



**SP Distribution and SP Manweb (SP Energy Networks)**

**Response to Electricity Distribution Price Control Review  
(Policy Consultation December 2008)**

**Appendix – Response to specific questions posed**

**12<sup>th</sup> February 2009**

*(Main response in separate document)*

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## QUESTIONS POSED BY OFGEM

### Chapter 1: Introduction and overview

#### Chapter 1: Question 1: Do you agree with our assessment of how the DPCR4 settlement has performed in practice?

Ofgem have identified a key weakness of the current DPCR4 settlement in their own Return on Regulatory Equity analysis, specifically that existing incentive mechanisms may not be calibrated against the policy objectives that they set out to achieve.

Industry and stakeholders would have been able to form more informed opinions if Ofgem could have been more explicit about the extent to which behaviours are related to rewards/penalties for specific companies. We believe that in some cases the returns earned are inappropriately suppressed by factors out with DNOs' control and in other cases enhanced by such factors.

Take for example, the uncertainty surrounding the losses incentive mechanism, where Ofgem have questioned the significant gains that some DNOs are receiving, yet to date Ofgem have made no attempt to measure actual underlying reductions in network technical losses and green house gas emissions achieved. In this instance there has been an over-reliance on data that does not necessarily correspond to a physical improvement in losses. In fact the data in question has proven to be volatile in a significant number of circumstances.

Ofgem's proposal to retain the DPCR4 losses mechanism, whilst approximately doubling its value and increasing the reporting and target setting volatility, must be a major concern for customers, other stakeholders and DNOs and seems to contradict their efforts in other areas.

This contradiction can be seen in relation to investment where Ofgem are more specifically trying to tie down output measures against different types of investment that commit companies to demonstrating what customers receive (outputs) for investment (inputs) undertaken. This kind of approach that is matching inputs to auditable outputs if applied more generally will in itself bring about the proper calibration of incentive mechanisms.

We do not agree with Ofgem's assessment of DNOs performance in relation to innovation and facilitation of environmental initiatives. DNOs have performed well within the existing regulatory framework and have moved forward significantly during DPCR4.

**Chapter 1: Question 2:** Do you agree with the main lessons we have drawn from this assessment?

The DPCR5 settlement needs to address two fundamental requirements that are driving the need for substantial investment in the industry in the UK:

- We need to continue the increase in asset replacement, begun in DPCR4, aimed at renewal of the UK's ageing Distribution infrastructure
- The Distribution companies have a significant role in facilitating European and UK Renewables policy delivery;

This review will mark a significant milestone, providing the platform for the UK to ensure security of supply, continue improvement in world-class customer service and underpin delivery of key environmental objectives. Given the scale of the investment and the challenges ahead it will be particularly important that this critical infrastructure investment is seen as an attractive opportunity, particularly as we will be competing for funds in a global downturn.

The main objective of Ofgem in setting the cost of capital is to facilitate the necessary capital formation (both debt and equity) to enable this investment to take place. This will be a challenging objective given current market conditions across the world, where unprecedented macroeconomic turmoil has impacted liquidity, reduced the markets appetite for risk and is demanding greater returns for taking risk.

More than has ever been the case since vesting it will be important to ensure that the Distribution Network Operators (DNOs) are seen as an attractive and secure investment proposition in a market that is likely to remain to have liquidity problems and where competition for infrastructure funding will be fierce. The combined plans of the DNOs, underwriting an additional 9000 jobs across the United Kingdom, will also have a significant role in helping the economy to recover from the current situation.

We would urge Ofgem to engage in the debate on cost of capital as early as possible in 2009 and to communicate their position well in advance of the final proposals more definitively than has been the case in the past.

Ofgem have correctly identified a number of incentive mechanisms that require to be retuned and in some cases removed.

The lesson that has been drawn in relation to the losses incentive mechanism is flawed. Our DPCR4 experience has been such that without fundamental review and overhaul of the Losses mechanism this item alone could make Ofgem's DPCR5 proposals unacceptable.

***Role of the DNO in delivery of energy policy objectives***

Distribution Network Operators (DNO) have a central role to play in the delivery of energy policy objectives in a European context. Delivery of these objectives will require Network companies to utilise different resources than they have needed to historically and to have better interfaces directly with the market, a factor that Regulation has prohibited and discouraged them from doing more recently.

The paper places a responsibility on the role of the Regulatory body that will be at the centre of this process, a fact that seems not to be readily recognised in the paper. It will not be sufficient to simply place all responsibility for delivery with industry. Ofgem will need to become an important facilitator in the process by development of a balanced, supportive and forward looking regulatory framework that better meets Ofgem's own reinforced environmental responsibilities as laid out in the Electricity Act 1989, as amended by the Energy Act 2008.

**Operating costs**

It has been clearly demonstrated during DPCR4, by DNOs performance against operating cost allowances, that operating cost allowances set on the basis of a simplistic annual efficiency stretch are no longer appropriate for the Regulatory mature DNOs.

**Chapter 1: Question 3:** Have we identified appropriate measures to address our concerns and deliver a settlement that provides better rewards/penalties for highly performing/poorly performing companies?

Whilst the measures identified go some way to addressing the concerns, there are some fundamental issues that need to be addressed to ensure that the DPCR5 settlement more appropriately rewards/penalises highly performing and poorly performing companies respectively:

### **Proposals to fine-tune existing mechanisms**

We welcome many of Ofgem's other proposals to fine-tune DPCR4 incentive mechanisms (e.g. Quality of Supply and Customer Service) and to remove other mechanisms that have proved to be empirically flawed such as the existing volume driver for revenue. These decisions are balanced and in the long-term interests of customers but they also represent a recognition that there can be and is a need for longer-term consistency in how the regulatory framework operates.

*It is essential that similar principles are applied to the proposed losses mechanism for DPCR5.*

### **Proposals to cap / collar incentive mechanisms**

We agree that caps and collars should be applied intelligently to individual incentive regimes **but only** where these limit exposure from factors unrelated to a company's action – better still, incentive mechanisms are designed adequately to avoid this circumstance in the first place.

Where companies can demonstrate a direct link between their actions / inputs and outputs / outcomes reflected in the incentive mechanism then there should be no need for a cap / collar to apply.

### **Proposals for output measures**

The introduction of output measures could provide an effective way to more effectively measure and communicate what DNOs are delivering. An integral component of such a measure / commitment from DNOs is the ability of such a mechanism to respond flexibly to uncertainties out with DNOs control, including global issues such as input prices or company specific technical issues such as type faults. These could have significant impact on companies' abilities to deliver outputs that are proposed at the start of DPCR5.

### **Proposals for treatment of capital underspend**

Every Company will establish an investment plan that it works to and that underpins its budgeting process. This is fundamental to planning funding arrangements. For, the DNOs, after a negotiation that takes up to 24-months the allowances Ofgem set become that plan and budget. These plans are underpinned by detailed Asset Risk data and engineering assessment produced at the time with the best knowledge available. During DPCR4 SPEN has had to respond to the substantial unanticipated real increases (above RPI) in equipment and other input costs by delivering capital efficiencies, improving our Asset Risk processes and prioritising its capital expenditure.

We agree that Companies should not benefit fully from capex under-spend through the IQI mechanism unless they can demonstrate that matching efficiencies have been delivered.

However, Ofgem's simple expectation that network risk that may have built up as a result of deferred asset replacement in order to avoid an overspend, 20-40% of the value of which should be funded by shareholders, is wholly unreasonable.

This has served to protect customers from substantial real input price rises, and any impact on network performance is dealt with by the IIS incentive scheme.

Customers have therefore benefited from avoided overspend, and this clearly merits a different treatment from a scenario where companies have deliberately not utilized the investment available to them, including funding by customers of efficient levels of catch up.

**Chapter 1: Question 4:** Do you think our proposal to base DNOs' incentives for under/out performance around their effective return on equity is appropriate?

We are unclear of Ofgem's intent around this issue.

Whilst the question states that you propose to base DNOs incentives around an effective return on regulatory equity, discussions with Ofgem suggest that in fact you merely intend to use the return on regulatory equity as a tool to measure and report performance against incentives. We have no objection to the latter, i.e. as a measurement and reporting device provided that the means of calculation is transparent and agreed in advance with the DNOs.

**Chapter 1: Question 5:** If you do, what range of return on equity do you think would represent a fair balance between customers' and shareholders' interests to reward increased efficiency, better service and innovation, whilst maintaining strong incentives for shareholders of any poorly performing DNOs to improve performance?

If it is your intent to use a pre-determined percentage of regulatory equity as an overall cap and collar for the revenues gained or lost arising from incentives in aggregate we feel that this is unnecessary and may detract from the incentive properties of robust, individual incentives.

It is a pre-requisite that individual incentives are appropriately calibrated and are designed such that they reflect fairly the actual performance of companies and exhibit all of the other economic characteristics of efficient mechanisms.

As discussed elsewhere we are of the view that certain incentive mechanisms impacting the DPCR4 period have not exhibited these characteristics, e.g. quality of service and in particular, distribution losses.

## Chapter 2: Environment

### Chapter 2: Question 1: Do you agree with our view of future uncertainties and the need for DNOs to change their way of working and thinking to encompass innovation and flexibility?

Distribution Network Operators (DNO) have a central role to play in the delivery of energy policy objectives. Delivery of these objectives will require Network companies to utilise different resources than they have needed to historically and to have better interfaces directly with the market, a factor that Regulation has prohibited and discouraged them from doing more recently.

The paper places a responsibility on the role of the Regulatory body that will be at the centre of this process, a fact that seems not to be readily recognised in the paper. It will not be sufficient to simply place all responsibility for delivery with industry. Ofgem will need to become an important facilitator in the process by development of a balanced, supportive and forward looking regulatory framework that better meets Ofgem's own reinforced environmental responsibilities as laid out in the Electricity Act 1989, as amended by the Energy Act 2008.

*DNOs have a critical role in facilitation of a low carbon future in an uncertain environment. Between our commitment to research and design and our experience in connecting diverse sources of generation few companies are as well positioned as SPEN to meet the challenges ahead.*

Ofgem recognise that at this point in time it is extremely difficult to anticipate the scale, significance and timing of the impact of developing environmental policies.

In anticipation of a future that requires the Distribution network to become more "active", SPEN are involved in a range of industry-leading projects. We are working in partnership with world-class academic (e.g. University of Strathclyde, UMIST) and manufacturing bodies (e.g. ADB, Ariva) in the development of projects from multi-DG constraint management, to dynamic circuit ratings, to fault current limiters and energy storage. We have also proactively led the development of a UK network demonstration facility (£7m funding approved from Scottish Enterprise Nov 08), which will enable trialing and more effective roll out of future network technologies.

SP has also continued to successfully leverage significant external funding (fully leveraged programme is more than 7 times that obtained by SPEN through the IFI mechanism) to expand the limited scope of the DPCR4 research and development funding mechanisms. *We are surprised by the lack of recognition of some of these schemes within the document when they have been submitted as part of the IFI annual reporting scheme, and were warmly received by Ofgem.*

Given some of the challenges laid out regarding possible future configurations of UK networks and the need to innovate it is also surprising that the Technical Director's role, which was a key enabler to the UK DNOs establishing the IFI scheme, has not been replaced. Particularly as it is exactly this type of engineering chairmanship that will be required to facilitate much of Ofgem's policy paper.

Many of the challenges suggested by Ofgem are already here, our SP Manweb network is operating at a very high level of utilization with the complications of "churn" and continued pressure to connect distributed generation our Design team is balancing a toolkit of solutions, from adoption of operational schemes to ensure system security in a fully utilised network to developing smarter investment solutions.

Take for example the complex constraint management scheme to enable connection of Rhyl Flats (RWE Npower's 87MW offshore wind farm), which monitors four different circuits to provide constraining signals to the generator should overloads on the network occur. With the addition of dynamic rating this solution could be expanded to cover other generation in this part of North Wales.

