

# ESMT MBA

## International comparisons of governance and innovations for transformation in electricity systems

Catherine Mitchell

[Catherine.mitchell@exeter.ac.uk](mailto:Catherine.mitchell@exeter.ac.uk)

24 August 2015



New Thinking For Energy

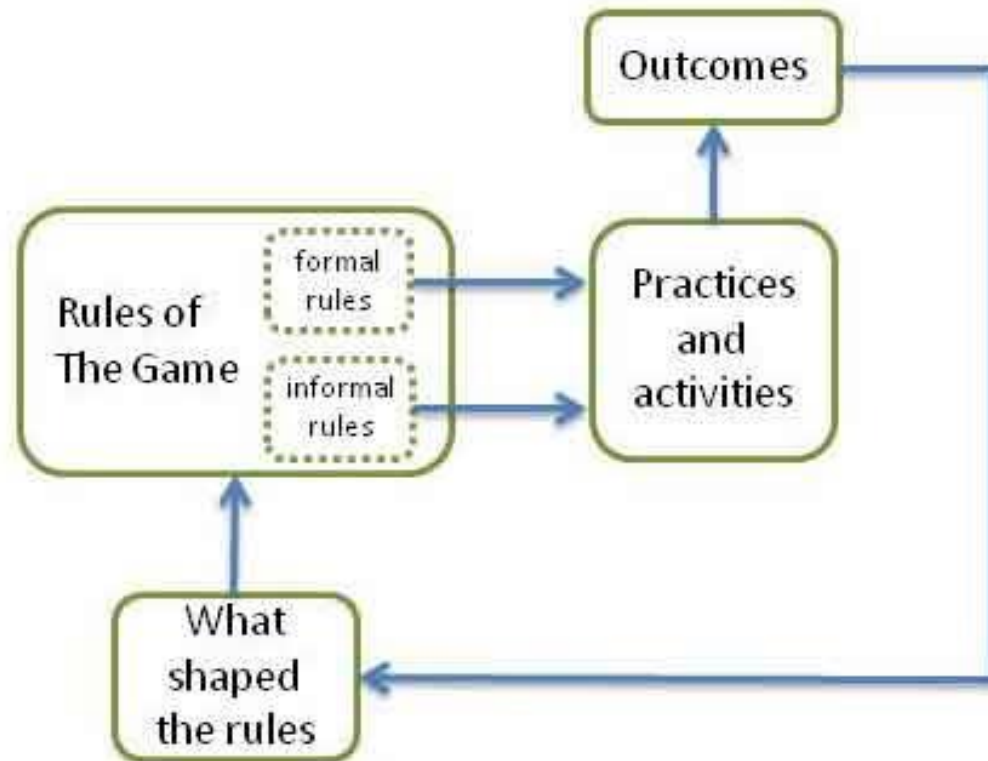


# Overview: Governance and Innovation

- What is governance? Why does it matter?
- Phase 1 v Phase 2 countries in relation to transformation
- 3 Examples
  - GB – an example of a country with minimal innovation because of its governance
  - NY REV – an example, of a new system which is directly trying to address Governance issues so that a fundamental shake-up of the energy system can occur
  - Hawaii – wants to restructure, is part driven by its geography, and also driven by its Public Utilities Commission
- Discussion

# What is Governance ?

## Innovation and Governance



# Fundamental Issues of Governance - countries which enable transformation need certain characteristics

- Who / what has the 'influence' within EP, and its ability to transform?
  - Are there a few powerful players or are there multiple groups involved so overall there is a reasonable balance of influence?
  - Is the EP public interest focused or business focused or a mixture?
- How does the Government treat the 'losers'
- Does the political process enable diversity of views? Ie FPP / PR / devolved / regional / local power?
- Does the governance inclusion for individuals / communities / new entrants to provide a service, if they can find customers
- Is the governance and decision-making process genuinely transparent and discursive?
- Is the governance ideological or pragmatic (meaning that a solution to a problem is chosen rather than a solution which fits certain ideological concerns)
- Check these against the country case studies below

# Phase 1 versus Phase 2 countries of transformation

Table 1: Potential success criteria and successful policy strategies in transition phases 1 and 2

