

**TITLE:**           **Securing Investment in Electricity Distribution Infrastructure In Advance of Need - Anticipatory Infrastructure (AI)**

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**CC:**             **Tara Singh, No. 10 Policy Unit  
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**DATE: February 2015**

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## **BACKGROUND**

Following a request from DECC in March 2014 Core Cities worked with: the Greater London Authority; No. 10 Policy Unit; DECC; HMT (infrastructure UK); Ofgem, and 2 District Network Operators to:

- identify and evidence barriers to economic growth in the current regulatory framework;
- develop new methodologies for introducing improved anticipatory planning and methodologies for additional investment in electricity distribution infrastructure.

The outcome of this work was accepted by the Minister for Energy in early January 2015. Ofgem have been formally requested to take the work forward and to provide a formal response to the Minister on how they intend to do this.

The purpose of this paper is to:

- summarise the current Core City position;
- set out proposals for future collaboration with Ofgem, DECC, Treasury and other relevant Government departments on this issue.

## **RECOMMENDATION**

That DECC, Treasury & Ofgem consider this report and endorse the proposals set out on page 5 for developing a further programme of collaboration with Core Cities to develop tested, working solutions.

## THE CORE CITY DRIVERS

The current investment in electricity distribution infrastructure is, for the most part, on a short term basis and is triggered when a customer requests a service. There is a limited degree of strategic planning, but only as set out on an eight year cycle and only as determined by risk adverse District Network Operator regulations.

Historically there has been limited local authority intelligence and economic forward planning data used to develop these plans.

There are an increasing number of cases where this approach is either delaying or increasing the cost of economic regeneration. These cases include both taking electricity from the Network or, increasingly, importing electricity into the network.

Core Cities identified the following barriers to investment in the Core City Growth Prospectus 2013:

***'Distribution networks.*** *Core Cities require a statutory seat at the table concerning the regulation of the gas and electricity distribution networks that cover their area. The absence of this leads to increased costs for the required up-grade that the UK needs to undertake to its distribution networks to remain competitive and move to a sustainable future. A recent study by Infrastructure UK<sup>1</sup> indicated that around £5 billion reduction of cost on the estimated £250 billion infrastructure spending needed (across a number of sectors up to 2030) can be obtained by better regulation and coordination....., Core Cities will leverage better coordination and deployment of infrastructure across their urban areas. '*

## A CORE CITY REVIEW OF THE AI COLLABORATIVE PROCESS TO DATE

Liverpool represented the Core City Low Carbon and Energy portfolio in meetings with OFGEM, DECC, the GLA and No. 10 Policy Unit. This work was carried out between April and November 2014.

Liverpool were, at the time, in the process of working with the local DNO, Scottish Power to see if economic regeneration objectives can be better aligned with DNO investment on an ongoing or automated basis with a predictable degree of certainty. The Liverpool model had trialled methodologies for sharing information with the DNO and for predicting future demand needs.

The Baltic Triangle regeneration area in Liverpool was used as the example of more typical problems outside London. Here the primary issue was the accumulation of a large number of smaller developments which have not been picked up in DNO

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<sup>1</sup> Frontier Report, Systemic Risks and Opportunities in UK infrastructure, A Report prepared for HM Treasury & Infrastructure UK, January 2012

planning and none of which is large enough to be able to cover the investment costs required as a first comer<sup>2</sup> for the possible £10m upgrade required for electricity infrastructure development.

In London, Vauxhall Nine Elms and White City, amongst others, were used to evidence examples of barriers. The London scenarios focused on delays to on site developments increasing costs to the developers.

The following principles were agreed:

1. The available capacity of electricity infrastructure in major cities is insufficient to meet the needs of the planned development areas and the current system for regulating investment in new electricity infrastructure is blocking investment.
2. DNO need to work with Local Authorities to bring forward the necessary anticipatory investment within defined areas of need outside of the current 8 year planning cycle (RIIO –ED1).
3. The DNO should be required to evidence that they have incorporated all relevant Local Authority economic development data and energy planning into their proposed local investment plans.
4. Developers need to be able to secure the advance DN investment needed, provided they bear the costs and risks associated with that.
5. The method used to secure additional advance investment must not have a material impact on business or consumer bills.