**Between our commitment to research and design and our experience in connecting diverse sources of generation few companies are as well positioned to meet the challenges ahead in balancing the network in diverse and uncertain environment.**

Ofgem's expectations of DNOs have increased significantly. In this context it is important to recognize that there exists a tension between requirements to provide services in the most efficient manner, to create a competition in connections market solely based around price and to 'future proof' investments. Many plausible scenarios will require increased network capacities and investment in technology such as power electronics for control schemes, however these risk being deemed inefficient by Ofgem if DNOs were to install them at this time, whilst future requirements for additional capacity could result in Ofgem deeming current investments inefficient in retrospect.

Where there is a risk that investment may now be subject to significant uncertainty and political risk arising from decisions taken by the Regulator at a later date, this will only serve to deter investors and undermine confidence in the sector. Ofgem must be mindful that they do not create barriers to development through complex and uncertain economic schemes that are based around subjective reviews. In designing new incentives it is also important in our view that we do not undermine some of the key parameters of the existing model that have served well, for example the Regulatory Asset Value.

There is a need for a much closer degree of coordination in future in our view, this will require an active and participating Regulator that signs onto a shared vision of the UK's energy future that the DNOs can deliver against. This will in all likelihood involve revisiting some decisions previously taken by Ofgem that may seem politically difficult to them at this time.

**Chapter 2: Question 2:** What are your views on our proposals for DNOs to provide more information to help low carbon initiatives and have we adequately identified and defined the information requirements?

*We agree with the principle of provision of additional network information to prospective generators, however it must be recognised that this will require DNOs to introduce a new customer interface, which will require to be adequately funded.*

Whilst we agree that there is additional information that can be provided to prospective generators, the solutions implemented need to be useful to generators, cost effective and proportionate.

Provision of some of the information detailed in Ofgem's proposal does not recognise the complexity of network analysis, or the scale of the step change that may be required from DNOs current practices, for example in relation to scale, complexity, frequency and presentation of results of 11kV network modeling.

We welcome Ofgem's recognition that an indicative web-based connection-costing tool will require efficient costs to be funded, and *would expect that this would also apply wherever incremental costs will be incurred as a consequence of Ofgem's proposals.*

Our formal DPCR5 stakeholder engagement events were heavily subscribed by renewable generator developers. We also engage with these parties on a regular basis due to our networks being in two of the most renewable resource rich areas in the country.

Our feedback from these customers is that whilst connection issues are important for DG projects, that these are second order considerations behind resource, land and planning availability. However, our customers have communicated a clear desire for greater dialogue and interaction on an engineering basis when considering project viability.

We do not believe that developers needs in this regard be met by, for example, the commercial products that are available and being actively marketed today. Whilst these are relatively expensive they provide a service that cannot be technically or commercially accurate, and requires an equal degree of interaction with the DNO subsequently to provide an accurate assessment of network capabilities and costs.

A review of the information requirements listed should be carried out by a subgroup the Ofgem/ DNO environmental workgroup in conjunction with a number of active developers.

Costs incurred for similar purposes to date, for example in production of LTDS, have not been funded. Our FPBQ submissions include an initial estimate of indirect engineering costs of meeting the information requirements specified, this can only be indicative at this stage and cannot include system costs until the requirements are agreed and specified in greater detail.

**Chapter 2: Question 3:** Do you agree with our proposal that all distributed generation should pay use of system charges, and if not, can you provide evidence to substantiate your specific concerns?

*In order to meet energy policy targets we believe that generator use of system charges should reflect the network benefits that they may bring and should not exceed a maximum cap of zero.*

*Pre 2005 generators should also benefit from negative charges that reflect the network benefits that they may bring.*

There will be an administrative burden on DNOs if pre-2005 generators were to be exposed to positive UoS charges, due to the connections charges refunds that may be necessary. A similar exercise for Scottish transmission connected customers at BETTA go-live demonstrated the considerable complexities and administrative burden that this could entail.

A policy decision to cap generator use of system charges to a maximum of zero, or the simpler solution of setting all generator charges to zero, could perhaps avoid the significant burden of harmonization of all generator connection boundaries.

We agree that all distributed generation should be credited for the network benefits they may bring, this includes pre 2005 generators.

Calculating a reasonable refund is not a simple task: it would involve determining the difference between what the generators actually paid for their connection charges and what they would have paid under the new “shallowish” approach.

We believe Ofgem should publish an agreed method / guidelines to determine the refund and guidelines for calculating this if necessary.

**Chapter 2: Question 4:** Do you agree that the distributed generation (DG) incentive should be retained? Should embedded transmission be deemed relevant DG?

*We agree with Ofgem's proposal to retain the DG Incentive Framework. However, we maintain that there is a case for the mechanism to be augmented to deal with very high cost project where network is sparse.*

SPEN has connected approximately 2000 MWs across its three Networks, representing 34% of the total UK portfolio of Renewable Generation<sup>1</sup>, and expect to connect another 250MW in the year to 31 March 2008. We interact with more than 25 different developers in facilitating connections to UK grid across CHP, Hydro, biofuels and wind sources.

In our previous response we highlighted that the low levels of megawatts connected across the UK is directly attributable to the complexities of obtaining planning consents and land rights, and to the structure of incentives faced by the GB Transmission System Operator (GBSO) under the current regime, and does not relate to the DGIM or the DG connections issues identified.

While Planning remains a key concern, since our last submission:

We remain concerned that DG connections may not be permitted to connect schemes that, whilst they do not trigger any local transmission works are seen to be a contributing factor to the rising cost of constraints on the wider transmission network.

Whilst NGET's CAP167 proposals have the potential to severely limit the connection of renewable generation in Scotland, we note the lack of support they have received from the industry as a whole. In comparison, the CE/ENW alternative amendment focuses on those transmission system works actually triggered by the connecting party. *This alternative amendment has received much wider support from both within the CAP167 Working Group and the CUSC Panel.*

**The CAP167 amendment proposals currently sit with Ofgem for approval and it is critical to the future of Distributed Generation in Scotland that Ofgem do not approve the NGET proposal.**

National Grid recently issued an updated GB Queue Management Methodology that now gives DG schemes the ability and right to request advancement. We are also encouraged by the work being done by the three Transmission companies, as part of GB Queue Management, to advance the connection dates of a number of projects. We are however concerned how such DG schemes will be treated under the enduring TAR arrangements. The TAR CUSC amendments focus on CUSC generation parties who have access rights to the Transmission

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<sup>1</sup> Renewable generators connected to SPEN network at April 08 as a percentage of portfolio quoted in Digest of UK Energy Statistics (DUKES), 31 July 08

system, and while it is assumed that arrangements for smaller embedded generators will continue to be managed by the Statement of Works process, it may lead to small generators having to apply for explicit rights with stronger obligations placed upon them as a result.

*It is also of concern that Ofgem have publicly stated they are unlikely to approve National Grid's four-year connection date advance for 450MW of renewable projects in Scotland, stating that the associated extra constraint costs would be unacceptable<sup>2</sup>. This conflicts directly with the messages from Ofgem to date and while we accept there will inevitably be short-term issues around about consents these should be resolved by the steady progress of the infrastructure upgrades that are taking place and are planned to take place across the GB grid.*

Regarding the DGIM itself, we believe that it provides an effective framework to enable DNOs to co-ordinate with multiple generator parties to provide more efficient and speedy shared connections. Within the current framework we have several real examples where we have liaised with developers to deliver more efficient and 'consentable' infrastructure and connection solutions.

We also believe that the volume of schemes completed to date do not provide a sufficient statistical data set to justify material revision to the DG mechanism funding rates, although there is some evidence that differential rates for different voltage levels may be appropriate. We believe there is case for lowering the high cost project threshold from £200/kW for non-sole use infrastructure.

In our last submission we highlighted that our experience has shown that the existing DGIM does not work in certain areas where there is little or no existing infrastructure to accommodate connection of Renewable Generation, the example we cited was in Wales where the Welsh Assembly has laid out its TAN 8 proposals. **We therefore also maintain that there remains a case for augmenting the DGIM mechanism to deal with very high cost strategic infrastructure projects. Such projects can be identified statistically and a threshold established, that when exceeded (assuming projects pass normal tests of efficiency) allow for a higher £/MW assumption within the DGIM mechanism.**

#### ***Treatment of offshore transmission networks***

We believe that generation connected to embedded offshore transmission networks could justify a differential incentive rate to reflect the differences in the assets that DNOs would provide, operate and maintain.

We suggest that the Ofgem environmental working group considers this matter further.

This provides an example of a situation where transmission exit charges could be incurred by a DNO for reasons materially outwith its control, a quality that makes them inappropriate to incentivise (see question 6 below).

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<sup>2</sup> SRF Conference, Glasgow, 27<sup>th</sup> February 2009

**Chapter 2: Question 5:** What are your views on our proposals on innovation and flexibility? How would you rate their feasibility and which option is most likely to drive the more innovative and flexible behaviour that we are seeking?

**It is essential that Ofgem’s proposals are well defined to enable DNOs to respond to current uncertainties at the appropriate time, and do not penalise companies that make decisions based on the available information at the time.**

**The IFI mechanism has been a resounding success against which companies such as SPEN have levered further funding. It is by building on the platform that IFI provides that we believe we can prepare DNOs for the future.**

With the support of the Technical Director at Ofgem, it was the DNOs who drove the need to reintroduce research and design work that had been previously stifled by shortsighted regulatory economics. The IFI mechanism has been a resounding success against which companies such as SPEN have levered further funding to develop and implement technologies with mid range Technology Readiness Levels (TRLs). It is by building on the platform that IFI provides that we believe we can prepare DNOs for the future that lies ahead.

It is widely recognised that the facilitation of a low carbon electricity system will require radical changes on both the supply (high penetration of variable renewable generation resources at all voltages) and the demand side (energy efficiency and the potential electrification of heat and transport). As the network operator is the common link between these changing inputs/outputs it is recognised that there will need to be an evolutionary change in both network topology and network operation from the largely passive (fit-and-forget) system of today.

We firmly believe that low carbon generation connecting to both the transmission and distribution networks is required in order to move in the direction of the EU CO2 targets in both the 2020 and 2050 timeframes.

The DPCR5 period therefore has a fundamental role in laying down the foundation of a regulatory framework that will allow us to meet the targets that apply for the end of DPCR6.

There is uncertainty about the choice and costs of the solutions that will be used to make the network more flexible and controllable, this being related to the availability of solutions and their positioning in the Research & Development (R&D) lifecycle. Whilst excellent, and in some cases world leading, work is being achieved via the Innovation Funding Incentive, there is a natural lag in delivery of complex technology to the networks. **Ofgem should recognise that all DNOs have effectively ramped up R&D from a point of almost zero in 2005 to today’s level (leveraged programme in excess of £35m)<sup>3</sup>.** Even without 19 years of RPI-X pressures and it’s affects on engineering resource in the UK, there would be a natural delay in the delivery of innovative solutions to the network moving from such a low starting point. It

<sup>3</sup> This includes c.£10m of other DNOs IFI funding

is accepted fact that network related R&D has longer timescales in comparison to many other sectors (e.g. pharmaceuticals, vehicles, mobile phones, etc), where their end product life-expectancy and competition (directly linked to market share) are on a different scale to that of DNOs.

We recognise, through projects in our own IFI portfolio, that many of the concepts and technologies underpinning a change to a more flexible network are still very much in an embryonic stage, with little or no firm commercial offerings in the marketplace. Examples here include Active Network Management (ANM) functions<sup>4</sup> such as dynamic load management, multi-generation constraint management, fault current limitation, etc. However, uncertainty around the costs and choices of solutions and the inability to benchmark against other schemes in detail should not, in itself, become a reason for delaying investment in these enabling technologies. In order to avoid such behaviour a ‘no-regrets’ approach to specific and targeted expenditure to such projects would be of benefit.

