

Direction-setting for energy system transformation

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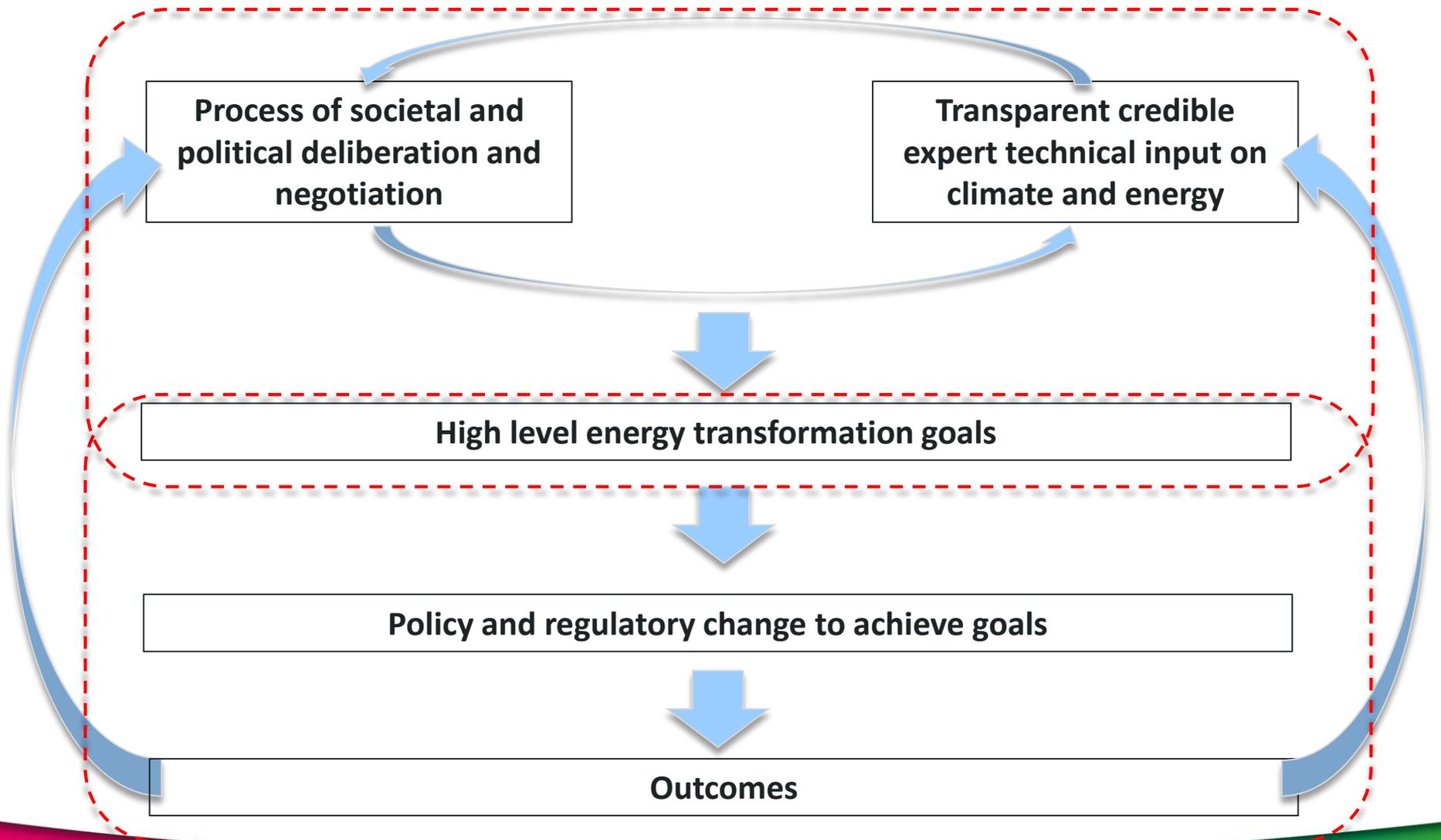
New Thinking For Energy



Outline

- Direction-setting as the focus of today's workshop
- Why does it matter?
- What are some of the issues to consider?
- IGov framework proposals

IGov governance framework for transparent and legitimate decision making



Direction-setting as the focus of today's workshop

High level energy transformation goals
(what should the energy system look like, by when?)

