

Rescaling energy – do places matter for net zero energy systems?

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What's coming up

- Multiple drivers are refocussing policy and practice on the local level in energy system change.
- Arguably local economic growth framing dominant – emphasis on scalability
- Local energy and place-based often used interchangeably but not necessarily in alignment.
- Local governance of energy system change is complex and messy but local governments likely to be central players in mediating change, coordinating and sometimes taking a more central role.
- Lack of structuring of energy governance across tiers is limiting self organising capacity of local areas.

Sub-national climate action

- Increasing recognition of scope for municipalities to contribute to accelerating transformation (Wolfram, 2016; Amundsen *et al.*, 2018).
- UNEP 2018 Emissions Gap report - potential for non-state and sub-national actors to enhance ambition and bridge 2030 emissions gap
- Municipalities framed as key sites of action:
 - responsible for many of the services and infrastructure central to decarbonisation efforts
 - better connected, than other scales of governance, to multiple stakeholders in the area
 - in a position to understand the dynamics of local politics, communities and economies.



Renewed local momentum: Climate Emergency declarations

- 3/4 of UK district, county, unitary & metropolitan councils have declared a Climate Emergency
- Net zero targets often more ambitious than UK Government
- >85% of the UK population lives in areas that have declared a climate emergency
- Impacts still to be determined...

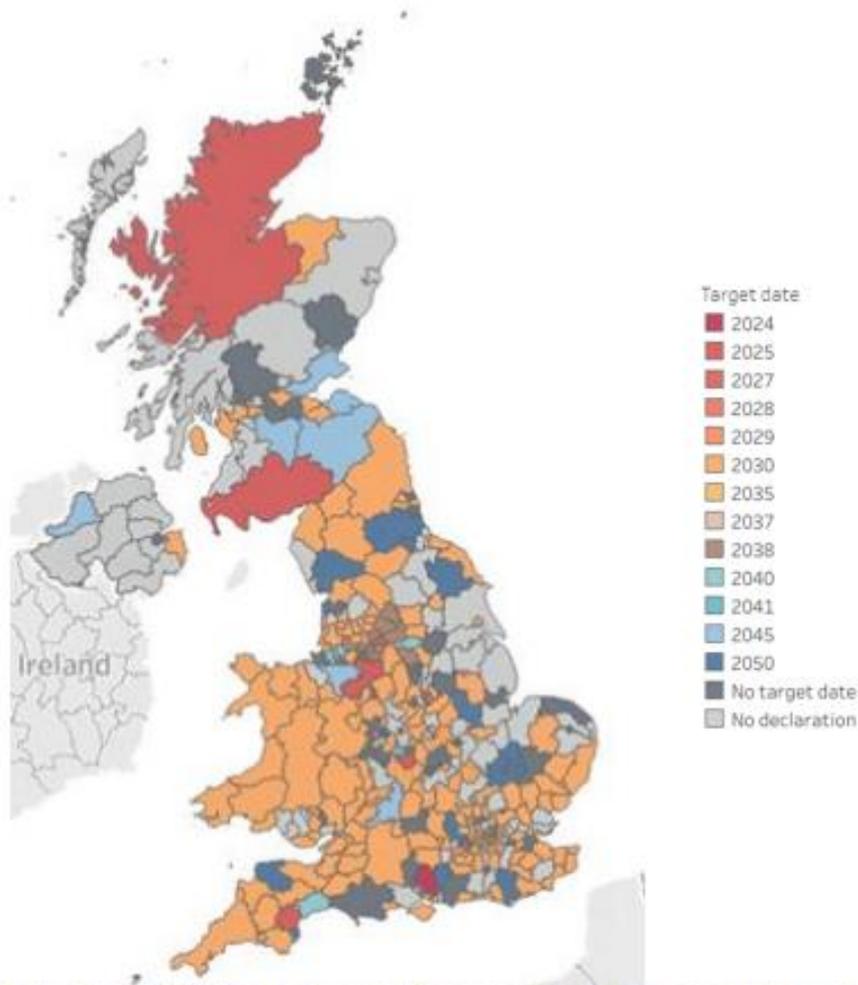
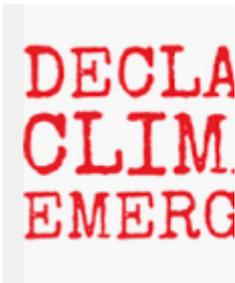


