AECOM Imagine it. Delivered.

Old Oak North Electrical Infrastructure

Summary of IDNO Market Engagement Exercise

OPDC

Project number: 60567089

Document Reference: **OOC-ACM-UTL-XX-RP-UT-05008**

12 August 2018

Quality information

Document reference: **OOC-ACM-UTL-XX-RP-UT-05008**

Prepared by	Checked by	Verified by	Approved by
[redacted]	[redacted]	[redacted]	[redacted]

Revision History

Revision	Revision date	Details	Authorized	Name	Position
01	4 July 2018	First Issue	BM	[redacted]	[redacted]
02	12 Aug 2018	Second Issue	BM	[redacted]	[redacted]

Distribution List

# Hard Copies	PDF Required	Association / Company Name

DRAFT

Prepared for:

OPDC

Prepared by:

[redacted]
[redacted]
T: [redacted]
[redacted]

AECOM Limited
Aldgate Tower
2 Leman Street
London E1 8FA
United Kingdom
aecom.com

© 2018 AECOM Limited. All Rights Reserved.

This document has been prepared by AECOM Limited ("AECOM") for sole use of our client (the "Client") in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between AECOM and the Client. Any information provided by third parties and referred to herein has not been checked or verified by AECOM, unless otherwise expressly stated in the document. No third party may rely upon this document without the prior and express written agreement of AECOM.

DRAFT

Table of Contents

DRAFT

1. Independent Distribution Network Operators- Market Engagement

To inform the Old Oak & Park Royal Development Corporation's (OPDC's) commercialisation strategy for the provision of strategic electrical power infrastructure in Old Oak North, OPDC and AECOM undertook a market engagement exercise with five Independent Distribution Network Operators (IDNOs) and one Independent Connection Provider (ICP) associated with an IDNO. The purpose of this early market engagement exercise was to:

1. Set out the scale of development and opportunity in Old Oak and Park Royal and the objectives of the electrical power strategy for Old Oak North;
2. Engage early and widely with the supply side, ensuring openness of access to OPDC officers and information;
3. Establish good communication channels with IDNO's;
4. Gain greater focus and knowledge about the market which will help to further define and develop our technical and commercial strategy; and
5. Gauge the level of interest in the IDNO market to adopt the electrical infrastructure for Old Oak North.

Five IDNOs who had previously expressed interest in the scheme and were known to be interested in operating in the London area were selected for this initial market engagement exercise and a meeting was held with each company individually. The five companies were:

- Eclipse Power (IDNO)/g2 Energy (ICP)
- GTC
- Leep Utilities
- UK Power Solutions (UKPS)
- Vattenfall

The key points emerging from the early market engagement meetings can be summarised as follows:

<u>Design and Construction of Electrical Infrastructure</u>

- New assets are normally designed, constructed and adopted through a process where the ICP provides designs, which are submitted to the IDNO for approval prior to procurement/construction[1]. The IDNO works collaboratively with ICPs to assist them in ensuring designs are 'Value Engineered', 'Fit for Purpose', aesthetically and ergonomically designed using the IDNOs standard specifications and material lists, to meet where possible the needs and expectations of the developer and to ensure access and legal risks are minimised.
- IDNOs will typically work with either a preferred ICP or a pool of ICPs who have an understanding of the IDNO's requirements and specifications and can therefore design and deliver a network the IDNO can adopt. This helps the IDNO leverage experience from across their business, including the opportunity for innovative solutions.
- It is important to the IDNO that the design of the new network facilitates access for maintenance in the adopted highway and provides easy access to third party land. The construction programme needs to be managed to ensure the new IDNO assets are not compromised by other construction works that may happen on site.

[1] This refers to procurement and construction of the electrical infrastructure by the ICP. The IDNO will have been appointed and will be working with the ICP to design and construct the required infrastructure.

- The IDNOs' confirmed they would consider all delivery model options e.g. design, build, adopt and operate. However, for residential developments the preferred model is to fund (via the provision of an asset valuation (AV)), adopt, own & operate.

Point of Connection

- The optimal point of connection (PoC) for an IDNO is at the Distribution Network Operate (DNO) Primary Substation, where they are eligible for the high voltage (HV) plus distribution use of system (DUoS) tariff. In the case of electrical power serving Old Oak North, this would be at the Atlas Road Substation. However different tariffs are available for different PoCs', for example, HV and low voltage (LV) tariffs.

As development progresses each plot will make a new connection application to the appointed IDNO, the application will request a level of capacity. The IDNO procurement shall place an obligation on to the IDNO to review the requested capacity from an electricity distribution viewpoint and agree the capacity to be allocated to the plot under consideration.

Commercial Considerations

- In each meeting it was explained that OPDC have bid for capital grant funding through the Housing Infrastructure Fund (HIF) to invest ahead of need in the strategic infrastructure required to bring forward the electrical power needed to unlock Old Oak North. All IDNO's indicated that early investment by OPDC was welcomed and de-risked private sector investment.
- IDNOs typically propose to release asset value (AV) either as phased instalments or instalments as metered connections are energised. The actual level of payments and time of release is subject to negotiation on individual projects. Typically, this may mean much of the primary and or 11kV infrastructure has to be funded and installed well before AV is released. It is expected the Housing Infrastructure Fund (HIF) will fund the initial works for providing the new HV infrastructure and these monies will be re-funded by a combination of connection fees, reinforcement charges and AV payments from the IDNO as the metered connections are energised over time.
- From commercial experience on other recent and current London development projects the AECOM team have considered the Old Oak North scheme and forecast that the available asset value from an appointed IDNO, following a competitive procurement could recover up to 50% of the early infrastructure investment into the electricity network.
- IDNO feedback suggests that any asset value payments would be made in line with the commitment and/or connection of development plots i.e. in accordance with the development programme.
- Recovery of early investment from the IDNO will be from a combination of reinforcement costs as part of the plot connection fee levied by the IDNO to the plot developer and the asset payment from an assessment of the long term revenues available from the Old Oak development as a whole.by the IDNO.
- Need to say something here that explains the rationale and precedents behind the assumed return on HIF investment.

Other

- DNO-IDNO-IDNO scenarios are possible. If early phases are agreed and adopted by one IDNO, it is possible to let subsequent phases to alternative IDNO's who are able to provide a more attractive commercial proposition for later phases. This scenario is not the preferred scenario for IDNOs though as their preference is to adopt the entire network (including customers if possible). However, developers are free to use another IDNO should they wish to.
- Several of the IDNOs confirmed that it is possible for a developer to appoint their own IDNO however, their experience is that majority of developers will normally appoint the incumbent IDNO to provide the electrical connection to their developments. This is because incumbent

IDNO's offer is likely to provide better economic, programme and transactional benefits to the plot developers.

- IDNOs have a vested interest in the long-term care of the network. As stated above they are willing to either work with or manage ICPs
- Typical information required by the IDNOs for bidding purposes is as follows:
  I. Commercial property schedule;
  II. Residential schedule;
  III. Start date/finish date/ connection dates;
  IV. Phase breakdown;
  V. Loadings;
  VI. Land ownership boundaries;
  VII. Restrictions on routing/location of infrastructure;
  VIII. Connection voltages, and
  IX. CHP/renewables strategy.

Feedback from the initial engagement with the IDNO's was positive, and all five companies expressed an interest in participating in the procurement process for this opportunity.

DRAFT