Introduction to IGov
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IGov Advisory Group, 6th July 2017

New Thinking For Energy

UNIVERSITY OF EXETER

EPSRC
Engineering and Physical Sciences
Research Council

Outline

- Agenda for today
- Role of Advisory Group
- Introduction to IGov 1 Research
  - Presentation kept to a few high level issues
  - How does IGov define innovation and governance?
  - Issues, and why governance matters
- Introduction to IGov 2
- Questions

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Agenda for rest of today

10.15 – 11.00   Introduction to IGov Project

11.00 – 12.30   Insight Session 1 & Discussion (Chair Matthew Lockwood)

Rich Hall; Rachel Stanley; Felicity Jones; Sam Wevers; Jeff Hardy; Janet Wood; Afsheen Rashid

12.30 – 13.30   Lunch

13.30 – 14.45   Insight Session 2 & Discussion (Chair Antony Froggatt)

Judith Ward; Adam Cooper; Nigel Cornwall; Chris Harris; Graham White; Becky Willis; Syed Ahmed

14.45 – 15.00   Break

15.00 – 16.00   Bringing it together

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Role of Advisory Group

The advisory group will act both as a sounding board for the ideas that are emerging as well as contribute ideas and insights to shape the direction of the research – such as:

- **Advice**, reflecting your areas of expertise to help improve robustness of our research
- **Flagging important developments** to us in GB and internationally
- Acting as **ambassadors** by helping us to identify key players, key meetings, letting people know about the research
- **Contributing to research** – providing a blog for the website (or reposts), helping with roundtable events, taking part in webinars and possibly the MOOC.
- Providing, or suggesting **interesting venues** for meetings

Any other suggestions/thoughts?

Definitions

Innovation
Not just technology, but new practices, business models, social preferences, that lead to practical change on the ground

IGov1 and 2
Although bringing all knowledge back to its value for GB, we are very international best-practice focused and practice based

Governance
the policies, institutions, regulation, market & networks rules & incentives and the process/politics behind them (including the way people are involved)

Energy is a whole system (electricity, heat and transport) and its governance has to recognise that, and be fit for purpose for the desired outcomes

GB governance remains the 'enabler' of the 'old', 'dirty', inefficient, inflexible ES and key 'blocker' to new, efficient, 'clean' ES – despite stated Government goals supporting the latter

GB Governance, on balance, supports current, more expensive supply focused ES with inflexible demand

Huge amount of change in ideas and practice and global ES momentum (particularly towards decarbonisation, decentralisation, digitalisation and democratisation - GB governance out of step and lags global best practice

GB needs governance to provide value for CCC's 50 g C02 per kWh by 2050 – currently not on track to meet GHG reduction and value not available for flexible, energy efficient system, including flexible demand side

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Why it matters that GB governance is not fit-for-purpose

Decarbonisation needs transformative governance, not BAU

So far, decarbonisation in 'easy' electricity – almost no movement in heat and transport – and wider governance changes often make situation worse

Risk that innovation will be stifled due to policy / regulatory uncertainty and lack of investor confidence

Energy is a critical infrastructure and the ES is increasingly integrated with other infrastructures, such as IT and data (eg blockchain, machine learning etc)

Within this new IT / Data enabled system the role of customers is changing and growing in importance– it is vital that there is capacity & trust across system given new issues (cyber security, data), equity (PSOs) and consent for costs
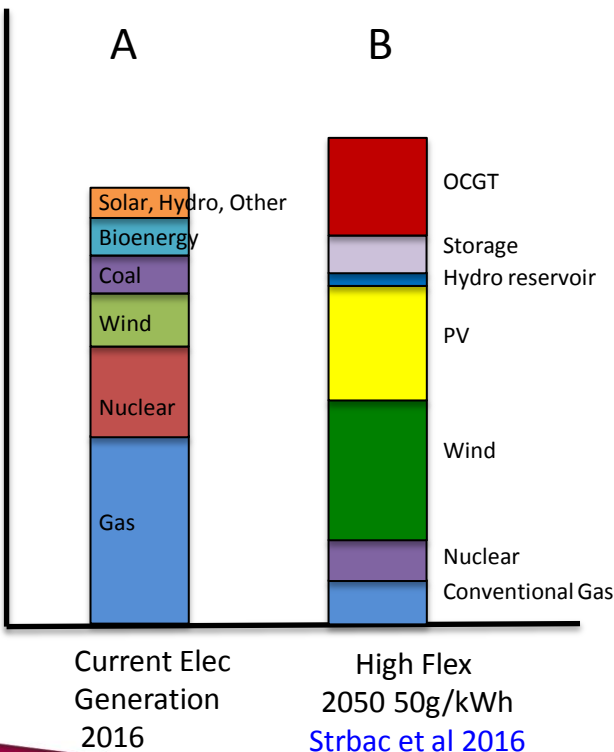
Governance changes are needed to move from A – B (new actors, new institutions, new thinking)

