NATIONAL INFRASTRUCTURE AND CONSTRUCTION PIPELINE 2021

The 2021 National Infrastructure and Construction Pipeline sets out nearly £650bn of public and private investment over the next 10 years to build market confidence and promote innovation and capability

Headlines

- Of the procurements in the current financial year (2021/22), none relate to the energy and utilities sector (outside of nuclear decommissioning)
- Of the known/planned investments from 2021/22 onwards, the wider energy sector (including all forms of generation, nuclear decommissioning and oil & gas) account for 51% - £202bn
    - £151bn of this investment sits within wind energy, energy from waste, photovoltaics and other generation technologies
- From 2021/22 onwards, there is at least £43bn of investment in the utilities (electricity, gas and water distribution)
    - However, as the values of the next price control reviews is currently unknown, the exact amount to be invested through to 2030/31 is unknown
    - The value of the currently unknown regulatory investments is estimated to be around £54.3m in the 10-year projections
- Over the next four years (2021/22 to 2024/25) an average of at least 425,000 people will be required to deliver the £200bn of planned investments
    - Delivering these investments will mean bringing more workers into the infrastructure workforce, through new apprentices, technicians and graduates and attracting skilled workers from other industries. It will also mean retraining and up-skilling the existing workforce to support improved productivity and performance.

Procurements in 2021/22

- Total procurements in 2021/22 are estimated to be worth between £21.4bn and £30.8bn
- **Energy sector**
  - £299m is planned within the energy sector – all of it associated with nuclear decommissioning
    - Sellafield = £116m
    - Low Level Waste Repository = £100m
    - Dounreay Site Restoration = £73m
    - Magnox (Dungeness) = £10m
- There are no procurements planned within the **Utilities sector** during 2021/22

Future investments – 2021/22 onwards

- Total planned investments in the pipeline amount to £399bn
  - The Energy sector accounts for 51% of all investments (£202bn)
  - The Utilities sector accounts for 11% of all investments (£43bn)

Sector	2021/22 to 2024/25		2025/26 and beyond		Total investment 2021/22 and beyond	
	(£bn)	% of total	(£bn)	% of total	(£bn)	% of total
Energy	£51.3	26%	£151.0	76%	£202.3	51%
Transport	£70.0	35%	£32.2	16%	£102.1	26%
Utilities	£41.8	21%	£0.9	0%	£42.7	11%
Communications	£9.4	5%	£6.8	3%	£16.2	4%
Housing and Regeneration	£14.3	7%	£1.7	1%	£16.0	4%
Others sectors	£13.5	7%	£6.2	3%	£19.8	5%
Grand Total	**£200.2**	**100%**	**£198.8**	**100%**	**£399.0**	**100%**

- Note: These investments do not include:
  - Electricity Distribution – ED2, starting in 2023/24
  - National Grid – post-2024/25
  - Gas Distribution – GD3, starting in 2026/27
  - Regulated water – AMP7, starting in 2025/26

