potential opportunity: £2.6 billion

1.45 Interconnectors: These allow the importation of electricity from European markets, with future interconnectors to France, Belgium and Norway in the pipeline. In general terms, there are two routes for interconnector investment: a regulated route, where interconnector developers have to comply with all aspects of European legislation on cross border electricity infrastructure and receive a regulated return for their investment; and a merchant-exempt route, where developers would face the full upside and downside of the investment and typically an exemption from European legislation in order to increase the safeguards for the business case of their investment.

1.46 Ofgem is currently developing a new 'cap and floor' regulated route for project NEMO, the proposed interconnector between Belgium and Great Britain, which may see these types of projects financed as part of a regulated asset base in future. However, the merchant-exempt route is historically the approach used in the UK and would generally require project-specific finance.

¹⁶ Front End Engineering and Design

Value to 2020: £2.2 billion; of which maximum potential opportunity: £2.2 billion

1.47 Biomass: The government has already supported a biomass conversion at Drax, the UK's largest power station, with a £75 million UK Guarantee, and a further three biomass projects have been pre-qualified. There is £900 million of investment in the pipeline in these sectors before 2020, all of which may represent a potential project-finance opportunity.

Value to 2020: £900 million; of which maximum potential opportunity: £900 million

Conclusion

1.48 This analysis suggests that £73 billion of the pipeline will be publicly funded, with an additional £63 billion being funded through a mixed (public-private) model. A further £92 billion of the pipeline – the bulk of which is in the regulated sectors – is currently expected to be primarily funded through corporate balance sheets, based on historical trends. Therefore, in none of these areas are there currently expected to be significant opportunities for project-specific investment, though there may be occasional one-off projects for which it will be appropriate.

1.49 This therefore suggests that the main opportunities for project-specific investment (both debt and equity) are currently likely to be in the electricity generation sector. Together with a handful of potential opportunities that have been identified in other sectors, this may represent up to c. £52 billion of investment before 2020. This represents around 14% of the overall value of the pipeline. The final figure and specific opportunities available will depend on the decisions made by individual companies, including the proportion that utility companies ultimately choose to finance on balance sheet. Annex A provides a breakdown of where these opportunities may lie.

1.50 The government will continue to engage with the investment community to build a common understanding of these opportunities to inform the future development of the National Infrastructure Plan and ensure that the UK is able to deliver the infrastructure it needs.

A

Breakdown of potential finance opportunities

A.1 Table A.1 sets out a breakdown of how the infrastructure pipeline is currently expected to be financed, and outlines where the potential project-specific finance opportunities for investors may lie. All figures are based on HM Treasury analysis of the published infrastructure pipeline.¹

A.2 The infrastructure pipeline is not a statement of need, or a commitment to undertake any of the projects shown. It provides a strategic and credible overview of the level of public and private infrastructure investment planned over the rest of this decade and beyond (though in some sectors the decision to go ahead with individual projects will be determined by the market).

A.3 The overall values for each sub-sector in Table 1.A are derived by filtering the following fields in the infrastructure pipeline:

- sector
- sub-sector
- sub-group
- economically regulated asset
- funding source(s)
- scheme status

A.4 Figures in the pipeline are in 2012-13 prices. Project costs were determined using the deflated costs in columns AD to AL, including using selections of this data to establish costs for particular time periods.

A.5 Potential project-specific finance opportunities (including potential equity stakes within individual projects) are estimated by HM Treasury based on the analysis set out above and do not rule out the possibility that other sources of finance may ultimately be used. The government recognises that decisions about the finance route for individual privately-funded projects will continue to be made by the project owners.

