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Commercial mitigation of imbalance risk
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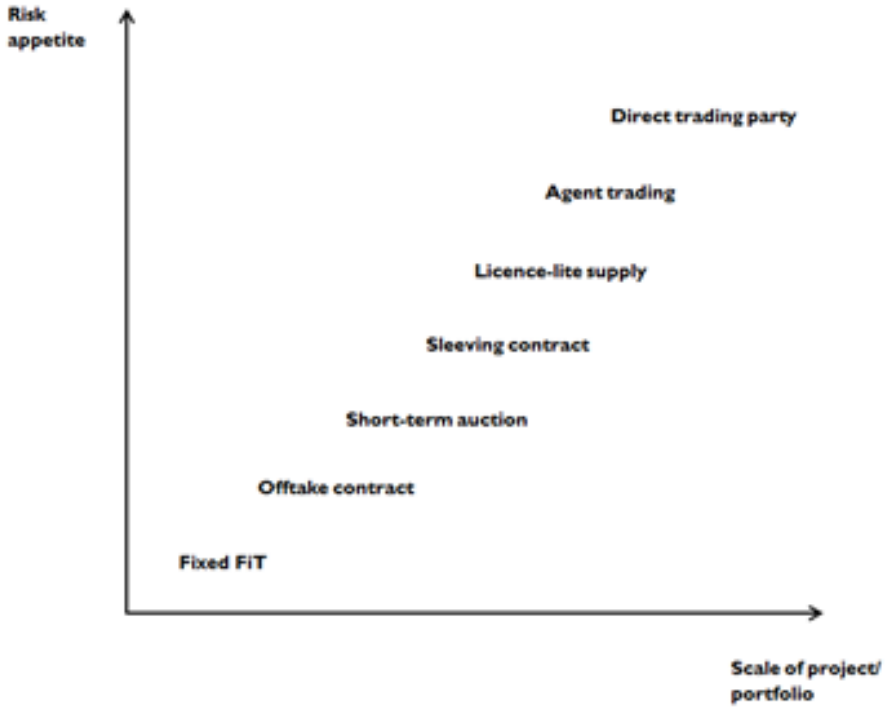
Introduction

- We have identified a number of options to treat imbalance risk commercially (both through changes to market rules and regulatory interventions)
- Dealing with imbalance risk depends on the chosen route to market. We have identified seven options
- Choice of route will be determined by:
  - size (e.g. licence thresholds)
  - wider business context
  - appetite for risk
  - ability and desire to access other sources of value (e.g. embedded and trading benefits)
  - regulatory rules (e.g. FiT bands)



Options in summary

- Four broad types
  - informational remedies
  - regulatory interventions
  - rules changes
  - improving market access and routes to market
- They are not mutually exclusive
  - some can be (and might need to be) combined
- At this stage a bit abstract
  - needs a clear assessment of the detriment - Baringa are doing this
  - so only preliminary views at this stage
- Mott MacDonald are also looking at technical mitigations

Assessment criteria

- Preliminary assessment against several criteria:
  - imbalance risk reduction
  - impact on system efficiency
  - competitive effects, including impact on end user prices
  - improvement to investor confidence
  - consistency with other stated objectives (EMR, liquidity and cash-out)
  - finally, complexity and ease of implementation
- Are these the right criteria?
- Are some more important than others?

Preliminary assessment

Classification	Options	Imbalance risk reduction	Improve-ment to system efficiency	Impact on competition	Improve investor confidence	Consistent with EMR aims	Consistent with liquidity aims	Consistent with cash-out aims	Complexity	Implementation
Information remedies	Standard offtake contracts									
	Information hub									
	Guidance on allocation									
Regulatory interventions	Obligation for suppliers to offer terms									
Contractual interventions	Imbalance risk indexation									
Varying/ improving access to existing markets	Green electricity market									
	Licence-lite supply									
	Changing Gate Closure									
	Allowing netting of generation and demand									

Standard offtake contracts

Description	▪ Standard terms and other key commercial parameters in the contract could be designed for PPAs and offtakers.
How it helps	▪ Transaction costs would be reduced (legal fees, time required). ▪ Simplification of negotiations.
Who undertakes it	▪ The mechanism could be administered by government or Ofgem.
Pros and Cons	▪ Could improve overall efficiency and reduce costs to consumer. ▪ Low cost to implement.

Guidance on risk allocation

Description	▪ Publication of guidance document or code of practice on imbalance risk allocation. ▪ Details of technologies and project sizes where particular imbalance.
How it helps	▪ Financial impact dependent on strategy of generator. ▪ Simplification of negotiations. ▪ Better understanding of managing imbalance risks.
Who undertakes it	▪ Mandatory through Ofgem or voluntary (good practice) through a trade association.
Pros and Cons	▪ Increased transparency could benefit generators and other stakeholders. ▪ Low cost to implement.