A

B

System also has to be integrated across electricity, heat and transport
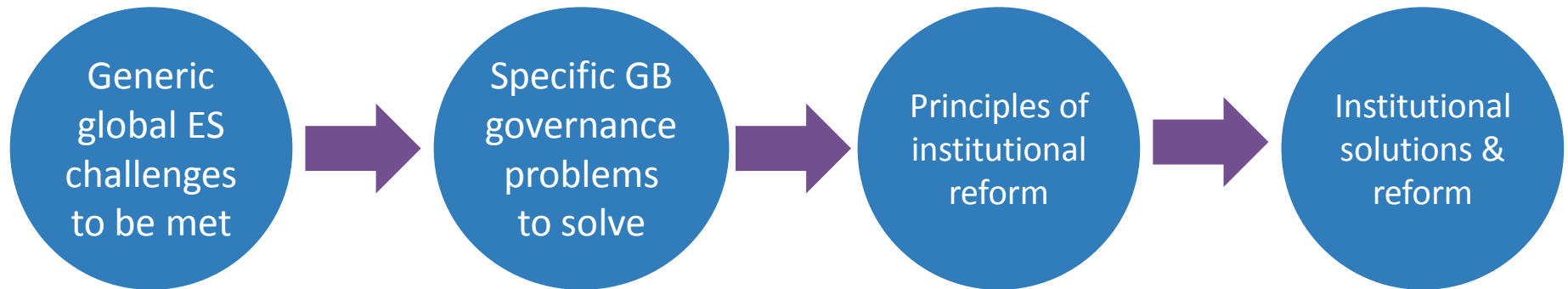
This leads to further complexities in the design, operation, coordination and appropriate transfer of value within the system and makes the case for effective governance stronger still.