<https://www.climateemergency.uk/blog/map-of-local-council-declarations/>

Renewable energy

Figure 1.1 Local Authority climate emergency declarations

- 3/4 of UK local authorities have declared
- Net zero targets
- >85% of local authorities have a climate emergency declaration
- Impacts on the environment



Source: Map by Aether (2020) Progress towards UK local climate emergency targets based on Climate Emergencies declared as at October 2020.
Notes: dates shown are earliest targets, some relate to council emissions rather than area-wide emissions.

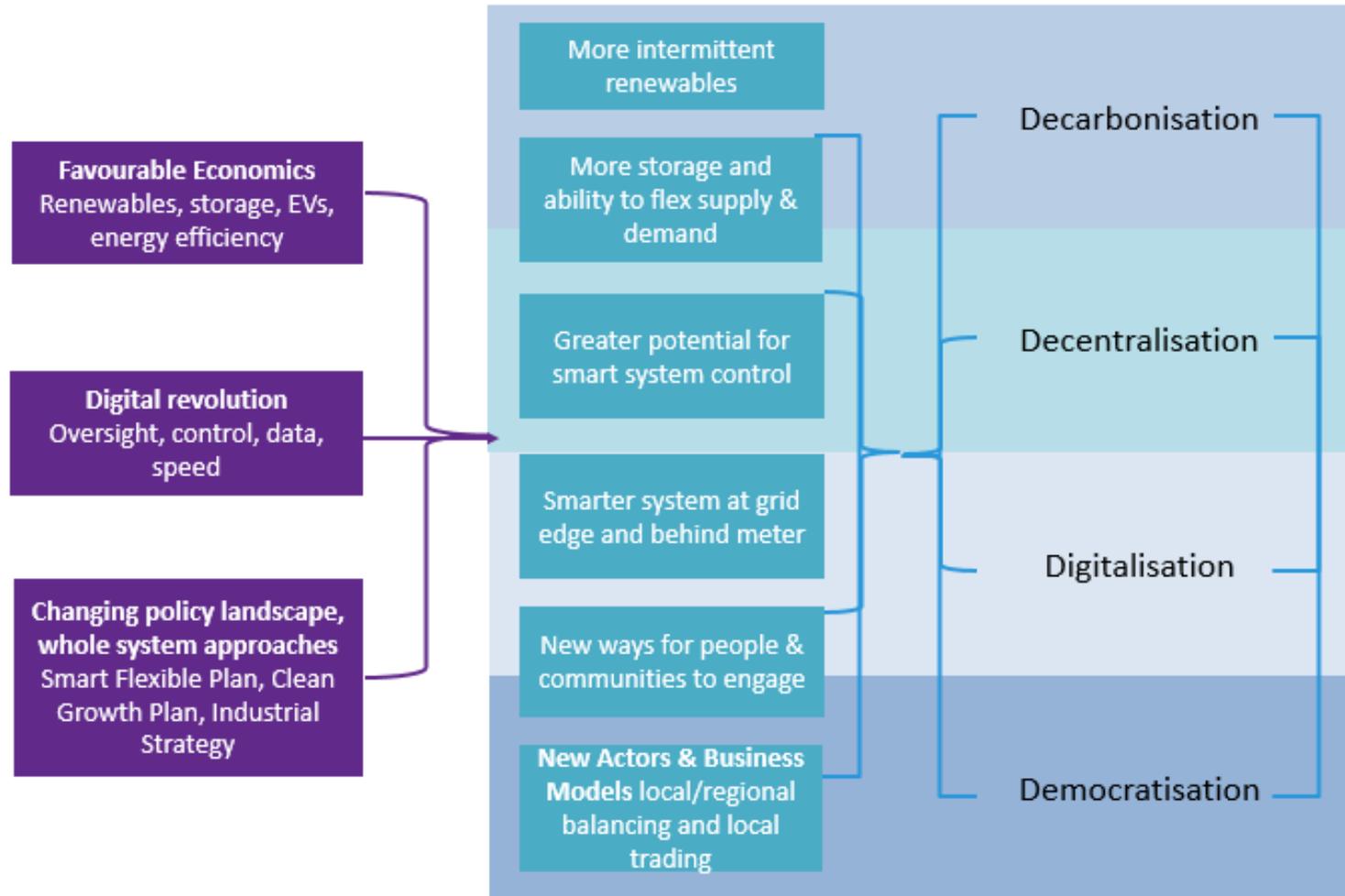
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4D momentum in energy system change



