

Proposals for the Whole Electricity System Coordination Register Template

Open Networks WS1B P9

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Acronyms

BaU Business as Usual

ENA Energy Networks Association

Executive Summary

Section 9 of the Electricity Act 1989¹ requires that electricity transmission and distribution networks are developed and maintained in an efficient, coordinated and economical manner. Historically, electricity distribution and transmission licence holders have sought to discharge their duties through focusing almost entirely on their networks without wider cross-network considerations. The transition to a smart, flexible energy system with a high penetration of renewable generation, and electricity increasingly used for heat and transport necessitates that licensees consider cross-network interactions to best meet the needs of the customers. Effective coordination in operating and developing networks has the potential to deliver benefits for consumers.

Ofgem introduced a principles-based licence condition in 2021 to provide a structure for demonstrating effective coordination of energy networks in the interest of consumers. The licence condition explains how Electricity Distributors and transmission owners should coordinate with other electricity network licensees and their network users, to advance coordination and cooperation across energy networks and users. The licence condition applies to all electricity Distribution Network Operators (DNOs), electricity Independent Distribution Network Operators (IDNOs), and onshore electricity Transmission Owners (TOs).

Upon reviewing the licence requirement for the register, the Open Networks WS1B set up this product (P9) working group to develop a consistent whole system register template, that will be used by DNOs and TOs. The proposed template has three broad categories that reflect the licence requirements. The details captured for each of three categories – coordination and cooperation activities, actions arising and user suggestions - are as given below.

Category	Column	Description
Coordination and cooperation activities	Identifiers	Unique id for each row, licensee, collaborating other licensees and stakeholders
	Description of the activity	Details of the activity (could be an activity from a project or an activity that is used in multiple projects)
		Only activities that improve the economy and efficiency of the whole electricity system are to be considered. Register is of activities in progress or completed, not planned
	Timeline	Date of initiation, status, updates
	Relevance	Details of why it is relevant to whole system.
	Data	Description of any data that was shared. Include the format of the data, if applicable, and highlight any data that cannot be widely shared due to commercial sensitivity
Links to the data, not the project/activity		

¹ [Electricity Act 1989 \(legislation.gov.uk\)](https://www.legislation.gov.uk)

	Impacts (on whole system and on licensee)	A brief description, mainly along the lines of positive, neutral or negative
	Next stage (including justification)	What is the recommended next stage? Positively, this activity would result in actions/processes that will then move on to the 'actions' part of the register. If it is not taken forward, add justification.
Actions arising	Identifiers	Unique ID for each row, licensee, collaborating other licensees and stakeholders
	Description of the activity	Details of the activity (could be an activity from a project or an activity that is used in multiple projects).
		Only activities that improve the economy and efficiency of the whole electricity system are to be considered. Register is of activities in progress or completed, not planned
	Timeline	Date of initiation, status
	Reference of the activity or user suggestion which resulted in this action/process	Reference to the activity in the register that resulted in this action/process (not to be confused with internal order or project numbers)
User suggestions	Identifiers	Unique ID for each row, licensee, collaborating other licensees and stakeholders
	User category	Domestic customer; customer commercial; Group of domestic customers; Group of commercial customers; local authority; combined authority; other infrastructure networks; generators; aggregators etc.
	Suggestion date	Date
	Suggestion	Details of the suggestion. Only those suggestions that improve the economy and efficiency of the whole system is to be considered, suggestions benefitting just one user is not to be included.
	Relevance to whole system	Details of the relevance to whole system
	Description of the action taken on the suggestion and justification	Action taken based on the suggestion and the justification for the action. Could even be decision to not take forward.
	Next stage (including justification)	What is the recommended next stage? Positively, this activity would result in actions/processes that will then move on to the 'actions from coordination' sheet. If it is not taken forward, add justification.

Recommendations:

The proposed register template is to be used by all electricity network licensees when producing their whole system registers in [May 2022]. A licensee group may publish one register to cover all their licenses, as long as the register clearly identifies activities, actions and suggestions per licensee. Following publication of the first register, the template will be reviewed later in 2022 by the Open Networks product group, and then again two years later (2024).

1. Introduction

1.1 About ENA

Energy Networks Association (ENA) represents the owners and operators of licences for the transmission and/or distribution of energy in the UK and Ireland. Our members control and maintain the critical national infrastructure that delivers these vital services into customers' homes and businesses.

