Briefing 7: The scale of the required investment and potential jobs created

The following briefing note summarises some of the key findings and recommendations from NEF's recent report for Hampshire County Council, 'A Green Economic Recovery for Hampshire'. For the full report see Hampshire 2050/NEF

Background

Transitioning to a net-zero economy heavily relies on decarbonising our built environment, which is responsible for almost 30% of the UK's total emissions and 24% of overall emissions in Hampshire.[1] Estimates place the scale of investment needed to retrofit our homes at over £65bn, with further funding required to scale up the supply chain.[2]

This briefing puts forth NEF's recommendations to Hampshire County Council to tackle this challenge, focusing on both the scale of the investment required for Hampshire, and the potential jobs created.

Recommendation: Assess the investment required to decarbonise Hampshire's housing stock, and the local low-energy construction skills and supply chain

NEF recommended that the council undertake a thorough assessment of the investment required to decarbonise Hampshire's housing stock, as well as the potential bill savings associated with doing so, the financial profile of occupants and owners, and the applicable financing options for each property.

Acting on this recommendation, the council commissioned Parity Projects to compile estimates of the total investment needed to undertake energy-efficient retrofits in the county for the housing stock to reach net zero per property. Two pathways have been modelled – one with disruptive fabric measures (i.e., accounting for internal and external solid-wall insulation, and floor insulation) and one without. The scale of the required investment and jobs created varies hugely between the two routes.

Table 1. Total investment in Hampshire and number of measures, by type of measure

	Without disruptive measures	With disruptive measures
Total cost (labour and materials)	£16.1 billion	£29.0 billion
Median average cost per residential property affected	£19,700	£36,400
Mean tonnes of CO_2 per property after investment	0.12 tonnes	0.009 tonnes
Average FTE jobs per year (2022–2050)	2,220	6,170

Table 2. Total investment in Hampshire and number of measures, by type of measure

	Without disruptive measures		With disruptive measures	
	Investment (£ million)	**No. measures (thousand)**	**Investment (£ million)**	**No. measures (thousand)**
Fabric	3,236	1,002	16,255	3925
Heating	10,146	602	10,020	975
Photovoltaics (PV)	2,592	2303	2,591	602
Lighting	40	636	40	636
Total	**16,014**	**4,543**	**28,906**	**6,138**

On the whole, this would mean a total investment of approximately **£16–£29 bn** for Hampshire, depending on whether disruptive or non-disruptive measures are used.[3] The non-disruptive scenario relies more heavily on the decarbonisation of the grid. However, this may be preferable owing to the lower cost and reduced disruption.

There were over 240,000 tradespeople in roofing, installation of electrical wiring and fitting, and other key construction work in 2008.[4] Since then, there has been a significant drop-off that has never recovered. This dip has disproportionately affected general builders and indicates an underlying crisis in the sector, exacerbated by a lack of new entrants and a rapidly ageing workforce.

Parity Projects has since estimated the number of full-time equivalent (FTE) tradespeople required per year of the programme, to assess the local low-energy construction skills and the supply chain.

Table 3. Average no. of FTE per year to achieve net-zero target by 2050 (domestic retrofit only)

	FTE per year (without disruptive measures)	FTE per year (with disruptive measures)
General Builders	790	1539
Insulation Specialists	300	2064
Plasterers and Renderers	18	919
Carpenters	206	198
Window Fitters	50	332
Electricians	294	423
Heating Engineers	49	129
Renewable Heat Specialists	427	418
Retrofit Coordinators	85	149
Total	**2219**	**6171**

The government's new Net-Zero Strategy also highlights the need for up to 230,000 skilled tradespeople in 2030 in the construction and heating sectors to deliver the retrofitting of houses.[5] To meet the new ambition of installing 600,000 heat pumps a year by 2028, the number of qualified installers must also rise rapidly from 3,000 to 35,000 within the next seven years.

The council can use this analysis, in combination with an assessment of the related income profile and tenure of property occupiers, to understand the applicability of different financing options in Hampshire. This can then be used to inform council strategy, and how the council communicates with its residents.

Recommendation: Bring stakeholders together to recognise the co-benefits of housing retrofit, pool relevant budgets to develop a retrofit strategy, and deliver this strategy

The council should bring together stakeholders from across departments and lower-tier authorities to recognise the co-benefits of housing retrofit. This should inform the pooling of relevant budgets to support the development of a retrofit strategy, as well as its delivery.

Enabling retrofit in Hampshire will require a holistic county-wide strategy to drive momentum across a range of key areas simultaneously. This includes implementing a plan for how to address finance, skills, and engagement. The council will need to work with other organisations to deliver on its ambitions and be well placed to respond to central government policy. Hampshire should also promote its recommendations for inclusion within Local Plans.

Analysis of the benefits should recognise the wide range of potential outcome areas, including wellbeing, health, climate change, energy security, local economic impacts and jobs, fuel poverty, deprivation, and more. Greater Manchester has adopted a similar approach, establishing a Retrofitting Task Force.[6]

Recommendation: Map the local low energy construction skills and supply chain

The council should simultaneously assess the relevant low-energy construction skills in Hampshire, as well as the energy efficiency services currently provided by Hampshire suppliers, and their capacity.

Recommendation: Map the demand for labour for retrofit against supply and identify shortages

The council should combine the analysis from this briefing's first recommendation to map skills shortages related to low energy construction. Combined with an understanding of the demand for retrofitting services, this should enable the council to better understand how existing skills and supply chains correspond to Hampshire's housing stock. Hampshire County Council can take a strategic oversight role through the one-stop shop (Briefing 1) to match demand to supply.

Summary

There is still a chasm between the rhetoric on net zero and delivery. Decarbonising Hampshire's built environment (accounting for 24% of the county's overall emissions) is critical to transitioning to a net-zero economy. Undertaking energy-efficient retrofits in Hampshire will likely require a substantial **£16– £29bn** in total, depending on the measures used. Beyond investment alone, a significant number of jobs will be created by a county-wide retrofit programme, likely rising to more than 2,000 roles per year on average to meet net-zero targets by 2050.

[1] Carbon Trust. (2020. *Analysis for Hampshire County Council.*

[2] Green Finance Institute. (2020). *Financing energy efficient buildings: The path to retrofit at scale.* London: GFI. Retrieved from https://www.greenfinanceinstitute.co.uk/wp-content/uploads/2020/06/Financing-energy-efficient-buildings-the-path-to-retrofit-at-scale.pdf

[3] This is based on a price basket for the able to pay. This estimate from Parity Project covers the cost of labour and materials and excludes disruptive measures (i.e., internal and external solid wall insulation, and floor insulation).

[4] Parity Projects. (2021). *Hampshire Pathways Report'*

[5] GOV.UK. (2021). Net Zero Strategy: Build Back Greener p. 238. Retrieved from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1026655/net-zero-strategy.pdf

[6] Greater Manchester Combined Authority. (2021). Retrofitting Task Force to drive forward plans for low-carbon homes across Greater Manchester. Retrieved from https://www.greatermanchester-ca.gov.uk/news/retrofitting-task-force-to-drive-forward-plans-for-low-carbon-homes-across-greater-manchester/