

The background features a large, stylized white arrow pointing to the right, set against a blurred image of a mechanical gear. The gear is partially blue and partially white, with a soft, glowing light effect. The overall aesthetic is clean and professional.

EDCM Consultation & pre-2005 Generation Workshop

9 June 2011

EDCM CONSULTATION - DG

The EDCM objective

The objective of the EDCM is to introduce a common charging methodology across the country which is cost reflective and which accounts for key developments in the DNO networks (such as the emergence of DGs and IDNOs).

Where are we in the process?

- 1 April 2011: The DNOs submitted their EDCM proposal to Ofgem
- 20 May 2011: Ofgem published a consultation on the EDCM proposals

EDCM consultation issues

Generation issues

- | | |
|---|--|
| ✓ | Issue 8: the generation revenue target |
| ✓ | Issue 9: scaling |
| ✓ | Issue 10: application of generation credits to units exported during super-red |
| ✓ | Issue 11: no credit for intermittent generation |
| | Issue 12: import charges for generation-dominated mixed import-export sites |

Common issues

- | | |
|---|--|
| | Issue 17: sole use asset charge |
| ✓ | Issue 18: demand/generation side management |
| | Issue 19: reactive power charges |
| | Issue 20: sense checking of branch incremental costs in LRIC |
| ✓ | Issue 21: volatility |

Overview of the methodology

Step 1 LRIC or FCP charges are applied to the generator's agreed export capacity

$$\text{LRIC/FCP charge rate (£/kVA)} * \text{Agreed export capacity (kVA)}$$

Step 2 LRIC/FCP charges are scaled up or down using a "fixed adder" to ensure recovery of a "revenue target"

$$\text{Fixed adder (£/kVA)} * \text{Agreed export capacity (kVA)}$$

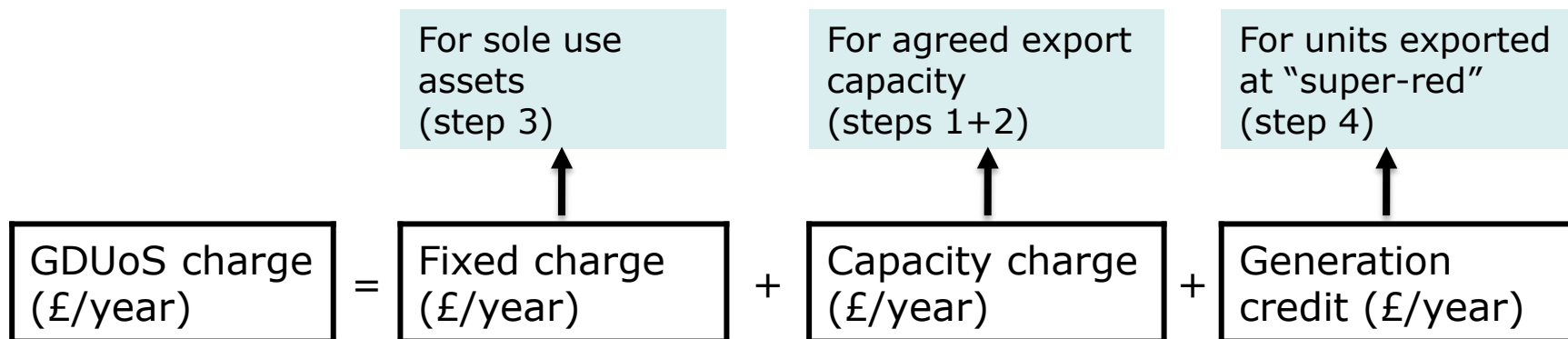
Step 3 A fixed charge related to the generator's sole use assets is added to the tariff

$$\text{Fixed charge (£)}$$

Step 4 LRIC or FCP credits are applied to generation export during the super-red time band for non-intermittent generation

$$\text{LRIC/FCP credit rate (£/kWh)} * \text{Units exported at "super-red" (kWh)}$$

