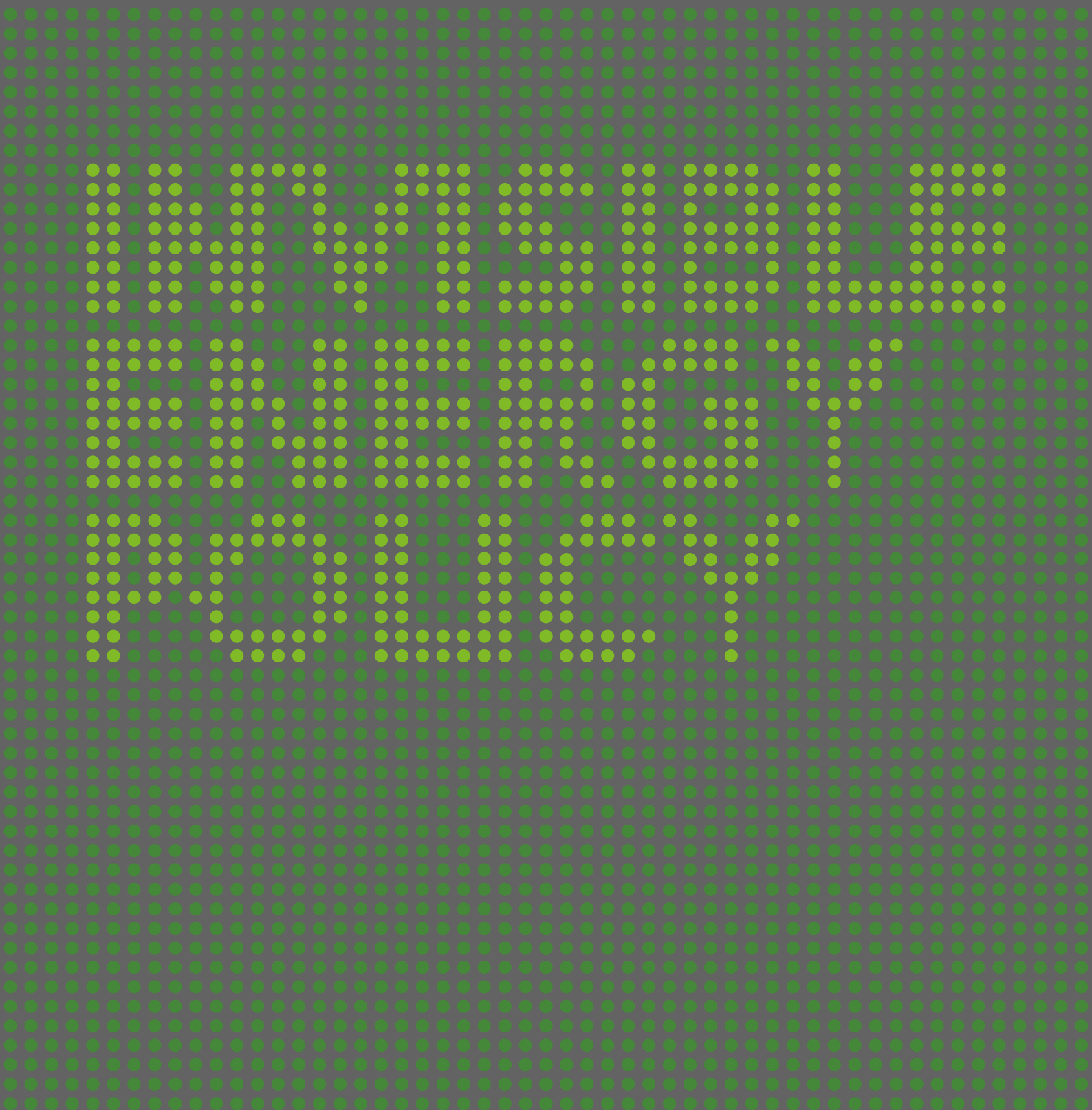
INVISIBLE ENERGY POLICY



REPORT FROM ONE-DAY CONFERENCE AT UK DEPARTMENT OF BUSINESS, ENERGY AND INDUSTRIAL STRATEGY, 20 SEPTEMBER 2017

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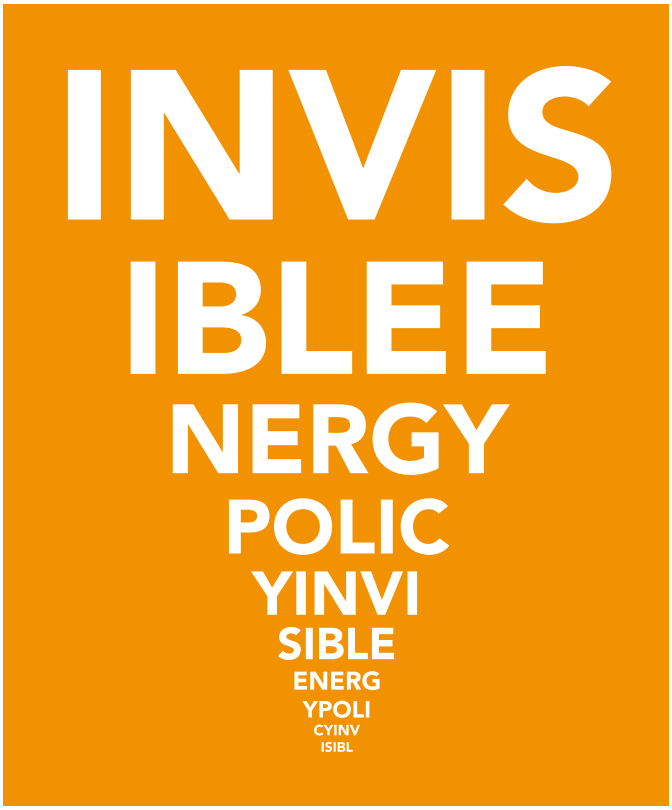
DEMAND
DYNAMICS OF ENERGY, MOBILITY AND DEMAND



This report summarises a day of discussion on 'invisible energy policy' which took place at the UK Department of Business, Energy and Industrial Strategy, London, on 20 September 2017. The report also serves as a primer on this theme, and an invitation to further dialogue about how policymakers could and should address energy demand.

What are invisible energy policies?

Invisible energy policies are non-energy policies which have unseen, unintended or unacknowledged impacts on energy demand.

Virtually all non-energy policies have impacts on energy demand, and some have very significant impacts. The organisation of education, health and welfare services all affect energy demand. Standards for building design and management that specify 'normal' indoor temperatures do likewise. Land use patterns have huge impacts on transport energy demand. And all of these patterns, standards and services are affected by policy and regulatory processes.

But the impacts of non-energy policies on energy demand rarely figure in discussions of energy policy. Instead, demand-side policies usually focus on promoting technological efficiency, and increasing consumer awareness.

Why is this a problem?