Solar, Hydro, Other
Bioenergy
Coal
Wind
Nuclear
Gas

OCGT
Storage
Hydro reservoir
PV
Wind
Nuclear
Conventional Gas

Current Elec Generation 2016

High Flex 2050 50g/kWh
Strbac et al 2016

Going from A to B leads to changes:
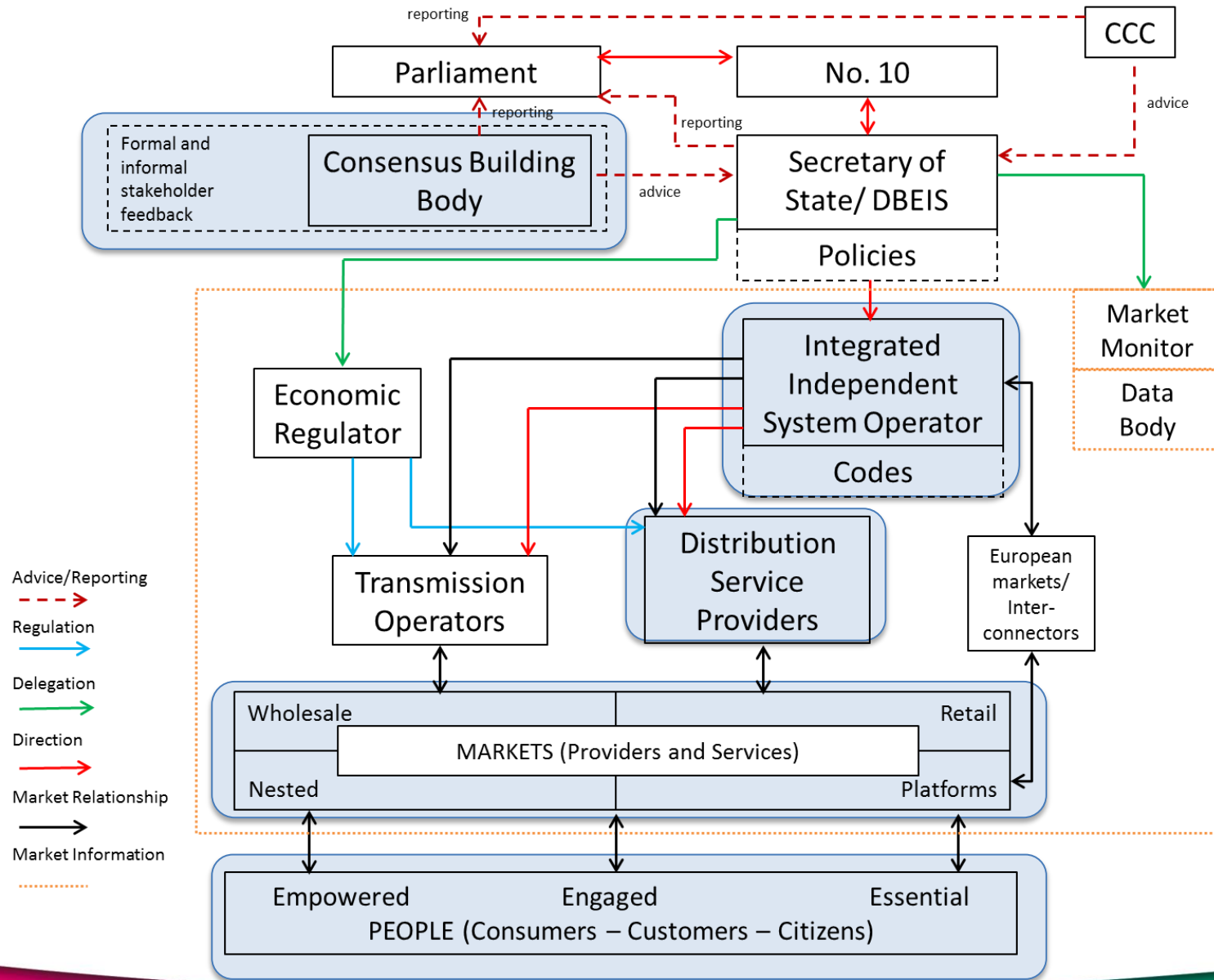
1) Supply fuels
2) Technologies & Supply Chains
3) System operation & coordination
4) Ownership
5) Different actors & different roles for actors
6) Changes to market types & their rules & incentives
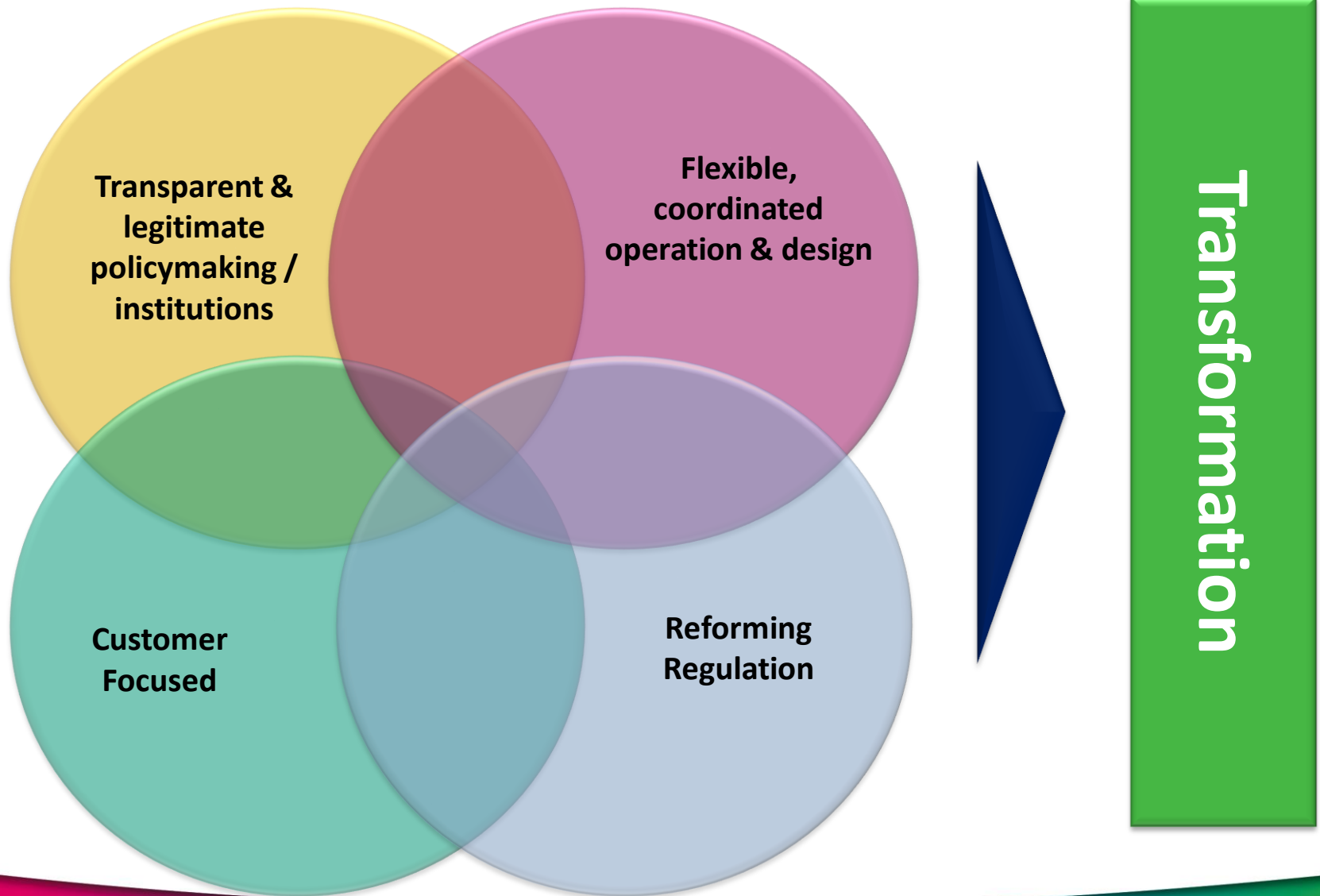7) Network payment/access/rules
8) Tariffs
9) Regulation