Furthermore, we recognise that overcoming the technical barriers with a ‘product’ is only part of the challenge, and having proven a technology there may be commercial or Regulatory issues that need to be resolved prior to wide-scale adoption. A good example here is energy storage, that whilst technically available in a variety of forms (Li-On, NaS, Lead-acid, etc) suffers from both a high capital cost and challenges the current Regulatory position for a network operator to own what could be perceived to be a generation technology. We have given some consideration to commercial barriers (Appendix Ch 2 Q5) and would welcome the continuing engagement and support of Ofgem for Regulatory matters as they arise.

It is increasingly apparent that a wider form of cross sector participation is required to facilitate the paradigm shift to a low carbon energy system. We would acknowledge that working as an individual DNO, or even body of network operators is insufficient to develop a future network in the most economic and ‘future-proofed’ manner. **Feedback given as part of our stakeholder engagement highlighted the need for active engagement with suppliers (re. smart metering), generators (re. energy mix), planning authorities (re. geographic issues) and other key stakeholders (e.g. car manufacturers – re. Plug In Hybrid Electric Vehicles) in order to fully understand the risks and opportunities presented by changes outside of the current Networks arena.**

It is questionable whether or not DNOs will lead these developments or actually have to respond and facilitate their development. Consider electric cars where a response to market demands will be led by car manufacturers, and DNOs may have to provide infrastructure to support this. We believe that appropriate cross industry forums need to be established to enable any developments to move forward in an effective and coordinated manner. Ofgem could have a key role in helping facilitate this in conjunction with DECC.

It is also fundamental that to meet these challenge DNOs need to be appropriately resourced to engage directly with customers, other industry parties and policy makers.

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<sup>4</sup> It is our understanding that an all-encompassing SmartGrid, utilising many of the Active Network Management techniques and technologies in addition to devices like smart meters, etc.

Ofgem will be also be required to ensure that concerns around aspects of business separation (between network operators, suppliers/generators, Meter Operators for example) and industry structure do not become a barrier to tackling these issues.

**With regard to the specific options laid out in the consultation, there is insufficient information to make a comprehensive response at this time and we see merit and need for a combination of the first two options plus an ex post assessment, and could see them functioning as parts of a single coherent package.**

**Option 1 – ex ante discretionary in FBPQ,**

Given this mechanism is intended to deal with innovation and uncertainty, this solution dictates a degree of certainty at the time of FBPQ resubmissions (note it is already too late to include this in the February submission of the FBPQ should this be required).

Perhaps this could be utilised for schemes that become known later in 2009, and could be contained in subsequent FPBQ updates.

This could represent an option for high cost projects previously identified which are excluded on grounds of cost through the IFI incentive.

**Option 2 – project by project (possibly central fund)**

Our preferred option is to provide an extended IFI scheme that can deal with technologies with different cost characteristics, supplemented with a scheme that will allow DNOs to bring forward technical/commercial proposals for consideration and agreement by Ofgem within the DPCR5 period.

The combination of these tools should enable DNOs to innovate effectively during DPCR5 and respond at an appropriate time to factors that are currently uncertain.

We do not see any merit in a central pot for the IFI scheme and see greater benefit to be obtained for customers and the industry from the mechanism being expanded to include the early stage deployment of technologies that have been developed through IFI mechanism, specifically applied to more expensive Technology Readiness Levels 8-9, Application of IFI (AIFI).

**We propose that that an AIFI mechanism should encompass:**

- **Further 0.5% of revenue specifically targeted for higher TRLs**
- **Projects linked to previous IFI work by any DNO**
- **No-regrets funding**
- **Deployment of the same technology across all DNOs should be promoted where critical mass is important, rather than prohibited**

We do not believe that simply providing greater availability of funding to DNOs will achieve a change of behaviour, whilst a new extended targeted mechanism as we have described will deliver new technologies across the industry.

For example, high capital cost technologies that are almost at commercial application, such as energy storage, are prohibitively expensive under the existing IFI mechanism, as they would utilise much of a DNOs allowance. By introducing an AIFI scheme as described, DNOs as a group would be able to move forward technologies through early stage development and begin to reduce the capital costs of the technology. We do not believe that simply providing greater availability of funding to DNOs will achieve a change of behavior, whilst a new extended targeted mechanism as we have described will deliver new technologies across the industry.

For example, high capital cost technologies that are almost at commercial application, such as energy storage, are prohibitively expensive under the existing IFI mechanism, as they would utilise much of a DNOs allowance. By introducing an AIFI scheme as described DNOs as a group would be able to move forward technologies through early stage development and begin to reduce the capital costs of the technology.

**Option 3 – ex post, significant discretionary reward**

Ex post assessment of innovation will by definition be subject to significant regulatory risk. This option may become acceptable if Ofgem provided a clear framework against which projects / innovation schemes could be assessed and against which there was clarity of associated rewards.

*A discretionary award for such investments is entirely inappropriate.*

**Chapter 2: Question 6:** What are your views on our proposal to set an incentive on transmission grid exit charges?

Transmission exit charges are clearly unsuitable for incentivisation, and creation of an incentive would be prejudicial to DNOs and represent inefficient Regulation as these are already subject to Transmission price controls.

The main driver for changes in transmission exit charges is replacement of life expired assets, not changes to capacity. Transmission owners are entering a period of increasing asset replacements, with many connection assets currently fully depreciated and not attracting annuitised capital charges.

***DNOs will face significant increases in charges going forward, and historic charges cannot be utilised to establish a baseline charge.***

Even when the changes are capacity-driven, the “volume” element in the total GAV used for the calculation is relatively small, as this reflects the installed cost of the asset. The relationship between GAV and capacity is not linear: an installed transformer with a capacity X and another with a capacity  $(X+X/3)$  will have very similar GAVs.

Also, assets are sized to standard capacities; it will take a considerable change in volume to materially impact the size (and GAVs) of the assets.

Areas of the country that are particularly rich in renewable resources (both on and offshore) will also face relatively greater increases in transmission exit charges.

This will be further compounded in Scotland as a consequence of the differences in transmission network voltage levels, both in terms of the relative volatility and the numbers of connections to the transmission network in the South of Scotland being approximately 5 times that of a typical England and Wales DNO (there are 83 Transmission exit points for SP Distribution).

**Given that the value of transmission exit charges is unpredictable and materially outwith DNOs control we do not believe that there is merit in any of the three proposals, and that Transmission Exit charges are inappropriate to incentivise.**

**Chapter 2: Question 7:** What are your views on our losses proposals, and do you have any additional comments on the option to install smart meters on low voltage substations?

*DNOs have a significant role to play in reducing green house gas (GHG) emissions, however the DPCR4 losses incentive mechanism does not facilitate this role and requires to be replaced.*

Ofgem have correctly identified network technical losses as the single most important area in terms of carbon footprint for DNOs, particularly as our industry moves into a period of continued and intense asset replacement. **Ofgem's Return on Equity analysis shows a number of DNOs deriving benefits from the DPCR4 mechanism that exceed by many multiples the technical loss reductions that a DNO can have physically delivered.** It is of great concern that Ofgem's current proposal for DPCR5 involves a revision of the existing scheme to introduce greater volatility in target setting and reporting whilst increasing the incentive rate significantly.

While we believe that there is a material opportunity to achieve a reduction in GHG, the current mechanism does not provide the appropriate framework to achieve this because it does not provide adequate signals to DNOs to invest in either low loss technology or loss reducing initiatives, it does not extend to deal with other market participants such as IDNOs and it cannot be accurately observed and measured as an output because of underlying volatility in the Settlements system.

We believe that one of the barriers to Ofgem changing their view regarding this mechanism is an apparent lack of engineering understanding and the impact that DNOs can directly have on network losses. **We therefore believe that in addition to the existing economics team there needs to be independent engineering input to the development of this incentive mechanism.**

We understand the point made in paragraph 2.89, and accept that EDF has made significant headway in terms of reducing commercial losses but the ScottishPower Group could demonstrate likewise and possibly at an earlier date, we suspect that there are other groups that have also been similarly active.

SPEN has been the only company to be significantly penalised by the Losses mechanism as the result of Ofgem revising our losses targets after the conclusion of DPCR4. This was as a direct result of underlying volatility in data utilised in the current mechanism and a move toward targets based on shorter terms and not because of reporting methodologies. The current proposal will lead to other companies being similarly penalised. Our experience has been such that without fundamental review and overhaul of the Losses mechanism this item alone could make Ofgem's DPCR5 proposals unacceptable.

In light of our experience we can see no alternative to a hybrid approach to losses: involving a "quasi output" approach to technical losses and a separate targeted mechanism for

commercial losses with a much lower incentive rate. Applying this approach can provide much greater certainty of environmental benefits for customers in relation to technical loss reduction initiatives, and is much more an output measure than the current scheme.

The DNO proposal contained in the document (for which we have presented a variant) would represent a significant advancement on the existing scheme. In our view this would also be more robust and directly auditable than the CERTS scheme for Suppliers, which is administered by Ofgem, and would yield real environmental benefits, which are a matter of physical fact.

#### Smart meter rollout

It is unfortunate that the smart meter roll out to domestic customers is unlikely to deliver full customer penetration for many years (current expectations are 2019) as this would significantly increase the confidence in reporting and settlement system outputs.

Universal smart meter rollout would enable the existing estimated losses incentive mechanism to increase in accuracy so that reported losses may become a reasonable proxy for measured network losses, this might enable a proxy measured losses incentive regime similar to that in DPCR4 to be reintroduced.

The phased roll out of smart meters, beginning in earnest during DPCR5, will result in significant short term settlement system volatility, and possibly require a resetting of losses targets.

#### Metering in secondary substations

If the problems and costs identified surrounding customer outages can be addressed, technology trials are currently being considered, then the proposal to install a meter or equivalent monitoring equipment in every secondary substation merits further investigation.

This could enable DNOs to focus load management initiatives on secondary substations with high loading, and to measure losses on the EHV/HV network. However, the main component of most DNOs loss reduction plans, low loss primary transformers, would gain little from such an initiative.

Further, it may allow DNOs to derive greater benefits from the rollout of smart meters to all customers, and begin to prepare for active network management due to widespread microgeneration. For example, in conjunction with Smart Meters this could allow DNOs to identify high loss / theft areas of the network and focus corrective activities accordingly.

We believe that the DPCR4 losses incentive mechanism was a material degradation from the DPCR3 mechanism, and Ofgem's proposals for DPCR5 will make matters considerably more uncertain.

We note that the incentives and penalties experienced by DNOs through the DPCR4 losses incentive mechanism have proven to be more volatile than the DPCR3, as a consequence of setting fixed rather than rolling targets.

Also the DPCR3 mechanism contained a mechanism to deal with the incremental network losses that occur almost universally as a consequence of connecting EHV generators. It seems perverse that the DPCR4 mechanism should penalise a DNO for the increased network losses, with an incentive mechanism that has a proxy value of carbon, that result from connecting a large wind farm. When such a connection is delivering energy policy and all the network losses are associated with the energy produced are from a renewable source.

When this issue was raised with Ofgem's environmental team it was of concern that they believed this might be addressed through the introduction of locational EHV UoS charges, whilst this is clearly a function of the relative remoteness of large wind farms from dense areas of population and existing network infrastructure.

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**Chapter 2: Question 8:** What are your views on the various aspects of the business carbon footprint proposals?

We welcome Ofgem's recognition that the design of distribution SF6 equipment, typically sealed for life, is such that it does not merit an incentive mechanism. We will continue to support regulatory interactions between the Energy Networks Association and Government regulatory bodies regarding management of fluorinated gasses.

**We support Ofgem's proposal that DNOs should publish their annual carbon footprint, the relative annual improvement and the principles of their reporting methodology. However, we believe that the reporting scope proposed by Ofgem is inappropriate.**

Ofgem have correctly recognised the relatively low impact of DNOs carbon footprint excluding network losses, and that the cost of reporting of this should not outweigh the benefits.

There is merit in the proposal for each DNO to report its relative annual movement in its own carbon footprint, as this deals with differences in reporting period, reporting methodologies, and differences in business management (insourcing vs. outsourcing) and differences as a consequence of the geographic location of DNOs.