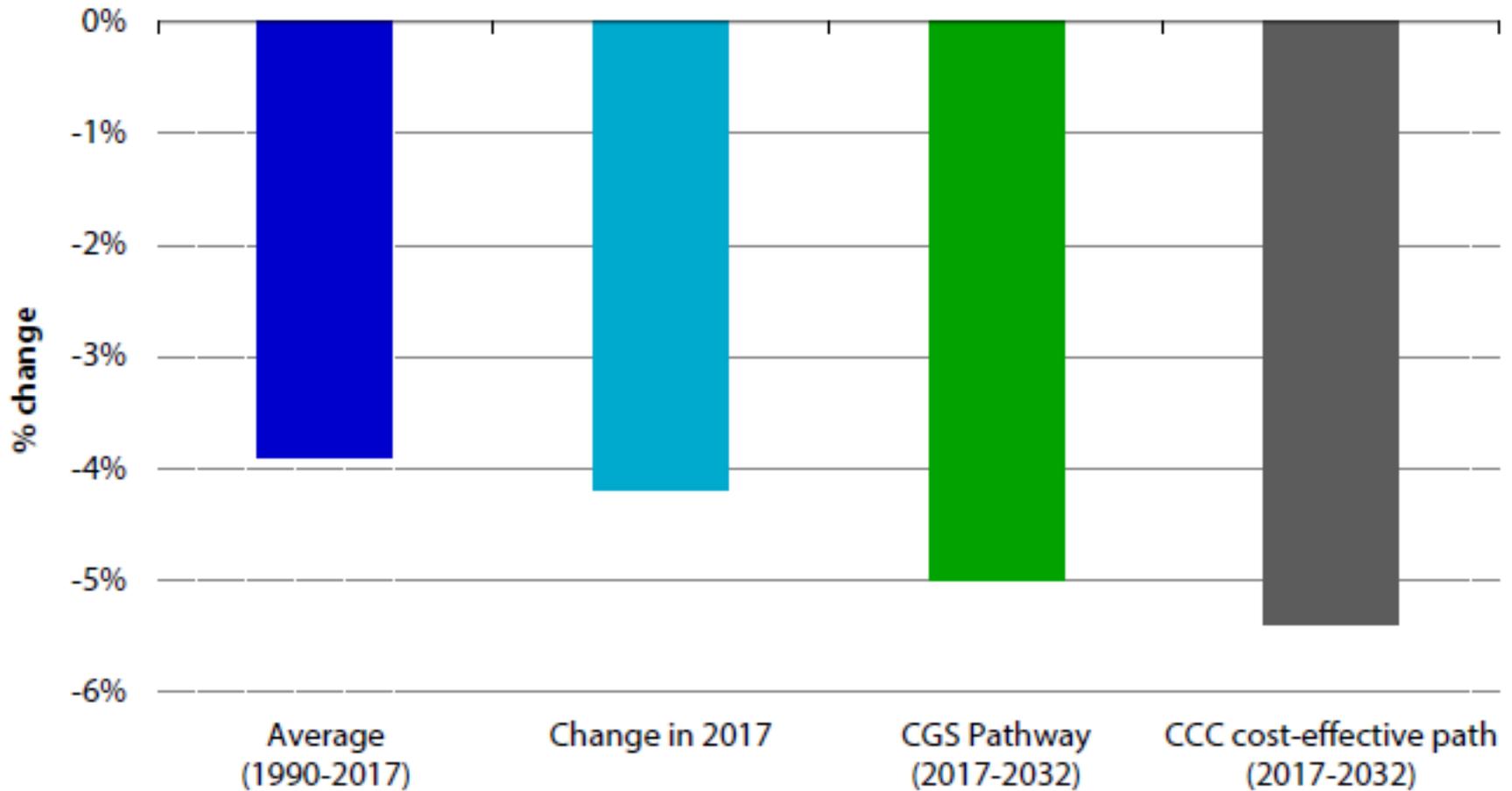


Policy change to achieve goals



Regulatory change to support policy change

Why does it matter?