As agreed in the 2015 Paris Agreement, radical global action is required to avoid dangerous climate change. Energy demand reduction will be a crucial component of this. And this will almost certainly require more than technical fixes and individual behaviour change. Illustrative of the problem, UK final energy consumption continues to rise – it was **0.9% higher in 2016 than 2015**.

Even the UK, which is in many regards a leader in climate policy, is not on track to meet its mandatory 4th (2023-27) and 5th (2028-32) carbon budgets. The newly-announced **Clean Growth Plan** is, by the government's own calculations, unlikely to change this. And that is without noting that the UK's carbon budget targets are not compatible with the goal of limiting global temperatures rises to 1.5 degrees C, agreed in Paris. More radical action is necessary – especially on the demand side.

How do non-energy policies affect energy demand?

Both non-energy policy objectives (for example, expanding broadband provision, or introducing student fees in universities) and policy processes (that is, decision-making, planning and regulatory systems and processes) have consequences for energy demand. If we are to prevent non-energy policies from increasing energy demand, or use them as a tool for demand reduction, then we need to think about the energy consequences of both non-energy policy objectives, and of related processes and procedures.

Non-energy policy objectives can either reduce or ratchet-up energy demand. The liberalisation of planning regulations to facilitate green field development has had upward consequences for transport energy use. On the other hand, post-financial crisis austerity policies in the UK, especially constraints on public sector spending, have reduced overall growth with a corollary effect on energy demand.