**However, we do not believe that the proposals to report using a standard methodology, for a regulatory year including contractors, satisfies the test of reporting costs being outweighed by benefits.**

Given the high level of voluntary adoption of carbon reporting commitments by the industry since the mid 1990's, there is a danger that an additional reporting scheme will only add to existing reporting burdens and complexities. This would be further compounded by the reporting requirements of the developing Carbon Reduction Commitment Regulations.

We believe the objective of this policy decision could equally be met by publication of each DNOs existing footprint reporting methodology, reporting being related to whichever period the DNO already reports this (calendar or regulatory year), plus a short report of material changes in business practice that might cause a step change from one year to the next (e.g. outsourcing of an activity).

In this way similar objectives could be achieved in a much more cost effective and appropriate manner.

**Chapter 2: Question 9:** What are your views on our proposals for refining the undergrounding scheme? In particular, should we apply caps per km of cable by voltage level or should we remove all voltage caps and just have a single overall cap?

*The AONB mechanism for undergrounding overhead lines in Areas of Outstanding Natural Beauty has been a success. The Regulatory definition of AONB should be refined to recognise the Scottish National Scenic Area designation.*

The AONB funding mechanism during DPCR5 is enabling us to successfully address a number of stakeholder visual amenity concerns within Snowdonia National Park.

However, **the current definition of AONB requires to be extended to capture differing status of areas of environmental sensitivity in Scotland.** The current definition of AONB is preventing us addressing a number of stakeholder visual amenity concerns within the South of Scotland.

AONB is an England and Wales designation and is not used in Scotland. The National Park designation, while different in detailed aims between England, Wales and Scotland, has the same broad aims. Differences between the England and Wales AONB designation and the Scottish National Scenic Area designation resulting in areas of the Scottish Landscape, designated for its landscape quality and amenity value, not being appropriately considered by the blanket use of the AONB terminology.

**We believe that the current caps by voltage level should be retained as these reflect the differences in cost.**

**Chapter 2: Question 10:** Do you agree with our proposed approach for the treatment of fluid filled cables?

We will work with DECC and network owners to develop a common industry approach to risk assessment of fluid filled cables based on forecast and experienced leakage rates and the environmental sensitivity of the location in which cables are operating.

This will enable a consistent prioritised approach to fluid filled cable replacement or other management techniques to be implemented.

We will also continue to support operation of the joint operating code for fluid filled cables in England and Wales.

### Chapter 3: Customers

**Chapter 3: Question 1:** Do you think that the range of existing and proposed arrangements will deliver the levels of service customers expect?

We welcome many of Ofgem's other proposals to fine-tune DPCR4 incentive mechanisms (e.g. Quality of Supply and Customer Service) and to remove other mechanisms that have proved to be empirically flawed such as the existing volume driver for revenue. These decisions are balanced and in the long-term interests of customers but they also represent a recognition that there can be and is a need for longer-term consistency in how the regulatory framework operates.

It is disappointing that a similar approach has not been adopted in relation to network losses, the current proposals will not deliver environmental improvements that can be demonstrably linked to the funding that customers provide.

We welcome the proposals for a number of peripheral aspects that were not well covered during DPCR4, e.g. Worst Served Customers. Whilst we would prefer there to be to see a larger allowance for Worst Served Customers Ofgem's proposals are a significant step forward.

**Chapter 3: Question 2:** What percentage of revenue/return on equity should be exposed to customer service and how should it be split between the various areas?

We believe that exposure to incentives in DPCR5 should remain at a level equivalent to 3% of revenue across the UK but should be based upon a percentage of Operating costs. We believe the current 60:40 split of exposed revenue between CML and CI should also be retained.

**Chapter 3: Question 3:** Do you agree with our intention to develop a broad measure of customer satisfaction and the proposed advocacy approach?

**We support Ofgem’s proposals to introduce a broad measure of customer satisfaction, providing it is relevant, cost effective and provides timely feedback to DNOs.**

We welcome the proposal to introduce a broad measure of customer satisfaction. It is important that this focuses on aspects of service that are the responsibility of the DNO and that we can directly influence. For example, we are advised by developers that they are confused by the complexity of the electricity market and that they do not understand the need for multiple parties to be involved in a new connection, for example an ICP, DNO, Supplier and Meter Operator. This is a function of the market structure and out-with the control of the DNO.

We support Ofgem’s proposal to progress this in two phases namely, changes to the existing telephony scheme and the introduction of a broader measure of customer satisfaction to replace the current telephony incentive scheme during DPCR5.

We have some reservations regarding the applicability of an advocacy-based approach to DNO’s since:

- DNO’s are essentially monopoly businesses and customers have little real ability to either choose or recommend their DNO to a friend
- It is not clear that customers will understand the complex market segregation (MOPS, distribution, billing etc) and their responses may be influenced by their wider experience, not just the experience in relation to the DNO.
- An advocacy approach takes away any option other than ‘excellent’ service by removing any grading scale and replacing it with a ‘yes’ and ‘no’ response.

However we are open to a thorough consideration of the merits of such an approach. We understand Ofgem intend to employ Market Research experts in this area but would emphasise that it would be beneficial to use a firm that has worked in this area before. We would also envisage that the DNOs would have a strong role in helping to develop a terms of reference for their work.

Providing the responsibility for initiation of the existing telephony survey is successfully transferred from Ofgem to DNO’s then we see no reason why implementation of the broader customer satisfaction measure cannot be implemented in a similar manner.

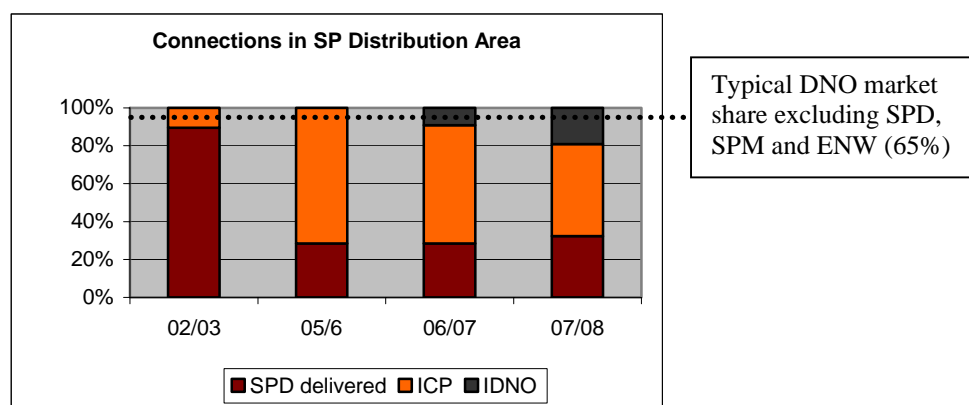
With regard to the detailed development and implementation of this measure we believe the most appropriate way forward would be for Ofgem to implement a working group comprising customer service experts from each of the DNO’s and Ofgem with the objective of developing a broader measure of customer satisfaction and implementing a trial survey from 1<sup>st</sup> April 2011.

**Ch3 Question 4:** Do you agree with our proposed approach to connections, which of the options do you support and why?

**The existing framework needs a fundamental review and overhaul to stimulate competition in DNO areas where effective competition has yet to develop, and to address weaknesses in the current arrangements.**

We encourage the fresh thinking in the document on how to stimulate competition and enhance customer protection in relation to electricity connections, and to improve competition in connections reporting.

Ofgem quote the 2007/8 Competition in Connections review that clearly demonstrates SPEN delivering industry leading levels of competition in both SP Manweb and SP Distribution areas despite the inherent lag in the current reporting system, and the reporting incorrectly including service alterations for 2007/08.<sup>5</sup>



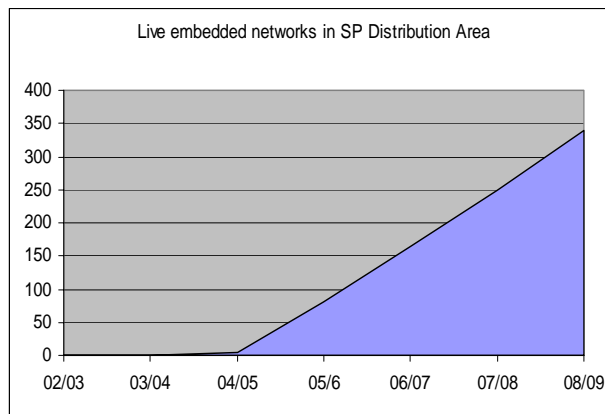
**Chart 1: Market shares of new connections in SPD area<sup>6</sup>.**

Whilst Ofgem’s annual reporting is based on customer end connections, connections that have been contractually won by IDNOs are much more relevant. The chart below shows live IDNO networks that will supply in excess of 40,000 customers once the developments are complete.

Ofgem’s 2007/8 Competition in Connections review also shows more IDNO networks in SPD areas than the rest of the UK.

<sup>5</sup> Table 8, Appendix 7, page 61 of DPCR Policy Paper supplementary appendices

<sup>6</sup> excluding service alterations and including out of area DNOs



**Chart 2: Growth of IDNO networks in SPD area.**

We can see the attraction of applying performance standards in sectors of the connections market that do not currently attract competition.

However, it should be recognised that there are already Guaranteed Standards for timescales for providing connection quotations at LV (up to four premises). Where customers do have problems there are new Complaints Handling arrangements established by each DNO as a result of the CEAR Act of 2007, supported by an independent Energy Ombudsman, that enhance customer protection in this area.

There is strong evidence that customers for one-off and other small connections are generally satisfied with the service provided. By way of illustration, SP Distribution alone carries out some 20,000 connections a year, while in the last 12 months that the consumer watchdog energywatch was in existence (up to September 2008) complaints received by energywatch in relation to SP Distribution across all categories totalled 6.

The proposals in relation to profit margins for sectors where there is judged to be actual or potential effective competition are imaginative. However, the DNO may have difficulty in achieving a margin in such cases, and there is also the question of how high the competitiveness 'bar' will be. SPEN has argued for some time that published figures in the annual 'CIR' report understate the extent of competition, for example by failing to take into account trends for accepted quotations versus final connections actually carried out.

We do not support price caps for 'non-competitive' connections due to the individual nature of even 'minor' connections. We apply individual assessment to all new metered connections due to the large number of parameters involved, such as ground type, distance from the network, capacity required, costs of obtaining land rights etc.

We are surprised that there is no real analysis in the paper of the competitive framework as it relates to the construction and operation of IDNO networks. There is no discussion, for

example, of the role of adoption payments. Given the rapid growth of IDNO sites, this is an important omission in the consideration of options for encouraging competition.

As a Group we are committed to competition in connections provided it is on a level playing field and that the end consumer genuinely benefits in terms of quality and value of service.

We believe that competition in connections in areas where there is effective competition from Independent Connections Providers (ICPs) has yielded material benefits and savings for developers, but there is no evidence of benefits for end customers in terms of cost or longer-term levels of service.

There is no evidence that the introduction of Independent Distribution Network Operators (IDNOs), and specifically the skewed regulatory arrangement which favours IDNOs, has delivered material benefits or savings for customers under the existing framework and we strongly believe that this is an area of activity that needs a fundamental review and overhaul.

Whilst there is insufficient evidence to date of the impact of market segmentation and network nesting on issues such as long term customer service levels, there is clear technical evidence that a short term focus on connections cost has lead IDNOs to install networks that are inappropriate from an environmental perspective (specifically increased network losses).

We also note that the current IDNO regulatory arrangements are inconsistent with Ofgem's stated desire in the DPCR5 Policy Consultation for future proofed development of networks with an emphasis on environmental initiatives.

**We are also concerned by the inequities that exist in the current regulatory framework where provision of licensed connections must be carried out at cost, failing to recompense shareholders for the significant opportunity cost entailed in the physical and financial resources employed.**

Ofgem's proposal to introduce a regulated return on connections activities for all DNOs in order to stimulate competition in connections will have a greater impact in areas where competition is already effective.

Ofgem's proposal for unregulated returns in DNO areas where there is effective competition, such as the SP Distribution and Manweb areas and will merely lead to greater market penetration by IDNOs and ICPs.