Are you local? An emerging agenda

- Local energy rarely referred to prior to 2017
- 2017: Industrial Strategy, Clean Growth Strategy, Smart Systems and Flexibility Plan, LEPs energy strategies, BEIS Local Energy Hubs (5)
- Shift from ‘active citizens’ in community energy to ‘active consumer/prosumers’ (Devine-Wright, 2019).



**INDUSTRIAL
STRATEGY**

**The Clean
Growth Strategy**

Leading the way to
a low carbon future



**Upgrading Our
Energy System**

Smart Systems
and Flexibility Plan

July 2017



SLES: Place-based needs vs scalable, replicable models

- Evolved into smart local energy systems narrative.
- *'Local energy is increasingly used to describe multi-actor partnerships to promote local economic growth, job creation, and skills development, as well as to develop replicable, scalable business models' (Bridgeman et al. 2019).*
- *'Local energy projects are energy related activities, initiatives or investments responding to place-based needs or opportunities' (EnergyRev, 2020)*
- 'dual spatial focus...both inwards to address local needs and outwards to provide replicable models to be deployed elsewhere' (Devine-Wright, 2019)

How is this being realised in practice?

- Prospering from the Energy Revolution programme: aims to prove investable, scalable local business models by 2022.
- Local area energy planning
- Local energy market trials
- Novel financing approaches