Success criteria	Successful strategies in transition phase 1	Successful strategies in transition phase 2
Dynamic transition process	Initiate dynamic processes: <ul style="list-style-type: none"> <li>- minimise entry barriers and risks</li> <li>- reduce private risks</li> <li>- create an enabling environment</li> </ul>	Control dynamic processes: <ul style="list-style-type: none"> <li>- focus on predictability and stability</li> <li>- introduce policy safeguards</li> <li>- maintain an enabling environment</li> </ul>
Effectiveness (deployment achieved)	Maximum deployment achieved: <ul style="list-style-type: none"> <li>- accelerate growth rate</li> <li>- reduce private cost of risk</li> </ul>	Deployment targets exactly achieved: <ul style="list-style-type: none"> <li>- control growth rate</li> <li>- control support costs</li> <li>- introduce safeguards on price and volume</li> </ul>
Efficiency (cost-effective deployment)	<ul style="list-style-type: none"> <li>- Minimise generation cost</li> <li>- minimise regulator's regret</li> <li>- keep open options of promising immature technologies</li> </ul>	<ul style="list-style-type: none"> <li>- Minimise generation cost</li> <li>- minimise regulator's regret</li> <li>- keep open options of promising immature technologies</li> </ul>
Preparation for phase 2	<ul style="list-style-type: none"> <li>- Coordinated management of related niches</li> <li>- ensure flexibility of the policies to adapt to new challenges</li> </ul>	
Integration of new technologies into regime		<ul style="list-style-type: none"> <li>- Exploit synergies from related niches</li> <li>- empower new technologies</li> <li>- adapt regulations and rules of regime to accommodate new technologies</li> </ul>
Technology cost reduction	<ul style="list-style-type: none"> <li>- Maximise technological learning</li> <li>- accelerate growth rate</li> <li>- introduce modest competitive elements</li> </ul>	<ul style="list-style-type: none"> <li>- Maximise organisational learning</li> <li>- uphold technological learning</li> <li>- introduce more competition</li> </ul>
Public acceptance	<ul style="list-style-type: none"> <li>- Increase equity</li> <li>- minimise support costs</li> </ul>	<ul style="list-style-type: none"> <li>- Increase equity</li> <li>- minimise support costs</li> </ul>
Preparation for discontinuation of policy support		<ul style="list-style-type: none"> <li>- Adapt market rules to provide adequate investment incentives</li> <li>- Adapt the support policies for slow phase-out</li> </ul>

# Great Britain – an example of a country where a few powerful interests predominate + ideological

- <http://projects.exeter.ac.uk/igov/working-paper-change-and-inertia-in-the-uk-energy-system/>
- Examples of the way governance is undermining innovation and transformation in GB
  - In general, rules which benefit the few (de facto the incumbents) rather than giving access to everyone (ie difference between RO and FIT)
  - Electricity Market rules – the bilateral market, capacity mechanism, balancing system – support the current system
  - Liquidity issues – customers don't switch and pay for it (CMA says 17% profit for suppliers)
  - Liquidity issues – trading is limited and therefore a particular risk for variables
  - Vertical Integration – CMA says this is not a problem but my view is that it maintains powerful structure in favour of supply; maintains affordability problems; and means that 'price' / transparency poor
  - Code Governance – not fit for purpose - nothing can change
  - Supplier hub model - does not recognise embedded benefits so DG is not paid their value
- Need to think about the whole system
  - One of these issues is bad enough but together they become a tightly knit whole which undermines change

# GB cont.

- Only good thing in GB at the moment is that 10% of our electricity supply comes from new entrant suppliers – see Ofgem non-traditional business model paper (<https://www.ofgem.gov.uk/publications-and-updates/non-traditional-business-models-supporting-transformative-change-energy-market>)
- Rhetoric versus reality
  - GB does not follow through on rhetoric when it wants something (ie nuclear or fracking)
  - Generally, pro-market ideology undermines RE and EE, even though Govt (until recently) said they supported them
- Lack of clarity of ‘independent’ regulator’s role relative to Government – which is not the regulator’s ‘fault’