The tariff structure



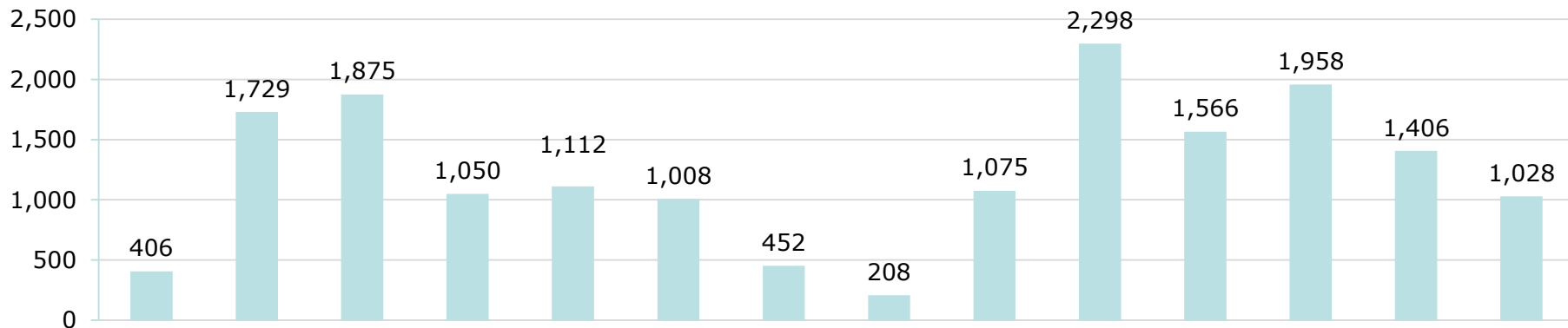
Recovery from generators in the EDCM by tariff component

DNO	Total fixed charges (£)	Total capacity charges (£)¹	Total generation credits (£)	Total generation recovery (£)
WPD W Mid	47,586	406,086	-44,617	409,055
WPD E Mid	164,669	1,728,607	-960,827	932,449
ENWL	179,373	1,874,674	-176,678	1,877,369
CE NEDL	79,028	1,050,125	-140,231	988,922
CE YEDL	185,587	1,111,825	-45,314	1,252,098
WPD S Wales	129,285	1,008,371	-111,893	1,025,763
WPD S West	106,284	451,920	-230,124	328,079
UKPN LPN	24,043	207,577	-239,033	-7,413
UKPN SEPN	66,494	1,075,280	-446,060	695,714
UKPN EPN	113,915	2,298,151	-1,497,432	914,635
SP Distribution	905,855	1,565,713	-390,672	2,080,897
SP Manweb	366,977	1,958,042	-1,559,964	765,056
SSE Hydro	944,908	1,406,094	-20,463	2,330,539
SSE Southern	114,856	1,028,493	-220,263	923,086
Average	244,919 (16.6%)	1,226,497 (83.4%)	-434,541 (-29.5%)	1,036,875

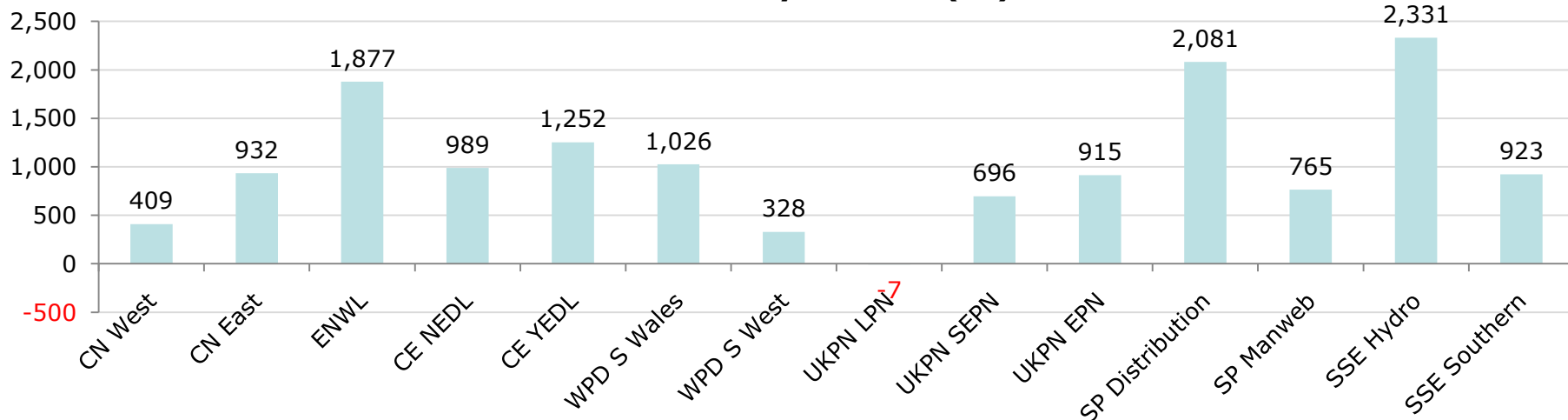
Source: Table 4.3 of Ofgem's consultation on EDCM proposals, 20 May 2011