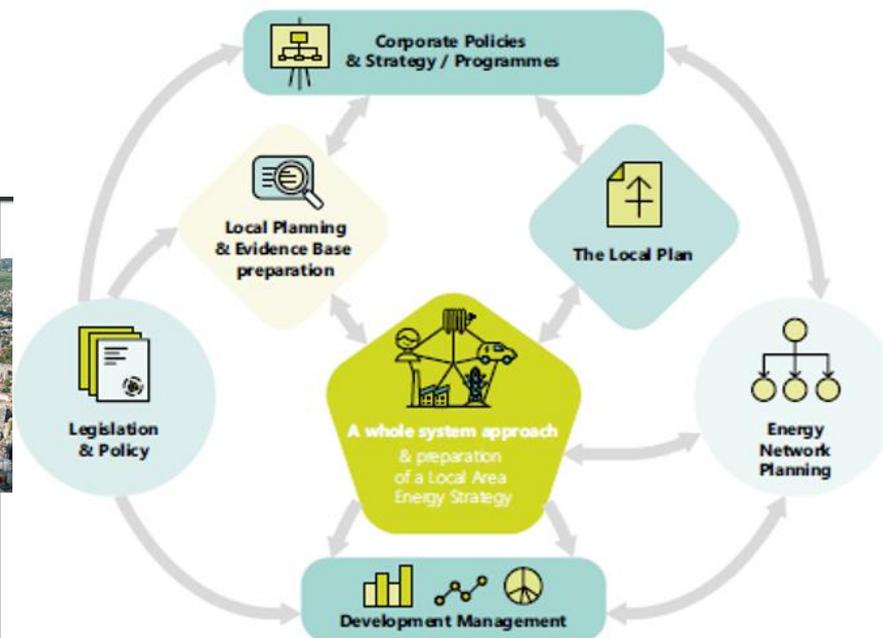


Prospering from the Energy Revolution

Unlocking the potential of intelligent local energy systems for the UK



Local Energy Oxfordshire



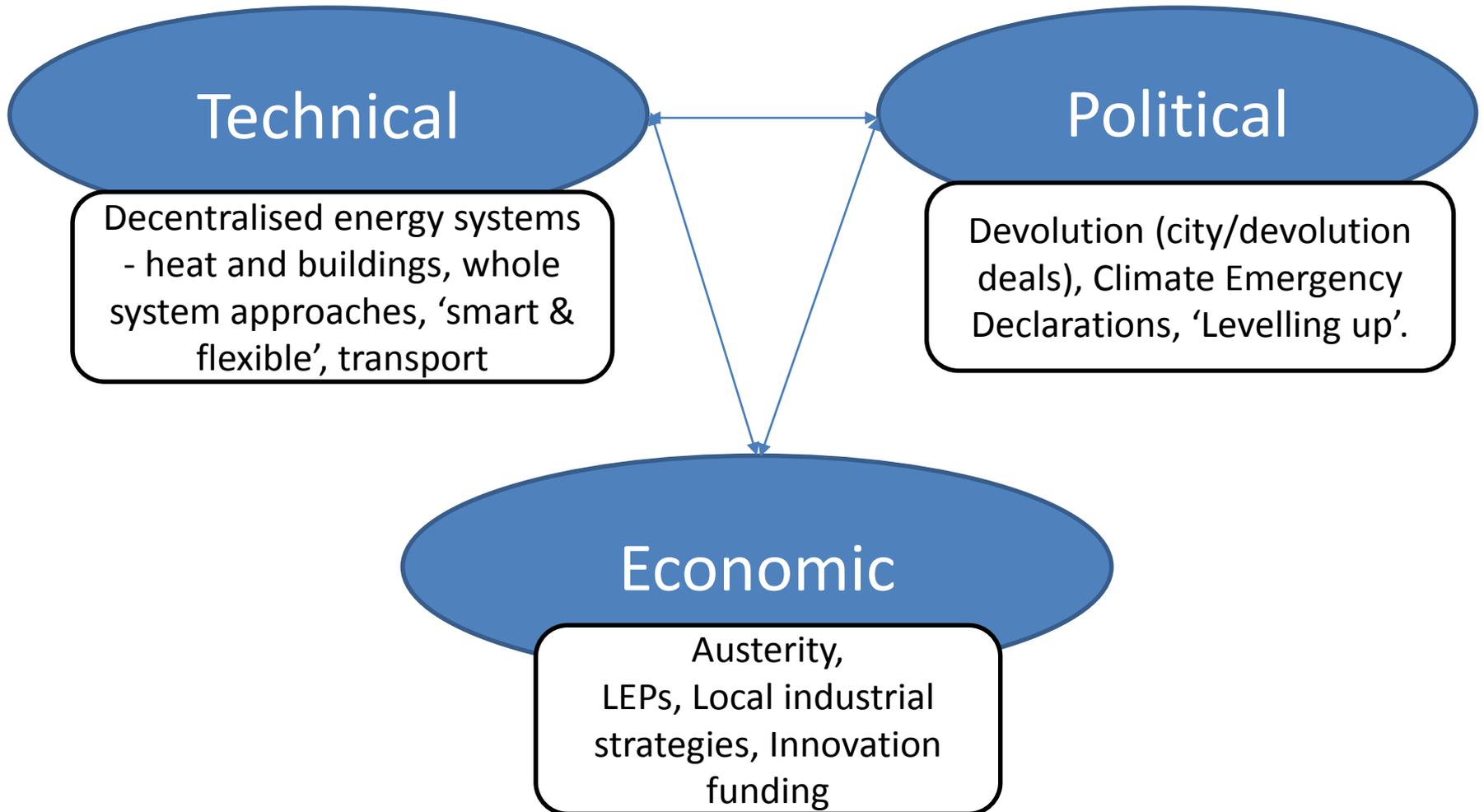
<https://es.catapult.org.uk/wp-content/uploads/2018/12/Local-Area-Energy-Planning-Guidance-for-local-authorities-and-energy-providers.pdf>

How is this being realised in practice?

- Focus on local pilots and experiments via partnerships
- Need to fit projects to green growth narrative. LEPs prioritising 'big ticket' energy projects (Britton & Woodman, 2014)?
- Evidence suggesting that smart local energy projects favour technological innovation over direct consumer or public participation (UKERC, 2018).



But drivers are not just technical: a range of interlinked decentralisation trends are at play



Are these drivers aligned?

