

Submission from the University of Exeter Energy Policy Group to the Green Recovery Consultation

From Professor Catherine Mitchell, Dr. Richard Lowes and Dr. Jess Britton

Overview and Introduction

The Energy Policy Group (EPG) of the University of Exeter welcomes the Labour Party Green Recovery Consultation. This submission broadly argues for the key recommendations made by the Innovation and Governance for Future Energy Systems project (IGov)¹. These are the essential ‘how to’ requirements for delivering what is agreed in the Green Recovery package. They enable the Execution of the Vision – something all too often missing in delivery programmes.

IGov was an Established Career Fellowship for Catherine Mitchell (2012-2019). It consisted of two parts: the first part (2012-2016) undertook analysis to show that the in situ GB governance was undermining the GB move to a sustainable energy system and meeting its GHG reduction targets. The second part, 2016-2019, established a ‘fit-for’ purpose GB governance² framework. This submission argues for the restructuring of the current governance system cost as the essential building block to delivering a sustainable, just, efficient and cost-effective energy system.

There is very little which is new in the IGov framework: most recommendations are changes to what are in place (ie new Duties on Ofgem; a rewritten SPS to align Government expectations on Ofgem³; an upgrading from Guidance to Duties on Ministries to meet carbon targets) .

¹ <http://projects.exeter.ac.uk/igov/getting-energy-governance-right-lessons-from-igov/>

² We take governance to mean the policies, institutions, rules and incentives of the GB energy system, and the ‘politics’ underlying the decisions with respect to policies, institutions, rules and so on, including the extent to which people are involved.

³ <http://projects.exeter.ac.uk/igov/new-thinking-the-lost-strategy-and-policy-statement/>

However, the two primary ‘new’ institutional recommendations – a coordinating body (we have called this an Energy Transformation Commission⁴ (ETC)); and local balancing and coordinating markets⁵ at the distribution level – are essential for a transparent, democratic decision-making process to enable delivery of a cost effective, Just Net Zero on time.

The reason why the current GB governance framework is not fit for purpose and needs to be changed is because it was set up in 1986 (fossil gas) and 1990 (electricity) to suit top down, one way system flow, large kit fossil or nuclear electricity plants, siloes from the heat and transport, passive customers who were excluded from decisions but paid for everything, a ‘distribution gap’; and in a time with minimal digitalisation and understanding of the importance of the climate crisis.

Decarbonisation of our energy systems requires different technologies (which have different scales and characteristics) and digitalisation enables a different, more efficient system operation with those technologies and scales. Increasingly much of the energy system is occurring in the distribution level (ie energy efficiency, EVs, decarbonised heat systems etc), and yet local governance is more or less ignored in the current governance system – leading to a distribution ‘gap’. Together, decarbonisation and digitalisation, creates new resource and service opportunities and new energy economics. A smart, flexible, efficient, decarbonised and just energy system is now technically possible, and economic. However, the GB governance in place often excludes, or makes ineligible, certain actions and actors thereby undermining decarbonisation and making the distributional impacts of a move to Net Zero unjust.

The IGov framework explains the negative impact of the current governance system on the move to a sustainable energy system, and sets out the steps to ‘hauling’ it up to date.

In the light of Brexit and Covid 19, it is essential that the stimulus package meets the innovation requirements of keeping Britain looking forward, delivering new jobs and well being, and inclusive change which also meets the wider goals of sustainability and erasing fuel poverty. A green recovery package should be ‘win win’ – good for society, but also good for the environment. But as we have known before, for example with the Green Deal, a policy which had good intentions can be a disaster if the details and its governance are not thought through and aligned.

This must not happen with the recovery package and therefore getting the energy governance in order is vital. IGov⁶ would argue this fit for purpose framework would be made up with (please see section below with schematics of frameworks) : a democratic decision-making process from the SoS; a coordinating body (our ETC (but could be another name), which has powers to enforce change, and has hierarchy over both Ofgem the Regulator and the Independent and Integrated System Operator (IISO)); an IISO which oversees Codes (which are reformed so that self-regulation ends) and has powers to enforce infrastructural change; a scaled back Ofgem to being an economic regulator only;

⁴ <http://projects.exeter.ac.uk/igov/wp-content/uploads/2019/04/IGov-Enabling-the-transformation-of-the-energy-system-Sept2019.pdf>

⁵ <http://projects.exeter.ac.uk/igov/electricity-market-design-5-summary-of-blog-series/>

⁶ <http://projects.exeter.ac.uk/igov/getting-energy-governance-right-lessons-from-igov/>

restructured distribution entities; restructured distribution governance to fill in the 'gap', including local balancing and coordinating markets⁷, new responsibilities on local authorities and so on⁸.