1.2 About Open Networks

Britain's energy landscape is changing, and new smart technologies are changing the way we interact with the energy system. Our Open Networks project is transforming the way our energy networks operate. New smart technologies are challenging the traditional way we generate, consume and manage electricity, and the energy networks are making sure that these changes benefit everyone.

ENA's Open Networks Project is key to enabling the delivery of Net Zero by:

- opening local flexibility markets to demand response, renewable energy and new low-carbon technology and removing barriers to participation
- providing opportunities for these flexible resources to connect to our networks faster
- opening data to allow these flexible resources to identify the best locations to invest
- delivering efficiencies between the network companies to plan and operate secure efficient networks

1.3 Open Networks Work Stream 1B Product 9 – whole electricity system register

1.3.1 Background

Section 9 of the Electricity Act 1989² requires that electricity transmission and distribution networks are developed and maintained in an efficient, coordinated and economical manner. Historically, electricity distribution and transmission licence holders have sought to discharge their duties through focusing almost entirely on their networks without wider cross-network considerations. The transition to a smart, flexible energy system with a high penetration of renewable generation necessitates that licensees consider cross-network interactions to best meet the needs of the customers. Effective coordination in operating and developing networks has the potential to deliver benefits for consumers.

Ofgem introduced a principles-based licence condition to provide a structure for effective coordination of energy networks in the interest of consumers. The licence condition explains how Electricity Distributors and transmission owners should coordinate with other electricity network licensees and their network users, to advance coordination and cooperation across energy networks and users. The licence condition applies to all electricity Distribution Network Operators (DNOs), electricity Independent Distribution Network Operators (IDNOs), and onshore electricity Transmission Owners (TOs).

² [Electricity Act 1989 \(legislation.gov.uk\)](https://www.legislation.gov.uk)

1.3.2 Objectives

Open Networks is transforming our energy networks into smart grids for the benefit of customers and stakeholders through a wide-ranging collaborative industry project involving electricity grid operators, BEIS, the energy regulator Ofgem and other interested parties.

The objective of Open Network's Work Stream WS1B is to optimise processes across the transmission and distribution boundary by considering key network operator activities, such as investment planning, operational planning and forecasting, from a whole electricity system perspective.

WS1B P9's objective is to develop a template for the whole system coordination register to enable electricity licensees to meet the whole electricity system licence condition (D17/7A). The purpose of this report is to present the proposed template for all network licensees to use for the whole electricity system coordination register. The licence condition did not require the licensees to coordinate on the form of register, or to publish consistently, but the Open Networks project identified that coordination on a consistent approach was consistent with the aims of the licence condition. This also recognises that in future the ENA, Ofgem or other stakeholders may wish to produce a consolidated version of the registers published by individual licensees.

Section two provides an overview of the whole system coordination register; section 3 provides the details of the whole system coordination register template. This is followed by conclusion and next steps in section four.

1.3.3 References

Under section 11A(2) of the Electricity Act 1989 (Electricity Act), the Gas and Electricity Markets Authority (the Authority) gave notice on 6 March 2020 to modify the Electricity Transmission Standard Licence (through the introduction of condition D17) and Electricity Distribution Standard Licence (through the introduction of condition 7A). This modification is referred to as the [Whole Electricity System Licence Condition](#).

The Licence modification will come into effect after a 56 days standstill period, from 00:01 on 27 May 2021, requiring the licence holders to evidence their performance of the obligations in the licence condition by way of publishing a register on their website within 12 months i.e. 27 May 2022.

Ofgem published [guidance](#) on the Whole Electricity System Licence Condition. The proposed template for the register reflects this guidance and does not summarise or supersede it and uses terms as they are defined in the guidance.

The guidance and part A of the licence condition set out the principles which licensees must follow

- | | |
|----------|--|
| Clause 1 | The licensee must coordinate and cooperate with other Electricity Distributors and transmission licensees to identify actions and processes that advance the efficient and economical operation of the Total System. |
| Clause 2 | The licensee must consider actions proposed by Distribution System Users/Transmission System Users which seek to advance the efficient and economical operation of its network. |
| Clause 3 | The licensee must use all reasonable endeavours to implement actions and processes identified and proposed through coordination or user suggestions that: (a) will not negatively impact its network; and (b) are in the interest of the efficient and economical operation of the Total System. |

2. Whole system coordination register (from the guidance)

2.1 Purpose of the register

Part B of the Whole Electricity System Licence Condition summarises how licensees must demonstrate compliance with part A of the licence condition by publication of a Coordination Register.

