

MAYOR OF LONDON

OFGEM'S LETTER – QUICKER AND MORE EFFICIENT DISTRIBUTION CONNECTION

RESPONSE FROM THE MAYOR OF LONDON

Executive Summary

1. London's development and ability to retain and advance its position as a world city are dependent upon adequate and timely investment in its infrastructure requirements, including the infrastructure which delivers London's electricity.
2. Removing the barriers to and enhancing the feasibility with which necessary investment in London's electricity infrastructure can be made is an important element in the Mayor's London Infrastructure Plan 2050 and the London Plan.
3. Protecting consumers is consistent with changed arrangements for investment in electricity networks that better support London's growth and the welfare of Londoners.
4. There is strong synergy between the three scenarios / models for advancing investment put forward in Ofgem's letter. The Mayor supports all of them and urges Ofgem with the Government to develop them as soon as possible as a single proposition, each having different mechanisms applicable to types of development with different characteristics, namely –
 - Scenario 1 (socialising additional reinforcement cost) for sites where earlier anticipatory investment can save cost in contrast to incremental reinforcements;
 - Scenario 2 (the RAV Buy –back Model) in cases where the risk of stranded assets is low and where more anticipatory investment can lower risk and cost for developers;
 - Scenario 3 (the DevCo model), in the context of higher value development sites requiring strategic anticipatory investment in electricity infrastructure, external investment being provided by a 'DevCo' without risk to consumers.
5. The regulatory issues involved in implementing the models are not insurmountable.
6. Better aligning investment decisions regarding London's electricity infrastructure with the strategic direction of the London Plan and the London Infrastructure Plan as well as London borough plans is fundamental to effective decision making on the location and level of anticipatory investment in London's electricity network. All three models must accommodate that.
7. The DevCo model is likely to be the principal means of securing adequate anticipatory investment in London's electricity infrastructure where needed most and may also help to secure adequate and timely investment in other utilities, notably water.
8. Detailed responses to Ofgem's questions are contained in Appendix 2.

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Introduction

The Mayor is pleased to respond to Ofgem's letter of 19th February 2015 regarding quicker and more efficient electricity distribution connections. London is now home to more people than at any time since 1939 and its current population of 8.6 million residents is likely to grow to over 11 million by 2050. London is a world city, competing for business and investment and talent worldwide. Its infrastructure, including electricity infrastructure, must support that. Reference is made below to London's Infrastructure Plan 2050.

London's electricity distribution system is already one of the densest and most intensively used in the world and is made up of aging equipment, often buried in highly congested land space which can make new electricity connections and reinforcement difficult, lengthy and expensive. The system operates on the edge of its available capacity. A report commissioned by the Mayor in March 2014¹ states that over 40 per cent of substations serving London (at 11 or 6.6 kV) would have less than 5MW of capacity available if the reported connection offers were taken up and one in five substations would have less than 2MW remaining available. In more constrained London boroughs such as Westminster, it was reported that there may be almost no spare capacity currently available.

Against this background the electricity distribution system has to respond to the needs of large individual developments in dense areas of inner London. For example The Shard, Kings Gate and Nova (Victoria Street), Quadrant (Regent Street) and 20 Fenchurch Street, are of a size rarely seen elsewhere in the UK and not in such concentration. London's Opportunity Areas, where the majority of London's growth is expected to take place, such as Vauxhall Nine Elms Battersea, the Greenwich Peninsula and Old Oak Common demand major and often complex reinforcement of the electricity distribution system, often with lead times of many years.

During the course of discussions between the GLA, Ofgem and last year, the GLA presented models of the effects of inadequate scope for introducing additional investment in advance of need for actual developments in Victoria and Greenwich. In addition Ofgem is aware that Vauxhall Nine Elms Battersea development area is seriously challenged in securing the availability on time of adequate electricity distribution capacity.

The London Infrastructure Plan envisages a long term investment plan for London's infrastructure. As explained below, all three scenarios put forward by Ofgem for regulatory change offer a framework for better aligning the development plans of local and strategic authorities with investment decisions. That could substantially improve the ability of Ofgem and the industry to anticipate future requirements for electricity infrastructure investment and enable all the scenarios to promote growth.

London Infrastructure Plan 2050 and the London Plan

The current London Infrastructure Plan update, published in March 2015, was informed by many months of consultation and engagement.

¹ London Electricity Infrastructure Review. Technical Working Group Report. Ramboll March 2014

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The Mayor has set up the London Infrastructure Delivery Board which brings together leaders in the field, including Ofgem, and which has the collective will and weight to drive work in this area and come up with creative solutions as to how we fund new infrastructure in London. The scenarios put forward in Ofgem's letter have the potential to provide a framework within which such creative solutions can be applied to London's electricity infrastructure.