GB's energy policy needs a strong Vision and the Labour Party appears to have that in the Green Recovery Vision. However, Visions have to be executed and that needs a clear 'how to' institutional basis for it to be fulfilled. Energy governance has to be restructured and made fit for purpose. An example of the negative strength of Governance relates to Codes⁹. Codes are the basis of all action in the energy system. Anyone / any company who/which gets involved in the energy system has to sign up to them. They are self-regulating (ie by those who are involved in the energy system agree the changes through a complicated process) and therefore those that want no change (usually incumbents) are able to stop change from happening. Operating a new just energy system requires many changes but they simply will not happen while Code governance continues as it is. There are multiple examples of how governance undermines an energy system transformation.

Questions to Be Answered:

Some of your questions are answered below:

Questions:

- 1. What sectors do you believe are the priorities for investment from government, for a green recovery programme to build a stronger, more resilient future economy? How can this investment reduce regional inequalities as well as address the climate crisis and environmental degradation? And what science and technologies do we need to invest in?**

The priority policy for a green recovery is an energy efficient buildings programme. Energy efficient housing is comfortable, healthy and uses less energy. That means, even if the price of energy remains the same or rises, bills are lower. This will be vital in a post Covid 19 world. There are nearly 30 million homes which need to be upgraded. This requires an army of energy auditors and energy efficiency measure installers¹⁰. Training and skills is essential to deliver sufficient, well trained people. Building regulations need to be updated and so on. Local authorities are obvious coordinators of local work, and that can be undertaken in multiple ways. This also needs coordinating at the national level. Payment mechanisms have to be easy and cheap, preferably free. The Energyspong and KfW systems work well. A key point is to learn the lessons of the Green Deal disaster, which was complicated and expensive.

Network companies have to work with lower energy flows rather than be incentivised to have electrons pass over their networks as now. Government has to confront the issue that energy efficiency cuts the 'market' for sales and therefore companies which sell will oppose such measures. However, a reduction in fuel poverty, a just transition, and reaching the Net Zero targets all require a major demand reduction programme. Moreover, it improves energy security.

- 2. How do we support people who have lost employment during this crisis to move into environmental growth sectors? How can we ensure that such jobs are decently paid, with quality training, and offer representation by trade unions?**

⁷ <http://projects.exeter.ac.uk/igov/electricity-market-design-5-summary-of-blog-series/>

⁸ <http://projects.exeter.ac.uk/igov/new-thinking-governance-for-local-energy-transformations/>

⁹ <http://projects.exeter.ac.uk/igov/primer-energy-codes-and-licenses/>

¹⁰ Catherine Mitchell was an energy auditor and installer in the US when she undertook her Masters at the end of the 1980s.

What lessons can be learned from past programmes current support and international examples?

As said above, we need to train energy auditors and energy efficient building skills. Germany and Denmark have great skills development programmes which can be learned from. Energy efficiency is not boring. Its actually very high tech. Triple glazed, argon filled windows have to be installed in the house with exact dimensions. Building becomes much more exacting. There are of course multiple views about how to deliver an energy efficient house. The EPG view is keep it simple. One of their members (Catherine Mitchell) has a very energy efficient house which is basically very good insulation (external walls; attics, under floor), triple glaze windows, thermal heat. Another EPG member (Richard Lowes) has similar but a heat pump. Both have cut their energy use by 80-90%. Building up a good supply chain of trades / builders for energy efficient houses is the key to success. These need to be seen as high quality and high skilled jobs requiring what effective regulatory framework. There needs to be an effective post building / refurbishment building control to ensure adequate levels are met. This latter point will require more funding for local authorities.

3. How should sector-specific support for business during this crisis be used to both protect and promote employment and to pursue our climate and nature objectives?

From now on, no Government money should be forthcoming for anything which is not sustainable.