¹ <https://www.gov.uk/government/publications/national-infrastructure-plan-2013>

Table A.1: Breakdown of potential finance opportunities

Infrastructure finance category	Value (£m)	Maximum potential project-specific finance opportunity pre-2020 (up to £m)	Notes
Public funding	73,200	0	Includes roads; High Speed Rail; local transport; flood defence; science; nuclear decommissioning; waste
Public / private funding	62,900	0	Includes flood defence, science and communications projects with partnership or match funding; Network Rail; Transport for London; Crossrail; some PPP waste projects and a small minority of road and local transport schemes
Corporate finance			
Economically regulated sectors	80,100	1,000	Includes energy transmission and distribution; water; designated airports c. £1 billion equity opportunity in Thames Tideway Tunnel
Communications	12,900	0	
Other Sectors	300	0	Includes ports and unregulated airports
Electricity generation (& private waste schemes)			
In construction or due to start in 2013-14	5,900	0	
Investment in pipeline post 2020	73,200	0	May include potential finance opportunities in the longer-term
Biomass pre-2020	900	900	
CCS pre-2020	2,600	1,600	£1 billion government funding through commercialisation competition
Nuclear pre-2020	14,000	7,400	Working assumption of up to 15% equity stake in Hinkley Point C available. Potential debt and equity opportunities before 2020 in Wylfa Newydd
Other renewables (large) pre-2020	3,200	3,200	

Other renewables (small) pre-2020	10,000	0	Likely to be too small for project-specific finance; supported by Feed-In Tariffs
Interconnectors pre-2020	2,200	2,200	
Combined Cycle Gas Turbine pre-2020	4,200	4,200	
Marine (tidal / wave) pre-2020	2,600	2,600	
Offshore wind pre-2020	18,300	18,300	
Onshore wind pre-2020	10,400	10,400	
Potential project-specific finance in waste schemes	100	100	
Total	377,100	51,900	

Source: HM Treasury estimate based on analysis of published infrastructure pipeline. Figures shown are in 2012-13 prices and rounded to nearest £100m. Figures may not match published pipeline or sum due to rounding.

B

Financing of Top 40 priority infrastructure investments

B.1 Table B.1 lists each of the government's Top 40 priority infrastructure investments and indicates the likely sources of finance based on the analysis and assumptions outlined in Annex A.

Table B.1: Financing of Top 40 priority investments

	Sector	Priority investment	Finance source(s)
1	Roads	Accelerated road construction pilots	Public
2	Roads	Highways Agency new capacity	Public/public-private
3	Roads	Smart Motorways	Public
4	Roads	A14	Public
5	Roads	Lower Thames Crossing	Public-private
6	Rail	High Speed 2	Public
7	Rail	Northern Connectivity	Public-private
8	Rail	Electrification	Public-private
9	Rail	Line capacity improvements	Public-private
10	Rail	Major station improvements	Public-private
11	Rail	Intercity Express Programme	Public-private
12	Rail	Strategic Rail Freight Network	Public-private
13	Rail	Crossrail	Public-private
14	Rail	Thameslink	Public-private
15	International Gateways	South East airports	Corporate
16	International Gateways	Regional airports	Corporate/ public-private ¹
17	International Gateways	Container ports	Corporate
18	Energy	Electricity generation – gas	Corporate/project-specific
19	Energy	Electricity generation – nuclear	Corporate/project-specific
20	Energy	Electricity generation – wind	Corporate/project-specific
21	Energy	Electricity generation – other renewables	Corporate/project-specific
22	Energy	Carbon capture and storage	Corporate/project-specific
23	Energy	Energy transmission and distribution	Corporate
24	Energy	Unconventional gas production ²	Corporate
25	Energy	Smart Meter rollout	Corporate
26	Communications	Superfast broadband	Public-private/corporate

¹ Public-private element refers to the A6 Manchester Airport Relief Road

² No projects currently in the published pipeline

27	Communications	Super-Connected Cities ³	Public
28	Communications	Mobile Infrastructure Project	Public-private
29	Communications	4G commercial rollout	Corporate
30	Water and flood defences	Water supply and sewerage network programmes	Corporate
31	Water and flood defences	Thames Tideway Tunnel	Corporate/project-specific
32	Water and flood defences	Flooding and Coastal Erosion Management Programme	Public/public-private
33	Science and Innovation	Science majors	Public/public-private
34	Science and Innovation	Research Partnerships Investment Fund	Public-private
35	Science and Innovation	Science and innovation Catapult centres	Public-private
36	Local infrastructure	Local authority major transport schemes	Public
37	Local infrastructure	Mersey Gateway Bridge	Public-private
38	Local infrastructure	London Underground investment	Public-private
39	Local infrastructure	Northern Line extension to Battersea	Public-private
40	Local infrastructure	Local infrastructure funding ⁴	Public

³ No projects currently in the published pipeline

⁴ No projects currently in the published pipeline

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