Policy processes, by contrast, affect energy demand by shaping the ways in which conflicting energy- and non-energy priorities are prioritised. Often policy objectives like those of delivering health care or facilitating travel planning have unintended consequences for energy demand. However, energy is usually treated as a separate sphere: within local institutions, energy managers are often not consulted on institutional priorities, and the same applies within national governments. Hence the scope for using non-energy policies

to reduce demand is routinely overlooked because of the ways in which policy responsibilities are divided.

These problems play out, with variations, at all scales. National government policies can clearly have major impacts on energy demand, but so too, at local levels, can the policies of devolved authorities, local councils or individual hospitals or universities.

The conference focused on devolution, health, higher education and transport and spatial planning as critical non-energy policy areas which both are having, and could have, significant impacts on energy demand.

Devolution

Devolution can have positive implications for energy demand in two ways: by allowing different policy objectives to be prioritised in accordance with local needs, and by enabling more integrated planning across different policy sectors. Experience in the UK from Transport for London, Greater Manchester and the Scottish government suggests that devolution can, and could, make a significant difference to energy demand.

For example, since 2014 Greater Manchester Combined Authority has been granted powers over transport, housing, skills and business support, and health and social care, making it easier to develop integrated policies across these areas. New bus franchising powers should make it possible for Manchester to develop a more integrated public transport system, as in London, including through the introduction of an equivalent of the oyster card. Concessionary fares, though funded out of transport budgets, can be designed as an element of economic and social policy with all kinds of health and other benefits, including reducing car-dependence.

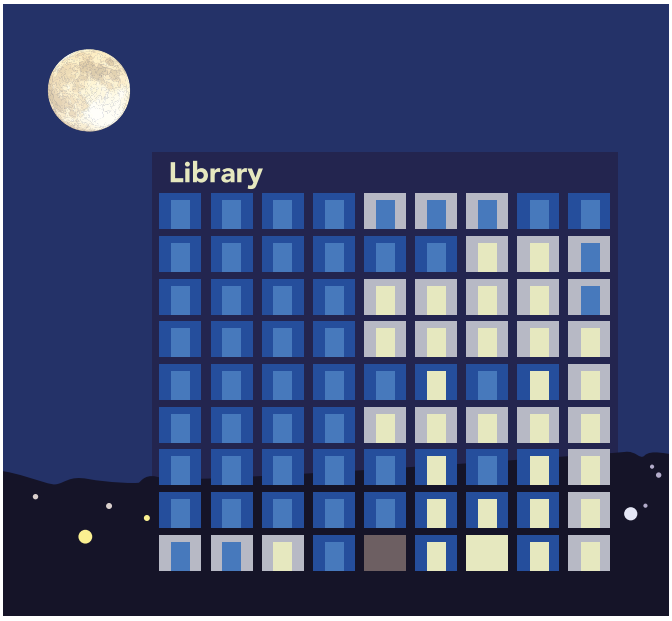
Devolution is not a simple panacea, however. Post-war in the UK, local government has mainly been viewed as an implementer of national level policies. More recently, the devolution of powers and responsibilities has not always been matched by the devolution of resources. Local authorities may not have the personnel or expertise to properly undertake joined-up planning. In addition, over the last decade local authorities have lost a great deal of capacity. Long-term certainty is also required for integrated planning, and this has often been absent within UK devolution frameworks.

Health

The NHS has the carbon emissions of a medium-sized country. Direct emissions per patient have dropped considerably in recent years, thanks to increased use of Combined Heat and Power (CHP) plants. However, **one in 20 vehicles** on the road at any one time in the UK is on NHS business. This means that the NHS is a significant contributor both to UK carbon emissions, and to the estimated 40,000 premature deaths which result each year from air pollution.

The NHS currently understands itself as in 'the health care business' rather than in 'the health business', with the result that preventative health and the negative externalities associated with healthcare are not prioritised. A shift away from this model would necessarily involve and lead to significant reductions in carbon and other emissions. In practice, this would involve changing forms of service delivery, taking many health care functions back into the community, and shrinking the hospital sector.