The new 2015 London Plan also places great emphasis on the strengthening of infrastructure planning in London. The Plan is in line with the National Planning Policy Framework which promotes infrastructure provision as a key priority. The new London Plan does not only include strengthened infrastructure policy generally, it also introduces a completely new policy that promotes the adequate and timely provision of electricity infrastructure including the provision of the required land. This was clearly supported by almost all stakeholders throughout the Plan's preparation process and its Examination in Public.

It follows from this that planning undertaken by bodies such as the relevant industry regulators and utility companies needs to be more joined up with London's infrastructure planning, for their investment decisions to have full regard to growth projections in the Mayor's plans and the underlying evidence. This is an important theme in the Mayor's response to the scenarios put forward in Ofgem's letter.

One of the key issues identified in the consultation on the London Infrastructure Plan was insufficient ability for investors to finance electricity infrastructure ahead of demand, which can impact on the cost and delivery times of developments in central London. The three investment models put forward in Ofgem's letter together form a sound basis for securing more forward investment where needed, on a timely and cost competitive basis.

Ofgem's letter –Scenarios 1- 4

In its letter Ofgem has used a number of scenarios to distinguish between different ways in which investment could be made earlier or the connections process otherwise improved. It is noted that they are not mutually exclusive. That point is expanded below. Answers to the specific questions asked in respect of each scenario are contained in Appendix 2.

Scenario1 – socialising additional reinforcement cost

Scenario 1 puts forward the proposition that distribution network operators (DNOs) be permitted to make more socialised investment (paid for by all consumers) in reinforcement works in anticipation of future demand for capacity in the system, on the basis that any costs associated with installing the assets earlier are returned to consumers through savings made. The savings occur through the avoidance of additional expense involved in installing the infrastructure on an incremental basis, without the engineering and economic advantages of all the reinforcement being designed and installed at the same time. This scenario therefore relies on the justification that consumers see the return of the costs of advancing the expenditure through savings in over-all reinforcement costs over the longer term.

Scenario 1 has a useful place, perhaps as the first option to consider. Its justification does however depend upon the prospective savings in reinforcement costs being validated and also not absorbed by the cost of delays in the anticipated connection requests being made. Such delays could leave the

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DNO with a carrying cost of the infrastructure work done which reduces or exceeds the savings achieved. It follows that the scenario would need to be accompanied by tests to demonstrate a high level of certainty of the connection requests being made as anticipated, in the required volume.

Scenario 2 – the DNO is refunded additional investment when connections are made

This scenario is based on the 'Regulatory Asset Value (RAV) Buyback Model' which is explained in Appendix 1 of the Ofgem letter. The DNO makes the additional investment to enable the reinforcement work to be carried out earlier, as in Scenario 1, but is reimbursed the costs payable by connecting parties when they ask for connections to be made. Scenario 2 is not therefore dependent upon the cost of the earlier installation of the network reinforcement being balanced by savings in over-all reinforcement costs. That is because connecting parties pay for the whole cost of the reinforcement work for which they are normally liable, at the time they sign up for connections.

However, Scenario 2 leaves a stranded asset risk in the hands of the DNO, but the risk can be managed by the imposition of conditions attached to the use of Scenario 2, principally –

- there must be stringent criteria for determining that the future demand for the additional capacity will be there when predicted, with sufficient evidence produced, before Ofgem permits the additional investment;
- a small premium might be charged to parties signing up for connections, to pay the DNO (and through them consumers) for the small risk of substantial delay in new connections, causing loss to them;
- the DNO is given an incentive to evaluate the volume and timing of reinforcement required prudently, by accepting a penalty in the event that any stranded asset cost exceeds a given amount. The principle of this has been discussed at meetings with Ofgem.

Although perhaps the certainty of the volume and timing of the connection requests need not be as absolute as in Scenario 1 above, it may be expected that the application of Scenario 2 will involve a high standard of evidence of the quantity and timing of the new demand to justify the reinforcement works. The evidence threshold may perhaps be only a handful of percentage points short of certainty. This would be in line with discussion of the merits of the RAV Buyback Model during 2014.

This model is an important constituent in the range of investment solutions that are needed, perhaps for smaller sites, particularly where the land values may not support the taking of higher risk by the parties who need the reinforcement work. Where the characteristics of the development justify the taking of a higher level of risk (from which under Scenario 2 the consumer would not be fully protected) the Scenario 3 model discussed below may be suitable, since it removes consumers from the risk arena entirely.

Scenario 3 – a connection customer (a 'DevCo') funds the cost of anticipatory reinforcement

This scenario can address the position where the perceived stranded asset risk is not low enough for the DNO to follow Scenario 2. A third party 'DevCo' pays the cost of the advance reinforcement works and is only repaid by the DNO when connections to the reinforced assets are made. The repayment is done by the DNO passing back to DevCo the connection charges received, including a premium to reward the DevCo for taking the stranded asset risk, arising through the risk of the development occurring later than predicted.