Source: CCC (2018) *Reducing UK emissions: 2018 Progress report to Parliament*

Why does it matter?

CCC Expected progress indicators

	2017/18	2030
Low carbon generation as share of total	52%	>75%
ULEVs as share of new cars	<2.5%	60%
Heat pumps in homes	<200,000	2.5 million
Electrical storage	2.7 GW	8-38 GW
Demand side response	1 GW	4-18 GW
Carbon intensity of electricity generation	265 gCO ₂ /kWh	<100 gCO ₂ /kWh

Sources: CCC (2018) *Reducing UK emissions: 2018 Progress report to Parliament*, Poyry/Imperial College (2017) *Roadmap for flexibility services to 2030*, National Grid (2017) *Future Energy Scenarios*, DfT (2018) *Road to Zero*, BEIS (2017) *Digest of UK Energy Statistics*

What are some of the issues to consider?

Different approaches to direction setting have consequences for goals and links to policies

Specific

Approach to direction setting

Broad

Goals

More specifically defined (e.g. renewable energy targets, energy savings targets)



Policies

- Clearer link to specific policies
- Less flexible (unless adaptive review built in)
- More stable
- Allows adaptation of input policies to progress towards targets

Goals

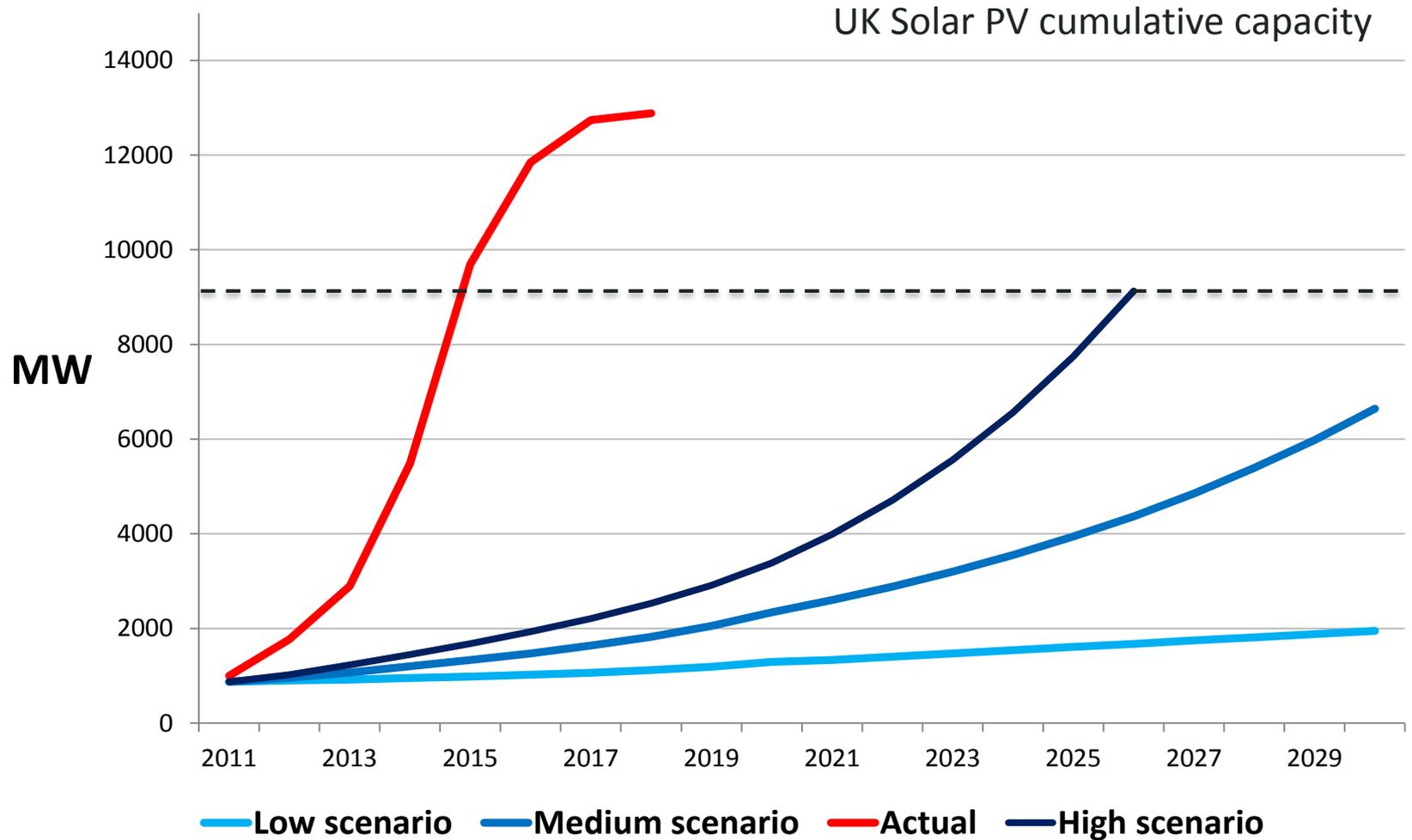
More broadly defined (e.g. GHG reduction targets only)