SP Energy Networks has actively engaged in facilitating competition in connections within our franchise areas. We are able to point to a level of competition in both our franchise areas (SP Manweb and SP Distribution) that is consistent with the level of competition in independent gas connections.

We propose that Ofgem should make the following changes to the regulatory arrangements for new connections:

- Ofgem should initiate a fundamental review of the IDNO regulatory framework to establish why there is effective competition in some areas and not others;

In areas where there is effective competition:

- DNOs can earn a regulated margin on contestable activities. This will address one of the flaws of the current arrangements and encourage DNOs to stimulate competition in their areas.
- New connections taken by the DNOs should attract the similar level of incremental revenue as an IDNO would be allowed (in effect a revenue driver)
- DNOs can offer asset values to developers / ICPs in a similar manner as IDNOs.

We believe that these measures strike an appropriate balance of encouraging competition in DNO areas where this has been slow to develop, and beginning to address some of the inappropriate market arrangements in areas where competition has fully developed.

*We have the following comments on the specific options proposed by Ofgem, although we do not think that any of these options adequately address the problems identified.*

**‘Non-competitive connections’**

**Option 1 – Extend regulation to all connections**

We do not accept the argument that measured progress in C in C points to the need for greater protection in segments where competition has not developed. As we have previously pointed out competition in connections, at least in the case of housing developments and commercial and industrial sites, is fully established in SP’s licensed distribution areas. Also, Independent Network Operators (IDNOs) are rapidly expanding in both our areas, and there are now more than 300 sites across the two areas in this category.

We accept that competition tends not to occur in such categories as LV small-scale domestic connections (1-4 premises). However, we have very little evidence of customer dissatisfaction with our service or charges in this category. In addition, a new Complaint Handling Arrangement has been established following the Consumers, Estate Agents and Redress Act of 2007 supported by an independent Energy Ombudsman. In the 9 months since SP Energy Networks joined the Energy Ombudsman service, there has been one complaint to the Ombudsman relating to SPEN, which concerned a service alteration. Ofgem’s Electronic Public Register contains details of around 60 connection-related determinations under the Gas and Electricity Acts carried out since 2001. This seems a very low figure against the high volume of connections carried out annually in the two industries combined.

It should also be borne in mind that existing Guaranteed Standards require quotations to be provided within preset timescales for customers seeking a connection at LV for up to 4 premises.

In addition, the quotation accuracy scheme in gas addresses consistency with the published charging statement and methodology rather than the reasonableness or otherwise of charges applied.

We recognise that there are concerns amongst some developers in relation to timeliness of connection works by DNOs. We would be prepared to work with Ofgem to develop a framework for standards for timeliness of final connections for ‘all the way’ connections by voltage level and type of connection.

**Option 2 – Price regulated segments where competition is unlikely to ever be effective.**

The paper says that urban single premise connections may be suitable for a price cap and minimise the potential for disputes. However, such connections may still differ very widely in their connection arrangements. The advantage of individual assessment (as currently applies in SP’s areas) is that a connection involving less materials and labour will be reflected in a lower connection charge. A capped connection charge may lead to some customers paying a cost reflective charge and others receiving a subsidy.

We do not recognise the comments on recent charges for unmetered connections. Nevertheless, we see a greater scope for standardisation/capping of charges in this area than for metered connections.

**Option 3 - Price Accuracy Scheme**

In the gas sector, this allows customers to challenge their quotation against the methodology (or, where appropriate, standard charges) applied by the Transporter concerned. That is to say, it is not a substitute for a determination or other complaint resolution process as to the reasonableness or otherwise of the connection charge or other relevant terms.

Due to the higher prevalence of individual assessment of connection charges in the electricity sector, we see less scope for such a scheme to apply to licensed electricity distributors.

**Option 4 – Cost efficiency incentive**

As recognised in appendix 7, one difficulty in exposing a portion of gross connection costs to capex incentives is that variances against forecasts would be subject to a number of factors outside the direct control of the distributor, including the volume of connection requests and the proportion of sole use and other capex carried out to provide connections.

**Chapter 3: Question 5:** Do you agree with the proposed amendments to the IIS (in full) and what are your views on how incentive rates should be structured?

### **Refinements to target setting methodology**

We support the majority of Ofgem's proposed improvements for the IIS scheme for DPCR5. In particular we support the changes that Ofgem have adopted for the calculation of IIS targets for unplanned system performance, namely recognising that with current investment plans there is little opportunity for DNO's to massively change the failure rates of underground cables and, for companies outperform the CI benchmark, that CML targets for should be calculated using CI benchmark values.

We continue to have concerns regarding the use of individual upper quartile interruption duration values for each of the 23 circuit disaggregation categories but to date we have not identified a simple 'fix' that could be incorporated within the existing process and we recognise that more fundamental changes to the target setting process to address this concern are not warranted at this late stage of DPCR5. We believe this aspect of the target setting process can attract further consideration before DPCR6.

### **Incentive Rates**

The RORE analysis performed by Ofgem demonstrated that the power of the IIS incentive mechanism was appropriate. Comparisons with other current flawed incentive mechanisms, such as losses are inappropriate.

We believe the current approach to setting incentive rates, by relating them to a percentage of total revenue, results in incentive rates that are skewed by the impact of adjustments that have been made to the element of return on capital included within total revenue stream. To address this we propose that incentive rates should be based upon a fixed percentage of Operating Costs being exposed to incentives for all DNO's. The percentage of Operating Costs that we propose should be exposed to the IIS incentive should be set so that the total national value exposed to the IIS mechanism remains equivalent to the current 3% of National Revenue exposed under the current scheme – for DPCR4 this would have related to approx 10% of Operating Costs.

We further believe that IIS incentive rates, which attach a wide (3:1) range of values to a customer interruption and customer hour lost across the DNO's is flawed. In this regard we believe Ofgem must respond to the results obtained in their customer satisfaction survey, which indicated a similar level of willingness to pay across the UK. This can best be addressed through adoption of a single national value for a customer interruption and a customer hour lost across all DNO's. With the result that the bandwidth around targets for max penalty / reward will be variable across DNO's.

### **Duration of the scheme**

It is clear that the methodology use to set IIS targets for DPCR4 was not perfect with a number of these flaws having being addressed for DPCR5. We are therefore of the view that the potential benefits that could be realised by the setting of longer-term targets are outweighed by the benefits of retaining the ability to further enhance the target setting methodology for DPCR6. We therefore do not support the proposal to set longer term targets as part of DPCR5.

### **Pre-Arranged allowances**

We recognise Ofgem's real concerns regarding the accuracy of Pre-arranged CI/CML allowances built into targets for DPCR4 but we do not believe these concerns will be avoided by moving to Capex/Opex allowances. The difficulties will simply re-appear in relation to setting appropriate monetary allowances in relation to the CI/CML impact of each work program.

Our preferred approach is to retain the current mechanism of including an appropriate Pre-arranged CI/CML allowance in DNO's overall CI/CML targets, also retaining the current 50% weighting applied to Pre-arranged interruptions. However we have no fundamental objection to Ofgem's alternative approach providing financial allowances are set at a level equal to the value attributed to the equivalent Pre-A CI/CML within the incentive mechanism.

We believe that Ofgem's concerns with regard to the level of allowances can only be addressed by DNO's demonstrating to Ofgem's how their estimates of future Pre-arranged CI/CML are linked to their proposed work program and we are proactively working with other DNO's to develop appropriate changes to reporting categories for Pre-Arranged interruptions.

### **Exceptional Events**

Excluding EE's from IIS is essential to ensure that the mechanism does not become a weather lottery, that targets can be challenging but achievable and that the likely result of actions to improve performance through investment or operational initiatives are reasonably predictable for the DNO's. To ensure consistency of operation of the IIS it is essential that any comparison between actual performance and targets are made on a consistent basis and as such if any changes are made to how EE's are excluded from actual performance then we believe it is imperative that targets are recalculated by applying the revised EE processes to historic events.

## **Weather Events**

We believe that there is benefit in terms of consistency in retaining the current methodology for weather related events in DPCR5.

If however changes are to be made we could support:

- The re-introduction of a ‘materiality of impact test’ based upon 2.5% of annual CI or CML alongside the current exceptionality test, and
- Using a multiple of daily average higher voltage overhead line faults to identify the occurrence of a weather related exceptional event.

If changes to the weather related EE mechanism are to be made for DPCR5 then we would strongly favour the exclusion to of all faults that occur during the EE period and not simply those that are weather related. Our reasoning is that during a major event we commit all available resources to expedite the restoration of supplies to those customers affected by the weather and such commitment has an adverse impact on our ability to restore supplies to customers who may be affected by a cable fault in an urban area. To accommodate the exclusion of all events during the period of an EE and ensure that the DNO is not advantaged overall by the occurrence of an event we would support the excluded period being replaced by the ‘average’ performance of the DNO concerned.

In all cases however we believe it would be necessary to apply any revised EE criteria to historic data before using the historic data to set future targets.

## **One-Off Events**

By exclusively focusing on events outside the control of the DNO, the one off EE exclusion process fails to acknowledge that even the most prudent DNO is exposed to the risk of big IIS impact events, for example during outages on higher voltage networks. We would therefore propose that the one-off EE mechanism is extended to include a limited number of events within the control of a DNO.

A mechanism which identifies events for possible exclusion using either fixed CI/CML thresholds, thresholds based upon a percentage [2.5%] of target, or a statistical analysis to identify exceptional impact faults, and excludes their full impact subject to the DNO demonstrating to Ofgem’s satisfaction that it has acted in an appropriate manner is our preferred option

## **Audits**

We support the setting of separate accuracy targets for LV and higher voltages and we support the accuracy thresholds proposed by Ofgem in Table 25. We also support expanding the number of 132kV and EHV incidents included in the audit sample to reduce the volatility associated with small sample sizes.

We also support Ofgem's proposal to undertake one expanded audit on each DNO during the course of DPCR5.

### **Short Interruptions**

We support Ofgem's proposal to implement a workstream during DPCR5 aimed at developing more robust short interruption data and we look forward to the opportunity to participate in the work.

We have recognised the need to improve our knowledge of short interruptions and have included a proposal within our preferred QoS investment proposals that seeks to ensure that we remotely monitor the operation of all autoreclosing circuit breakers via our SCADA system.

### **Voltage Quality**

We support Ofgem's conclusion that there is no requirement to change voltage quality standards.

### **Non-domestic customers**

We do not believe that non-domestic customer receive a substandard service from DNO's as a result of IIS.

Larger customer connected at higher voltages actually benefit from a range of enhanced services not available to smaller customers:

- Dedicated telephone numbers which enable them to directly contact the control engineer, rather than making contact through a call centre operator
- Involvement in the planning of pre-arrange outages so as to facilitate the customer undertaking their own work at the same time
- Direct communication with control engineers during incidents so as to make them aware of the possibility of voltage dips
- Dialogue with the DNO regarding the cause, impact and possible mitigation of voltage dips on the network.

### **Guaranteed Standards**

We welcome Ofgem's acknowledgement that in general the strength and scope of the current standards is adequate and we support Ofgem's proposal to increase GS payments broadly in line with inflation.

We believe there must be an explicit cap on the exposure of a DNO to Guaranteed Standard payments during normal weather conditions and one-off Exceptional Events. We believe this could best be achieved by placing an upper limit on the payments to any individual customer to say £200. We do not believe that Ofgem have made any adequate proposals in the Dec 08 paper to address this concern.

**Chapter 3: Question 6:** Do you agree with our proposed long-term objective of DNOs being able to automatically know which of their customers are off supply and the exact times, and if so what is the appropriate timescale to achieve this?

We support Ofgem's vision for DNO's to automatically know which of their customers are off supply and the exact times they are affected on the grounds that this will facilitate a step change in the customer service that a DNO is able to provide. It is our view however that such a change will have little impact upon the overall accuracy of reporting for the purposes of IIS since the IIS scheme is dominated by the performance of higher voltage networks which are currently reported under IIS to a high accuracy.