4. What is the scope for redeploying people from industries which are facing crisis? What are the models of retraining and support which should be examined? Do you know of examples of programmes which have been effective in enabling redeployment; and what can we learn from programmes that have not been effective?

This is not our area. Germany has a Coal Commission which is retraining coal miners. We think with a dynamic buildings programme that people can be retrained fairly easily. For example, plumbers used to putting in gas boilers can move to heat pumps etc. Initially the retraining can be focused in areas of high unemployment. Coordination is going to be vital. This is why IGov argued for a new coordinating delivery body. One of the key issues to be resolved is what to do with the gas networks – which we pay a lot of money each year. Another is how to roll out energy efficient buildings. According to the CCC, electricity should be decarbonised by 2030; gas by 2040 and transport by 2050. This needs a coordinating body and skills / retraining is an essential part of that. As said above, Germany and Denmark are good examples of skills. Netherlands is a very example of transforming the urban infrastructure to cycling and public transport.

5. Given the regional and area-based impacts of this crisis, what role can a green recovery play in mitigating these impacts? What are the lessons of past environmental interventions in terms of local and regional impacts?

Again, environmental impacts are not really our area. With respect to local and area based implications for institutions, we would argue that local governance has never really been enabled and is a critical component¹¹. Jess Britton¹² is the EPG expert on local authorities. She would be very happy to talk through details.

¹¹ <http://projects.exeter.ac.uk/igov/new-thinking-governance-for-local-energy-transformations/>

¹² http://geography.exeter.ac.uk/staff/index.php?web_id=Jessica_Britton

6. How can we help existing businesses, including SMEs, to adapt as a result of the crisis, including through measures for a green recovery? How can these measures be allied to the improvement of productivity and viability for these companies?

7. How can measures you are proposing in this recovery and renewal period improve quality of life—for example around walking, cycling and public transport, and improving access to nature? What habitats are you especially concerned about and want to see more support for and focus on?

We see GHG reduction measures as improving well being and environment. Urban restructuring to enable greater green space and cycling is an essential part of that. Again, devolving actions down to local areas are necessary for input from people – who have to live and pay for the green recovery.

8. In providing responses to 1-7, please can you indicate to us what considerations of cost-benefit analysis are relevant (and, if such analysis has not been undertaken, what sources of information would be necessary to understand costs and benefits); and which institutions would be required to enable effective delivery? In particular what is the role of public and private investment and different ownership models?

All models show the ‘clean and green’ pathways are cheaper than BAU, and that is because of the high level of energy demand reduction. Once demand comes down, then expensive infrastructure needs come down etc.

We believe in markets but we also think that there needs to be more direction. More direction is going to be vital to meet the Net Zero targets by 2050. IGov argued for a new balance between regulation and markets¹³. So: Government sets where to go, taking all decisions that have major distributional impacts. Then markets can come in. Private investment can be useful and vibrant. Take Octopus with its Agile tariff. This means that customers are paid not to use energy at peak times. On the other hand, complex coordination issues like delivering a net zero energy infrastructure needs to be done by a State Owned body – otherwise the conflicts of interest are too great. An energy efficient building programme should be based on something like the German kfW programme which is money from Government, lent out at 1% or so via local banks to domestic owners / companies / local authorities. This is the opposite of the Green Deal which was all about ensuring a long term return, well above bank rates, to a few private financial investors.

This new direction is a combination of direct democratic decision-making by the SoS; regulatory reform with Ofgem taking up a new role; and the new role of the IISO ensuring adequate infrastructure decisions, taken to meet the CCC recommendations for budgets.

9. What are the key institutions including business, local government, trade unions who should play a role in delivering a green recovery? Are there particular lessons that should be learnt about effective delivery? Local people know their communities better than Westminster. What steps do we need to introduce to empower local communities to be able to tailor the provision to suit their needs?

The IGov framework deals with this and the main institutional frameworks are set out below as schematics taken from <http://projects.exeter.ac.uk/igov/new-thinking-the-igov-institutional-framework-for-energy-governance/> .

10. What other issues/points do you think are important? What are the Covid-19 challenges of delivering such a programme and how might they be overcome?