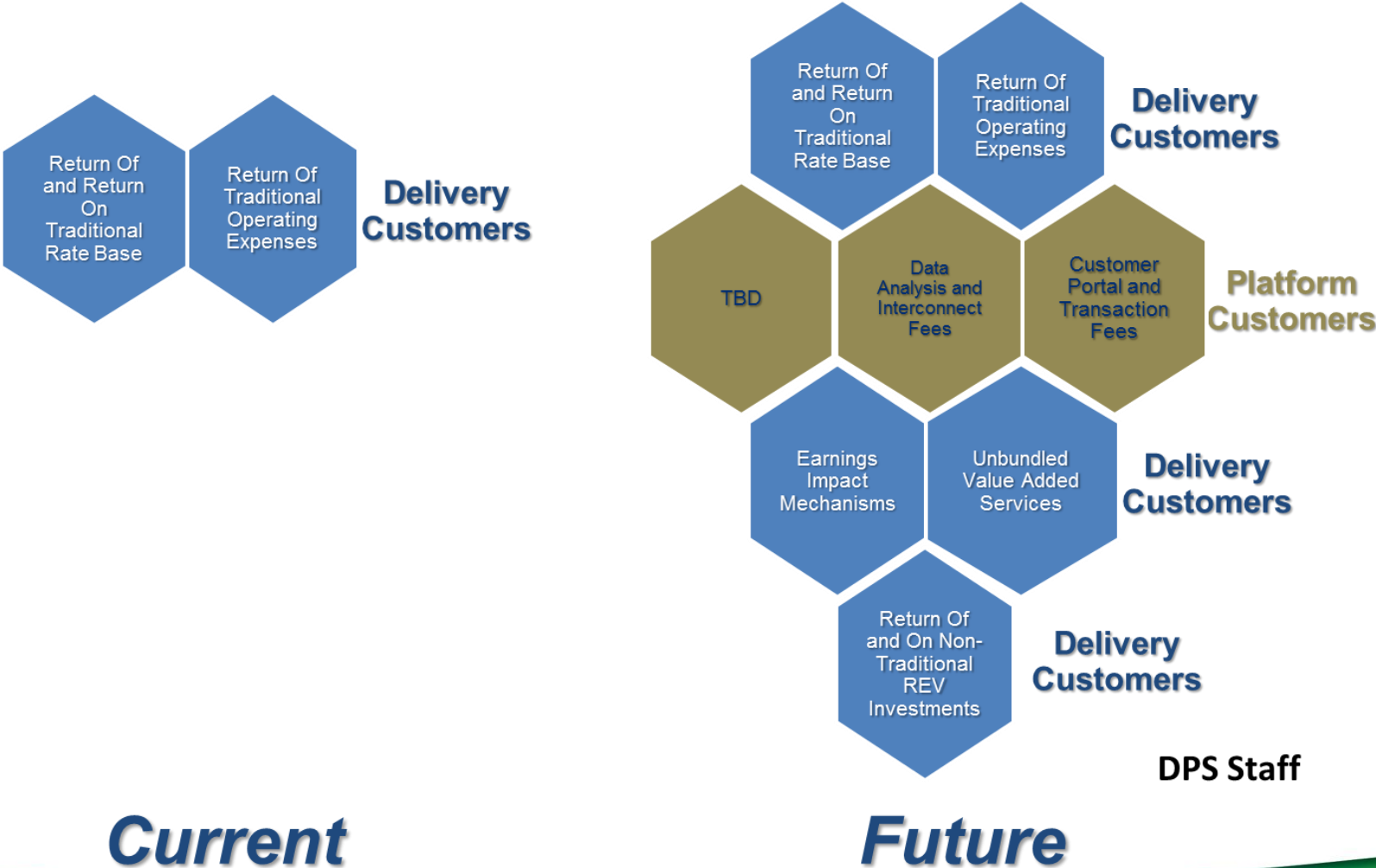


# NYC Reforming the Energy Vision

- Much more optimistic
- This is a fundamental rethink of regulating the energy system
  - It is challenging the conventional wisdom that ‘big is beautiful’ and asking what should the role of the regulator, the utility, the consumer, the government be?
  - Very open and transparent process
  - Openly in favour of the public interest
- Look at links for details but the point is that NY has 19 million people; very important to US economy; and is starting from scratch.
- Coming after 10 years of progressive policies – but still a confluence of drivers which enable it to do this now.
- Has political buy-in



# New Revenue Model – creating a whole new value proposition – the DSP



# References for the Details

- May 2014 – Vision  
[http://www3.dps.ny.gov/W/PSCWeb.nsf/96f0fec0b45a3c6485257688006a701a/26be8a93967e604785257cc40066b91a/\\$FILE/ATTK0J3L.pdf/Reforming%20The%20Energy%20Vision%20\(REV\)%20REPORT%204.25.%2014.pdf](http://www3.dps.ny.gov/W/PSCWeb.nsf/96f0fec0b45a3c6485257688006a701a/26be8a93967e604785257cc40066b91a/$FILE/ATTK0J3L.pdf/Reforming%20The%20Energy%20Vision%20(REV)%20REPORT%204.25.%2014.pdf)
- Rich Sedano of RAP for New Revenue Model  
<http://raponline.org/document/download/id/7737>
- June 2014 IGov blog  
<http://projects.exeter.ac.uk/igov/lessons-from-america-new-york-states-reforming-the-energy-vision/>
- Aug 2015 blog update –  
<http://projects.exeter.ac.uk/igov/new-thinking-reforming-the-energy-vision-an-update/>

# Hawaii

- Hawaii has a new policy for 100% renewable electricity by 2030 which in many ways suits a DG policy because it is a series of islands previously dependent on fossil fuel imports, and now customers are adopting economic solar / storage units rather than pay the high utility fees.
- However, it is an example of a place that even though transformation is supported (ie all about RE and EE) it is still very unclear what the governance will be
- PUC system in place
  - Is this good or bad for governance?

# Hawaii references

- All Jim Lazar of RAP [www.raonline.org](http://www.raonline.org)
- References
  - <http://www.raonline.org/document/download/id/7680>  
Smart Rate Design for a Smart Future
  - [Recognizing the Full Value of Energy Efficiency, www.raonline.org/document/download/id/7544](http://www.raonline.org/document/download/id/7544)
  - [www.raonline.org/document/download/id/7424](http://www.raonline.org/document/download/id/7424) Grid defection in Hawaii – crisis or opportunity?

# Discussion

- Do you agree with the list of fundamental issues I put forward or do you have other ones?
- How important do you think historical, cultural factors of a country are for governance ?
- Do you think a CEO type system or a PUC type system is most appropriate for the needs of a 21<sup>st</sup> century?