The purpose of the Coordination Register is for the electricity distributors and transmission owners to clearly and transparently demonstrate the process each has undertaken to coordinate and cooperate with other electricity network licensees, and to consider proposals from systems users which seek to advance the efficient and economical operation of its networks.

This will allow other electricity network licensees and users to understand what opportunities have been identified and learn from them, advancing the industry's understanding of the possibilities across a broad range of scenarios.

To comply with the Whole Electricity System Licence Condition, the Electricity Distributors and transmission owners must publish a Coordination Register within the first 12 months of the condition becoming operative, and thereafter must publish an updated Coordination Register at least once in every twelve-month period from the date of the initial publication.

2.2 Information required

The coordination register should be evidence based, and detail active and completed actions, rather than forthcoming actions. The information to be included in any coordination register (or update thereto) comprises:

- Details of **all relevant coordination and cooperation activities** completed with other electricity network licensees during a relevant period to develop whole electricity systems outcomes, including data sharing.
- Details of any **actions or processes** that have been implemented (or are being implemented) **as a result of coordination and cooperation activities** completed with other electricity network licensees. As well as a concise and clear summary of actions or processes not deemed to be apt for implementation, including the reason(s) for that decision.
- Details of **all proposals received during a relevant period from system users** to advance the efficient and economical operation of electricity distributors' and/or transmission owners' networks.
- Details of **any system user proposal that have been implemented** (or are being implemented). As well as a concise and clear summary of proposals not deemed to be apt for implementation, including the reason(s) for that decision.

As an example, the P9 product group identified that a coordination or cooperation activity might be a planning or operational scheme requiring data exchange between two licensees to meet a defined objective with whole system benefit e.g. planning across a system boundary, development of a new service, creating an operational intertripping scheme across a boundary. There would then be specific actions or processes being implemented to support that activity e.g. analysis of benefits, development or agreement of a new procedure, a test milestone for the new approach, gathering feedback from a specific stakeholder.

The Coordination Register should inform its reader about the whole electricity system actions Electricity Distributors and transmission owners have considered and taken. The reader should be able to clearly understand the justifications given for approving or rejecting proposals from other electricity network licensees and systems users; being those which seek to advance the efficient and economical operation of its network in isolation or in combination with other electricity network licensees.

The Coordination Register should be published on Electricity Distributors' and transmission owners' websites in a discoverable place, and its format should meet modern expectations for data sharing (such as portability, machine readable, easily discoverable searchable and understandable information). For the avoidance of doubt, the register does not require prior Ofgem approval. Electricity Distributors and transmission owners should enable

system users to provide feedback on the content and format of the register.

3. Register template

[ON21-WS1B-P9 Coordination register template \(13 Dec 2021\)](#)

The Excel template for the register consists of an overview tab, a guidance tab and two worksheet tabs with the contents of the register. The 'Activities and actions' tab describes the coordination and cooperation activities, and the related actions. The headings on this tab are listed in Tables 1 and 2 overleaf.

1. Table 1 shows the different columns within the coordination and cooperation activities category.
2. Table 2 shows the details of the columns for actions resulting from coordination and cooperation activities.
3. Table 3 provides the details of the columns in the 'User suggestions' tab. This category provides details of all proposals received during a relevant period from system users to advance the efficient and economical operation of Electricity Distributors' and/or transmission owners' networks from a whole-system perspective (not for the benefit of individual users). Details of any system user proposals that have been implemented (or are being implemented) as well as a concise and clear summary of proposals not deemed to be apt for implementation, including the reason(s) for that decision.

Table 1: Details of 'coordination and cooperation activities'

Unique ID	Unique identifier for each row of the sheet. xxxx/00n for an activity xxxx refers to the publishing organisation or license group; n refers to a number
Licensee	Lead licensee for the action or activity (not licence group)
Collaborating licensees and other stakeholders	Licensees and other stakeholders with whom collaboration was/is being carried out.
Description of the coordination/ cooperation activity	Details of the activity (could be an activity from a project or an activity that is used in multiple projects). Only activities that improve the economy and efficient of the whole electricity system is to be considered. Register is of activities in progress or completed, not planned.
Status	In progress, Not taken forward, Complete
Update (if any)	Update since the last publication
Coordination activity initiation date (mm/yyyy)	When was a decision made to act upon a challenge/need. This could include the date when analysis for options was initiated.
Whole system relevance of the activity	Details of why it is relevant to whole system.
External links to reports on the activity (if available)	Links to reports of the project or activity
Description of data (who shared the data) [widely shared/restricted sharing]	Description of any data that was shared. Include the format of the data, if applicable, and highlight any data that cannot be widely shared due to commercial sensitivity.

