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INNOVATION

NEXT GENERATION NETWORKS

NIC 2018 – THIRD PARTY CALL

SUMMARY REPORT

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Prepared by:	Jonathan Berry	19.02.2018
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1 Summary

This year our Future Networks Team has continued its third party (non-network licensees) Call looking for a number of Network Innovation Competition (NIC) projects for the third successive year. In June 2017 Ofgem updated the Electricity Network Innovation Competition Governance Document to version 3.0[1], which necessitates that in order for a Network Licensee to make an application for NIC funding they must first issue a call to Non-Network Licensees for Project proposals to be taken forwards to facilitate third party access to the funding mechanism.

This year our Call focussed on two key challenges; Building Networks and Electric Vehicle (EV) Infrastructure Deployment. In order to ensure maximum participation the Call was publicised on UVDB Achilles, ENA's Collaboration Portal and our Innovation Website. For both these challenges a permanent technical or commercial solution was to be considered for installation or implementation at any point on the distribution network.

We received 16 submissions for the two challenges with six being received for Building Networks and 10 for EV Infrastructure Deployment. Following a procurement led scoring exercise and face to face meetings with selected respondents, due to the quality of submissions and relevance to the challenges released, one proposal, submitted by Ricardo, in the EV Infrastructure Deployment challenge was taken forwards.

2 Introduction

In order to ensure access to the NIC funding mechanism we have, for three consecutive years, carried out a Third Party Project Proposal Call. This year's Call centred on two specific challenges, Building Networks and Electric Vehicle Infrastructure Deployment. As with the previous two years the Call has been made available via UVBD Achilles, ENA's Collaboration Portal and our Innovation Website. The proposal was released on the 29th September 2017 and as well as outlining the specific challenges, provided an overview of requirements to be considered eligible for funding, information regarding the timeline for submission and further notification and a breakdown of the scoring criteria to be used against a submission.

1 https://www.ofgem.gov.uk/system/files/docs/2017/07/electricity_network_innovation_competition_governance_document_version_3.0.pdf

3 Challenges

Two key challenges were identified for this year's Call. For both of these challenges a permanent technical or commercial solution was to be considered for installation or implementation at any point on the distribution network.

3.1 Building Networks

As well as smart alternatives to network reinforcement in order to support projected increases in electricity use, specifically to enable significant levels of Low Carbon Technologies (LCTs) such as Electric Vehicles (EVs) and Heat Pumps (HPs), a substantial amount of network reinforcement will inevitably be required. As the cost of construction increases and regulations regarding construction increase, such as planned hourly charges for roadworks causing disruptions in major cities, it will increasingly be prevalent that enhanced construction techniques and solutions are developed and trialled.

Solutions to this challenge should focus on one or more of the following:

- Reducing time on-site to construct and commission assets;
- Minimising roadworks or wayleave / easement requirements for cable and overhead line deployment; and / or
- Compacting of key substation equipment to increase deployment opportunities.

3.2 Electric Vehicle Infrastructure Deployment

In the short to medium term the take up of EVs is projected to dramatically increase; therefore, the appropriate charging infrastructure is required, both in terms of capacity and scale. Significant clustering of EVs is expected at residential and commercial level, requiring a robust solution as well as overcoming the challenge of on-street charging both for residential and communal purposes. It is critical that charging availability is not a barrier to EV uptake, which means that suitable charging technology is required but moreover the appropriate infrastructure to facilitate a variety of charging requirements is sought.

Solutions to this challenge should focus on one or more of the following:

- Creating capacity for significant EV clustering;
- Enabling 300kW+ charging to be achieved; and
- Rapidly deploying EV charging infrastructure.

4 Responses

There were 16 responses for the Call with six submissions for the Building Networks challenge and 10 for EV Infrastructure Deployment. The largest value of proposal received was £12M, the smallest was £0.15M and the average value £3.2M.

The submissions came from a variety of organisations ranging from large multi-vector consultancies, multi-national engineering firms, technology and system integrators, telecommunications companies and energy aggregators. There were nine different small and medium enterprise (SME) and six multi-national organisations that responded to this year's submission[2].