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Since in Scenarios 1 and 2 significant risk of the new reinforcement assets remaining unused for longer than planned is left with the consumer, the need to protect consumers from that risk must involve a very high probability of the use justifying the earlier investment occurring as planned. That will limit the scope of both models. Scenario 3 allows for wider opportunities for advance investment where the characteristics of the development and the future demand for electricity justify it–

- there is scope for the DevCo accepting higher levels of risk than might be feasible in either Scenarios 1 or 2, since the investment in the reinforcement during the risk stages is outside the regulated asset base of the DNO. For example, for development sites / areas with high land values where the premium likely to be involved in financing the risk is a proportionately small cost, the DevCo model can provide flexibility and give the relevant public authority and developers the opportunity to manage risk in return for the benefits of earlier infrastructure installation;
- a single DevCo could be established in a local authority area or region, acquiring a portfolio of electricity network investment projects, thereby concentrating expertise, spreading risk , improving access to investment funding and speeding up the progression of projects through the management and governance structures already being in place;
- a local or strategic authority (that may be the GLA and / or London boroughs in the case of London) could participate directly in the DevCo, its business plan conforming to local infrastructure priorities. That may imply such authorities sharing some of the risk (notably the stranded asset risk);
- the DevCo's role need not be confined to electricity distribution infrastructure but could extend to other utilities, notably water.

An outline structure of the DevCo model demonstrating how it would work is contained in Appendix 4

A variant to the DevCo model put forward in Ofgem's letter is the consortium arrangement. It appears to rely upon the interested developers (whether they be on the demand side or smaller scale electricity generators) being in place and able to contract collectively for advance reinforcement works at a sufficiently early stage. This variant is discussed in response to Question 16 in Appendix 2.

An overview of Scenarios 1-3 collectively

Ofgem's letter states that the scenarios set out for consideration are not mutually exclusive. However, the point can be taken further than that. Not only may the adoption of any one of the three scenarios referred to above not preclude the adoption of either of the others on other development sites; there is also synergy between all of them, meaning that they can usefully be considered as a single proposition. Specifically –

1. the objectives of the three investment scenarios are essentially the same, namely to –
 - enable more reinforcement work to be done in advance of connection requests being made, so as to reduce or remove the risks and costs associated with a more reactive approach;

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- improve the opportunities for strategic investment in the network so as to reduce the overall cost of reinforcement;
 - improve the certainty of connection costs to individual connecting parties by spreading the ‘first comer’ costs over all connecting parties more predictably, or in the case of Scenario 1, removing reinforcement costs entirely through their socialisation;
 - better align the development plans of local and strategic authorities with the investment decisions of the DNO and Ofgem so as better to anticipate future requirements for electricity infrastructure.
2. The three scenarios are inter-supportive in delivering those results, in that each is suitable for development sites / areas with different characteristics, for example –
- Scenario 1 - sites / areas with opportunity for significant savings in reinforcement costs if the reinforcement is done strategically rather than more incrementally, combined with the prospects and timing of the demand for the reinforced infrastructure being sufficiently certain to justify consumers (through the DNO) meeting the costs;
 - Scenario 2 – sites / areas where the benefits of carrying out more advance reinforcement work are clear and the risk of the demand for the reinforced infrastructure not occurring within the predicted time frame is sufficiently small; but where undertaking the reinforcement work earlier on a strategic basis is not self-financing as in Scenario 1;
 - Scenario 3 – sites / areas where there are strong economic reasons for securing more network reinforcement in advance of need, but where the risk of demand for the reinforced infrastructure not materialising within the predicted time is too high to justify the use of Scenario 2.

An illustration of how the three scenarios fit together as a single decision making process is set out in diagrammatic form in Appendix 1

Suggested outline criteria for establishing special arrangements for earlier network reinforcement in development areas are set out in Appendix 3.

Better aligning development plans with investment decisions on infrastructure

Better aligning the development plans of local and strategic authorities with investment decisions on the electricity infrastructure needed is necessary in the case of all these scenarios. That is because all the scenarios depend upon an assessment of risk that cannot usefully take place without knowledge of the development plans of the relevant local and /or strategic authority and other information such as key development / growth locations and trends. For example in the case of London, the London Development Database includes data about planning permissions and completions across London. In the case of Scenarios 1 and 2, the local / strategic authority’s role would be largely one of delivering information and playing a consultative role in assessing risk and benefit issues, so that Ofgem can take a decision on whether either such option should be adopted. In the case of Scenario 3, with higher levels of risk and probably larger scale developments, the role of the local /strategic

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authority could be more direct, possibly involving a shareholding or management interest in the DevCo including, where justified, the taking of a share of the investment risk.

Hard cases

It should not be forgotten that the current regulatory arrangements for sanctioning investment in electricity distribution networks often work satisfactorily. The forward investment scenarios addressed by Ofgem in its letter are for use in those cases where there are special reasons for securing more, earlier investment in electricity network development. The criteria referred to above and contained in Appendix 3 should make the eligible development sites / areas identifiable.