External links for data (if available)	Links to the data not the project/activity
Impact of the activity on the whole system	A brief description, mainly along the lines of positive, neutral or negative
Impact of the activity on licensee	A brief description, mainly along the lines of positive, neutral or negative
Recommended next stage of the activity	What is the recommended next stage? Positively, this activity would result in actions/processes that will then move on to the 'actions from coordination' sheet. If it is not taken forward, add justification.
Justification for recommendation	Justification for the decision. Even if the decision is not to take things forward, a brief explanation should be added to promote learning.

Table 2: Actions resulting from coordination and cooperation activities

Unique ID	Unique identifier for each row of the sheet. xxxx/00n/A0m for action xxxx refers to the publishing organisation or license group; n and m refers to numbers
Action or Process description	Details of the action and/or process
Action or process initiation date (mm/yyyy)	Rough date of initiation of the action/process
Status	New, Improving, Mature, BaU
Reference of the activity or user suggestion which resulted in this action/process	Reference to the activity in the register that resulted in this action/process (not to be confused with internal order or project numbers)

Table 3: User suggestions

Unique id	Unique identifier for each row of the sheet (starting with xxxx/U/001 where xxxx refers to the licensee)
Licensee	Licensee who is publishing register
Collaborating licensees	Licensees and other stakeholders with whom collaboration was/is being carried out.
User category	domestic customer; customer commercial; Group of domestic customers; Group of commercial customers; local authority; combined authority; other infrastructure networks; generators; aggregators etc.
Suggestion submission date (mm/yyyy)	Date on which the user suggestion was received

Description of the suggestion	Details of the suggestion. Only those suggestions that improve the economy and efficiency of the whole system is to be considered, suggestions benefitting just one user is not to be included.
Relevance to whole system	Details of the relevance to whole system
Description of the action taken on the suggestion	Action taken based on the suggestion. Could even be decision to not take forward.
Justification of the action	Justification of the action resulting from the user suggestion.

3.1 Guidance on activities and actions to be included

Licensees should describe the content and purposes of cooperation and coordination activities, actions and processes, not simply refer to an overarching project or programme by name. One project may relate to multiple activities, actions or processes; the Regional Development Programmes between National Grid ESO, transmission owners and Distribution Network Operators are examples which would expect to be split into multiple activities and actions. Similarly, one activity might lead to multiple actions/ processes, or one action might be associated with multiple activities.

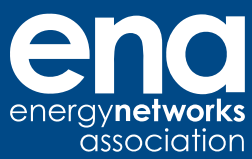
Innovation projects with actual or potential whole system benefits that are funded under NIA / NIC projects will be included in other publications by the network licensees, and do not have to be included in the register. However, licensees may include them if they provide a relevant example of compliance with the Whole Electricity System Licence Condition

It is noted that the licence condition refers only to collaboration with other *electricity network* licensees for whole-system benefit. However, licensees are encouraged to include in their register coordination and cooperation activities which have any actual or potential whole-system benefit for the planning and operation of the network, *even if they only involve collaboration with other parties that are not electricity network licensees*. Examples might be collaboration with other utility networks including gas, transport and telecommunications, or local/regional authorities for planning or operational purposes. Inclusion of these projects is to be treated as desirable but optional.

The underlying intention of the licence condition is to encourage as much wider engagement as possible, albeit on the basis that that it is not negative for the licensee’s network and benefits the total system. Thus other relevant engagements may be included that contribute to the intention of the licence and the wider learning on whole system processes. Depending on the circumstances that started the activity or action, these engagements may need to be captured as ‘user suggestions’ with an appropriate category of user e.g. local authority, infrastructure networks.

4. Conclusions and next steps

WS1B P9 have developed a template for whole system coordination register in consensus with all participating licensees and advisory group. It is proposed that the template be reviewed after the first publication in 2022 and then in two years' time (2024) to gather both internal and external feedback and revise as appropriate.



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