Recovery from generators in the EDCM by tariff component

Total capacity charges (£k)



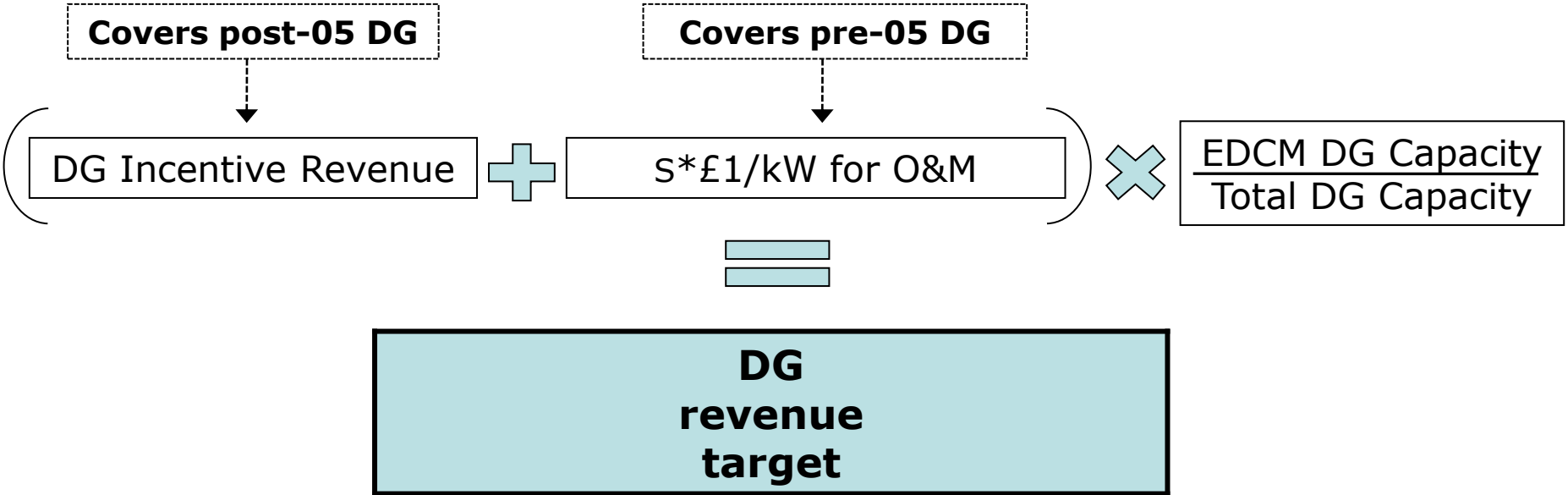
Total recovery from DG (£k)



Issue 8: the generation revenue target

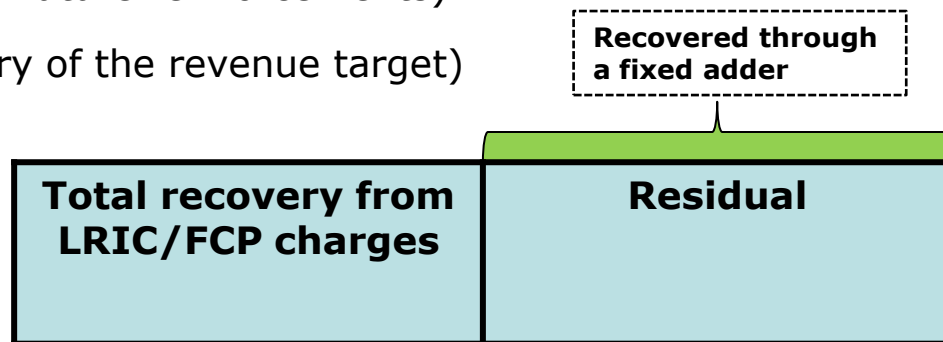
The generation revenue target is a sum of money that each DNO sets out to recover from its EDCM generators through use of system charges