However we do not concur with Ofgem's view that visibility of customer interruptions in real time will simply be a by-product of the implementation of Smart meters. In our view achieving visibility of customer interruptions in real time will require specific attention to develop an appropriate and cost effective approach. It is possible that Smart meters might have a future role to play in the implementation of a solution but the requirements of the selected process will need to be built into the specification of such meters from the beginning since DNO's data and communication requirements will be different to those of a retail business.

ScottishPower is committed to working with other DNO's, Ofgem and DECC (Dept for Energy & Climate Change) to influence the specification of Smart meters. We remain concerned however that our ability to influence the specification of metering devices aimed at a competitive market place may be limited and we welcome Ofgem's support and backing in this process.

In our view it is therefore premature to be considering making implementation of this vision by DPCR6 a licence requirement since it is not at-all clear that this vision is achievable. We would prefer to see Ofgem take an active role in monitoring progress in this area throughout DPCR5 whilst retaining an ability to resolve any barriers such as funding that might arise.

**Chapter 3: Question 7: Do you agree with the proposed focus on worst served customers and which of the options do you prefer?**

**We support the focus on worst served customers but are concerned that the current proposals will not address the very worst served customers.**

Our stakeholder consultation demonstrated universal agreement that worst served customers and communities should be addressed, consistent with our submissions for DPCR4, our response to the Initial Consultation and our HLFBPQ submission.

We are pleased that Ofgem are proposing to set a Capex allowance for each DNO to direct towards improvements for WSC. We would prefer to see the allowance set closer to our Aug 08 submission level, of £8m for each of our licences, however we agree that any allowance is a significant step forward from DPCR4 and we believe we could deliver a reduced but effective program of improvements for the c.£3m allowance per DNO considered in Ofgem's documents.

Ofgem should not set an upper threshold for the allowed investment aimed at improving the service for a worst served customer since this will effectively result in some WSC being deemed too expensive to address. We would prefer for Ofgem to require DNO's to use the allowance to ensure that it is spent effectively to deliver the best service improvements for their worst served customers.

We agree that the identification of WSC should be based on the number of >3min long interruptions experienced by customers averaged over a minimum of 3 consecutive years with those customers who have experienced the highest number of interruptions being considered worst served. We do not support the inclusion of a value for the numbers of interruptions required for a customer to be classified as worst served.

Our experience in addressing WSC demonstrates that the 'fixes' required do not usually withstand scrutiny by normal investment appraisal techniques since the cost per customer can be very high. As a result we believe that, for DPCR5 at least, Ofgem should not set an upper threshold for the allowed investment aimed at improving the service for a worst served customer since this will effectively result in some WSC being deemed too expensive to address. We would prefer for Ofgem to require DNO's to use the allowance to ensure that it is spent effectively to deliver the best service improvements for their worst served customers.

## Chapter 4: Networks

**Chapter 4: Question 1:** Have we identified the right behaviours for DNOs? Are there others which should be included?

**The behaviours outlined by Ofgem should include an active role in development and facilitation of energy policies.**

The broad “behaviours” that are set out in the Policy Paper are consistent with the key components of our Asset Strategy that has been accredited under the PAS 55 scheme. We believe that the list should also include the behaviour: ‘to take an active role in development and facilitation of energy policy’.

There is clearly a need for these principles to be translated into more clearly defined requirements and targets, and inevitably, there will be a trade-off between costs and the extent of activities.

Important that overall price control is coherent and incentive mechanisms are consistent with the desired behaviors.

There is a risk that poorly designed incentive mechanisms, revenue drivers and inappropriately drafted licence conditions could distort DNOs behaviour.

**Chapter 4: Question 2:** What action should we take where a DNO has deferred investment and created a backlog in DPCR4?

**We agree that Companies should not benefit fully from capex underspend through the IQI mechanism unless they can demonstrate that matching efficiencies have been delivered.**

**Backlogs as a consequence of avoided overspend however clearly merit different treatment and the efficient costs should be funded by customers.**

Every Company will establish an investment plan that it works to and that underpins its budgeting process. This is fundamental to planning funding arrangements. After a negotiation that takes up to 24-months the allowances Ofgem set become that plan and budget for the DNOs. These plans are underpinned by detailed Asset Risk data and engineering assessment produced at the time with the best knowledge available. During DPCR4 SPEN has had to respond to the substantial unanticipated real increases (above RPI) in equipment and other input costs by delivering capital efficiencies, improving our Asset Risk processes and prioritising its capital expenditure.

We agree that Companies should not benefit fully from capex under-spend through the IQI mechanism unless they can demonstrate that matching efficiencies have been delivered.

However, Ofgem's simple expectation that network risk that may have built up as a result of deferred asset replacement in order to avoid an overspend, 20-40% of the value of which should be funded by shareholders, is wholly unreasonable.

This has served to protect customers from substantial real input price rises, and any impact on network performance is dealt with by the IIS incentive scheme.

Customers have therefore benefited from avoided overspend, and this clearly merits a different treatment from a scenario where companies have deliberately not utilised the investment available to them, including funding by customers of efficient levels of catch up.

**Chapter 4: Question 3: What approach should we manage to deal with volume uncertainty?**

**Volume Uncertainty**

We agree with the removal of the current revenue drivers based on units distributed and customer numbers. In DPCR 4, the current growth term resulted in a significant shortfall of allowed revenue for SPD and SPM and had no reciprocal reduction in our cash costs. Furthermore, the continued use of units distributed would be inconsistent with the transition to a low carbon economy.

However, we do support the development of more appropriate revenue drivers to address volume uncertainty in an area such as load-related capex. In principle these would involve flexing an ex ante baseline allowance for investment related revenue, up or down, dependent on an agreed set of assumptions.

These could be similar in structure to those currently applied to the transmission price controls and consistent with the network output measures for reinforcement.

For example, this might include:

- a reinforcement revenue driver (for churn/network hot spots)
- a connections revenue driver
- a driver for replacement of Rising Mains

We will continue to support the industry-working group to develop the most appropriate revenue drivers,

**DPCR4 ESQCR Reopener**

The re-opener mechanism in DPCR4 for ESQCR should be retained as a generic mechanism for changes to legislation / mandatory obligations that lead to a material change in the costs that DNOs face. This could for example apply to the Rising Mains programme that we have incorporated within our submission in the interests of public safety.

**Chapter 4: Question 4: What approach should we take to price uncertainty?**

**Price uncertainty**

We believe that risk sharing would offer the best balance of protection for customers and shareholders and propose that:

- Base allowed revenue should be set on the best available independent forecast of increases in input costs
- Triggers should be set, outside which indexation would apply and;

‘True-up’ should be undertaken at the beginning of the next price control period to take account of:

- deviations from movements in the artificial index to actual changes in input prices;
- changes in the mix of expenditure by DNOs through the price control period; and
- inevitable lags between the timing of the expenditure, publication of the index and, subsequently, adjustment to allowed revenue.

In the absence of a ready-made index of costs affecting networks businesses, we propose that one is calculated using pre-determined weights applied to independently published relevant cost and price indices. These weights should reflect the underlying proportions of the materials/labour/contractor components of investment expenditure by DNOs in a base year.

A joint Ofgem / industry working group should be established to develop the most appropriate index of input prices.

**Ch4 Question 5:** Should we be looking to equalise incentives for opex and capex? If so, what approach should we adopt?

In principle, we support equalisation of incentives for opex and capex.

Simply fixing the boundaries between opex and capex is not sufficient to equalise incentives as the proportion of cost-savings retained would continue to be different.

The simplest approach would appear to be to capitalise the same percentage of all expenditure into the RAV, as this would remove boundary issues. However, the percentage of expenditure, which is capitalised, would be critical. The value of the RAV is a fundamental component of the regulatory regime and is widely used by investors, analysts and financial commentators. **The value of the RAV itself must not become distorted.**

It is essential that potential interactions, including those with the IQI mechanism, RAV value and, hence, depreciation charges, financial ratios and financeability are fully taken into account.

**Chapter 4: Question 6:** Do you consider that we should make refinements to the IQI? If so, what changes should we make?

**It is essential that DNOs be allowed to revise their submissions once the IQI mechanism and output measure assessment framework have been published.**

Given the requirement for output measures, the complexity involved, the dependence on historic data, and the various starting positions of DNOs it is appropriate to retain a single-tier IQI mechanism for DPCR5.

This single-tier IQI mechanism should be able to distinguish between inefficiencies in DNOs capital plans and differences in network policies between DNOs.

Before considering what capex should be included in the IQI mechanism we would anticipate that Ofgem would apply a filter on items that signify a different policy to ensure that investment plans are evaluated on a like-for-like basis. For example, as a Company we recognise that there is a significant safety issue in the UK surrounding rising mains and mural wiring, we have advanced a plan to replace 10% of these assets<sup>7</sup> within our franchise areas in the interests of public safety but we also recognise that not every company may have detected this as a problem as yet. We do not believe that incorporation of this programme, essentially proactive management of a public safety issue, should leave us disadvantaged in the IQI mechanism.

We would make the following comments on the detail of the scheme:

- Benchmarking of opex provides the regulator with full information on DNOs' opex performance so there is no need to extend IQI to include opex
- We would question the inclusion of Load Related capex within the IQI mechanism in the event that we develop revenue drivers to adjust the revenue allowances based on volumes of activity.
- Differential IQI mechanisms based on robustness of output measures must be fully justified and take into account the different starting positions of DNOs.
- The IQI should avoid penalising DNOs, which are subject to inevitable uncertainty, especially in a period where macroeconomic conditions and forecasts have shifted markedly, over the last few months (e.g. the depth and duration of the recession is unknown).
- We do not accept that perceived risk aversion of management distorts the IQI mechanism. No analysis has been published that demonstrates this.

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<sup>7</sup> 10 year programme replacing 10% over 10 years, c. 10% in DPCR5

- It is critical that the IQI mechanism is incentive compatible and does not lead to distortions of other incentive mechanisms. It is difficult to design non-linear schemes that remain incentive compatible.

The primary purpose of IQI was to encourage accurate forecasts from DNOs and we do not accept that perceived risk aversion of management distorts the IQI mechanism in the way that has been suggested. No analysis has been published to support this unfounded assertion. We are concerned that tilting the IQI matrix may have unexpected and potentially undesirable consequences. In any case, there is no reliable way of quantifying the degree of risk aversion, if any, and so it would not be possible to calculate the optimal degree of tilt. Consequently, there is a severe risk that the matrix is tilted too much.

Finally, Ofgem must allow DNOs the opportunity to revise their forecasts after the IQI matrix has been published; otherwise, the IQI will be totally ineffective. We note that Ofwat published their version of the IQI matrix on 19 December 2008 and are allowing water companies adequate time to review their FBPQ responses prior to submission, whilst DNOs have had to prepare their detailed FBPQs without knowledge of Ofgem's IQI matrix.

**Chapter 4: Question 7: What action should we take where DNOs provide insufficient output information as part of their February FBPQ?**

We welcome Ofgem's proposals that the assessment of a DNOs delivery of its commitments to output measures will not be formulaic in nature, but will enable Ofgem and the DNOs to factor in the impact of emergent issues such as plant type faults or new legal obligations that emerge during the course of DPCR5.

It is important that Ofgem consider DNOs proposals for output measures pragmatically, including an assessment of the relative starting positions of DNOs, and the clear dependence on historic data. For this reason we do not believe that a two-tier IQI mechanism is appropriate.

DNOs should be afforded a further opportunity for submissions following publication of clearer guidelines on 'robustness' and the detail of the IQI mechanism. **The details provided to date do not provide a sufficiently well defined framework against which an assessment can be made.**

Common output measures may be achieved in relation to some DNO activities, however it is probable that differences in data collected (current and historic) will limit this possibility.

SPEN are providing comprehensive output information as part of our February FBPQ and shall provide any further clarification to Ofgem and their advisors, as required.