¹³ <http://projects.exeter.ac.uk/igov/getting-energy-governance-right-lessons-from-igov/>

This is all about people being part of this societal transformation. It needs an inclusive Vision and then it needs huge support and discussion throughout GB. For those of us old enough – the energy part of it is rather like the changeover to north sea gas from town gas. The transformation to a post covid, just, non-racist society which has well being at its heart encompasses sustainability. There will have to be a rebalancing of expenditure and tax. This again is not our area but we are impressed with New Economics <https://neweconomics.org/>.

Conclusion

IGov was a 7 year project and delivered about 600 pieces of work.

This submission is a brief recap.

We would be happy to discuss any more of this in detail.

Best Wishes,

A handwritten signature in black ink, appearing to read 'C Mitchell', written in a cursive style.

Professor Catherine Mitchell (for also Dr. Richard Lowes and Dr. Jess Britton).

Governance Figures:

There are 5 governance figures: as the system is now; what we propose at the national level; local governance; market governance; and all 3 areas together in a summary governance framework.

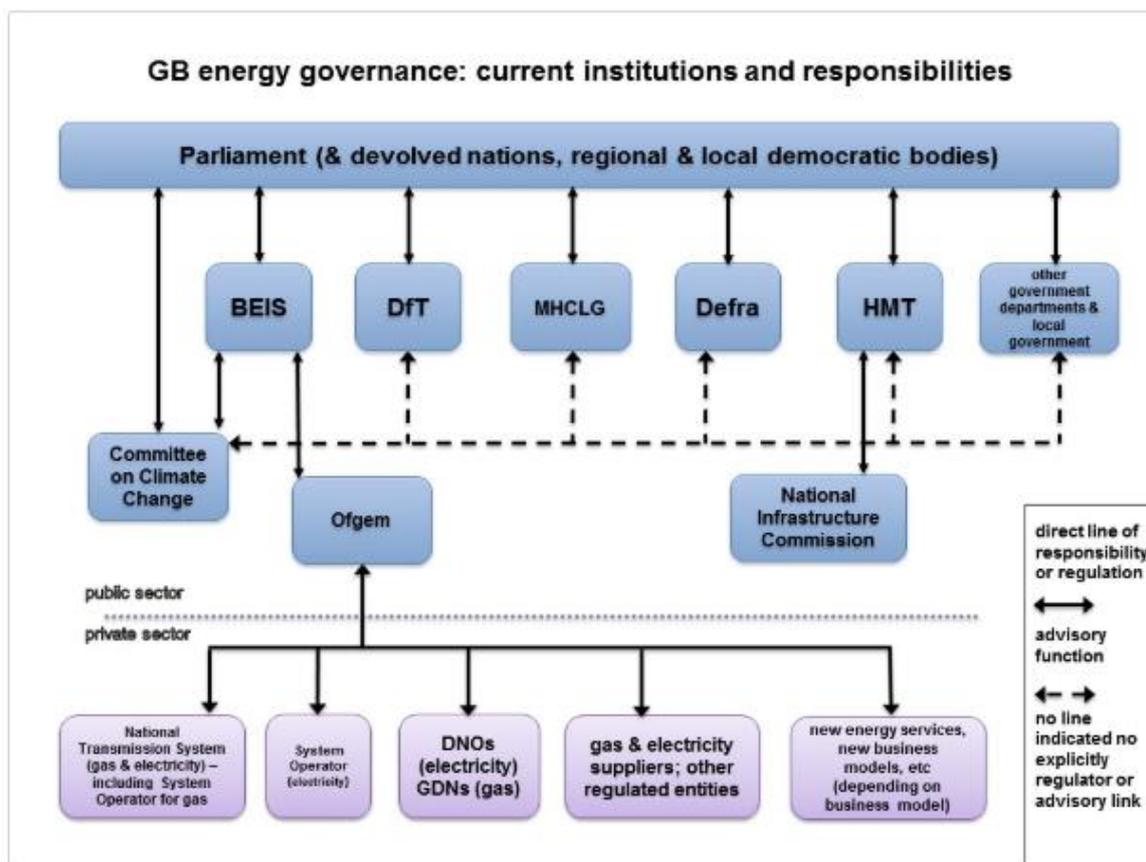


Figure 1 GB Energy Governance: current institutions and responsibilities

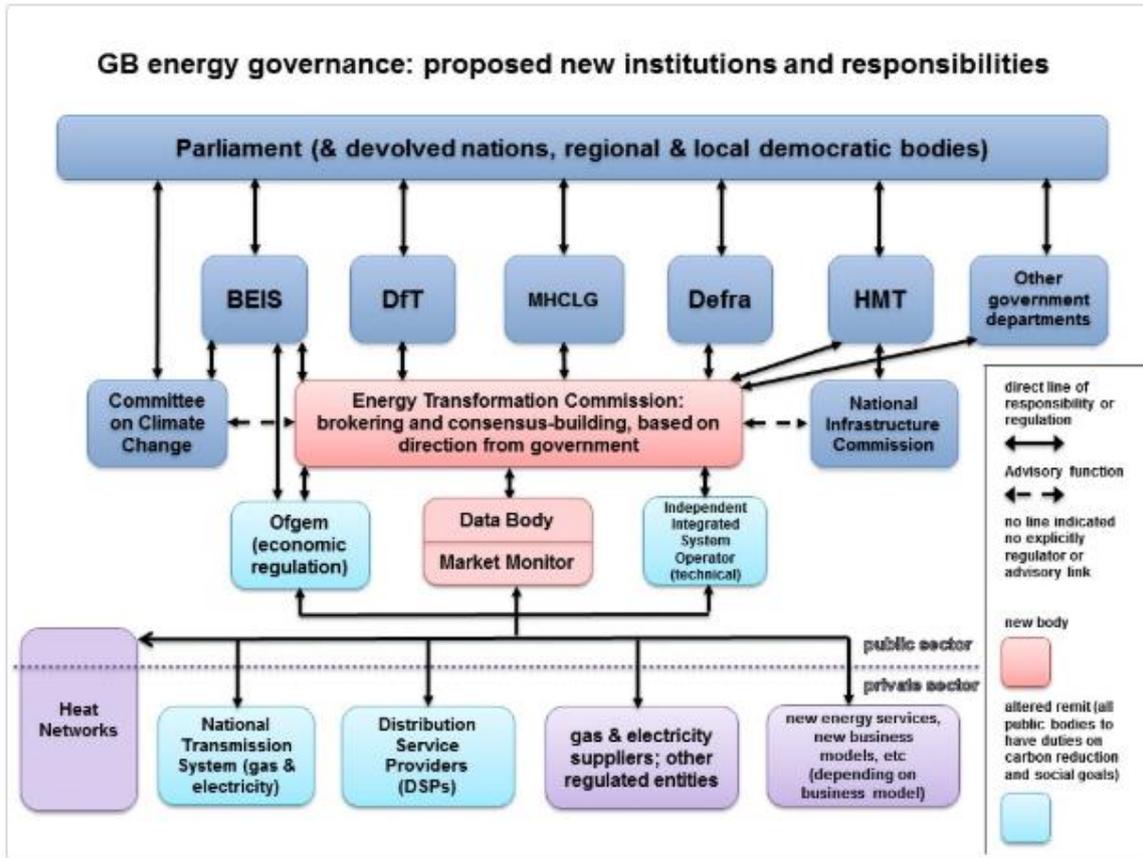


Figure 2 Proposed new institutions and responsibilities

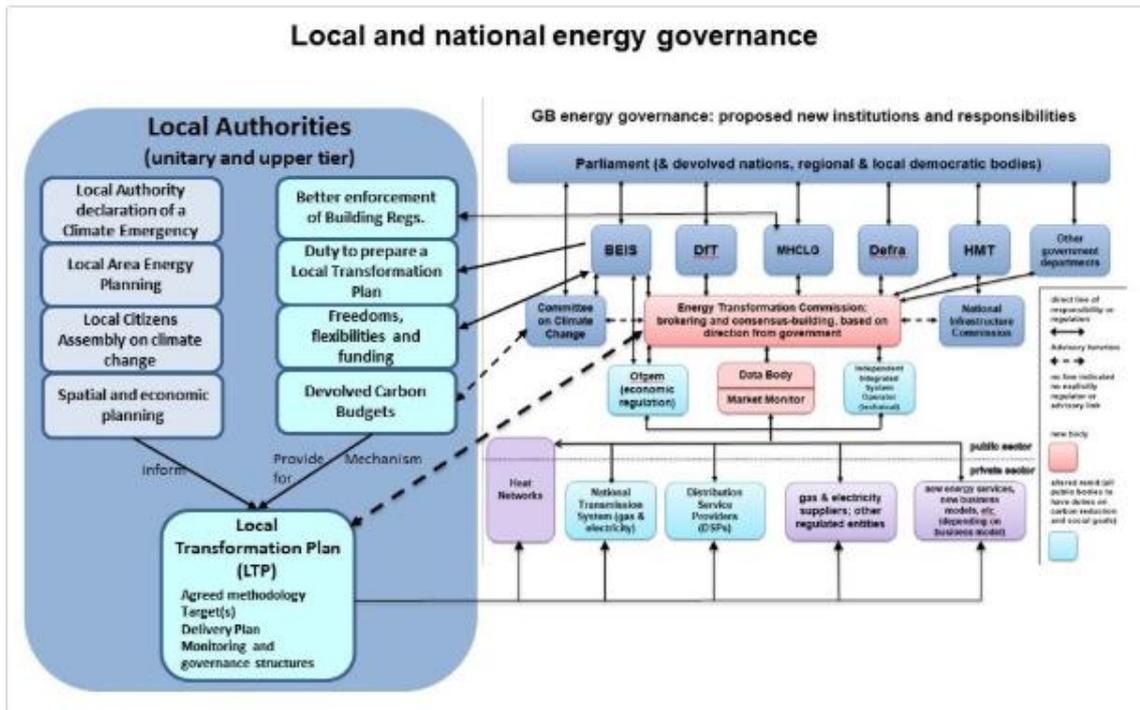
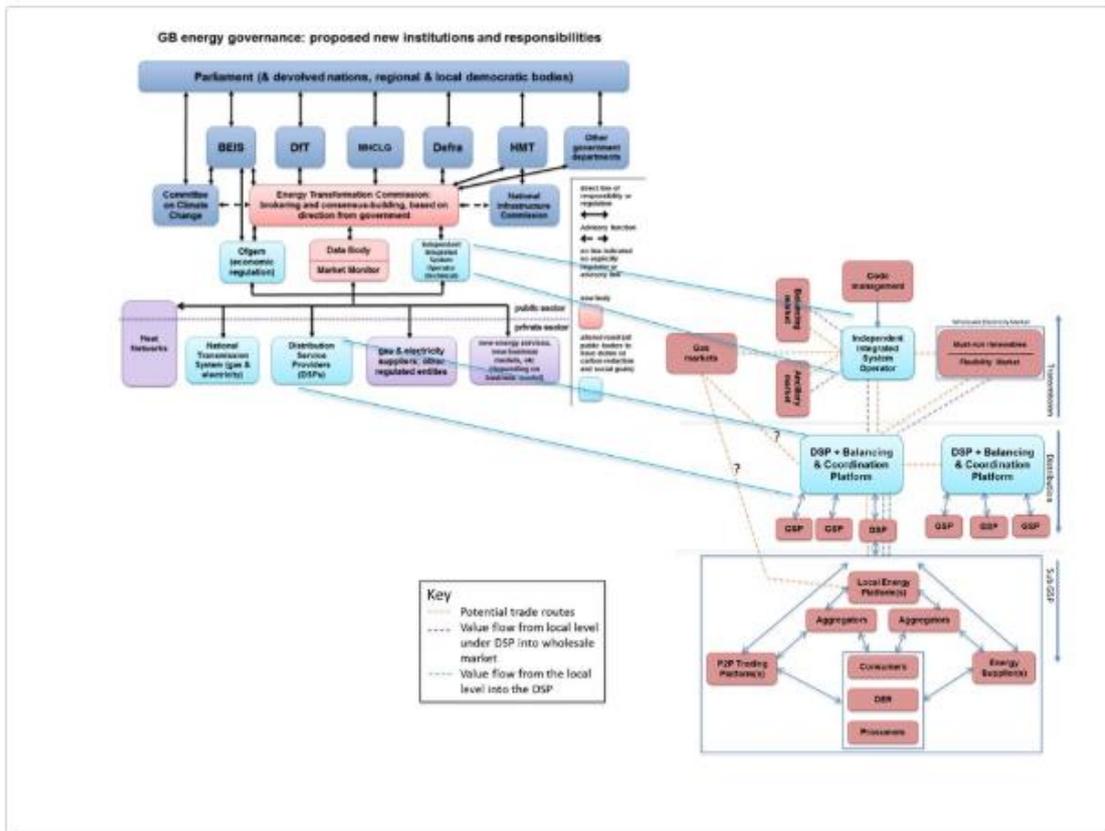


