Regulatory cooperation: two countries, one Single Electricity Market

David Newbery,*
EPRG, University of Cambridge

Economic Objectives of Regulation
Conference honouring Catherine Waddams
UEA • 16th September 2019

* Independent member, SEMC, speaking purely in a personal capacity
NRAs in NI and RoI

- “The Utility Regulator (UR) issues licences,..” Its statutory objectives include “Protect the short and long-term interests of electricity .. consumers with regard to price and quality of service; Promote competition, where appropriate …”

- The Commission for Regulation of Utilities (CRU) grants, revokes and enforces Licences. Its aims for electricity “is to protect the interests of energy customers, maintain security of supply, and to promote competition covering the generation and supply of electricity and supply of natural gas.” Its strategic priorities include:
  - “Deliver sustainable low-carbon solutions with well-regulated markets and networks
  - Ensure compliance and accountability through best regulatory practice”
• The island of Ireland has two NRAs, but a Single Electricity Market (SEM) governed by the SEM Committee (SEMC), with two members from each NRA, and two independents.

• “The principal objective of the SEMC is to protect the interests of consumers of electricity wherever appropriate by promoting effective competition between persons engaged in, or in commercial activities connected with the sale or purchase of electricity through the SEM.”

• Many functions remain with the NRAs, only those affecting the SEM come to the SEMC.

• These include market monitoring, market design, EU compliance, capacity auctions
Network problems

- Network tariffs guide location decisions
  - New generators, mobile large loads like server farms
  - Location constraints relevant to capacity auction procurement
- Guidance can be via nodal prices (US standard model) or Locational fixed T charges on generation (GB model)

=> A SEM or NRA matter?

- Nodal prices allows decentralisation but not chosen
- Price zones set according to constraints or politics?

⇒ **politics wins** despite N-S constraint

⇒ SEMC finds it hard to change NRA regulated tariffs

*Hard to coordinate across jurisdictions*
Network charges

• Networks have economies of scale = quasi public goods
• Should equity be left to ministries of finance?
  ⇒ How finance fixed costs of distribution network?
    – Simple Ramsey? Purely efficiency, hits poor more
    – Ability to pay? Protects poor better
  ⇒ Strong case to consider equity as in public economics
• Liberalised suppliers choose efficiency over equity
  – Or risk losing profitable customers to rivals
• Customer-specific network charges require network to set user network charges (ideally also own smart meter)
• Retailers then just charge for energy => more competitive
• Standard model – periodic reviews, lengthy consultations, devolve many tariff decisions to network operators
  ⇒ regulatory stability **good for investor confidence**
  ⇒ **poor at addressing inefficiencies**, short-run challenges
• Capacity auction decides outcomes in minutes
  ⇒ location decisions last 20-40 years
  ⇒ Critically depend on correct location decisions
    ⇒ Access charges and RES support inappropriate
• **GB auction** expected 600+ MW CCGT connecting to grid
  – But 10 MW reciprocating engines connect to distribution networks
Competition issues

- Delivering competitive outcomes – how interventionist?
- Electricity markets need detailed design
  - Unintended consequences need rectifying but create winners and losers => Judicial review; legal not economic, slow not speedy
- How do we know if the market is well-designed?
  - E.g. could compare old SEM with I-SEM/TEM
  - Regulated audited bidding of variable costs + central dispatch vs self dispatch? Hard to persuade regulators to compare outcomes
- Market monitoring critical for assuring efficiency/fairness
- Market power an issue in concentrated markets
- Good news: market transparency provokes questions
- Bad news: changes often redistribute more income than efficiency gains => judicial review

Regulation – the least worst solution?
Conclusions

• Stability/predictability vs responsiveness
• Hard/slow to change decisions ⇒ need to think carefully about changes beforehand, but delays costly
  – I-SEM took 5 years to implement, cost €100+ million
  – Coupling interconnectors took 12 years, annual loss before coupling €20-30 million/yr
• Politics constrains choices that require cross-jurisdiction agreement (NI and RoI, SEM and EU, …)
  – Four EU packages. 20+yrs, and now, Brexit
• Equity is a legitimate concern for network tariffs

Catherine Waddams has led on this and other topics