However, there will be hard cases, namely development sites / areas justifying more preliminary investment in electricity distribution infrastructure, but which fail to fit the conditions for using any of the three investment models. An obvious example might be a development site / area where additional forward investment would be highly beneficial, but the lower land values may make Scenario 3 uneconomic and the risk of delayed or under- utilisation of the reinforced infrastructure installed is too high to justify either Scenarios 1 or 2. In such cases, it might be a matter for the relevant local or strategic authority to consider what role it could take in reducing risk.

Scenario 4 – other ways

Ofgem' letter sets out in Scenario 4 other ways of making it easier to connect, notably better network management and better management of connection offers.

First, better network management which reduces the need for reinforcement and speeds up new connections is important to obtain best utilisation of existing assets. The use of 'smart grids' can plainly play an important role in this.

Second, in the case of management of connection offers, it is noteworthy that a significant proportion of connection offers made by DNOs to potential connecting parties are never accepted, yet for so long as they are extant, tie up available capacity. There is scope for better management of connection offers so that they do not sterilise available capacity.

The Mayor strongly supports measures directed at both these objectives. Such means should secure better value for consumers and users of the networks, postpone the need for further reinforcement and even avoid it in some instances. However, these measures are very unlikely to be a universal substitute for improvement in the current system for introducing more forward investment in network reinforcement.

Finally, Scenario 4 introduces the possibility of more flexible terms for the recovery of connection charges that are at present recovered upfront. Payment up front is an important element in protecting consumers from the risk of bad debt and reducing the DNOs' working capital requirements. However subject to leaving consumers protected, the use of more judgement in permitting connection charges to be spread forward could be a useful step in reducing the barriers to connection, particularly for small scale demand customers for whom large up - front costs can be prohibitive and for developers of small scale energy projects. Further work in this area is justifiable.

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The Mayor's views on Ofgem's scenarios for possible change

The Mayor is grateful to Ofgem for taking forward consultation on possible areas of change to improve the process of making connections to electricity networks and securing investment in them.

For the reasons described in this response, Ofgem should take forward detailed work to make feasible the adoption of all the scenarios for change contained in its letter. In particular Scenarios 1 - 3 are a priority, in that they together form a matrix of opportunity for earlier and timely investment in electricity infrastructure which is overdue. They would provide valuable infrastructure support for the development of new housing, commercial and industrial premises.

In the case of London, Scenario 3 (the 'DevCo' model) is seen to have important potential, not only in the context of electricity infrastructure investment but possibly extending to other utilities, notably water.

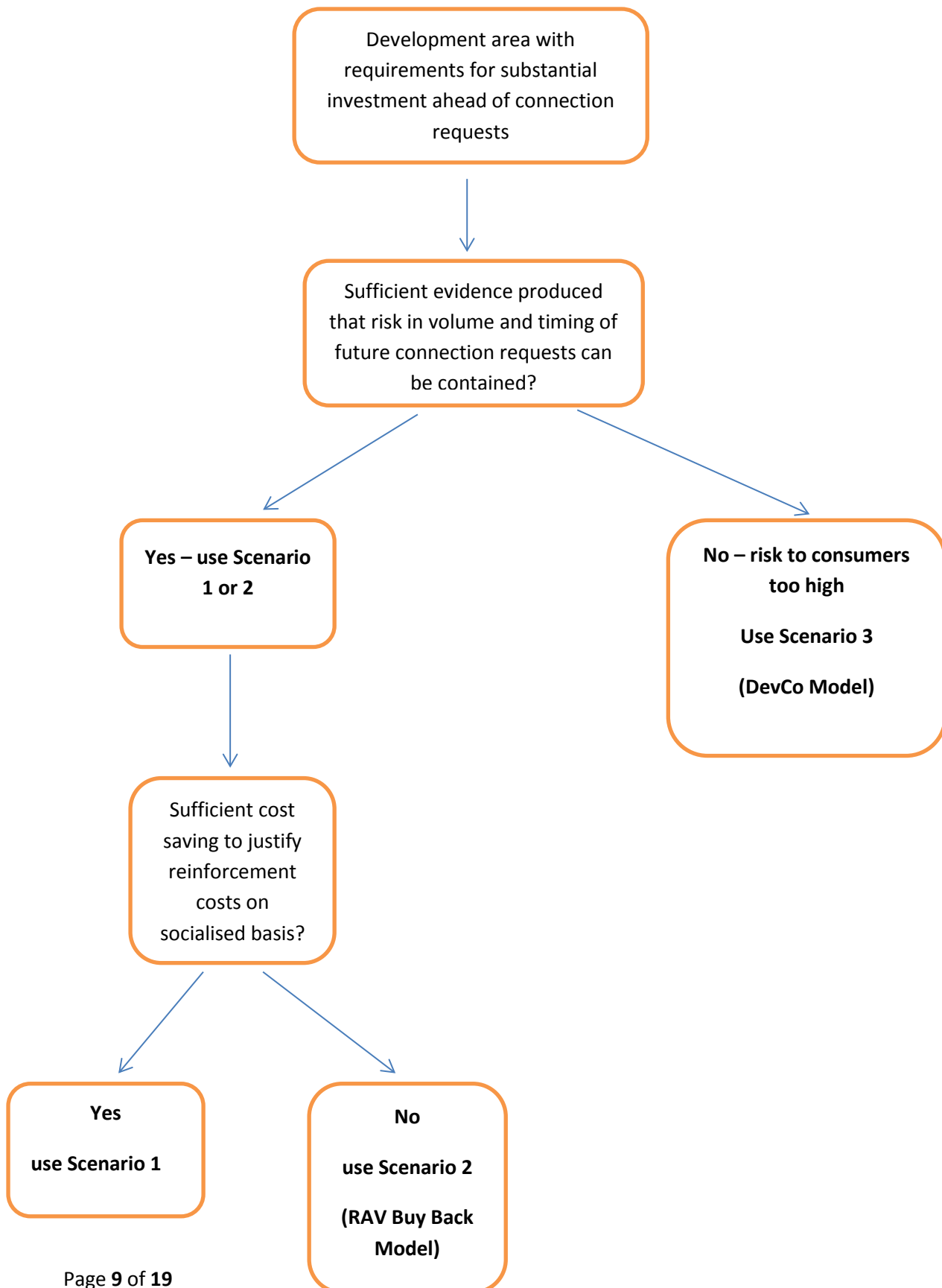
The GLA will work with Ofgem to take the three scenarios forward as rapidly as possible.

