REALISE FORUM

Renewable Energy & Liberalisation in Electricity Markets: Lessons and Recommendations for Policy

Market perception of coordination of support schemes: stakeholders viewpoints and expectations

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Coordination of support schemes

- The main different types of support schemes:
  - Feed in tariff
  - Tender
  - Tax rebates
  - Tradable certificates

- It seems the solution at this time is not to dictate to MS to adopt only 1 support system, but a combination set with minimal criteria – i.e. primarily a market based system as the basis with elements of the other schemes.

Market based mechanism is the key for long term efficiency – as with many other markets

- EU energy policy is moving towards liberalised markets encouraging cross boundary trading to minimise physical barriers – why should RE go against this?
- The aim of liberalised tradable markets is to work towards more efficient pricing – which is a natural effect of competitiveness between market players

Lets not forget the basics! – What is a Tradable Green Certificate?

Physical green electricity

Renewable Energy Certificate / Green Certificate

Allowing the green attributes of the generation to be traded separately

Underlying physical "brown/grey" electricity

- Usually representing 1MWh of generation
- **AIM:** to encourage the growth of renewable energy capacity
- **HOW:** by allowing the environmental benefits to be freely traded from physical power
- **RESULT**: physical bottlenecks traditionally associated with energy markets are avoided – therefore encouraging generation in the most economical sites

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Make the most of renewable energy sources in the most efficient way

- Renewable energy is subject to geographical restrictions – i.e. some areas have very high RE resources but not such high electricity demand and vice versa
- By separating the environmental value from the physical electricity, you can freely move the environmental benefits to where demand is greatest – this is not always possible with feed in tariffs due to physical limitations such as interconnectors.

Tradable Certificates Markets are already operational on a mandatory basis

- Certificate systems are operating for some years now
- The UK's Renewables Obligation system has been running for 4 years and although there are some problems with the system, it has and is achieving what it was set out to do – i.e. increase the volume of RE. There is competition and the lowest cost projects and technologies are being developed (mainly onshore wind, landfill gas and cofiring) - volume of RES-E is increasing at lower cost!
- The existing structure of the UK RO does not encourage more expensive technologies to be developed – which is where elements from other support mechanisms can come into play – minimal feed in tariff, tendering, multiple certificates, grants used to get the technology to the level where it falls back into RO structure. Government consultation is now out considering these options

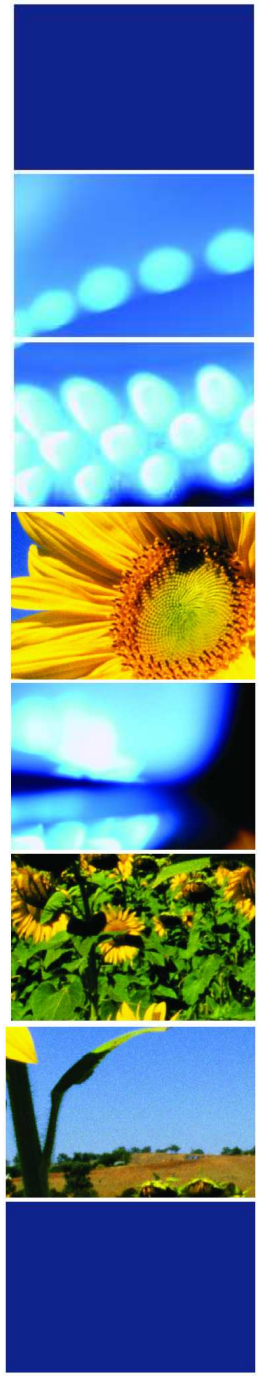
Tradable Certificates Markets are already operational – also on a voluntary basis

- There is voluntary demand from end consumers which is causing electricity suppliers to source certificates to meet this demand
- This is not always possible in their own area and so certificates are being traded from one country with the resources to another country where there is demand
- In this way the end consumer is achieving a green product at a competitive lower cost than if the electricity supplier was forced to buy this physical power in their own area
- There is already voluntary demand from end consumers (banks, financial institutes, domestic, commercial etc) – yes it is small at this stage – but market based system is the only one that will encourage this demand. Feed in tariff works against encouraging end consumer demand.

- Remember that we are at the beginning!
- We are shaping a robust structure to increase RES-E over the very long term.
- Of course there will be problems with markets when they begin – but when you think it through logically – a market based mechanism makes use of the resources and delivers to where demand is greatest by avoiding physical bottlenecks

Learn from our mistakes – key components for a successful REC system

- Verifiable to ensure no double counting. Including well managed registry.
- Driver stimulating market demand – e.g. mandatory targets or financial incentive
- Simplicity – no excessive documentation. Clear wording.
- No revocation
- Encouraging, long-term policy



- Systematic Demand:
  - Mandatory targets with some form of penalty, e.g. financial penalty, imposing trade restrictions (if supplier doesn't purchase certain volume of green, they are limited to the volume brown power they can purchase)
  - Financial incentives – e.g. tax rebates or exemptions (as with Dutch REB law)

Market players must have drivers to buy RECs. Too early in most MS for market to be purely driven by end consumer green demands

Conclusions

- Market based system is the most cost effective way forward in the long run and should be the key support scheme with elements of the other systems
- Current mandatory and voluntary REC systems are operational and are achieving new build
- Learn from our mistakes to remove trading barriers to make the market more efficient
- Create systematic demand – i.e. mandatory system or financial incentive – as consumer demand is not as strong in all countries

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