Obligation on suppliers to offer terms

Description	▪ Require suppliers to offer PPA terms in certain circumstances. ▪ Could be minimum requirements (e.g. contract duration, change of law provisions).
How it helps	▪ Increased competition for generators.
Who undertakes it	▪ Implemented through a supplier licence condition.
Pros and Cons	▪ It is not clear if generators would be more likely to obtain an economically viable PPA. ▪ Suppliers may question the efficacy of the licence condition.

Imbalance risk indexation

Description	▪ E.ON UK proposal – SPAM. ▪ Set the CfD strike price based on the current. average cost of balancing and adjust each year using a balancing index. ▪ One index per technology.
How it helps	▪ Mitigates long-term imbalance uncertainty.
Who undertakes it	▪ Government, through CfD FiT design.
Pros and Cons	▪ Improves investor confidence but complex and unknown costs. ▪ Not obvious it would spur PPA market.

Realising value

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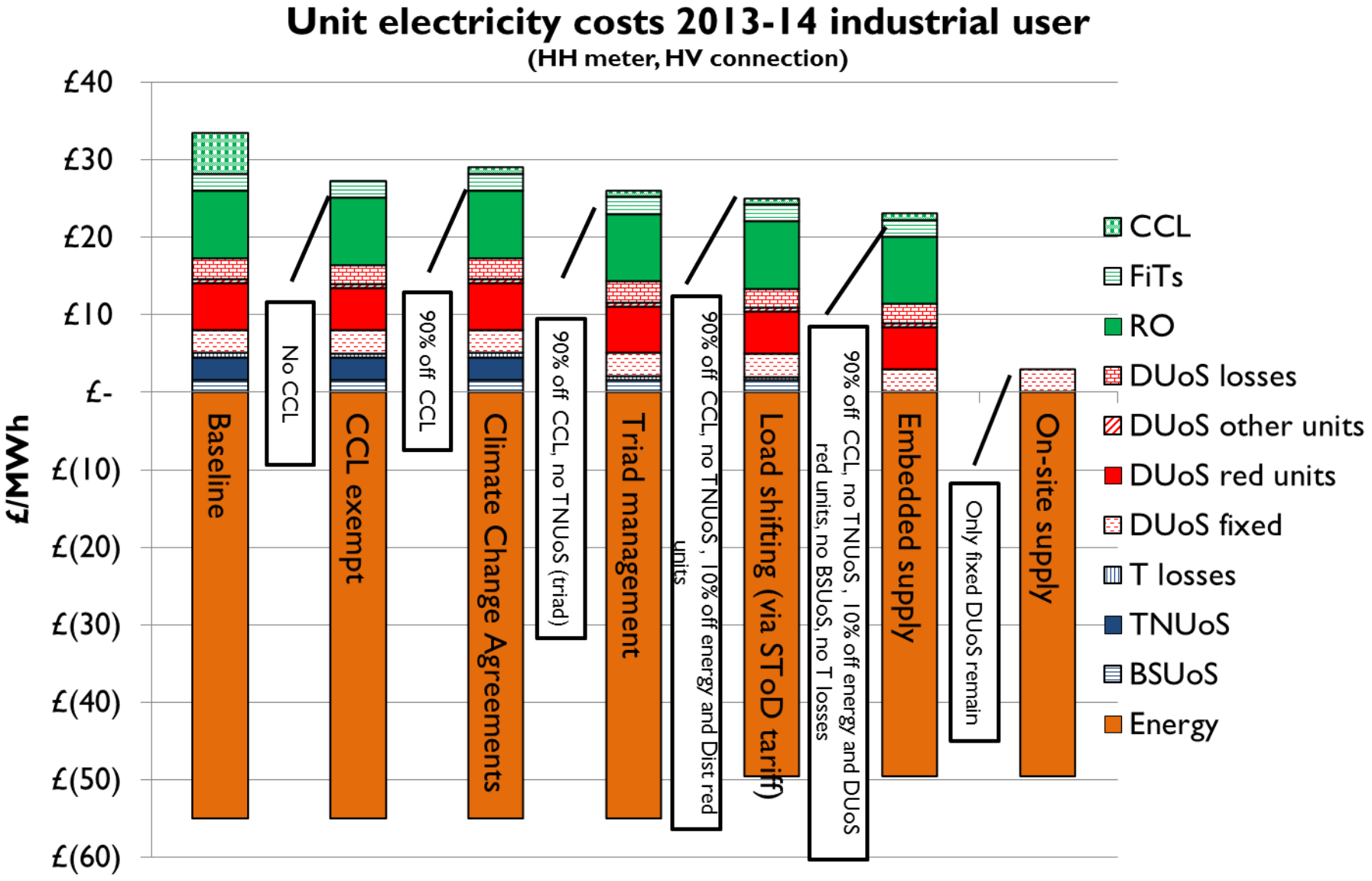