Why we need a revenue target? to ensure that final charges are cost-reflective in terms of the price control settlement



Issue 9: scaling of generation charges

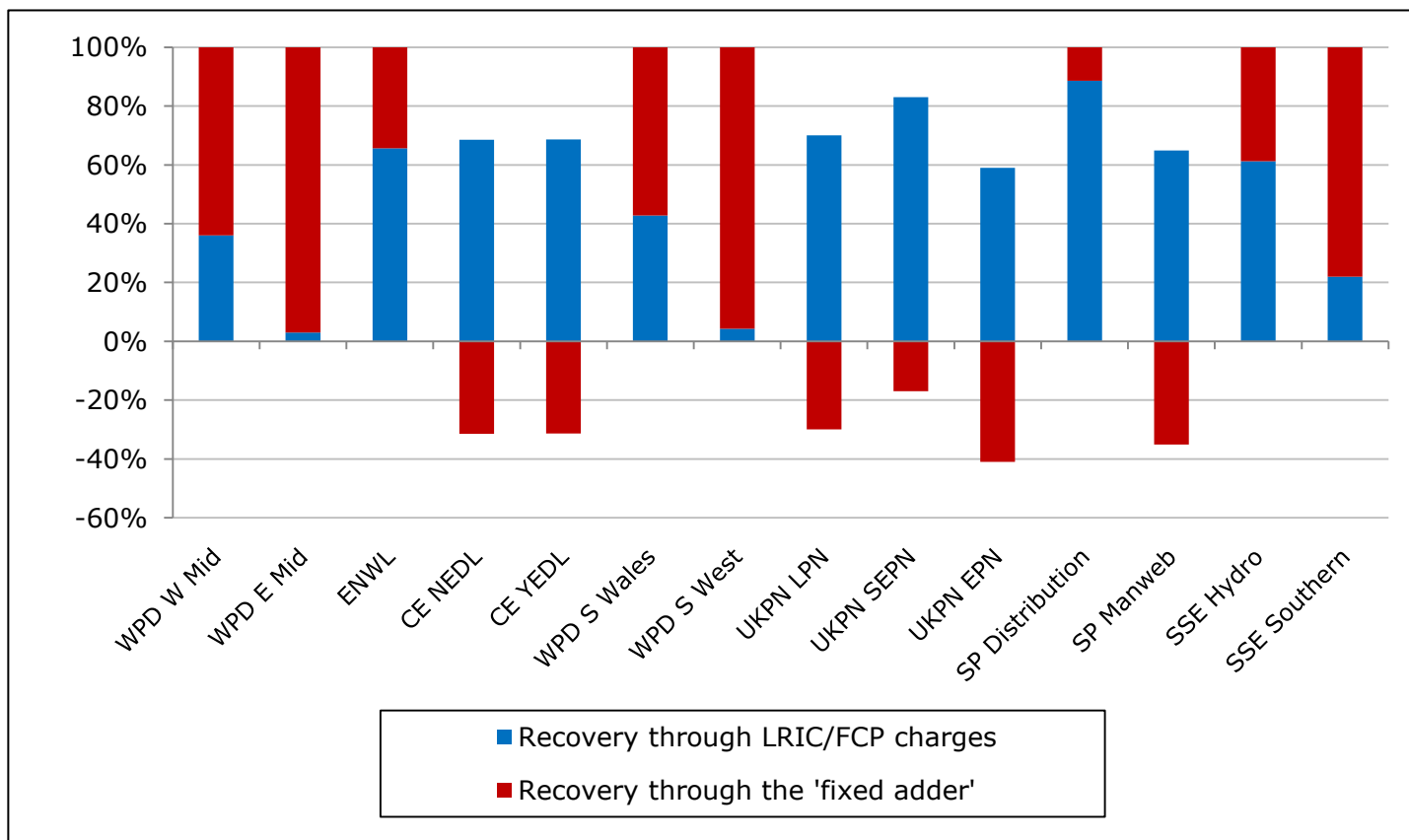
- The generation revenue target is recovered through export capacity charges (£/kVA)
- The capacity charge rate is composed of two components:
 1. LRIC/FCP charge (in respect of future reinforcements)
 2. Fixed adder (to ensure recovery of the revenue target)