Greater London Authority

May 2015

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APPENDIX 1 Illustration – assessing scenario options



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APPENDIX 2

Part 1

Responses to Ofgem's questions

Scenario 1.

Q1. Would a DNO be sufficiently confident about future connections demand and the benefits to DUoS customers to justify this approach? If so, in which circumstances?

A.For the purpose of discussion with interested parties, the GLA has produced an outline matrix of criteria that might be used to determine the certainty of demand. The draft matrix is attached as Appendix 3. Much of the evidence of the likely demand for future connection requests is in the possession of local or strategic authorities (including planning authorities) and for example in London, the London Development Database which includes planning permissions and completion data across London. If the matrix of criteria and the acquisition of evidence to support its conclusions for each development area is developed and systematised, a DNO should with Ofgem be able to determine which of either Scenarios 1 or 2 might be available; or if neither is available through lack of confidence in the conclusion, to examine Scenario 3, where questions of future demand would largely be for the DevCo.

Q2. What other barriers are there to the DNO taking this approach? How might these be overcome?

A.Other barriers are a matter for the DNOs to identify but the GLA would be pleased to work with them to identify solutions.

Scenario 2.

Q3. What are your views on this type of approach and the RAV Buyback Model? Are there any elements which are essential, not required or should be changed and why?

A.The Mayor's views on Scenario 2 and the RAV Buyback Model are contained above. This approach forms part of a matrix of solutions, also involving Scenarios 1 and 3. Scenario 2 is likely to find its principal use in the case of substantial development sites / areas requiring substantial reinforcement of existing electricity infrastructure, where the risk on volume and timing of connection requests is low. As described in Ofgem's letter, we do not see any elements as not required or requiring change.

Q4. Please give details of any projects or schemes this type of arrangement could have helped progress which would have not otherwise gone ahead?

A.Developers will have their own perspective on the answer to this question and should be asked. The Mayor, in the context of his planning and development functions, has a number of current and prospective examples of where the Scenario 2 type arrangement could help, although in some such cases, a Scenario 3 (DevCO) arrangement might be the most appropriate. Through discussion with the GLA preceding the publication of Ofgem's letter, Ofgem is aware of such examples of development sites. The GLA delivered modelled examples of the effects of the current restrictions

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on securing adequate investment in reinforcement requirements in advance of need on actual developments in Greenwich and Victoria. Ofgem is also aware that the Vauxhall Nine Elms Battersea development is seriously challenged in securing adequate electricity distribution infrastructure in time to meet the needs of this major Opportunity Area. It should be added that the relevant test is not necessarily whether there are developments that have not gone ahead through the absence of any of the solutions discussed in Ofgem's letter. Particularly in London, land values are sufficiently high to mean that ultimately barriers presented by electricity infrastructure difficulties are crossed. The objective is more one of achieving optimal cost effectiveness that does not inappropriately reduce other developer contributions, in particular for affordable housing. It is also to reduce the reputational risk of London (or any other area with development requirements) being perceived as a difficult place in which to invest in the built environment.

Part 2 of this Appendix contains examples of two London Opportunity Areas where the investment requirements for new electricity infrastructure are a major challenge under current regulatory arrangements, involving substantial additional risk to developers and prospective additional costs (Vauxhall Nine Elms Battersea Development Area); and Old Oak Common Opportunity Area which presents similar challenges that need to be anticipated well in advance of connection requests being made.

Q5. What would justify requiring subsequent connection customers to only be able to connect to the new, enhanced infrastructure?