Licence-lite supply

Description	▪ Junior supply licence without being direct party to industry codes.
How it helps	▪ Allows generator to access retail rates without having to invest in systems to comply with codes. ▪ Senior supplier would manage imbalance.
Who undertakes it	▪ Ofgem introduced changes to supply licence in March 2009 to allow for licence-lite, but it has only be defined at high level.
Pros and Cons	▪ Potential to increase competition by opening up innovative supply solutions. ▪ Facilitates consolidated balancing. ▪ Greater London Authority has recently applied for licence-lite supply licence – work should happen anyway.

A different consolidation model?

- Provide a competitive route to market for community projects
- Framework contract with preferred provider(s) based on public sector energy procurement:
  - use consolidation and expertise to maximise benefits available to generators
- Fixed period and standard terms, joining windows for new projects:
  - SSP until e.g. 1 April or 1 October, then join
- Bespoke pricing based on wholesale markets at each joining window:
  - permit choice of selling strategies/ technology types
  - governance and reporting arrangements for transparency

Green electricity market

Description	▪ Power auctioned on an organised platform on a rolling basis. ▪ e.g. GPAM, based on current NFPA e-Power auctions. ▪ CfD reference price could be price achieved in auction.
How it helps	▪ Generators would benefit from route to market with reduced basis risk.
Who undertakes it	▪ Government, through powers sought in the *Energy Bill*.
Pros and Cons	▪ Route to power for suppliers and liquidity benefits. ▪ Increased investor confidence. ▪ Cost of balancing is priced into auction results, but does this create the right incentives?

Emerging conclusions

- Many possible ways to mitigate balancing risk through contracts or rule changes
- Two key variables:
  - definition of problem and its quantum
  - which assessment criteria are most important
- Informational remedies are no regrets and "fit" with need to educate concerning EMR and to manage the transition
  - no reason why good practice cannot be defined and disseminated
- On-going work on balancing SCR and licence-lite?
- There are more extensive interventions, if they are considered proportionate to scale of problem
- Don't forget different business/ financing models

Reference slides

Assessment of all options

Classification	Options	Imbalance risk reduction	Improve-ment to system efficiency	Impact on competition	Improve investor confidence	Consistent with EMR aims	Consistent with liquidity aims	Consistent with cash-out aims	Complexity	Implementation
Information remedies	Standard offtake contracts									
	Information hub									
	Guidance on allocation									
Regulatory interventions	Standardised imbalance risk sharing									
	Obligation for suppliers to offer terms									
	Capping imbalance price									
	De minimis balancing provision									
	Banded imbalance charges									
Contractual interventions	Imbalance risk indexation									
	CfD strike price re-opener									
Varying/ improving access to existing markets	Green electricity market									
	Licence-lite supply									
	Extending fixed FiT threshold									
	Changing Gate Closure									
	Allowing netting of generation and demand									
	Information imbalance charge									
Centralised renewables market	Centralised renewables market									

Information hub

Description	▪ Development of publically-available information in a centralised hub. ▪ data and information can currently be found on Elexon and National Grid websites. ▪ potential to share more real-time system balance data and price information with the market.
How it helps	▪ Of itself this option does not provide mitigation of imbalance risk. ▪ It could be introduced in combination with standard offtake contract and guidance on risk allocation options.
Who undertakes it	▪ Suppliers could be asked to develop and maintain. site as alternative to more radical interventions.
Pros and Cons	▪ Increased data and information should help all market participants.

Standardised imbalance risk sharing

Description	▪ Standard imbalance risk sharing practices for generators and suppliers. ▪ Backstop measure supporting standardised offtake contracts and guidance on imbalance risk allocation.
How it helps	▪ This measures should result in an improvement of terms for generators.
Who undertakes it	▪ Implemented through a new licence condition for suppliers.
Pros and Cons	▪ Should result in financial benefit for consumers by lowering overall premia for imbalance costs. ▪ Would this introduce greater rigidity?

Capping imbalance price

Description	▪ Set a limit on maximum liability a generator faces through electricity cash-out process. ▪ The cap could be set at a maximum charge/MWh in a HH period or at a % above wholesale market price.
How it helps	▪ Generator would be protected from extreme cash-out prices.
Who undertakes it	▪ Implemented through BSC modification and formal consultation.
Pros and Cons	▪ Depending on how costs of balancing are recovered, the costs for other participants could increase. ▪ Government has stated throughout EMR that cash-out processes should reflect costs incurred to balance system.