$$\boxed{\text{£/kVA fixed adder}} = \frac{\text{DG revenue target (£)} - \text{Recovery from LRIC/FCP (£)}}{\text{Total EDCM DG capacities (kVA)}}$$

Only charges are scaled, NOT credits!!

Scaling may be negative or positive depending on whether FCP/LRIC charges over or under recover the revenue target



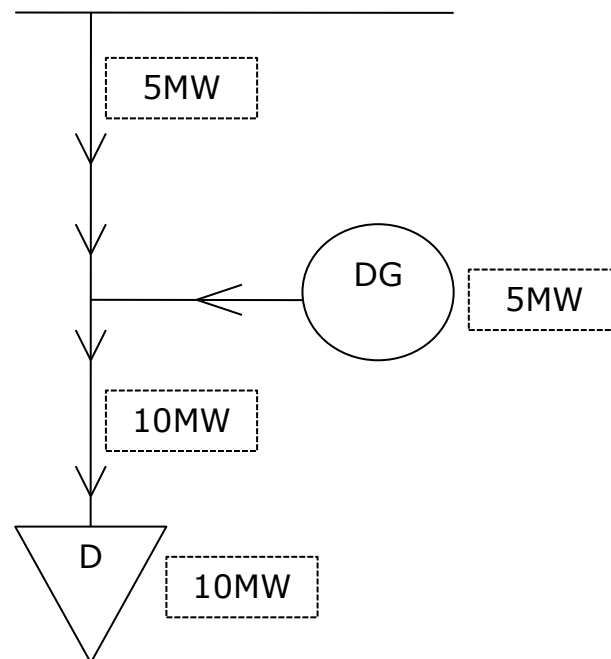
Source: Figure 4.2 of Ofgem's consultation on EDCM proposals, 20 May 2011

Generation credits

The EDCM proposals include a payment of credits to non-intermittent generators only

Why credits? to reflect cost savings from deferred reinforcement works

Credit rates are calculated by the LRIC/FCP models



Issue 10: application of generation credits to units exported during the super-red time band

- Sub-issue 1: providing credit to units rather than capacity
 - ER P2/6 specified the extent to which generation capacity provides system support (in particular, it specifies the proportion of the DG capacity that can be relied upon for system security)
 - The DNOs argue that using units produced rather than capacity may better represent the actual contribution that individual generators make to security of supply
- Sub-issue 2: apply credits to all units exported or only to some?
 - Option 1: Credits apply to all units exported (DNOs' EDCM consultation)
 - Option 2: Credits apply to units exported at "super-red" (EDCM submission)
 - Justification: generation benefit to the network is mainly in offsetting demand when the network is highly loaded. For this reason only units exported during the super-red time band, which is when the network is highly loaded, qualify for the credit

DNO specific super-red time bands

DNO	Super-red time band	Weekdays	Annual hours in super-red
WPD W Mid	November - February 16:00-19:00	Monday to Friday	261
WPD E Mid	November - February 16:00-19:00	Monday to Friday	261
ENWL	November - February 16:30-18:30	Monday to Friday	172
CE NEDL	November - February 16:00-19:30	Monday to Friday	298
CE YEDL	November - February 16:00-19:30	Monday to Friday	298
WPD S Wales	November - February 17:00-19:30	Monday to Friday	188
WPD S West	November - February 17:00-19:00	Monday to Friday	150
UKPN LPN	November - February 16:00-19:00 June-August 11:00-14:00	Monday to Friday	459
UKPN SEPN	November - February 16:00-19:00	Monday to Friday	261
UKPN EPN	November - February 16:00-19:00	Monday to Friday	261
SP Distribution	November - February 16:30-19:30	Monday to Friday	261
SP Manweb	November - February 16:30-19:30	Monday to Friday	261
SSE Hydro	October-March 12:30-14:30 October-March 16:30-21:00	Monday to Friday	845
SSE Southern	November-February 16:30-19:00	Monday to Friday	218
Average		Monday to Friday	299