- Emphasis on technical and economic decentralisation limiting attention on formal governing
 - Reliance on ideas of networked governance (hollowed out state)
 - Devolution processes assumed to support place-based priorities but difficult within current energy system structures.
 - Evidence of very patchy activity (Tingey and Webb, 2020)
- Self-organising properties of local networks limited by both lack of wider governance and wider energy system structures



What does this look like in practice?

- Self-organising properties of urban energy systems constrained by lack of vertical structures.
 - No local government duties on decarbonisation and energy system change.
 - No formalisation of local energy planning responsibility, including zoning for heat to provide long-term certainty.
 - Limited integration of DNO and other local actors (starting through improved stakeholder engagement but needs to be embedded in price control deliverables).
 - Ongoing difficulties in embedding decarbonisation in spatial planning – planning system now in flux with fewer, not more, strategic planning powers likely to be held locally.



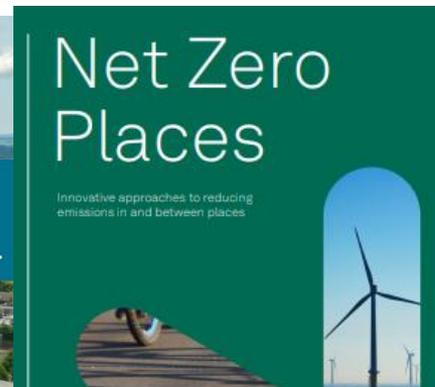
Urban governance literatures and the shadow of hierarchy

- Networked governance approaches can often fail in practice (Castan-Broto & Westman 2020).
- Increasing rejection of binary ideas of state institutions or networked governance – focus on interconnections between the local and other scalar locations (Bulkeley and Betsill, 2013).
- Experiments: often limited scaling-up or scaling-out (Hölscher *et al.*, 2019). Embedding requires new actor relations/networks, contestation of existing logics, and the parallel construction of new rationalities. Many of these changes need to happen across scales for energy.
- Networked governance approaches require: strategic approach, rules of the game, trust, ability to self-organise and take local action: often involves a ‘shadow of hierarchy’.

Increasing calls for clarity on ‘local’ role in energy system change

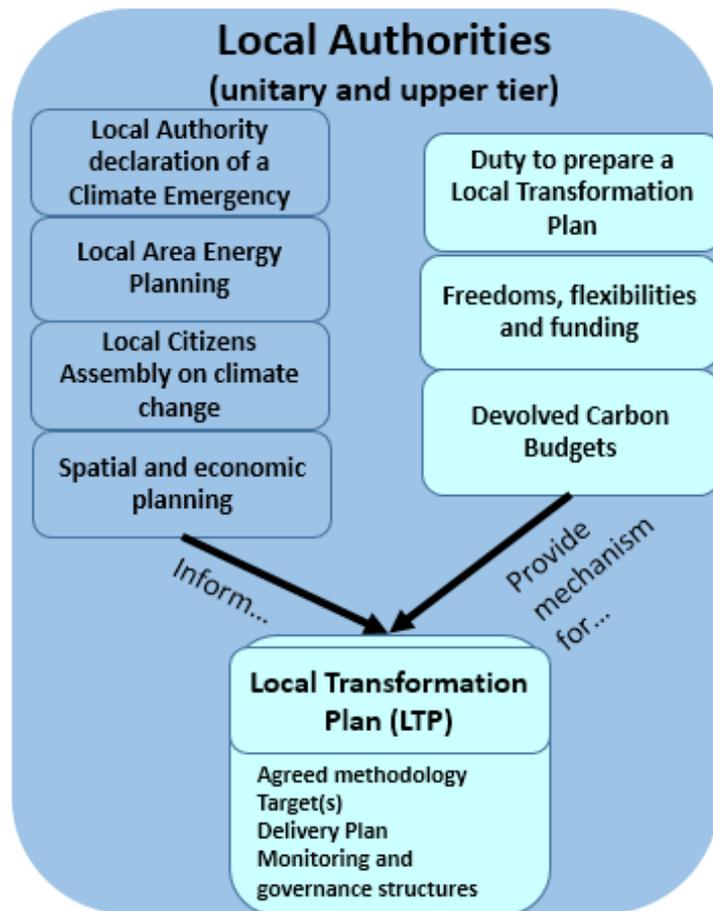
- IGov 2019 – local framework in context of wider changes
- CCC 2020 - Local Authorities and the Sixth Carbon Budget
 - Framework, Financing, Flexibility, Facilitation
 - Stops short of recommending devolved carbon budgets
 - Similar calls from Regen, ESC, Green Alliance
- But structures of energy system also need attention