A. The processes described above for satisfying the criteria for introducing any of the three Ofgem scenarios include measuring the advantages of speedier infrastructure installation for the development site as a whole, to reduce risk and cost. It is fair that the development site / area should be considered as a whole and that an individual developer should not be placed at a competitive advantage over others by being able to by-pass the costs implied in adopting the advance investment arrangements selected, through the fortunate timing or siting of their part of the development. That is distortive.

Q6. What would justify a DNO charging a premium to subsequent connection customers to reimburse DUoS customers for the risk they bear in funding this work? What might be the impact of this? How should the premium be calculated?

A. In the Scenario 2 (RAV Buyback Model) the premium is in effect a hedge to consumers against the minority risk of there being significant slippage in volume or timing of connection requests to the new infrastructure. The risk would be assessed by reference to normal economic /commercial criteria (see the matrix of outline criteria contained in Appendix 3). The impact would be on developers requiring connections who would pay the premium. Assessment of the impact on them would be a matter for consultation with developers.

Q7. Over what period of time would it be reasonable to expect DUoS customers to be reimbursed for their initial funding?

A. The answer may depend upon the size of the premium being paid as above. It should be such period as combined with the level of premium, leaves the financial effect of applying Scenario 2 broadly neutral to DUoS customers.

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Q.8 When might it be appropriate for a DNO to have an upfront revenue adjustment to cover this type of scheme? Or should existing mechanisms be used?

A. This is a question for the DNOs.

Q.9 Do you consider that this approach would have any implications on competition in connections?

A. In principle, there is no basis for concluding that the Scenario 2 approach would have any implications for competition in connections. The approach should not affect the contestability of reinforcement works done; nor should the approach preclude or hinder the opportunities for Independent Distribution Network Operators to invest in systems. The approach is concerned with the timing of reinforcement works and handling the risks thereby involved, not with by whom the works are carried out or the ownership or operation of the assets.

Scenario 3

Q10. What are your views on the DevCo model and process set out in Appendix 2? Are there any elements which are essential, not required or should be changed – and why?

A. There are no elements in the DevCo model as described that are not required or should be changed. The model would however require further work to refine it and determine options for its management, governance structures and access to finance.

Q11. Please give details of any projects or schemes this type of arrangement could have helped progress which would not have otherwise gone ahead?

A. Please see the answer to Q.4 above and also Part 2 of this Appendix.

Part 2 contains a description of two London Opportunity Areas where the investment requirements for new electricity infrastructure are a major challenge under current regulatory arrangements, involving substantial additional risk to developers and prospective additional cost (the Vauxhall Nine Elms Battersea development area); and the Old Oak Common Opportunity Area which presents similar challenges which need to be anticipated well in advance of connection requests being made.

Q12. What would justify requiring subsequent connection customers to only be able to connect to the new, enhanced part of the network?

A. Please see the answer to Q.5 above.

Q13. What would justify a DNO charging a premium to second- comers to reimburse the customer? What might be the impact of this? How should the premium be calculated?

A. Please see the answer to Q.6 above. In addition however, in the case of a premium charged under Scenario 3 (DevCo model) the size of the premium will be influenced by market perception of the risks associated with the predicted volume and timing of connections and the extent to which any of the assets could become stranded.

Q14. Over what time period would it be reasonable to expect the customer to be reimbursed for their initial funding?

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A.The 'customer' in this instance will be the DevCo which will have funded the reinforcement works. The expected repayment risk is likely to vary from one development to another. It will be influenced by the terms upon which the finance is obtained by the DevCo and the extent to which any strategic or local authority involved is prepared to participate in the investment risk. Whatever the outcome, DUoS customers would not be affected.

Q15. What would justify the initial investor being permitted to restrict the type of schemes that would connect using the infrastructure it has paid for? For which type of schemes might this be appropriate?

A.There need not be any restriction on the type of schemes (meaning it is assumed, types of development) that would connect using the infrastructure. Any such restriction would be distortive of the planning authority's role and have other public policy implications. Understanding which developments may connect would be informed by planning data which should be known to the DevCo, at least in outline, prior to its investment decision being made.

Q16. Do you have any comments on the recommendations proposed in Appendix 3 to enhance consortium arrangements? What would justify these recommendations? Are there any other changes which would support consortium arrangements?

A.Consortium arrangements such as those described would appear in principle to be available under existing regulatory arrangements through developers applying for a connection as a consortium under Section 22 of the Electricity Act. Section 22 allows for voluntary arrangements to be reached between a DNO and a connecting party for agreed connection work to be done on freely negotiated terms. The DevCo model is designed for use where there is need for reinforcement work to be done prior to any developer or developers as a consortium being in a position to make a connection request. However, the DevCo model could be used as a consortium vehicle as described in Ofgem's letter, to bring together developers with a firm interest in reinforcement works being advanced, when coincidence of interest between developers occurs early enough. Such a consortium of developers might have the opportunity to finance the advance reinforcement work itself, rather than rely on external finance and may not need to charge a premium if all the developers involved are parties to the consortium. However, such a co-incidence of interest between developers at an early enough stage to make this variant on the DevCo model work is, in the experience of the GLA, rare. This variant is more likely to be of use to a community of small scale generators, as in the example set out in Ofgem's letter.