Though undoubtedly radical, there are precedents for such changes. Outside the UK, there exist hospitals and health systems where every unplanned admission is treated as an instance of system failure. Promoting health and reducing the demand for health care represents an important and obvious method of energy demand reduction. Equally, health sectors globally have historically achieved major successes by shifting norms around healthy living (e.g. de-normalising smoking).



Higher education

In 2009, the English higher education sector agreed to work towards a 43% cut in carbon emissions by 2020, against 2005. Yet the sector is forecast to achieve just a **23% reduction** – and most of this has resulted from grid decarbonisation, rather than universities' own actions. The sector's energy use has actually increased by 3% since 2005/06.

A large part of the reason for this has been university expansion: the universities which have grown most tend to be furthest away from the national target, while those which have shed space and jobs have been relatively 'successful' in cutting emissions. In addition, energy demand has been pushed upwards by the marketisation of UK higher education, which has led institutions to invest in, and arguably 'over-provide', energy intensive facilities and services in order to attract 'student-consumers'. As in other sectors, energy and even estates managers are rarely involved in high-level and strategic institutional planning, and are unable to challenge policies that increase demand **(Royston, 2016)**.

Yet there are opportunities for limiting higher education energy demand. The National Union of Students has a large sustainability team, which has been relatively successful in pushing energy and related concerns up universities'

agendas. More broadly, students and faculty are potentially important advocates for change, and could be more fully included in institutional planning around energy – both so as to prevent its 'siloing', and to challenge prevailing understandings of energy 'needs'.

Transport and spatial planning

Transport is a major challenge, not least because relatively little progress has been made so far in reducing transport sector emissions, despite improvements in vehicle efficiency. A switch away from fossil fuelled vehicles will obviously be vital to meeting climate change targets. But changes in patterns of demand will also be required, including changes in transport modes (with far greater use of public transport, cycling and walking) and in planning around the location of homes, workplaces and public services. Reducing energy demand requires a much closer integration of transport and spatial planning.

For example, over next two decades 220,000 new homes will be built in the **Greater Manchester region**. Where these new homes are located, what jobs and services are located near to them, and what modes of transport these new developments are connected by, will have major impacts both on the extent of mobility and on how people travel. Integrated planning around these issues could have significant impacts on transport emissions and energy demand, as well as bringing various co-benefits (around accessibility, congestion and health).

There are numerous obstacles to this kind of integrated policymaking. Patterns of ownership, weak development controls and deregulated transport systems are not conducive to integrated action on transport and spatial planning. For example, proposals from Greater Manchester Authority to manage local railway stations, in order to use them to provide social services have yet to be approved. More broadly, pro-development biases in planning processes make it harder for local or devolved authorities to control and plan the design of urban spaces.

In addition, some parts of central government are not especially supportive of integrated action. In this regard, the shortcomings of the Department for Communities and Local Government were repeatedly noted during the conference.

Can non-energy planning and policy-making be used to reduce energy demand?

Without doubt, yes. We can be confident of this for several reasons.

First, especially with regard to transport and spatial planning, policy is already widely and consciously being used to reduce energy demand – especially within some of the world's leading green cities. There is no reason that this could not be extended, either within the transport and planning sectors, or elsewhere.

Second, policy integration and mainstreaming have a rich history. For example, health and safety and equality and diversity agendas have been relatively successfully mainstreamed across many institutional policies and practices (although their implementation is an on-going challenge). By analogy, there is no reason in principle why energy demand reduction goals could not be better integrated into national and institutional policies and priorities.

Moreover, there are numerous advocates for more integrated approaches (students, issues lobby groups, community groups), as well as multiple co-benefits to such integration (relating to health, community and even economic costs).

Next steps?

We are keen to continue building understanding and debate around the scope for mobilising non-energy policies to reduce energy demand. We are open to suggestions on areas in need of further research; on any policy spaces or issues which could particularly benefit from a more integrated approach to energy demand and on policy and practitioner communities with an interest in this agenda.

Further information

The Invisible Energy Policy project is part of the **DEMAND Centre**, funded by Research Councils UK. The project is led by Jan Selby (Sussex), Elizabeth Shove (Lancaster) and Sarah Royston (Sussex). Further information on and draft publications from the project are available through the **project webpage**.

Acknowledgements

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