Policies

- Looser link to specific policies
- More flexible
- Less stable
- Input policies more likely to be adapted to budgets

Consequences of not adapting policies to targets



Need to link supportive regulatory change to policies and goals

- Need for regulatory change (including at code level) to support policy goals
- Changes required across networks, markets, system operation and balancing, data, cyber security, contacts with consumers
- Crucial role of electricity distribution networks
 - Realising true value of new sources of flexibility, costs and benefits of DER
 - Key areas include
 - incentive regulation
 - design of charging
 - institutional vision for distribution–level entities, linked to the functions they will play (e.g. mapping DER, smart management of network constraints, providing balancing and market platforms...)

GB – not a lack of activity!

Half hourly settlement

Supplier hub consultation

Unlocking the capacity of electricity networks

Smart charging standards (AEV Act 2018)

Access and forward charging review

Smart Flexible Energy reforms (storage, DSR aggregation)

Open Networks project (TDI, DSO...)

Targeted Charging Review

RIO2 (inc. ED2)

Sandbox, Innovation Link, NIA/NIC etc.

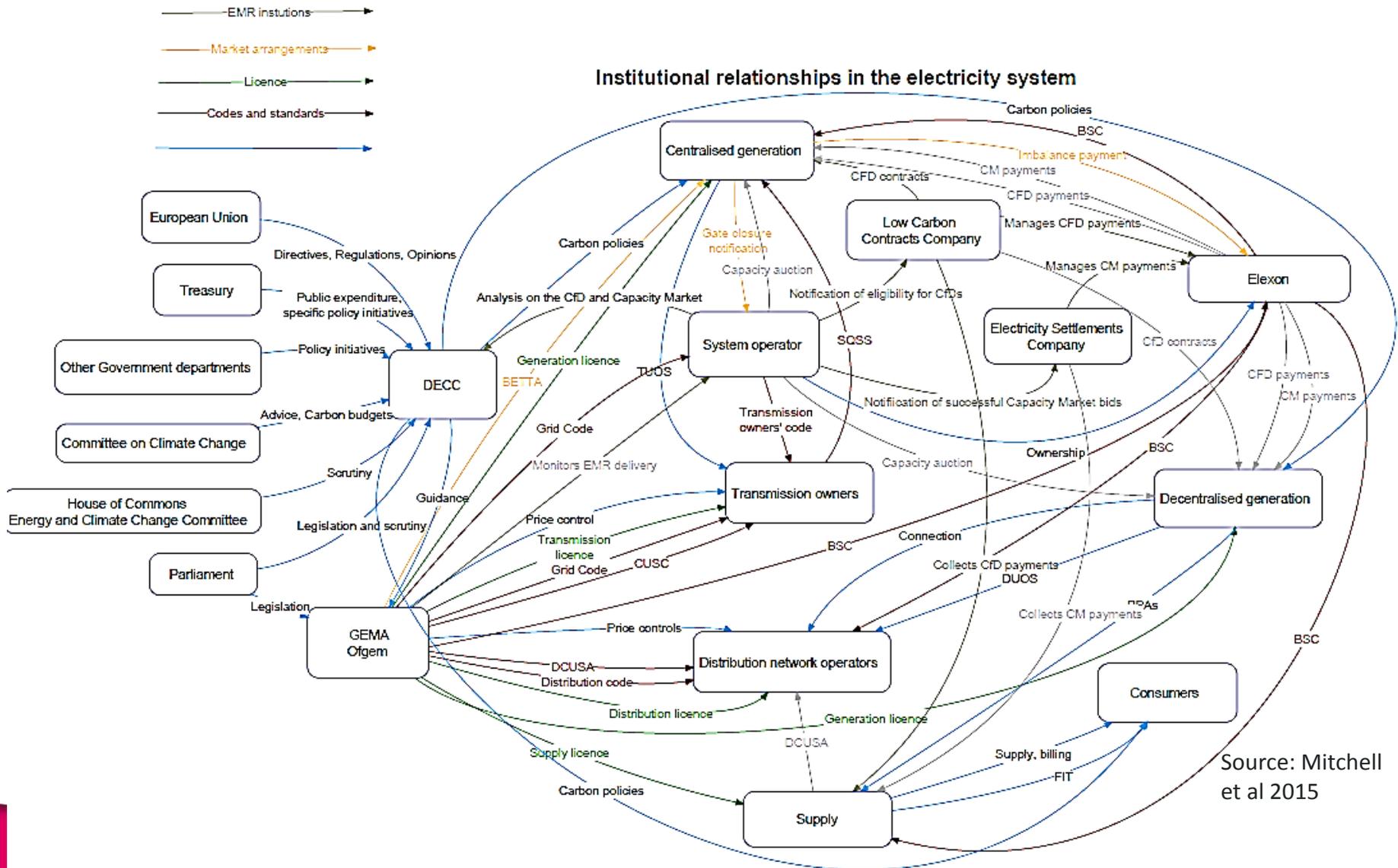
Next day switching

NG Power Responsive

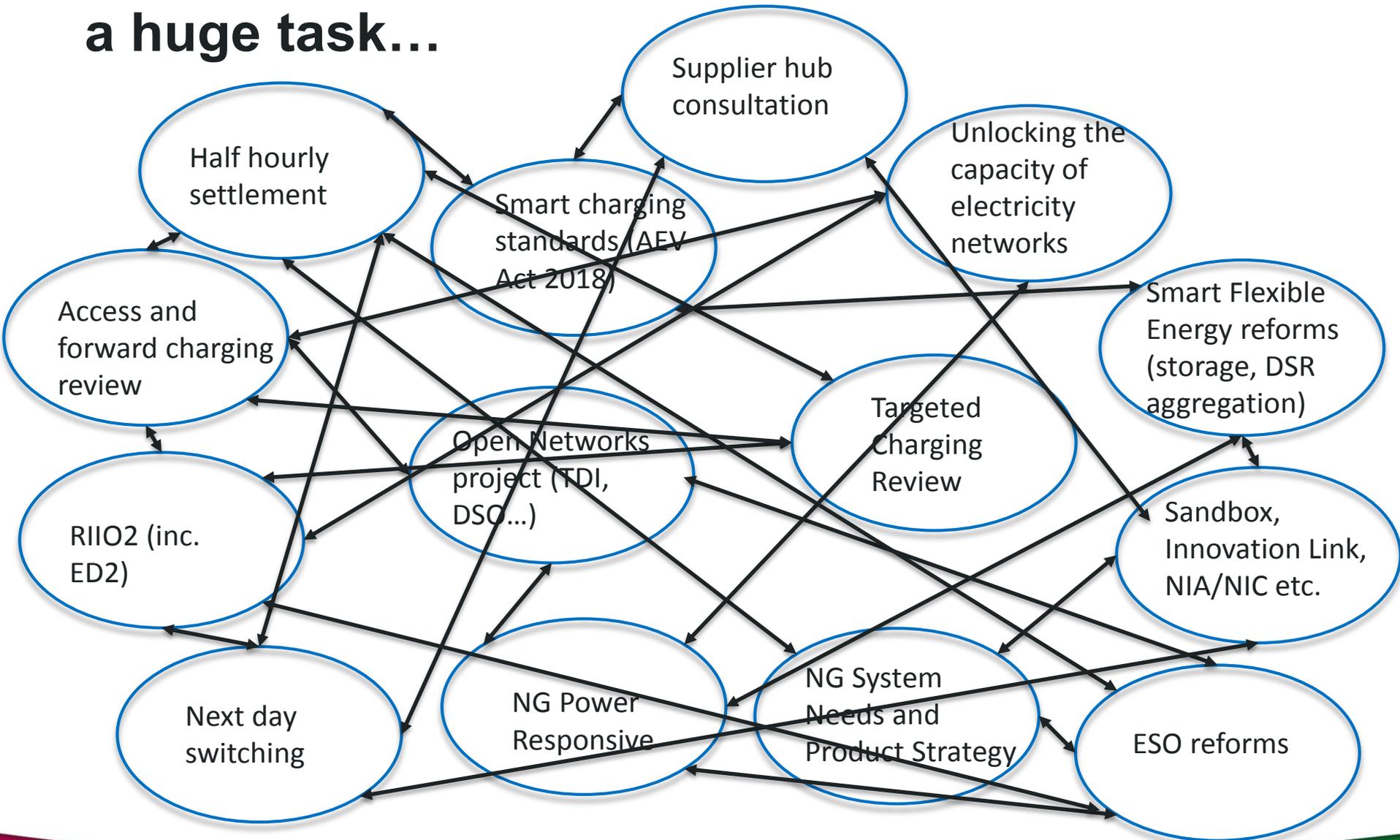
NG System Needs and Product Strategy

ESO reforms

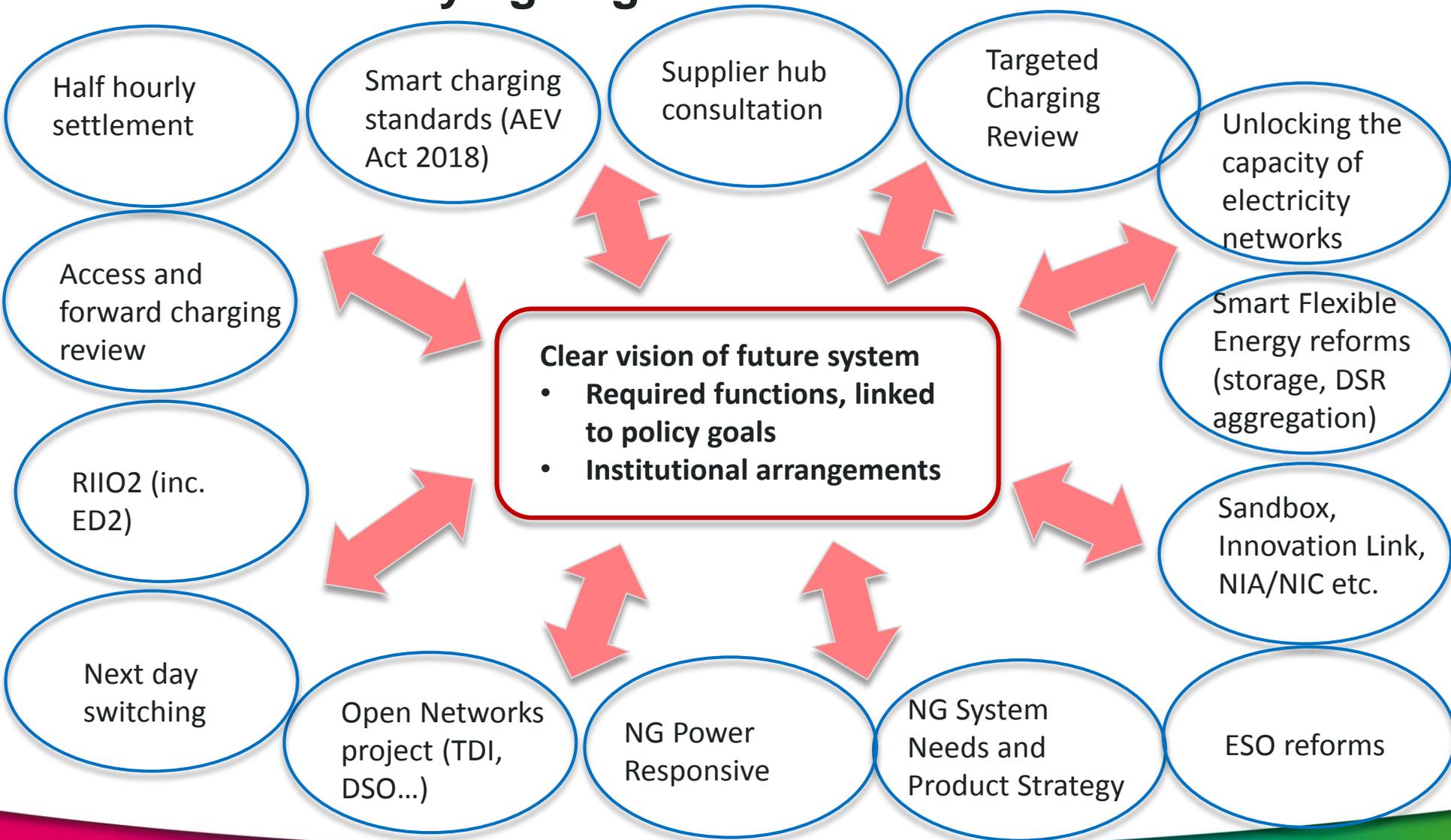
But policy and regulatory system is complex...



...so ensuring coordination and consistency is a huge task...



...made easier if there is clarity and agreement on where we are trying to get to



Who should coordinate regulatory change?

- Managing complex change needs clear mandate and capacity
- GB situation
 - Ofgem playing lead role in practice