<https://www.theccc.org.uk/wp-content/uploads/2020/12/Local-Authorities-and-the-Sixth-Carbon-Budget.pdf>

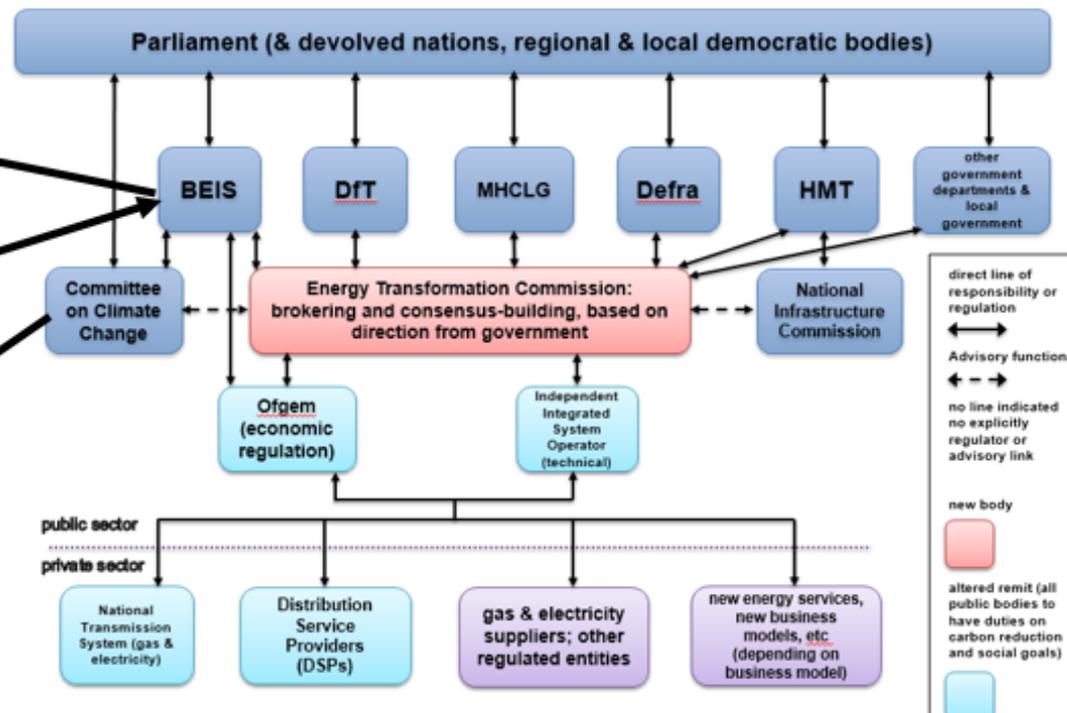


IGov local framework

- Despite renewed role much activity still 'voluntary' and patchy
- Lack of clear relationships between tiers of governance or other energy system actors