Scenario 4

Q17. What role, if any, could changes to engineering standards play in helping to accelerate the connections process without damaging reliability levels? In what circumstances would this be appropriate?

Q18. Which particular standards might most benefit the connections process if changed?

A17 and 18. These are questions to be responded to by the DNOs.

Q19. What benefits might the introduction of assessment and design fees bring?

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Q20. Could more flexibility in the way assumed available capacity is calculated help accelerate the process? Are there any other improvements to be made in how DNOs manage interactivity between schemes looking to connect to the same part of the network?

Q.21 When might it be reasonable to withdraw capacity it has previously offered to customers?

Q22. Are there any other changes which could be made to reduce the need for reinforcement?

Q23. What would justify a DNO offering more flexible terms for connection charges? What might be the impact of this?

Q24. What types of schemes would most benefit from this arrangement?

Q25. What could be done to protect other customers from picking up any costs which cannot be recovered from the original connection customer?

Q26. Are there any other measures that would reduce the cost impact of connecting to the network?

A – Qs 17 – 26. These are questions to be responded to by the DNOs and other parties with specific knowledge regarding their content.

Summary and next steps

Q27. Which of the arrangements described above would deliver the greatest benefit to the connections process without placing additional risk or cost on the generality of customers and why?

A.Each of the Scenarios 1 -3 can deliver the greatest benefit without placing additional material risk or cost on the generality of consumers, on the basis of our comments on the three scenarios contained in this reply. Specifically, risk to consumers can be reduced to a level at which to the extent it is still material, it is manageable. That would involve adopting the criteria outlined above and in Appendix 3 of this response. Where such risk cannot be sufficiently reduced, the alternative is a scheme using Scenario 3. That uses the DevCo model, save where there is a sufficiently early co-incidence of interest amongst the developers, to enable use of a consortium model referred to in the response to Q. 16 above.

Q28. Should wider benefits beyond energy system benefits (such as those provided by Non Traditional Business Models) be taken account of in DNOs' or third parties' considerations of any of the measures or mechanisms described in this paper?

A.All such wider benefits should be taken into account, insofar as they are of benefit to the cost, availability or quality of electricity supply and do not burden consumers with unjustifiable costs.

Q29. Do you have any other suggestions for delivering quicker and more efficient connections?

A.London has a very strong interest in the outcome of Ofgem's deliberations on these issues and the GLA looks forward to being involved further in developing the solutions under discussion and to introducing any other relevant suggestions.

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Part 2

Responses to Ofgem's questions - examples of London Opportunity Areas

Vauxhall Nine Elms Battersea Opportunity Area

The Vauxhall Nine Elms Battersea Opportunity Area (VNEB) is a large development area on the south bank of the River Thames between Lambeth Bridge to the north and Chelsea Bridge to the south west. It encompasses Albert Embankment, Vauxhall Cross, Nine Elms, including New Covent Garden Market and Battersea Power Station. The planning framework supports the delivery of high density and mixed use, comprising 16,000 new homes and 20,000 – 25,000 new jobs.

Issues have arisen at VNEB around the planning and delivery of utility infrastructure and notably electricity distribution infrastructure. In comparison with the prospective power demand of VNEB of around 130 MVA, there is very little available electricity distribution capacity to provide it and to provide the capacity requires very substantial network reinforcement, including major upgrades as far away as the Wimbledon area.

The challenge is securing the design, costing and installation of the infrastructure involved in time for the development requirements and to do so cost effectively. The current restrictive regime for the sanctioning of investment in reinforcement of electricity distribution infrastructure in advance of connection requests being able to be made, has created severe difficulties in meeting that challenge, in particular –

- securing the cheapest option. The genuinely cheapest option requires the estimated electricity requirements of all the relevant parts of this very large development to be taken into account at the same time to secure a strategic plan for the investment required. More strategic investment could reap the full cost benefits of scale and avoid additional costs that may arise through an incremental approach, of making investment in reinforcement as and when formal connection requests are made. This means early planning and commitment to investment in reinforcement works at an earlier stage. That has not been practical to the extent needed under the existing regulatory framework;
- land availability. An important element in securing the availability of major electricity infrastructure work within the required time frame is land availability. The important first step is identifying the land requirements in the context of the over-all requirements of the development site. At the acquisition stage, this can cause individual developers within the development area disproportionate loss of developable space; and as the development accelerates, the land costs involved can increase. The VNEB development has revealed serious difficulties in this context.