 - Legacy of arms-length relationship (but *de facto* interventions by government)
 - Legacy mandate of and capacities for economic efficiency vs. new goals of decarbonisation and system transformation
 - Requires handling trade-offs that are ultimately political in nature
 - 2013 Energy Act: Strategic and Policy Statements (SPS) to clarify situation but never happened



IGov framework proposals for direction setting

- Well-defined vision (= some specific goals)
 - Outcome-defined policies and regulation, but with adaptive mechanisms
 - Social and political as well as technical process
 - Beyond remit and capacity of CCC and NIC
 - “Energy System Transformation Commission”
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- Clearer links between regulatory change, policy change and goals
 - Mandate and capacity for managing regulatory change in appropriate institutions
 - Ofgem stripped back to economic regulator role
 - Regulatory and technical systems change coordinated through independent integrated system operator (IISO) with clear mandate
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- Vision for new institutional arrangements at distribution and local levels
 - Distribution Service Providers (DSPs)

Rest of today's workshop

- **Session 1: Experiences from the US**
 - *What approaches to direction setting for energy system transformation have been adopted in the US?*
 - *What features of US experience might be useful and transferable to the UK?*
- **Session 2: Views on the British approach**
 - *Is greater direction setting for energy system transformation needed in GB, and if so how should it be developed?*
 - *What role should the regulator, government and other institutions play?*
- **Wrap up:**
 - *Are there key areas of agreement?*
 - *What principles or evidence underlie areas of disagreement?*