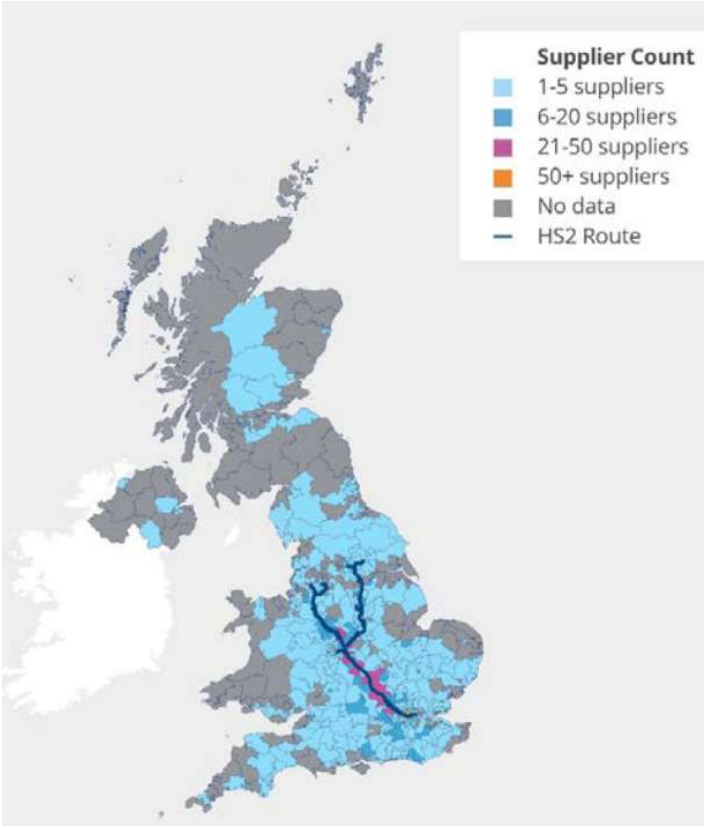
- The two tables below show the investments planned within the ENERGY and UTILITIES sector during each half of the pipeline, through to 2030/31:

Energy Sector	2021/22 to 2024/25 (£bn)	2025/26 and beyond (£bn)	Total investment From 2021/22 (£bn)
Electricity Generation	**£35.1**	**£133.5**	**£168.6**
Nuclear	£13.2	£4.0	£17.2
Other Generation to 2025	£10.4	-	£10.4
Wind Offshore	£8.1	£0.2	£8.4
Wind Onshore	£1.8	-	£1.8
Energy from Waste with CHP	£0.9	-	£0.9
Photovoltaics (Large)	£0.4	-	£0.4
Advanced Conversion Technologies	£0.3	-	£0.3
Post 2025 Generation	-	£129.3	£129.3
Nuclear Decommissioning	**£2.3**	**£2.3**	**£4.6**
Waste & Materials Management	£0.9	£1.5	£2.5
Infrastructure	£0.5	£0.4	£0.9
Operations	£0.5	£0.05	£0.5
Decommissioning	£0.4	£0.3	£0.6
Oil & Gas	**£13.9**	**£15.2**	**£29.1**
Oil & Gas	£13.9	£15.2	£29.1
Grand Total	**£51.3**	**£151.0**	**£202.3**

Utilities Sector	2021/22 to 2024/25 (£bn)	2025/26 and beyond (£bn)	Total investment From 2021/22 (£bn)
Electricity Distribution	**£4.8**	**--**	**£4.8**
Electricity Distribution	£4.8	--	£4.8
Electricity Transmission	**£15.0**	**£0.9**	**£15.9**
Infrastructure	£13.8	£0.4	£14.2
Electricity Distribution	£1.2	£0.5	£1.7
Water and Sewerage	**£21.9**	**£0.03**	**£22.0**
Other	£20.7	-	£20.7
Project over £50m	£1.2	£0.03	£1.3
Grand Total	**£41.8**	**£0.9**	**£42.7**

- Note the exclusion stated above relating to the investments of subsequent price control periods for the regulated utilities (estimated to be around £54.3m in the 10-year projections – see below).