Issue 11: no credit for intermittent generation

- Under the EDCM proposals, intermittent generation does not receive generation credits
- This proposal reflects the view that intermittent generators do not help offset the need for network reinforcement
- In practice, intermittent DG *may* provide support to the network, but more often than not they do not impact network planning. What is the best charging policy?
- We consider that there may be a case for allowing some credit to intermittent generators. Difficult to work out how much.

Issue 18: generation side management

Firm capacity: not constrained by the agreement

Interruptible capacity: constrained by the agreement

Proposals: for the application of LRIC/FCP components, only the firm capacity will be taken into consideration

Example: a generation customer with 15MW agreed export capacity enters into an agreement to allow 5MW of this capacity to be interruptible.

Firm capacity = 10 MW

Interruptible capacity = 5 MW

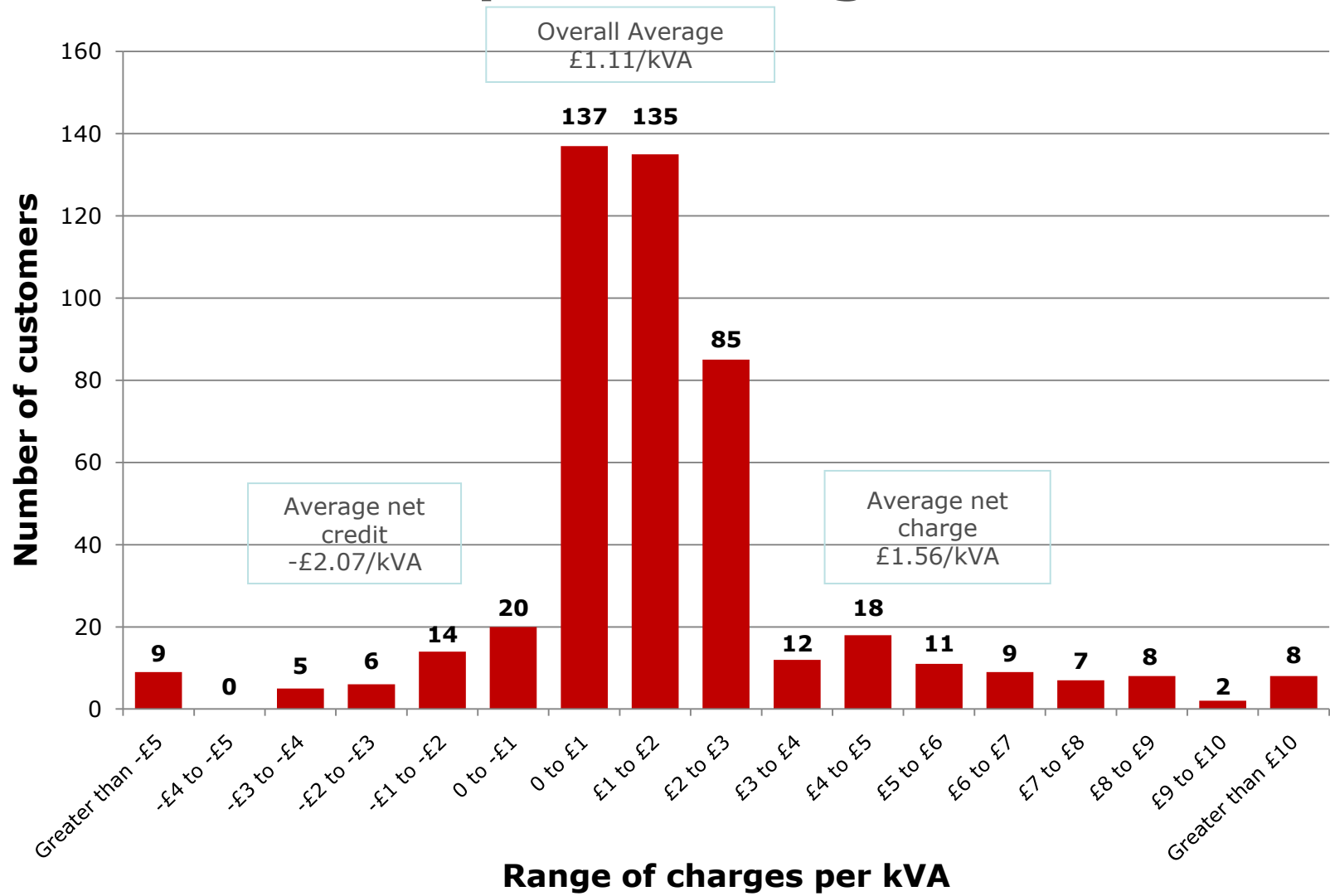
DUoS Charge discount = 5*LRIC/FCP charge

