

Royal Institute of British Architects response to National Infrastructure Commission Call for Evidence

The Royal Institute of British Architects champions better buildings, communities and the environment through architecture and our 40,000 members. We provide the standards, training, support and recognition that put our members – in the UK and overseas – at the peak of their profession. With government and our partners, we work to improve the design quality of public buildings, new homes and new communities.

1. The RIBA welcomes the decision to establish the National Infrastructure Commission (NIC) and the opportunity to respond to this call for evidence on the three initial projects the commission has been asked to consider.
2. The RIBA's response to this consultation is focussed primarily on the energy infrastructure and storage question.
3. However in addition to this we would like to offer the following comments relating to the other challenges identified by the NIC.
4. **Improving the transport infrastructure of the North of England must be a priority for the NIC.**
5. The failure of successive governments to address the infrastructure gap in areas of England outside London and the South East is a major cause of the widening gap between the regions of this country.
6. The knock-on effects are also putting additional pressure on London and the South East as economic growth and investment becomes increasingly focussed on these areas, putting infrastructure under strain and fuelling demand for new homes which the market has been unable to deliver.
7. We hope that the commission will be able to look in more detail at the economic impact of poor infrastructure and make the case for greater investment in areas of the country in which investment is currently lacking.
8. **Investment in London's transport networks is welcome, but without a more integrated approach, benefits will be lost and costs increased.**
9. A number of large infrastructure projects have transformed large areas of London over the past decades. The upgrading of the London Overground network has facilitated major investment in housing and job creation schemes by opening up previously underserved areas. However, a lack of joined up thinking means that opportunities to carry out large scale place making have been missed.
10. The creation of a number of housing zones in areas near the Crossrail scheme is a welcome start, we hope that this can be given greater consideration if Crossrail 2 is taken forward.
11. **An ambitious national energy efficiency scheme represents the best investment for achieving a sustainable balance between energy demand and supply.**

12. The RIBA is very pleased the Government has recognised housing as a key infra-structure issue. However, the only way to make our built environment fit for the future is to fully integrate built environment energy efficiency within the UK's Infrastructure Plan.
13. We hope that the NIC will use this opportunity to set out an ambitious national energy efficiency scheme of buildings to be embedded within the National Infrastructure Plan, which represents the best investment for achieving a sustainable balance between energy supply and demand.
14. No other investment can stimulate as much economic growth and create jobs in every constituency in the UKⁱ. A programme to make UK domestic stock energy efficient would provide net economic benefits of £8.7 billion. This is comparable to the economic benefits of investments in HS2 Phase 1, Crossrail and new roadsⁱⁱ.
15. Deploying infrastructure funds to support a national energy efficiency programme could create up to 108,000 new jobs, doubling the number of jobs in the sector to 260,000ⁱⁱⁱ. Apart from generating significant economic growth in all regions of the UK, energy efficiency investment would also boost Britain's energy security by reducing gas imports by 26%^{iv}.
16. The benefits of investing in energy efficiency could go deeper and further than other more visible infrastructure schemes that are already being financially supported by government. The large net economic benefits outlined above excludes the added value of this approach through many of its social benefits, such as health and wellbeing improvements; and its critical ability to address national challenges of safeguarding energy security and tackling climate change.
17. The Energy Secretary Amber Rudd has called on industry and consumer groups to work with the Government to make new, stable policy and build a system that works for the longer term^v. By investing in energy efficiency building stock, Government can substitute for expenditure on more visible elements of energy investment like power stations, energy storage and the grid, through more effectively reducing demand.
18. The private sector is already paving the way towards a low carbon future. The RIBA would like to see the implementation of a very successful large scale retrofit scheme in the UK based on the successful Energiesprong model which is currently benefiting 111,000 properties in the Netherlands^{vi}.
19. The innovative whole house retrofit scheme helps homes achieve net zero energy levels through clicking on off-site manufactured building envelopes onto existing properties. It is a market driven initiative funded by savings delivered via a contractor-guaranteed energy performance contract. Plans are underway for housing associations and local councils in London, Birmingham and southern England to pilot the large scale carbon neutral retrofit of at least 1000 properties by January 2018.
20. Despite its knowledge, expertise, and established business models, the private sector is not able to implement large-scale roll out of energy efficiency measures without Government intervention. The success of

Energiesprong in the Netherlands relied on central Government starter capital which has helped develop economies of scale and enabled the business to work through any teething problems to achieve higher energy savings in energy costs than initial costs of the retrofit^{vii}.

21. Other reasons for Government intervention in driving a national energy efficiency programme are long-established. Many energy efficiency installations have a long asset life, while the private sector looks for shorter-term payback. Much of the private sector also does not consider externalities such as carbon benefits, and struggles to secure business without long term policy for energy efficiency.
22. Over £100 billion had been allocated to support infrastructure projects over the next 5 years under the Spending Review 2015^{viii}. The publicly funded investment programme should prioritise the upgrade of existing building stock, minimising the energy demand of new buildings through maximising fabric energy efficiency, and driving up standards and quality control to ensure buildings perform as designed.
23. Research has shown that if a refurbishment incorporates advanced energy-saving techniques, designed and administered by suitably trained architects, this has the potential to reduce overall energy usage in retrofitted domestic and non-domestic buildings by up to 90% with as little as 3% additional cost over a standard refurbishment that would have a relatively poor impact on energy use.^{ix}
24. There's a clear case that energy efficiency delivers value for money and added value. By accepting and embracing domestic energy efficiency as infrastructure, and something that needs to be tackled as soon as possible, the benefits could potentially go further and deeper than those offered by more visible infrastructure schemes that are already being financially supported by government.

<http://www.ukgbc.org/sites/default/files/A%20housing%20stock%20fit%20for%20the%20future%20-%20Making%20home%20energy%20efficiency%20a%20national%20infrastructure%20priority.pdf>

ⁱⁱ Based on Governments own economic analysis <http://www.frontier-economics.com/publications/energy-efficiency-an-infrastructure-priority/>

ⁱⁱⁱ Based on estimate of 136,000 sector jobs in 2012 and the creation of up to 130,000 jobs by 2027 through recycling of carbon taxes: Department of Energy & Climate Change, Energy Efficiency Strategy: 2013 Update, Dec 13; Consumer Futures, Jobs, growth and warmer homes, Oct 1

^{iv} According to Building the Future: The economic and fiscal impacts of making homes energy efficient, published by Verco and Cambridge Econometrics

^v Amber Rudd speech to Conservative Party Conference, October 2015 <https://www.politicshome.com/energy-and-environment/articles/news/amber-rudd-speech-conservative-party-conference>

^{vi} <http://energiesprong.nl/transitionzero/>

^{vii} <http://energiesprong.nl/transitionzero/>

^{viii} HM Treasury Spending Review 2015 <https://www.gov.uk/government/publications/spending-review-and-autumn-statement-2015-documents/spending-review-and-autumn-statement-2015>

^{ix} <https://connect.innovateuk.org/web/building-performance-evaluation/articles>