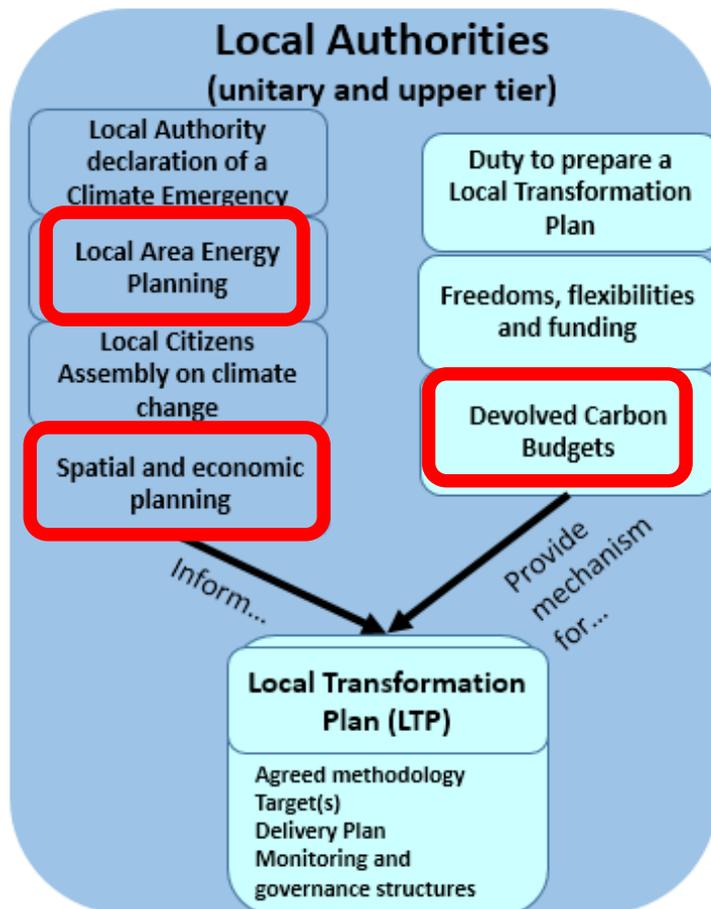
GB energy governance: proposed new institutions and responsibilities



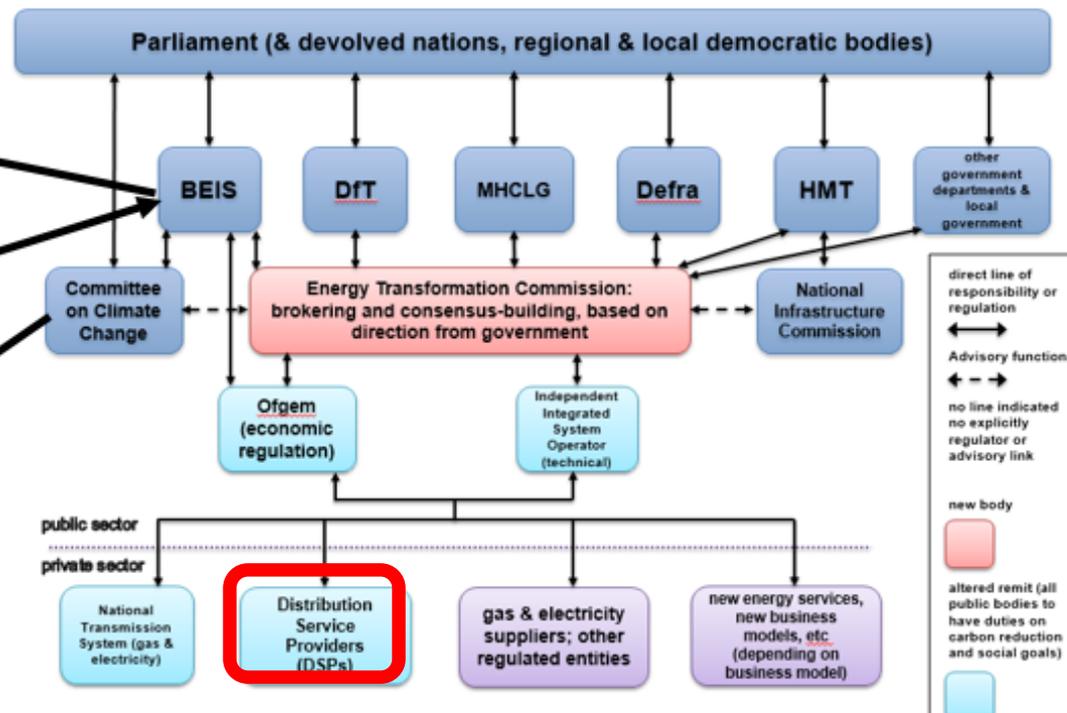
New Thinking For Energy

IGov local framework

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GB energy governance: proposed new institutions and responsibilities



New Thinking For Energy

Conclusions

- Processes of energy system change are increasingly configured and governed locally.
- Overarching focus on experiments and scalability.
- A lack of structuring of energy governance likely to limit self organising capacity of local areas.
- Creating a shadow of hierarchy could paradoxically support place-based governance of energy system change.



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