At an early stage Ofgem must communicate in detail the shortcomings of any DNOs proposals, provide DNOs the opportunity to revise their submissions and / or to explain why Ofgem's clearly defined expectations cannot reasonably be satisfied.

**Chapter 4: Question 8:** Do you agree with our proposed approach to assessing network operating costs and indirect costs?

We agree that benchmarking of operating costs is appropriate and that the range of alternative techniques mentioned should in theory be capable of achieving this accurately and fairly.

Given the lack of detail on the actual approach that will be used contained in the paper it is not possible at this stage to comment on Ofgem's approach in any meaningful way. We look forward to discussions in the lead up to the publication of the Methodology and Cost Assessment Document in April/May where we would anticipate that the substance of Ofgem's approach will emerge.

We agree that via the changes made in respect of cost reporting in recent years Ofgem should be in a position to carry out improved efficiency analysis. This is dependent however on the fair resolution of outstanding issues on treatment and the optimal application of comparative analysis techniques.

Company specific factors should be considered. We would re-iterate there should be recognition of X-type network characteristics as a normalisation adjustment.

On the subject of exclusions and normalisations, our views were provided to Ofgem following the Electricity Distribution 2007/08 Cost Review. In summary we hold the view that most of the items highlighted by Ofgem should be excluded from the main comparative analysis but that pensions, non-operational capex, regional adjustments and insourcing/ outsourcing issues merit further careful consideration.

It is not clear that joint work undertaken to date on cost drivers has reached any clear, agreed conclusion either between DNOs or between DNOs and Ofgem. As such the outputs of any regression analysis may be compromised. It is clear that a position will require to be set out in the short time that remains prior to Initial Proposals. We share Ofgem's desire to develop these further over the coming months, in the meantime we offer the following comments:

- Appropriateness of a single prime cost driver for the purposes of comparative efficiency on a bottom-up and top-down basis: We are comfortable that for practical purposes this will be *generally* appropriate.
- LV and HV Underground Faults: We agree that number of faults is a reasonable cost driver
- LV and HV Overhead Faults: We agree that number of faults is a reasonable cost driver and are comfortable with the proposed grouping of these costs.
- Network Policy, Network Design, Project Management, System Mapping: We are broadly comfortable with an asset based volume driver multiplied by an adjusted unit cost in principal. We would highlight that this approach will require forward-looking asset data. We presented our ideas on the subject of a Network Scale Variable (NSV) to Ofgem during the annual cost visit. We highlighted the shortcomings of a NSV

where the scale variable was not independent of the cost variable that it was attempting to explain. We look forward to understanding how this subject has been developed since that time.

- Engineering Management, Control Centre, Call Centre, Stores, health & Safety and Operational Training: We would question this particular grouping. It would seem logical to suggest that Call Centre costs will be driven in part at least by number of faults rather than a general measure of the level of network investment as suggested.

We support the use of a range of benchmarking techniques, however:

- A clear audit trail of any adjustments to data must be provided
- Panel data analysis should be used where sufficient data is available
  - One year's data may not be representative of underlying costs
  - Provides more observations
  - Allows fuller evaluation of alternative models
    - Functional form
      - e.g. linear, quadratic, linear in logs, quadratic in logs
    - Explanatory variables (cost drivers and regional characteristics)
    - Mis-specification and omitted variables
    - Statistical properties
- X-type network characteristics (e.g. Manweb normally interconnected network) should be recognised as a required normalisation adjustment to deal with the additional costs.
- International comparisons must be undertaken with great care. Well known issues, include
  - Exchange rates
  - Data availability, quality and comparability
  - Wage rates
  - Taxation
  - Wide variation in scale
  - Network architecture and voltage levels
  - Degree of vertical integration
    - e.g. distribution, metering, transmission and supply
  - Extent of horizontal integration
    - e.g. electricity, gas, water and appliance retailing etc
  - Ownership structure
    - Public, private, mutual, co-operative etc
  - National and regional characteristics
  - Quality of service
- Particular care must be exercised when undertaking bottom-up modelling
  - e.g. varying degrees of out-sourcing
  - e.g. differences in allocation of costs
  - risk that overall benchmark is below that attained by any one company
    - result of 'cherry-picking' lowest cost for each activity
- Data and model results should be made available to DNOs
  - At the earliest opportunity

SP Energy Networks Response to Electricity Distribution Price Control Review (DPCR5)  
(Policy Consultation Dec 2008)

Appendix – Response to specific questions

- To allow correction of any inaccuracies, inconsistencies or omissions
- To facilitate analysis by the DNOs
- To provide opportunity for review of statistical analysis and results

**Chapter 4: Question 9:** Do you agree with our proposed approach for assessing network investment?

**Investing to preserve the safety and continuity of energy supplies**

The industry has advanced capital investment plans that are consistent with the need to replace an ageing network and to reduce asset risk. While the scale of the increases are significant it is worth bearing in mind that companies will replace a relatively small proportion of their total asset base. In SPEN's case this will represent about 4% of the existing asset base. We continue to examine and deploy life extension techniques across our Networks and where possible review our operational procedures to ensure that we prudently replace assets. It is also important to note that companies' plans have had to increase to incorporate new legal and policy obligations introduced since DPCR4 was concluded e.g. ESQCR Regulation 20A (compliance with ENATS 43-8 & ETR 132).

We support Ofgem's recognition that it is extremely difficult for the industry to anticipate the size, significance and timing of the consequences of environmental policies, and that there is a need for the DNOs role to grow to incorporate facilitation of these policies. Many of these factors will require a fundamental change to the regulatory framework, a process that can begin in DPCR5 but that we expect will also be addressed through the RPI-X at 20 project.

Against this backdrop of future uncertainty, Ofgem infer that unless DNOs second-guess the future correctly there is a real risk that a significant amount of the investment we propose will become unnecessary or redundant. This misrepresents the existing investment plans. As highlighted above companies are replacing a relatively small proportion of their assets, the vast majority of which will be required regardless of which future transpires. There may be a risk in future but at this stage it is relatively immaterial.

**Current Economic Outlook**

There have been very sharp changes in economic conditions, the extent of which were not evident over the summer of 2008. The combined DNO investment plans, which will also bring a further new 9000 posts in engineering and crafts across the industry will not only now be about maintaining the integrity of the UK Distribution system but will represent a significant opportunity to help underpin the UK's economic recovery.

**Locational charging impacts on investment**

We are also concerned about the claimed potential impact of locational charging for EHV customers in reducing DNOs capital plans. We believe this has been overstated and that this does not demonstrate a clear understanding of DNO's EHV reinforcement requirements on the part of Ofgem.

Ofgem stated in their Structure of Charges paper that between 33% and 50% of load related spend in DPCR5 relates to EHV reinforcement, and assumes benefits of 5% of this (£100-

125m). The majority of DNO's reinforcement needs, including EHV, are triggered by load changes at HV/LV, >96% of gross load related spend in SPEN for DPCR5<sup>8</sup>.

Of the remaining 4% associated directly with EHV customers, these customers will actually fund the majority (c.75%) through their connections charges. It is therefore the connection charge that provides the economic signal both in terms of location and highlighting where the network has existing capacity at EHV. Applying SPEN's proportions to the industry forecasts and taking Ofgem's speculative assumption that 5% of EHV customer load related spend could be avoided would result in a potential saving of between £4-5 million for the total industry during DPCR5, against a request for investment of £7.7 billion across all DNOs.

**We support Ofgem's approach focussing on load "hotspots" and welcome further work on the load related model. We are also supportive of Ofgem's approach on non-load provided that this is subject to adequate expert review.**

### **Load Related**

We support Ofgem's approach to deal with load "hotspots" as being far more suitable for consideration of reinforcement requirements. We would welcome further discussion with Ofgem, either directly, or through an ENA working group, on the effective application of the load related model to ensure it accurately captures the required investment drivers.

We believe that the LV connections should be treated as an excluded service given the level of competition being seen in our area. We also agree that a revenue driver is appropriate for the larger schemes and welcome further discussion on the development of mechanisms.

### **Non-Load Related**

We support Ofgem's approach to the assessment of non-load related investment provided that we are given adequate opportunity to review the assessment jointly with Ofgem's experts. It is important to ensure that Ofgem's (and the DNO) modelling assumptions are aligned, and that expert consideration of the particular condition and performance issues faced by DNOs are also addressed. At this stage we are not clear on how asset categories that cannot be effectively incorporated within the modelling process (civils, protection etc) will be captured. It is essential that these items be dealt with consistently across all companies, particularly as they may affect the outcome of the IQI mechanism. These investments can be significant and we would expect to obtain clarification on this at the start of the process.

### **HILP**

Our stakeholder consultation strongly supports the socialisation of the HILP costs across all customers, as this investment is considered by the government as value adding for the GDP of the UK. Following discussions with Ofgem we understand that Ofgem are reluctant to write to [DECC] to seek clarification on this issue and as a result the ENA will correspond. We expect that this correspondence will clarify the position going forward.

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<sup>8</sup> Extract from HLFBPQ August 2008

**Unit Costs**

We support Ofgem’s work to ensure that a consistent understanding is developed for unit costs, however this work should recognise the value to customers of differing asset management approaches, and not seek to penalise DNOs for alternative asset replacement / life extension approaches.

## Chapter 5: Financial issues

**Chapter 5: Question 1:** Have your views on the appropriate methodology for setting the cost of capital or on indexing the cost of debt changed as a result of the current turmoil in the capital markets?

### Cost of Capital

**At a time when a significant proportion of the UK asset base is reaching the end of its operational life it is crucial now, more than ever, to set a cost of capital that enables DNOs to attract and retain the funding required to meet a step change in capital expenditure levels. Given the current uncertainty due to the credit crisis we believe that further analysis of debt triggers should be undertaken.**

The credit crunch has both raised the cost of debt and significantly reduced its availability. The premiums on corporate debt have widened substantially, disproportionately so below the single A grades. With RPI inflation falling rapidly, the real cost of debt will rise further. At times, the market has effectively been closed to issuance of debt with the lowest investment grades. Also, non-price conditions have tightened significantly. Although there is considerable uncertainty about the depth and length of the recession, it is unlikely that recent developments will prove transitory. It is most probable that the era of “cheap” debt is over.

Financial volatility has increased during the credit crisis and onset of recession. Measures of equity volatility (both calculated from equity movements and implied from options) have increased sharply through 2008 and remain at historically high levels. Investors have been reluctant to take-up rights issues, making it difficult to raise additional equity capital.

Against this background, we propose to undertake further analysis to assess whether debt triggers would be appropriate and, if so, how such a mechanism should be constructed and operated.

### Financeability adjustments

**Financeability adjustments or other revenue smoothing methods are entirely appropriate to obviate price volatility being experienced by customers.**

We agree that provided the cost of capital is set at the right level, financeability adjustments should be unnecessary. In theory an appropriate cost of capital including allowance for equity issuance would allow DNOs to raise capital in times of high investment. In practice equity issuance is perceived adversely by the market in terms of future performance risk and would undermine confidence in utilities. To address this problem, Ofgem may wish to consider signalling to the financial community via its “RPI at 20” project that equity issuance may begin to emerge as a feature of future utility financing strategies beyond 2015.

## **Accelerated Depreciation**

**Accelerated depreciation remains an essential means of applying a financeability adjustment. It is well understood, predictable and transparent, and is NPV neutral thus ensuring companies have adequate cash-flows for investment and customers are protected financially.**

SP Distribution and Scottish Hydro Electric Power Distribution are the last remaining DNOs to face the post vesting “cliff face”. It is crucial that the resultant, very material, shortfalls in revenues are mitigated using the same approach and specific treatment as was previously applied to all other DNOs; i.e. the accelerated depreciation of post vesting assets using an assumed 20-year life with a 15-year catch up and that financeability tests are carried out from this baseline.

We understand Ofgem’s concerns regarding depreciation rates and their long-term impacts. We believe however that in the interests of regulatory consistency the current precedent applied at DPCR4 and more recently for the Scottish companies at the TPCR should be extended for the duration of DPCR5. If that were not the case then the two Scottish companies would require a commensurate adjustment to uplift revenues in order to achieve and maintain our key financial ratios.