5 Observations

Figure 5-1 shows a comparison of the submissions for the three previous years. It can be seen that the number of submissions every year has decreased with 32 being received in 2015, 30 in 2016 and 16 in 2017. A number of factors may have influenced the significant reduction of submissions this year on previous years (almost fifty percent); one is the greater understanding of the time required during the bid preparation process from increased third party involvement in previous NIC bids[3]; the second is Ofgem's Governance update to remove the facility of funding NIC bid preparation costs through the Network Innovation Allowance (NIA).

It can also been seen in Figure 5-1, through the size of the objects that represent the average value of the proposals submitted, that the scale of projects has reduced. In 2015 the average project value was £7.4M, £4.9M in 2016 and as previously stated £3.2M in 2017.

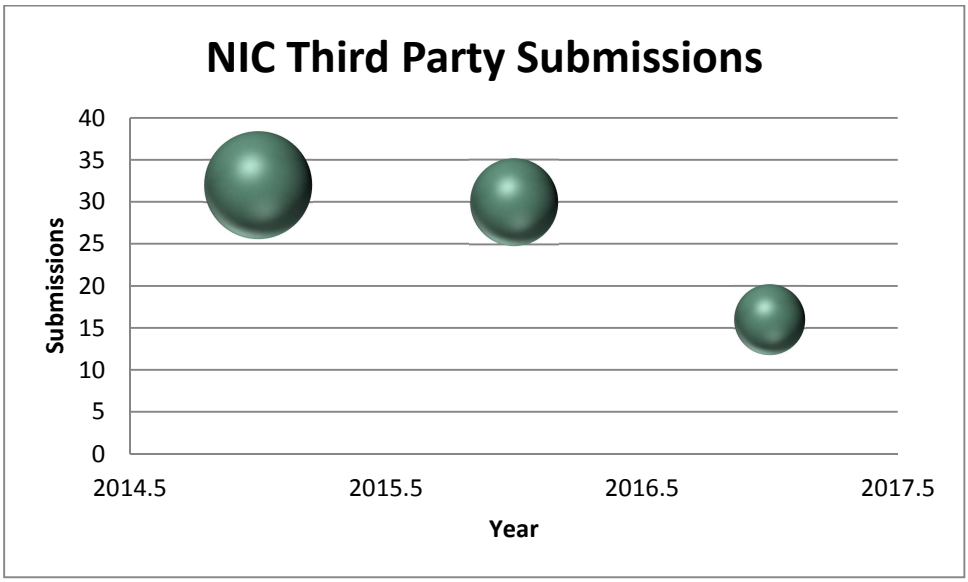

Figure 5-1: Comparison of Third Party Submissions

[2] One company submitted two proposals; therefore organisations and submission numbers aren't equal
[3] Bid process period is typically in the order of nine months from concept to Ofgem decision

6 Conclusion

Following scoring of the 16 proposals submitted we selected seven proposals (three in Building Networks and four in EV Infrastructure Deployment) to take forwards to face-to-face meetings to understand in greater detail the project proposals. Following these meetings it was observed that a number of submissions did not meet the specific aims of the two challenges or the governance criteria to be eligible for NIC funding, therefore, we appointed only one organisation, Ricardo, who submitted an EV Infrastructure Deployment project proposal.

On the success of our previous three NIC Third Party Calls we have recently released an NIA Third Party Call, centring on our Distribution System Operability Framework[4], which focusses on three key areas, Assets, Network Operations and Customers. We are confident this will provide a significant breadth of projects to support the second part of our ED-1 innovation project portfolio.

Finally, we will continue to release annual NIC Third Party Calls, either individually or collectively through the Energy Networks Association (ENA).

[4] https://www.westernpower.co.uk/docs/About-us/Our-business/Our-network/Strategic-network-investment/DSOF/WPD-DSOF-September-2017.aspx

7 Glossary

Abbreviation	Term
ED-1	Electricity Distribution Prince Control (2015-2023)
ENA	Energy Networks Association
EV	Electric Vehicle
HP	Heat Pump
ISP	Initial Submission Pro forma
LCT	Low Carbon Technology
NIA	Network Innovation Allowance
NIC	Network Innovation Competition
SME	Small and Medium Enterprise
WPD	Western Power Distribution

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