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IGov1 approach of how to go from A to B

Generic global ES challenges to be met → Specific GB governance problems to solve → Principles of institutional reform → Institutional solutions & reform

IGov1 Fit-for-Purpose GB Energy Governance Framework

Overview Findings of IGov

Transparent & legitimate policymaking / institutions

Flexible, coordinated operation & design

Customer Focused

Reforming Regulation

Transformation

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IGov 2 IGov for Future Energy Systems (FES)

- IGov 2 – if we want an energy efficient and flexible energy system, what is required and what has to be valued?
    - What change is happening across the global energy system, in terms of practice and ideas?
    - What implications does this have for GB?
    - What should GB be doing in terms of governance?
        - Has to bring down total energy use
        - Has to speed up change
        - In the 'new' system several things become very important – public service obligations (ie looking after the vulnerable), how to pay for networks, different role and influence of actors, better system coordination, new balance between markets and regulation
    - We are interested in gender / diversity of FES

Thank you and links

- IGov is a two stage research project, the first from 2012-2016, and the second from 2016-2019. [This basically explains what we are trying to do](#).

- The first phase was all about producing a fit-for-purpose GB energy governance system - which we did with a [Final-Framework Paper](#) plus a [PowerPoint](#)

- This was enlarged on in various submissions - for example to the BEIS flexibility, NIC, Ofgem future of SO consultations etc. There are links to most of these in a reset the reset blog series of 3:
  - [We need institutional governance reform](#)
  - [Aligning content with intent](#)
  - [DER walking the walk](#)

- An important part of that fit for purpose framework is this combination of [DSPs and PBR](#)

- This link is to the first blog of the 6 blogs [comparing CA and NY](#)

- [People are at the centre](#) of future energy systems