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Time to stop experimenting with UK renewable energy policy

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ICEPT provides an academic hub for the interdisciplinary study of energy and the environment, specialising in the interface between technology and policy. ICEPT addresses key policy challenges, including climate change, energy security and energy for development.

Overview

- Context
- Why support renewables at all?
- UK and international experience – what works, what doesn't work and why?
- What might be the way forward for UK policy?

Context

- Progress in the UK is behind target
- Four out of five DECC/Ofgem scenarios propose some change to RE support
- Wider regulatory reform can't fail to affect RE
- The coalition is making a (now vague) commitment to an expanded Fit

- All this on top of a raft of recent changes (banding, FiT, headroom, etc
- We have 20 plus years of international experience, most countries take a different approach to the UK

Context

- Apparently the UK is…

‘lavishing huge levels of subsidy in attempt to mass deploy technologies earlier than is efficient, not waiting for technologies to prove themselves nor develop down the cost curve’

AND

‘mass deployment… should be driven by technology neutral carbon pricing…’

Why support any technologies directly?

- Increasing returns
  - Economics as a dynamic discipline
  - Learning, scale, co-ordination effects
  - Deployment is key to cost reduction, performance improvement and tech transition
  - But also lock-in – overcoming it is hard, see next slide

- Innovation systems aware
  - RD&D alone is pointless – valley of death
  - Progress through niches the normal route
  - Zero product differentiation = a role for policy
  - Innovation systems can fail = ditto

Why not just price carbon instead?

- Pricing carbon isn't 'wrong' just very simplistic
  - High enough to raise hackles too low to achieve anything
    - Politics leads to gradualism, but the problem is urgent
    - Why impose a cost on *all* KWh when need to support a fraction
    - Seeking long term options not just next least cost
  - Investor needs not met
    - Volume security essential – simplicity, transparency, longevity
    - Uncertainty price and political risk inherent to carbon tax
    - Who pays? – direct pass through to consumers so marginal change (if anything)
  - Conventional economics provides a *static* response to a dynamic process
    - Lock in arises from path dependence, which is created by increasing returns
    - Carbon is deeply locked in – the static result is inelastic demand
  - Targeted support is MORE economically efficient
    - The dynamic response seeks to harness increasing returns effects
- "Using learning to deliver cost reductions by targeting support at specific markets is a more effective and economically efficient alternative. Indeed it can help facilitate a gradual approach to carbon pricing."

- UK policy has tried to create a learning space for renewables; with some success. This is not to say that all is well with current UK policies, since other countries have done rather better.

- How can UK policy be improved?

The British approach

- The fault line opened early
- Britain chose auctions (NFFO), others chose fixed prices/premiums (FiT)
- NFFO's failures
  - Exacerbating planning problems
  - Unfriendly to small investors/locals
  - Encouraging gaming, impeding new entrants
  - Limited support for the UK supply chain

The British approach

- Legacy issue 1

Other countries created a constituency of supported stakeholders, Britain did not.

- Legacy issue 2

Other countries created a domestic industry, Britain did not.

- Legacy issue 3

Other countries got comfortable with policy choices about support levels, Britain did not

Economic elegance vs. reality – the RO and FiTs

- RO some success, Britain now secures around 7% electricity from renewables

- Analysis from the EC, IEA, DB and others shows FiTs cheaper and more successful
  - More investable (transparent and stable)
  - More local (accessible to small investors)
  - More targeted (technology specific)
  - Far better at nurturing industrial base

- The RO's false premises
  - Neglects the temporal dimension (equilibrium takes time)
  - 'Not picking winners' (just choosing least cost first)
  - 'Not setting price' (but buy out and target level do)

Other factors

- Planning
  - Part legacy: NFFO and RO equally unfriendly to local investors – wind farms imposed by the London office of a foreign firm for a govt we didn't vote for
  - Part planning system: capture by vociferous
  - Part national psychology?

- Grid access
  - The RO and Neta/Betta can't be seen as isolates
  - Priority access and C&M will help EMR must address

A way forward

- Overcoming legacy issues should frame immediate focus
  - Build a constituency: expand MG FiT to 25 MW, provide community access to GIB – building a supportive public not massive capacity
  - Target support at UK supply chain (e.g. in offshore wind, marine)
- Grid access should prioritise the present
  - debate focused on the challenge of integrating large volumes of variable RE in electricity markets in the mid 2020s
  - A nice problem to have, but not today's!
  - Investment incentives now, optimisation challenge is tomorrow's. Regulation should fit the moment and evolve
  - priority access for low carbon options, is the main principle immediate (and five to ten year) need

Address cost concerns

- Negative impacts on poorer consumers can be avoided or reversed
  - innovative financing/energy service arrangements
    - investors benefit from FiT revenues
    - householders benefit from bill reduction
- Volume based restrictions on the capacity of higher cost options
    - (e.g.a maximum total installed MW of PV, micro-wind, etc that will be eligible for a given FiT rate)
- Set ambitious forward targets for cost regression
    - This would also be useful in sectors such as offshore wind, where current costs are high.

A transit route to FiTs is perfectly feasible

- Acknowledge now that a FiT or similar would be more effective for all but the nearest commercial (landfill gas, onshore wind, co-firing).
- Announce an intention to replace support for all positive ROC multiple options with a FiT when current multiples are reviewed in 2014.
- To prevent an investment hiatus, make clear not assured that the FiT will be more generous than the ROC multiple.
- Guarantee that all investments made in the interim will be grandfathered fully.
- Extend the micro-generation FiT to 25 or 30 MW for community owned schemes (further work is needed on how this should be defined).
- Mature technologies could have the option of transferring to a FiT or moving to participate in a wider low carbon obligation should one be established.

To conclude

- Britain has run simultaneous experiments in particular forms of both liberalisation and support for renewables
- Good evidence that Britain's approach has been less successful than our near neighbours or indeed in the US, China and elsewhere
- Other impediments, notably planning, directly affected by the form of support that Britain chose
- Britain's peculiar adherence to a highly rarefied form of market design, based on a particular interpretation of economic principles, has almost certainly impeded the development of renewables in this country
- Cost effective, investable, transparent and differentiated support for the deployment of low carbon technologies continues to be a key response to the climate problem. There is a route forward.

Thank You

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