Figure 3 Local and national governance

Figure 4 Link between market Design and Wider GB Energy Governance Framework



References

Shortcut to key IGov findings: <https://projects.exeter.ac.uk/igov/shortcut-to-key-igov-findings/>

Particular key findings document sites and links to full PDFs:

- 1) Getting energy governance right: Lessons from IGov <http://projects.exeter.ac.uk/igov/getting-energy-governance-right-lessons-from-igov/>

Full PDF: <http://projects.exeter.ac.uk/igov/wp-content/uploads/2019/08/IGov-Getting-energy-governance-right-Sept2019.pdf>

- 2) Briefing: Enabling the transformation of the energy system <http://projects.exeter.ac.uk/igov/enabling-the-transformation-of-the-energy-system/>

Full PDF: <http://projects.exeter.ac.uk/igov/wp-content/uploads/2019/04/IGov-Enabling-the-transformation-of-the-energy-system-Sept2019.pdf>

- 3) Governance for local energy transformations <http://projects.exeter.ac.uk/igov/new-thinking-governance-for-local-energy-transformations/>

- 4) Electricity Market Design 5: Summary of blog series <http://projects.exeter.ac.uk/igov/electricity-market-design-5-summary-of-blog-series/>

- 5) The IGov institutional framework for energy governance <http://projects.exeter.ac.uk/igov/new-thinking-the-igov-institutional-framework-for-energy-governance/>

- 6) IGov Primers <http://projects.exeter.ac.uk/igov/igov-primers-some-of-our-key-themes-and-reads/>

- a) IGov Primer – Fit for Purpose GB Energy Governance Framework <http://projects.exeter.ac.uk/igov/primer-fit-for-purpose-gb-energy-governance-framework/>

Full PDF: <http://projects.exeter.ac.uk/igov/wp-content/uploads/2019/02/Primer-Fit-for-Purpose-GB-Energy-Governance-2.pdf>

- b) IGov Primer – The UK Capacity Market <http://projects.exeter.ac.uk/igov/primer-the-uk-capacity-market/>

Full PDF: <http://projects.exeter.ac.uk/igov/wp-content/uploads/2019/12/Primer-Capcity-Market.pdf>

- c) IGov Primer – Local energy and the changing role of people
<http://projects.exeter.ac.uk/igov/primer-local-energy-and-the-changing-role-of-people/>

Full PDF: <http://projects.exeter.ac.uk/igov/wp-content/uploads/2019/12/Primer-Local-energy-and-people.pdf>

- d) IGov Primer – New York State Reforming the Energy
Vision <http://projects.exeter.ac.uk/igov/primer-new-york-state-rev/>

Full PDF: <http://projects.exeter.ac.uk/igov/wp-content/uploads/2019/02/Primer-NYS-REV-1.pdf>

- e) IGov Primer – Energy System Change in Eastern Australia
<http://projects.exeter.ac.uk/igov/primer-energy-system-change-in-eastern-australia/>

Full PDF: <http://projects.exeter.ac.uk/igov/wp-content/uploads/2019/02/Primer-Australia-2.pdf>

- f) IGov Primer – Distribution Service Providers and valuing Distributed Energy Resources
<http://projects.exeter.ac.uk/igov/primer-dsps-and-valuing-der/>

Full PDF: <http://projects.exeter.ac.uk/igov/wp-content/uploads/2019/02/Primer-DSPs-and-Valuing-DER-1.pdf>

- g) IGov Primer – Energy Industry Codes and
Licenses <http://projects.exeter.ac.uk/igov/primer-energy-codes-and-licenses/>

Full PDF: <http://projects.exeter.ac.uk/igov/wp-content/uploads/2019/01/Primer-Energy-Codes-and-Licenses-Sept-2019-1.pdf>

- h) IGov Primer – RIIO <http://projects.exeter.ac.uk/igov/primer-riio/>

Full PDF: <http://projects.exeter.ac.uk/igov/wp-content/uploads/2019/12/Primer-RIIO-.pdf>