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Flexibility in obtaining optimal sites for the reinforcement infrastructure required and the cost implications could have been substantially improved if it had been practical for land availability to be more strategically planned and acquired, even if the land is not developed for a number of years;

- future proofing for expansion. There are difficulties in securing investment to enable future expansion of capacity for primary substations, for example to enable upgrade from a two – transformer to a three - transformer solution. That involves land availability, building design and associated cabling which may often be significantly cheaper to size and provide with cable routes at an earlier stage, to enable the later addition of transformers. This is a key issue in major development sites such as VNEB, with phased development profiles.

Old Oak Common Opportunity Area

Old Oak and Park Royal represent London's biggest single regeneration opportunity with the potential to deliver 25,000 new homes, space for 65,000 new jobs alongside significant levels of new social and physical infrastructure. The Old Oak and Park Royal Development Corporation (OPDC) was established on 1st April 2015 to drive this regeneration and has developed a Development Infrastructure Funding Study (DIFS) which identifies the amount of infrastructure needed to support the new development. This shows that a significant amount of new electricity infrastructure will be required alongside other utilities.

It is critical that all utilities, including electricity, are planned for and delivered in a smart, integrated manner to secure long term sustainability and resilience for Old Oak and Park Royal. The OPDC is keen to ensure that the delivery of utilities in Old Oak provides best practice for future development across London and beyond. The regeneration of Old Oak represents a major opportunity to achieve this and the OPDC would seek to work with Ofgem to help achieve this vision.

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APPENDIX 3 –suggested outline criteria for the establishment of special arrangements for network reinforcement under Scenarios 1-3

CRITERIA	EVIDENCE
<p>1.Planning Status</p> <ul style="list-style-type: none"> Local plans Planning designation 	<p>Growth opportunities</p> <ul style="list-style-type: none"> major reservoirs of brownfield land with significant capacity to accommodate new housing commercial and other development, linked to existing or potential improvements to public transport accessibility built up areas with good existing or potential public transport accessibility able to support redevelopment at higher densities <p>Status of local plans</p> <p>Spatial priorities of local plan</p> <p>History of planning permissions granted and implemented.</p>
<p>2.Developer interest</p> <ul style="list-style-type: none"> Intention /willingness to invest in new development Scale /use of development Intended timing of development completion 	<p>Planning applications made</p> <p>Land interests acquired</p> <p>Land values</p> <p>Viability constraints / risks</p> <p>Estimated demand for use of developed area</p> <p>Other evidence of developer interest</p>
<p>3.Contribution of development to local /regional economy</p>	<p>Estimated gross value added by new economic activity in the developed area or to which the area will contribute elsewhere</p>
<p>4.Shortfall between existing available electricity distribution capacity and estimated demand post completion of development of the area</p> <p>The area within which the required re-enforcement work would take place</p>	<p>Existing electricity distribution capacity / utilisation / bottlenecks / existing connection commitments</p> <p>Capacity estimated as required by forecast development completion date</p>
<p>5.Time by which completion of required connection /re-enforcement work for first</p>	<p>Evidence of likely start dates and construction periods for buildings /infrastructure planned to</p>

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<p>connection exceeds estimated construction period of buildings / infrastructure to be connected in the development area</p>	<p>be constructed in the development zone</p> <p>Evidence of the installation period for the re-enforcement and connection work required, taking the development zone as a whole.</p> <p>Identification of those works to be done / land to be acquired and their location in advance of the first connection being requested</p>
<p>6. Doing nothing will have –</p> <ul style="list-style-type: none"> • Material / substantial economic impact on the development • Material /substantial impact on the value the development will add to the area /locality /region • Material or substantial risks of either or both above <p>In each case the negative effects are disproportionately large relative to the cost and risk of advance infrastructure installation</p>	<p>Estimated financial impact on development costs</p> <p>Calculation of GVA effects</p> <p>Impact on existing electricity consumers</p> <p>Risk assessments in respect of the above.</p> <p>Measured by the cost of the advance infrastructure works not exceeding a stated percentage in excess of the ‘business as usual’ cost of the connection and re-enforcement work required</p> <p>The percentage for each defined development area will vary according to the proportionality of the negative impact referred to above</p>
<p>7. The cost and risk of the advance infrastructure works is financeable</p>	<p>Capital required</p> <p>Additional costs to be recovered</p> <p>Risk of stranded assets</p> <p>Cash flow and profile of expenditure and benefit realisation</p> <p>Scenarios showing different levels / timing of uptake</p> <p>Available financial instruments, e.g. –</p> <ul style="list-style-type: none"> • Government financial mechanisms • Pension funds • Mutual funds • Bond market • PPP • Sovereign wealth funds

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APPENDIX 4 – outline of the DevCo model

The principles of the DevCo model

- the mechanism must pass back the risks / costs associated with excessively optimistic predictions of demand for new capacity from consumers;
- the source of funding therefore needs to be outside the regulated asset base; and
- the risk of the new assets being stranded through delays in their use must be assumed by developers and / or strategic / local authorities who benefit from the accelerated investment.

The DevCo structure