Regional analysis



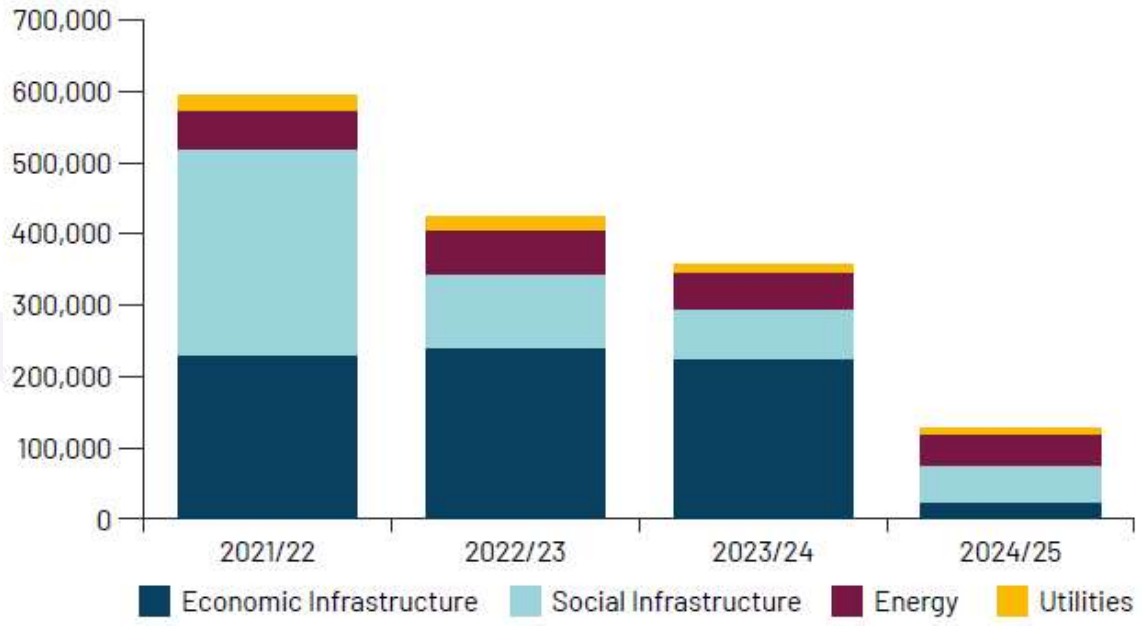
- This analysis provides an indication of where construction activity will be taking place.
- Due to the nature of many energy infrastructure projects, investments made in one region will deliver benefits to citizens in multiple other regions, and often across the whole of the UK.
- Job creation and contract opportunities for the supply chain across all sectors are also spread more widely across regions as illustrated in the map on the right.
- In terms of the energy and utilities sector, investments that can be assigned to a specific English region are dominated by the regulated water industry – this is because AMP7 continues through the majority of the first half of the investment period, whereas the gas/electricity price control periods do not (so these are not included in the pipeline).
- Investments in other areas of the regulated utilities (i.e. electricity and gas transmission and distribution) is under-reported in this pipeline due to the value of the next price control periods being unknown at this time.
    - An assumption is built into the 10-year projection for £97m to be invested in the regulated utilities over the next decade
    - As £42.7m is already specified in the pipeline, this leaves an estimated £54.3m for subsequent price control periods
- The two tables below show the planned future investments by sector and region/nation – stated in £m.

Sector	East Midlands (£m)	East of England (£m)	London (£m)	North East (£m)	North West (£m)	South East (£m)	South West (£m)	West Midlands (£m)	Yorkshire and the Humber (£m)
Electricity Distribution	**£484**	**£456**	**£300**	**£220**	**£361**	**£747**	**£390**	**£477**	**£315**
Electricity Distribution	£484	£456	£300	£220	£361	£747	£390	£477	£315
Electricity Generation	**£187**	**£143**			**£362**	**£894**	**£17,204**	**£106**	**£5,743**
Advanced Conversion Technologies	£94	£124						£106	
Energy from Waste with CHP		£19			£362	£470			
Nuclear							£17,204		
Other Generation to 2025									
Photovoltaics (Large)						£424			
Post 2025 Generation									
Wind Offshore	£93								£5,743
Wind Onshore									
Electricity Transmission						**£2,133**	**£701**		
Electricity Distribution									
Infrastructure						£2,133	£701		
Nuclear Decommissioning					**£4,593**				
Decommissioning					£640				
Infrastructure					£950				
Operations					£534				
Waste & Materials Management					£2,469				
Oil & Gas									
Oil & Gas									
Water and Sewerage		**£2,530**	**£5,378**	**£1,183**	**£2,194**	**£3,165**	**£1,933**	**£2,572**	**£1,780**
Other		£2,530	£4,122	£1,183	£2,194	£3,165	£1,933	£2,572	£1,780
Project over £50m			£1,256						
Grand Total	**£672**	**£3,128**	**£5,677**	**£1,403**	**£7,509**	**£6,939**	**£20,228**	**£3,155**	**£7,838**