LRIC/FCP (p/kW/day)	Annual per 1 MW	Annual per 5 MW
1p	£3,650	£18,250
2p	£7,300	£36,500
4p	£14,600	£73,000

Savings per
interruptible
MW

Implementation

Impact of charges



Management of charge changes

- Previous chart is based on *current* behaviour
- EDCM offers opportunities to manage charge
 - generation side management agreement
 - increase export during super-red hours (if receiving credit)
 - reduce agreed export capacity
 - target less congested locations for new plant
- We expect some generators will adjust their behaviour in response

Managing charges over time (Issue 21)

- Beyond one-off change, there may be ongoing volatility in charges
- Measures to manage volatility
 - five year projections of potential variances
 - long term products
 - modification to model inputs, eg smoothing
- Role of Workstream C

What measures would be most useful in helping you manage your charge over time?

Implementation of new charges – as planned

Default option – new charges start 1 April 2012 as planned

Pros

- benefits of methodology realised asap
- significant notice charges will change

Cons

- significant impact on some customers, could affect viability
- may not give sufficient time to adjust behaviour where possible

Implementation of new charges

Delay – new charges start 2013, 2014 or at RIIO-ED1 (2015)

Pros

- 'cleaner' method than phasing
- time to mitigate/adjust to increase where possible

Cons

- EDCM benefits deferred, especially more cost reflective charges
- customers with charges reducing are disadvantaged

Implementation of new charges - Phasing

Pros

- time to mitigate/adjust to increase where possible

Cons

- benefits of methodology deferred, including cost-reflectivity
- makes mods difficult
- difficulty adjusting tariffs and licence

Phasing for some or all?

For all customers:

- delays benefits to those with reductions

For those with significant increases:

- targets those most affected, minimising impact on others
- but, arbitrary decision on who to phase

Questions on implementation

Question 2.2

- *Should we approve the methodology, do you agree with our proposal to implement it in full from 1 April 2012?*
- *If not, why is phasing-in charges or delaying implementation appropriate?*

Appreciate responses to this question by 24 June 2011

- *although we will still consider responses submitted after*

Are there any other implementation issues we should consider?

EDCM

Q&A

COFFEE BREAK

PRE-2005 DG CHARGING

Background

- DPCR4 - connection charging boundary was changed (deep to shallowish)
 - Pre-2005 DG given a 5 year exemption from UoS charges until 2010
- DPCR5 – decided not to renew the exemption to encourage efficient use of the networks and competition between generators
 - But recognised that DNOs may need to compensate DG
- CDCM implemented 1 April 2010
 - HV/LV DG already captured by CDCM (most/all receiving net credits)
- EDCM planned to be implemented 1 April 2012
 - Intention is that all EHV DG will be charged consistently under EDCM
- July 2010 consultation – existing contracts, unbundling, principles
- Live consultation (ref 58/11) – deadline for responses 17 June 2011

Consultation overview

- Rationale for our approach – the pre-2005 regulatory framework and regulatory precedents
- Circumstances where we think a refund should be funded by customers through the price control – double payment
- Circumstances that we don't think compensation should be funded through the price control
- Implementation arrangements
 - Responsibilities
 - Evidence required
 - Due process
 - How should refund be paid and recovered

