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Ofgem TransmiT

Theme 6 : G/D Split
Generation / Demand share

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18 August 2011

Background

- Paper and spreadsheet sent out to WG on Thursday 11th at 07:52.
- Feedback received from WG members and RUK stakeholders.
- Ivo feedback especially on numbers:
  - Onshore investment too low compared to RIIO-T1
  - Change baseline from 2008/9 to 2011/12
  - Offshore generators pay ~90% not 100% as assumed
  - Depreciation on existing transmission assets unclear
- These changes to be incorporated, will change the scale of the numbers but not the principles.

Theme 6 - G/D and “Local” interaction

- Generation Demand Split – currently 27%/73%.
- However “Local” assets are dealt with differently - with knock on effects.
- Local assets costs are charged 80-100% (say 90%) to generators.
- But “Local” assets are also part of the total pot, therefore result in 73% of their costs being charged to demand.
- Therefore “Local” assets recover:
    - ~90% from local generator +
    - 73% from demand customers

  = 163% i.e. recover 63% more than their cost.
- As a result some other charges must fall.
- Result – generators’ Wider / non- local charges fall.

NGET charging tutorial slide

Offshore charging regime - Impact to residual

nationalgrid
THE POWER OF ACTION

Original TNUoS revenue requirement

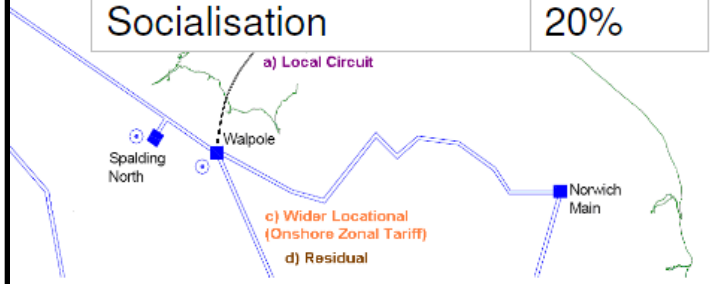
Total TNUoS revenue	£100m
Generation (27%)	£27m
Demand (73%)	£73m

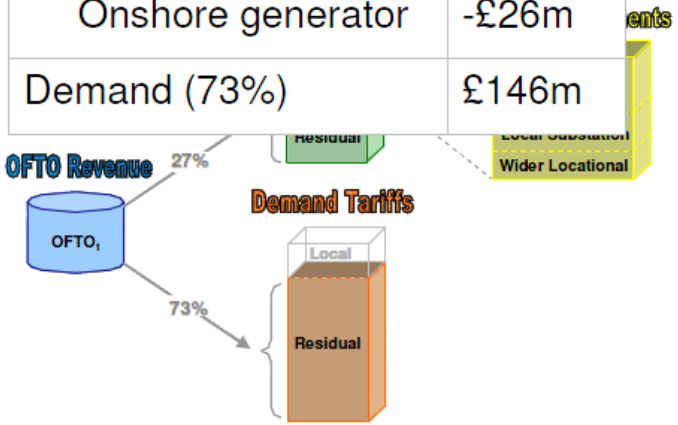
Final TNUoS revenue requirement

Total TNUoS revenue	£200m
Total generation (27%)	£54m
Offshore generator	£80m
Onshore generator	-£26m
Demand (73%)	£146m

Offshore TO revenue

Offshore TO revenue	£100m
Socialisation	20%





Transfer of £53m/year to onshore generators

G/D split and Local offshore

- With onshore Local charges, effects are small.
- With offshore, significant investment and Local assets result in lower onshore generator charges.
- So onshore generator tariffs become cheaper, even though they are connected to the same or a better network.
- As a principle, a charging system should not result in participant type A's charges reducing, just because participant B has connected.
- This situation would lead to undue discrimination against a particular technology and would be non-cost reflective for others.

Potential solution - 1

- **Status quo**
  - **Local assets charged G=~90% D=73%**

- 1. Local assets charged G=100% D=0%.
  - Postage Stamp or improved ICRP
  - Logic
    - Limit charges to 100% of costs – no over collection.
    - 100% cost on generator.
  - Result
    - Onshore generator charges do not fall with more offshore.
    - Offshore would pay more than in status quo.
    - But overall G/D split changes from 27%/73% towards 50%/50% as more offshore connected.

Potential solution - 2

- **Status quo**
  - **Local assets charged G=~90% D=73%**

- 2. Local asset charged [G=27% D=73%]
  - Postage Stamp or improved ICRP
  - Logic
    - Limit charges to 100% of costs – no over collection.
    - Same split as onshore assets [G=27% D=73%].
    - Is a cost reflective charge to generator.
    - Doesn't lower charges to other (onshore) generators.
  - Result
    - Demand charges do not increase vs. status quo.
    - Onshore generation charges do not decrease.
    - Onshore generation charges same as Solution 1.

Potential solution - 3

- **Status quo**
  - **Local assets charged G=~90% D=73%**
- 3. Local assets charged G=90% but local charge based on 400kV OHL cost (i.e. expansion factor 1).
  - Postage Stamp or improved ICRP.
  - Logic
    - Offshore being used to reinforce onshore.
    - Similar to one HVDC option (Theme 4).
    - Costs are higher for offshore due to 20 year vs. 50 year depreciation period.
    - Under-recovery of cost in short term made up for by continued generator charging after year 20.
    - Is cost reflective charge to generator.
  - Result
    - No over-recovery.
    - Onshore gen charges higher than Sol'n 2 but less than Sol'n 4.