Sector	Scotland (£m)	Wales (£m)	England and Wales (£m)	Offshore (£m)	UK-wide (£m)	Grand Total (£m)
Electricity Distribution	**£542**	**£555**				**£4,848**
Electricity Distribution	£542	£555				£4,848
Electricity Generation	**£4,287**	**£29**			**£139,654**	**£168,607**
Advanced Conversion Technologies						£323
Energy from Waste with CHP						£851
Nuclear						£17,204
Other Generation to 2025					£10,395	£10,395
Photovoltaics (Large)						£424
Post 2025 Generation					£129,259	£129,259
Wind Offshore	£2,526					£8,362
Wind Onshore	£1,761	£29				£1,790
Electricity Transmission	**£6,610**	**£374**	**£6,037**			**£15,854**
Electricity Distribution	£1,655					£1,655
Infrastructure	£4,956	£374	£6,037			£14,199
Nuclear Decommissioning						**£4,593**
Decommissioning						£640
Infrastructure						£950
Operations						£534
Waste & Materials Management						£2,469
Oil & Gas				**£29,100**		**£29,100**
Oil & Gas				£29,100		£29,100
Water and Sewerage		**£1,217**				**£21,951**
Other		£1,217				£20,695
Project over £50m						£1,256
Grand Total	**£11,439**	**£2,175**	**£6,037**	**£29,100**	**£139,654**	**£244,953**

Workforce Demand Analysis from 2021/22 to 2024/25

- **This analysis does not provide an exhaustive view of future workforce demand and should be treated as an indication of potential workforce demand.**
- Estimates of future workforce demand to deliver these planned investments are derived by taking on-site labour data from samples of historic projects and programmes delivered across different sectors and schemes of varying capital intensity and applying them to the planned investment within the pipeline.
- This analysis suggests that, on average, over 425,000 people will be required over the period 2021/22 to 2024/25 to deliver the £200bn of planned investments.
- The chart below provides the annual profile of the workforce to deliver this planned investment.



- These estimates are based solely on the planned investments stated within the pipeline – they do not take into account additional projects that will become known as we move through the 2020s. This will particularly affect the Utilities sector where future price control investment post-2024 are not yet known.
- Therefore, it is likely that future workforce requirements will increase as new projects are approved via a future Spending Review and new private sector projects are brought to market.

About the pipeline

The pipeline includes (but are not limited to) a broad range of works across infrastructure and construction such as:

- construction work including building, design & build and civil engineering contracts
- repair and maintenance services
- architectural, construction, engineering and inspections services
- consultancy services

The pipeline is split into two sections:

- The **Procurements** section is made up of work packages that are planned to go out to market for procurement during the 2021/22 financial year. It contains details of more than 400 contract opportunities (none of these projects relate to the energy and utilities sector (outside of nuclear decommissioning).
- The **Future Investments** section includes details of planned investment on announced projects. It contains details for 528 individual projects, totalling around £400 billion (£200bn of which will occur by 2024/25).

  Although this gives the best available indication of planned investment, it does not provide a full picture over the long-term as future price control periods for the regulated utilities have not been set for the period beyond 2022/23.

However, as new projects and programmes are approved – particularly subsequent price control investments within the utilities – these investments will rise further.

Additional labour market resources

- A range of labour market and skills-related resources are freely available on our website at:

https://www.euskills.co.uk/our-services/skills-solutions/sector-skills-research-and-market-intelligence/

- Member companies of the Energy & Utility Skills group can access additional resources here:

https://www.euskills.co.uk/membership/members-area/sector-insights/

- For further information on the data contained in this summary, or to discuss how the labour market may affect your organisation's talent attraction and retention strategies, please contact:

Rob Murphy

Workforce Planning Consultant

rob.murphy@euskills.co.uk

07834 751608