Rationale for our approach

- Based on a review of evidence we found that:
 - Connection and UoS are distinct
 - Pre-2005 DG were generally not charged UoS as deemed not to impose costs on the networks
 - However, charging statements did mention possibility of being charged as did the 1995 Knapton determination
 - We have not found evidence to suggest that the regulatory regime gave the expectation of never being charged in the future
- We therefore think that it is only appropriate that regulatory regime refunds the relevant portion of connection costs to avoid double payment and not for a change in policy
 - If rights to UoS without further charge were given as part of connection agreements we do not think it is appropriate for customers to pay any necessary compensation – for DNOs to settle
- We think this rationale is consistent with regulatory precedent
 - Demand boundary – no refunds for change in policy
 - PLUGS – refunds necessary to avoid double payment as some connection assets added to the TOs' RAVs

Circumstances for refunds to be provided by customers through the price control

Principle: to avoid double payment

- Refund unexpired elements of the connection charge that would be covered by UoS charges
- Necessary to stop customers paying twice for assets/services

Application:

- The CDCM and EDCM both incorporate charges for O&M relating to DG
- Pre-2005 DG typically paid a lump-sum capitalised payment for O&M
- Therefore necessary to refund unexpired value of the capitalised O&M at the time of the introduction of the charging methodology
 - CDCM refunds would need to be backdated to April 2010
- No other examples of double payment identified

Circumstances not to be funded by customers through the DNOs' price controls

Contractual rights to UoS without further charge

- We have not identified evidence which such rights were given
- If it could be demonstrated that they were given, we do not think that customers should fund any compensation as such rights do not appear to be compatible with the regulatory regime at the time
- No evidence has been demonstrated to prove that such rights were given or that they were compatible with regulatory practice at the time

Deeper reinforcement

- DG would not be charged twice for assets they paid for through their connection charge
 - The EDCM and CDCM do not seek to recover the cost of any pre-2005 connection assets
- Ofgem does not compensate for changes in policy

Implementation of arrangements (1)

- Responsibilities
 - It is the DNOs primary responsibility but DGs should be proactive; parties should effectively collaborate
- Application
 - All DGs should be treated equally and consistently
 - Mixed sites
- Evidence
 - Clear evidence required
 - Recognise problems with paper trail; propose assumptions can be made in certain circumstances (ie where standard practice can be proven)

Implementation of arrangements (2)

- Due process
 - i. DNOs write to all of their DGs
 - ii. DGs respond with any additional supporting information
 - iii. DNOs consider further evidence and consider changing position
 - iv. Dispute resolution (if required)
- Payment
 - Unbundled
 - i) one off, ii) phased or iii) hybrid
- Recovery
 - Cost of refunds would be added to DNOs' RAVs
- Dispute resolution
 - UoS bills post 1 April 2012 could be logged up

Issues for discussion

- i. Based on available evidence, we don't think that DG have a legitimate expectation that they have paid or would never have to pay for UoS. Have we missed any important evidence?
- ii. We propose that refunds for ensuring DGs don't pay twice is economic and efficient. We have only identified this applying to unexpired O&M.
 - Are there other things that may be paid for twice?
 - Are there other things that were reasonably paid for that should be refunded? If so, who should pay for these refunds?
- iii. Should the amount of refund due be determined based on whether the connection was sized for demand or generation, or the proportion of MEC:MIC?
- iv. Should payments for refunds be: i) one-off, ii) phased or iii) hybrid?
- v. Disputes should be resolved by 1 April 2012. Is logging up UoS charges an effective incentive? Are there alternatives?

Pre-2005 DG Charging

Q&A

Next steps

Pre-2005 DG Consultation responses	19 June 2011
EDCM Consultation responses	4 July 2011
➤ Responses on phasing	24 June 2011
Ofgem's decisions on EDCM and pre-2005 DG	Aug/Sep 2011
Indicative charges for 2012/13	December 2011
Final charges for 2012/13	February 2012
EDCM implementation (if approved)	1 April 2012

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The background of the slide is a composite image. On the left, there are rows of solar panels under a bright sun. On the right, a hand is shown holding a white document. In the bottom left corner, a blue gas burner is visible. The overall theme is energy and customer service.

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for all gas and electricity customers