De minimis balancing provision

Description	▪ Participants that are out of balance (in either direction) to a defined level would not face energy imbalance charges. ▪ Could be set at MWh or fixed percentage ▪ Tolerance band would be for all technologies.
How it helps	▪ All generators benefit equally. In proportionate terms, smaller generators may see greater benefit.
Who undertakes it	▪ Implemented through BSC modification and formal consultation.
Pros and Cons	▪ Suppliers and aggregators will see lower risks from dealing with generators but some consolidation value could reduce. ▪ Cash-out prices may not reflect costs incurred to balance system.

Banded imbalance charges

Description	▪ Two (or more) bands for imbalance charges in tiered approach. ▪ Lower band would set charge for participants that are out of balance by up to a given proportion; imbalance above this band will be charged at higher rate.
How it helps	▪ All generators benefit equally. In proportionate terms, smaller generators may see greater benefit.
Who undertakes it	▪ Implemented through BSC modification and formal consultation.
Pros and Cons	▪ imbalance charges for those further out of balance than the low band would be exposed to higher prices. ▪ Cash-out prices may not reflect costs incurred to balance system.

CfD strike price re-opener

Description	▪ This option would allow for strike prices to be adjusted after they had been set if it were deemed necessary. ▪ The trigger could be increased balancing costs making contact uneconomic. ▪ Strike price could be changed without affecting other terms of CfD.
How it helps	▪ Generator would have reassurance on balancing risks and should be able to PPAs easier.
Who undertakes it	▪ Government, through powers sought in the *Energy Bill*.
Pros and Cons	▪ Cost of CfD scheme likely to be higher and become more unpredictable.

Information imbalance charge

Description	▪ There is a provision in current market rules to charge participants that deviate from their FPN. ▪ This is currently set to zero.
How it helps	▪ Create sharper incentives on parties to accurately forecast their output/ consumption.
Who undertakes it	▪ The functionality exists within the BSC.
Pros and Cons	▪ New charge on generators and suppliers, those worst at forecasting would face higher charges. ▪ Could reduce the overall imbalance and imbalance charges. ▪ A new charge could be detrimental for investor confidence. ▪ Any reason to believe current requirements on notifications are not working?

Extending fixed FiT threshold

Description	▪ Extend the fixed FiT threshold beyond the current 5MW to, for example, 10MW.
How it helps	▪ Provides a route to market option for smaller-scale generators with guaranteed incomes.
Who undertakes it	▪ Requires a change to Energy Act 2008 to enable secondary legislation (FiT Order) to reflect threshold. Changes to primary legislation could be made via the *Energy Bill*.
Pros and Cons	▪ Increased investor confidence. ▪ Could exacerbate balancing costs. ▪ Consistency with other objectives?

Change Gate Closure

Description	▪ Gate Closure is the last point at which parties can notify their contract position to NETA central systems. ▪ Reduce from current one hour to e.g. 45, 30 mins.
How it helps	▪ Generators could see decreased exposure to imbalance charges as forecasts could be more accurate.
Who undertakes it	▪ Ofgem, secondary consideration under Balancing SCR. ▪ Ofgem's initial timetable sees any new arrangements in place in 2015. ▪ Technical working group unenthusiastic.
Pros and Cons	▪ Suppliers could also see financial benefit through improved contracting and lower imbalance charge exposure. ▪ Increases complexity but real benefits?

Net generation and demand

Description	▪ Dual trading accounts introduced at Neta Go-Live. ▪ Allow parties to net off their volumes in settlement so there is one overall imbalance (where applicable).
How it helps	▪ Allows parties on both sides of the market to reduce imbalance exposure. ▪ Provides additional opportunities for generators to contract.
Who undertakes it	▪ Can be changed through standard industry code modification process. ▪ Ofgem's could issue directions under EBSCR.
Pros and Cons	▪ Could reduce costs of balancing for BSC parties. ▪ Possible impact on system operation. ▪ contracts notified under Neta and traded contracts not the same thing.

Centralised renewables market

Description	▪ Separate market for renewables where output is aggregated and auctioned.
How it helps	▪ Eliminates risk of imbalance for generators.
Who undertakes it	▪ To be considered under Future Energy Trading Arrangements (FETA).
Pros and Cons	▪ Forecast error and overall imbalance should fall. ▪ Lower balancing costs for suppliers, but crowds out market for aggregators. ▪ Stakeholders have voiced concerns over unintended consequences. ▪ Significant time and costs to implement.