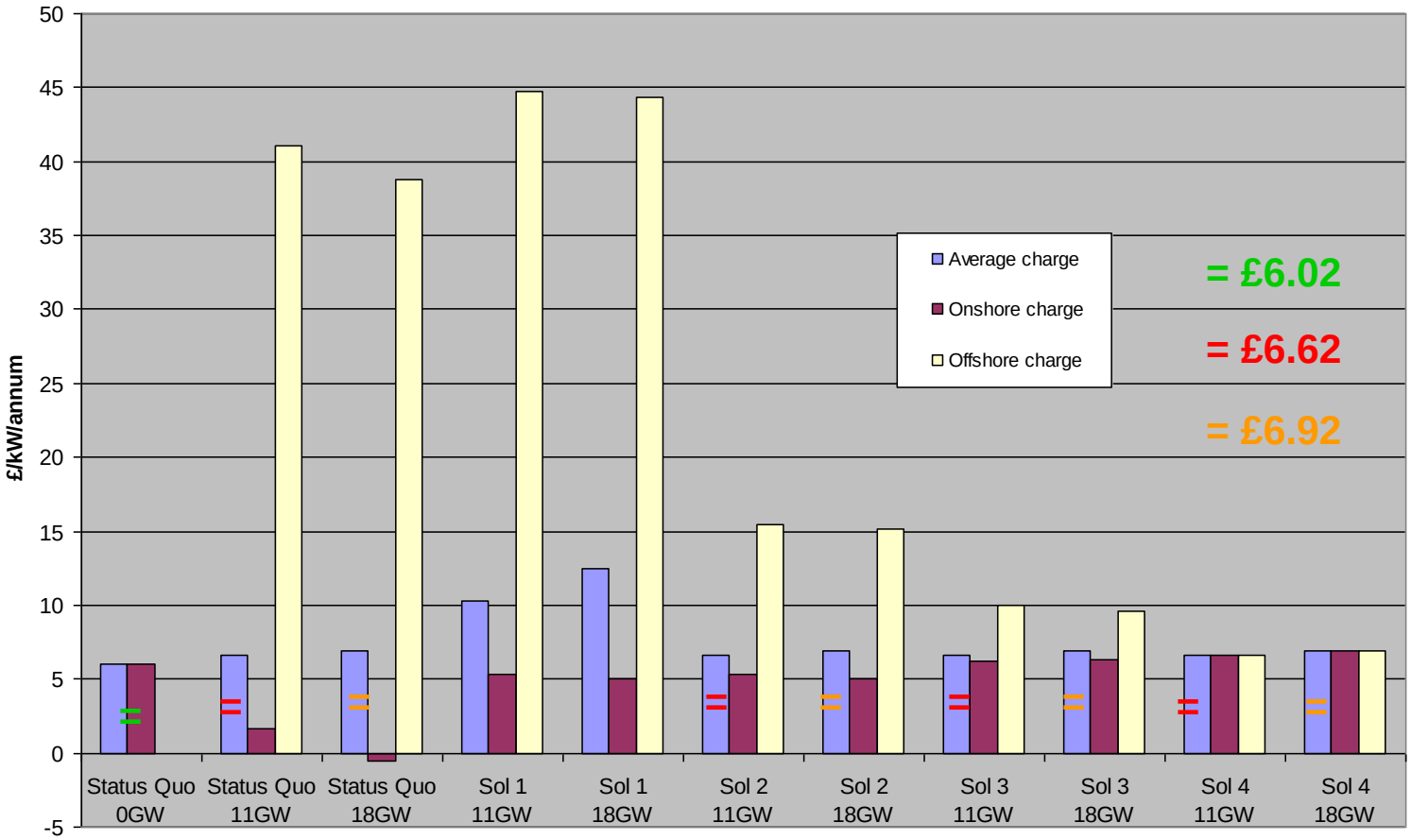
Potential solution - 4

- **Status quo**
  - **Local assets charged G=~90% D=73%**

- 4. No Local assets
  - Postage Stamp only
  - Logic
    - No difference in transmission charges for any generator.
  - Result
    - All generators charged the same.
    - Onshore charges only 1- 1.5% per year higher than 0GW.
      - 10% increase by 2020 for 11GW vs. 0GW
      - 15% increase by 2020 for 18GW vs. 0GW
      - Much lower than rate of inflation.

Charges for 2020 - status quo & solutions

GB Average Generator charges for 2020 including status quo and solutions with 11 or 18GW offshore wind.



NB these values to be revised following Ivo's comments

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Some more complex issues:

- Interconnected offshore network
- Under Improved ICRP
  - Assets may flip from Local to Wider (e.g. when interconnected)
    - Local charge could flip to zonal charge.
    - Zonal would be about 2x local due to changed security factor 1>1.8.
    - One offshore substation in its own zone.
    - Major cost change to generator.
- Under Postage Stamp retaining Local
  - Assets may change from Local to Wider (e.g. when interconnected)
    - Big fall in charge.
    - Windfall gain.
- These are not transitional from now to a new regime, but future changes that the new regime must accommodate.
- Charges may deter optimum designs
  - e.g. if longer connection routes had system benefits the generator(s) will pay extra for this saving to GB system and customers.
- Offshore low carbon support (ROC/CfD) would be used to reduce charges for fossil fuel generators under current scheme.