## **THE CURRENT POSITION**

In November 2014 HM Treasury proposed 2 new models for introducing additional investment in electricity distribution infrastructure prior to formal requests for connections being made - TOTEX (later RAV) and DEVCO. Both proposed models for securing additional advance investment are potentially consistent with the principles 1- 5 and both models, or similar, will be needed to address the different scenarios.

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<sup>2</sup> Currently the first developer or business that requests the connection that would trigger the need to invest would be liable for all the costs of that investment and then be paid back by second comers over the next 5 years. There is a current proposal to extend the 5 years to 10 years.

**TOTEX Buyback** (RAV) enables ahead of need investment by the DNO, in specifically defined areas as agreed by the local authority and in exceptional cases outside of the 8 year planning cycle. The proposal is that the works would be initially funded through the current customer charging mechanism (DUOS)<sup>3</sup> with those customers being paid back as developments go ahead. Theoretically worked examples show that a £40m upfront investment over 8 years in London would initially increase customer bills by 56p per annum with a likely future reduction in bills as new developer connections are made.

**The DEVCO model** has the challenge of being dependent upon external finance to support the cost of the advance infrastructure installation, pending the capital expenditure being recovered from connection charges paid by developers.

DEVCO is funded outside of the customer base by developers, land owners and local authorities. DEVCO partners carry the financing risks, compensated by a risk premium charged to second comers. DEVCO raises the possibility of DEVCO owning the assets and being the significant electricity connection company within a defined area. In this early model any new consumers coming into the area would be required to use the DEVCO for connections and subsequently pay a premium for the service. Any risk of stranded assets is taken by Devco. In London and other areas of high development pressure there is evidence of developer support for this option. In these cases the cost of getting new connections would rise but it would not result a material increase in the developers overall cost.

The Core City Group supports the further development of both the TOTEX Buyback (RAV) and DEVCO models, and sees them as applicable to different development conditions. There are issues with both models that could only be understood by working on some real pilot cases.

## **THE NEXT STEPS**

Further work is required to complete the models as viable mechanisms for delivering electricity distribution infrastructure investment, to ensure the previous principles are upheld and to define any necessary regulatory changes.

The Minister for Energy has agreed with the need for change and has tasked Ofgem to take this work forward.

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<sup>3</sup> A DNO is permitted by OFGEM to charge an agreed cost to their customer's base this is known as DUOS. Overall these distribution costs form about 16% of an average electricity bill.

## **THE CORE CITIES PROPOSAL TO DECC, TREASURY AND OFGEM**

Core Cities is a unique network of cities in the UK, providing the ability to realise opportunities that would not be possible or as readily achievable through other UK means. The Core Cities, individually and collectively, provide the opportunity to deliver progress at significant scale. The Core City Low Carbon and Energy Portfolio Group are keen to see real and rapid action to realise working solutions. Effective solutions cannot be negotiated or trialled solely with the District Network Operators.

**Core Cities now wishes to develop a programme of work to:**

- 1. Work with Ofgem and others to take through a number of worked examples to the next stage of pre- operational development and establish the criteria by which:**
  - a. A TOTEX type model could be developed, in particular to better understand the financial benefits to the DNO businesses of an improved asset base and whether the DNO could therefore justifiably offset any residual risk to consumers.**
  - b. The development of a DEVCO example, outside of London, to determine whether the financial value to a local developer is sufficient to justify the premium on connection charges and special connection regime required in the DEVCO model.**
- 2. Subject to funding and licensing requirements, trial the current Liverpool Anticipatory Automated Planning model with one other Core City and with a different DNO to determine how acceptable and robust criteria for the incorporation of Local Authority forward planning data can be developed.**
- 3. Subject to funding being available, commission expert advice to enable a fuller understanding the overall anticipated investment need of the DNO networks within the Core Cities.**
- 4. To disseminate knowledge and information to other local authorities and networks as the programme develops.**