We recommend that a number of possible solutions are fully considered as part of Ofgem’s RPI at 20 project when each DNOs RAVs and capex profiles can be modelled in detail in order to find an optimal strategy going forward. We believe that any attempt to reset depreciation rates as part of DPCR5 would introduce unnecessary complexity and uncertainty, at a time when the priority is to fund the increased investment programmes of the DNOs.

It must be recognised that resulting short term financial constraints arise from the interaction of regulatory remuneration mechanisms with investment profiles rather than from any mismanagement of companies.

**Even in the absence of the cliff edge issue faced by the Scottish DNO’s it should be noted that any move to lengthen regulatory asset lives would lead to financeability problems in the absence of other remedies. These alternatives may be more feasible if developed and carefully communicated externally via the RPI at 20 process.**

## **Financial modelling**

### **Modelling must be done on a statutory basis and consistent with good regulatory practice we agree that it is important that the price control is a transparent process.**

In order to ensure full transparency of how the final proposals are derived we believe that it is essential that there is a transparent audit trail in the DPCR5 financial model showing how the costs are derived from the FBPQ. We suggest this trail should commence from 2004/05 showing how the RAV additions in 2004/05 and DR4 are derived and then both operating costs and capital expenditure additions calculations for DR5. The RRP returns and FBPQ should be input initially in a statutory accounting format by operating cost and capital expenditure categorisation. There then needs to be a sequence of adjustments showing how the values in the final proposals calculations are derived from the FBPQ data.

We note that the tax computation is being calculated by using regulatory cost allocations as opposed to statutory cost allocations. Corporation tax is calculated based on statutory cost allocations. For example, in DPCR4 faults capitalised in the statutory accounts are included in regulatory operating costs – we agree that a subsequent transfer was made from operating costs back to capital expenditure but this would not necessarily result in the same treatment of costs as in the statutory accounts.

In DPCR5 there may be similar calculations/allocations of costs for regulatory purposes that will not necessarily reflect the statutory accounting treatment. While these calculations may be the approach for allocating the total cost pool for the purposes of calculating regulatory revenue excluding tax; for statutory taxation purposes these same costs in total need to be transferred back onto a basis consistent with generally accepted accounting practice as this is how the taxation authorities will deal with the actual costs when determining the cash tax liability of the regulated business. If this adjustment of costs back to generally accepted accounting practice is not adopted then the Distribution companies will not be receiving the correct tax allowance in the final price control settlement.

As an example, for some companies the regulatory mechanism allocates more costs to operating costs than is the case for statutory taxation purposes. A mismatch therefore occurs because costs which are treated as operating costs in regulation are deducted 100% from revenue in the regulatory financial model tax calculations whereas a portion of these regulatory operating costs are treated as capital expenditure for statutory tax purposes with the latter attracting only capital allowances deductions. Therefore, in this example, the regulatory model tax allowance calculation would underfund these companies compared to the actual tax they pay. Equally the opposite may apply to some companies and they would be overfunded.

When assessing financeability ratios it is important that the value included in the calculation of the ratios in respect of pension deficit costs paid by the DNO should be the value agreed with the pensions regulator spread over the period agreed with the pensions regulator; as opposed to the period over which deficits are to be funded in setting price control allowances as these might be a longer or shorter period than that agreed with the pensions regulator.

## **Financeability**

### **Consistent with previous price control reviews, Ofgem should continue to test proposals for consistency with credit ratings comfortably within investment grade.**

The current licence obliges companies to take all appropriate steps to ensure that they maintain an investment grade issuer credit rating at all times.

With companies being faced with raising new debt to fund higher capex programmes, increasing restrictions on the availability of credit, and credit insurers reducing their cover particularly in the retail sector, it is important that Ofgem reassess its view of “comfortably within investment grade”. Strong credit ratings are required in the current financial climate and we believe that companies need to be within the “A” range of credit ratings and that the floor should therefore be “A-“. We believe that the current ratios themselves are fit for purpose as metrics, although we are of the view that consideration of equity based metrics such as dividend cover may also be appropriate.

We are concerned that Ofgem still do not recognise the need to consider the post-maintenance interest coverage ratio (PMICR) as a key financial ratio. For example, Fitch recently stated<sup>9</sup>

“Because PMICRs take into account the cash which must be spent in order to preserve the value of the RAV in calculating the amount of cash available to service interest, Fitch believes that PMICRs are the most appropriate interest coverage metric for UK regulated utilities.”

Similarly, Moody’s uses<sup>10</sup> adjusted interest cover

“This ratio is calculated by Moody’s to measure the degree of interest cover of a regulated company after deducting from post-tax operating cash flows available to cover interest expenses the portion of the capital expenditure that is necessary to maintain the RAV constant in real terms. This is the amount of capital investment that compensates for the depreciation of the RAV (as increased or decreased by any profiling mechanisms applied in the relevant regulatory model).”

We therefore expect Ofgem to include an adjusted interest coverage ratio in its financial model and in its assessment of financeability for DPCR5.

We believe strongly that these should be tested for the duration of the price control period to ensure that they do not exhibit a deteriorating trend since such a pattern could in itself trigger a credit rating downgrade and thus make raising finance more costly. In addition we believe that these should be stress-tested for adverse shocks and that appropriate headroom should be

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<sup>9</sup> Post-maintenance Interest Coverage Ratios for UK Regulated Utilities, Fitch Ratings, 28 February 2007

<sup>10</sup> UK Regulated Industries: Q&A on Lending against the Regulated Asset Value, Moody’s Corporate Finance, November 2007

maintained. One area that should be specifically stress tested is the implications of negative inflation on financeability.

### **Profiling**

We believe that revenues should be smoothed to reduce price volatility. We note in the financial model that a number of profiling options have been modelled. We believe that these profiling options should be NPV neutral. The only exception to this would be if the financeability ratios indicated financial stress in which case you may expect NPV positive revenue uplifts.

### **Treatment of Taxation**

**Overall approach** – We agree with the overall approach for setting tax cost allowances on an ex-ante basis with an ex-post adjustment to reflect actual gearing compared with assumed gearing.

**Ex-post adjustments for changes in the tax regime/triggers** – We agree that such changes in the tax regime, tax legislation and HMRC published guidance (such as changes to the corporation tax rates or to the rate of tax relief for capital expenditure) that are outside the control of licensees should be subject to an ex-post adjustment mechanism. We also considered whether tax case law and IFRS/UK GAAP changes should be included; but we have concluded that these areas would be too subjective and therefore difficult to agree on the appropriate adjustment to the tax cost allowance. This mechanism should be symmetric (i.e. both reductions and increases in the tax cost allowance should be treated equally).

The mechanism for calculating the appropriate adjustment should be included as part of the DPCR5 Final Proposals to ensure certainty for investors, consumers and licensees if this adjustment needs to be invoked. We suggest a very simplistic approach – rerun the DPCR5 Final proposals financial model with the revised corporation tax calculations including the impact of changes in the tax regime, tax legislation and HMRC published guidance. For example, if the rate of corporation tax is changed to 26% with effect from 1<sup>st</sup> April 2011, then from 2011/12 onwards 26% would be substituted for the rate assumed in the final proposals. The revised price control revenue would then be reflected in the licence.

Regarding triggers – We are not sure what is meant by a sharing mechanism – the important issue here that Ofgem have recognised is that changes to the tax regime, tax legislation and HMRC published guidance are outside the control of consumers and licensees therefore it is unfair that either consumers or licensees are penalised by such changes. Therefore we believe that 100% of the effect of such changes should be passed to consumers as either a benefit or an increase in charges – there should be no sharing e.g. a 50:50 split of any resulting reduction or increase in revenues. Therefore no trigger mechanism would be needed – this fits well with our suggested very simple to operate mechanism for calculating any changes to price control revenue; however if the setting of a de minimis trigger level is decided upon then this should be set no higher than a real cumulative impact on price control revenue over the 5 year price

control period of £1m – and 100% of the adjustment should be applied not just the excess over £1m.

**Claw back of tax benefits of excess gearing** – We have responded under separate cover to the letter proposing how the practical issues will be tackled.

**Modelling of capital allowances** – Consistent with good regulatory practice it is important that a consistent policy (as with all other aspects of the price control settlement) for modelling capital allowances is applied to all. We believe that the ‘DNO-specific tax pool allocation policy’ option is preferable.

**Chapter 5: Question 2:** What is the appropriate timing of actuarial valuations for setting ex ante pension allowances.

**Pension allowances should be based on DNO’s assessment of their pension costs over DPCR5.**

We favour option 2 as outlined within Appendix 10, i.e. base pension allowances on DNO’s assessment of their pension costs over DPCR5, supported by work from scheme actuaries and subject to Ofgem review i.e. not limited to formal triennial valuations which in the current financial climate may well not be reflective of the current health of the individual pension schemes nor the re-opener option when the formal triennial valuations become available in-period.

In respect of the review of the working of the pension principles we welcome the conclusion that there is no need to change the overall pension principles.

We note that Ofgem are examining the potential consequences of the Pensions Act for the price control review. We will respond to this when this is consulted on.

**Deficit recovery periods**

We believe that the period over which deficits are to be funded in setting price control allowances should be scheme specific as opposed to generic. Indeed the proposal to adopt a generic approach seems at odds with the general consensus of responses to the pensions consultation: “a scheme specific approach is required”. A scheme specific approach links into the obligations and regulation that has come from the Pensions Act and the guidance from the Pensions Regulator that focuses on scheme specific funding. There is also clear guidance from the regulator for trustees to consider when negotiating deficit repair plans with companies. This will include consideration of the company covenant. The mismatch arising from funding deficits through the price control allowance over a different timescale to the actual deficit repair will lead to financeability issues.

**Ex post adjustments for DPCR4**

The decision on whether to spread the adjustment relating to the opex element of any over/under funding of pension costs (both normal contributions and deficit repair costs) over one or five years needs to result in an NPV neutral solution. The decision may well depend on the scale of the adjustment and the consequent impact on P0.

### **Capitalisation into RAV**

Consistent with the treatment in DPCR4, deficit repair costs should be spread on the same basis as normal contributions i.e. following salaries. This will automatically ensure that an appropriate amount of pension costs are allocated to opex and to the RAV.

### **PPF Levy**

We welcome the decision that it is not cost effective to carry out an efficiency review of the PPF Levy particularly the risk-based element that is outside the control of sponsors and trustees. It is important however that it is recognised that the PPF Levy may increase substantially if the impact of the credit crunch is prolonged.

## 6 Process and timetable

**Ch6 Question 2:** We invite views on our proposed process.

*The timetable for response to the Policy consultation is inappropriately short, and we have concerns over the timing of publication of details of the IQI scheme in relation to FBPQ submissions.*

We are disappointed at the compressed timescale allowed for responses to this important paper (10 weeks inclusive of the Christmas period). Twelve weeks would still have provided Ofgem with up to 3 months to incorporate responses in the analysis to inform the May 2009 consultation paper.

The process timetable on page 105 of the paper says that draft licence modifications will be published in December 2009. Based on experience in DPCR4, It is important that this process begins much earlier and that *individuals involved in developing the incentive mechanisms are tasked with drafting the associated Licence changes.* We would like to work with other DNOs and Ofgem on draft licence modifications following the Initial Proposals.

We continue to believe that there should be an update document this September, even if there is no new information from DNOs or arising from the wider environment. In past reviews, Ofgem's own thinking has often changed significantly between the Initial and Final Proposals. We would expect a chance to examine and comment on such changes in detail. **Meetings with the DPCR5 team and the Committee of the Authority are not a substitute for this part of the process.**

We believe that the working groups and industry workshops organised by Ofgem throughout 2008 have worked effectively and believe that these should be continued throughout 2009. However, we have some concern over the undue influence of a single major Supplier who has been invited to participate in workgroups whilst other Suppliers and stakeholders have been excluded. This may be to the detriment of the consultation process.