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**Energy Systems Catapult Response to the Ofgem Consultation:  
*Industry Code Governance: Initial consultation on implementing the  
Competition and Markets Authority's recommendations***

## **Introduction**

1. This response is submitted on behalf of the Energy Systems Catapult (ESC). The ESC is part of Innovate UK and its remit is to create innovation in UK energy markets and create business opportunities. The ESC is looking at a “whole systems approach” and is responsible for the delivery of the **Smart Systems and Heat (SSH) Programme** on behalf of the Energy Technologies Institute.
2. The ESC is working with the UK government and local authorities to deliver the SSH Programme, determining the most effective means of decarbonising the UK's 27 million homes and contributing to the target of an 80% reduction in the UK's Greenhouse Gas emissions by 2050.
3. The ESC is also leading the Future Power System Architecture (FPSA) project in collaboration with the Institution of Engineering and Technology (IET). This project seeks to determine the functions that will be required to enable a future, low carbon, power system to operate in the face of transformative change, and hence to enable recommendations to be made that will inform policy and regulatory considerations. The FPSA project is also now considering the issue of change governance and considering how this could be made more agile and responsive. While the report will not be available until around April 2017, the ESC is happy to engage with Ofgem and share its thinking.
4. If you wish to discuss the contents of this submission, please contact Tony Diccico at [tony.diccico@es.catapult.org.uk](mailto:tony.diccico@es.catapult.org.uk).

## **Summary**

5. The ESC supports BEIS/Ofgem's policy intent that undue regulatory, commercial and legal barriers should not prevent the deployment of smart technologies and processes, or new service providers competing in markets. The energy supply industry faces a number of significant challenges as we move onto a “smart” world – these were discussed in the recent BEIS/Ofgem Call for Evidence: *A Smart, Flexible Energy System*. Fundamental changes will be required to the energy market structures, trading arrangements and the associated codes and agreements – a major re-design may be the appropriate course of action. Given this, the changes to industry code governance as discussed in this initial consultation may not be sufficient to enable the paradigm shift that is required. This response from the ESC addresses the specific questions raised in the initial consultation but we feel that it is appropriate to

point out that more radical change than is being suggested may be required in the medium-to-longer term.

6. The decarbonisation of electricity generation, heating and transport will require more cross-vector coordination and changes to a number of different codes simultaneously. For instance, the implementation of heat networks, fuelled by gas-fired CHP plant, could require changes to the BSC, CUSC, Distribution Code, UNC (and/or IGTUNC) and any associated codes developed for the supply and trading of heat. Many of these changes will have technical aspects to them. As a simple example, there will be tension between the electric vehicle manufacturers' desire that their vehicles will be able to charge rapidly and the network operators' desire to limit the impact on their networks. This implies the requirement for a level of technical expertise and horizon scanning from both the Code Managers and, especially, those developing the strategic direction. Therefore, developing a coherent strategic direction to drive the development of the industry will be key to effecting the significant changes required to existing market and trading arrangements
7. Currently, it appears that there is a lack of a shared set of fundamental principles for the future of energy across the sector, resulting in many different organisations pulling in many different directions. It is going to be difficult to reach a timely and definitive conclusion on key issues. For example, the transition of Distribution Network Operators to Distribution System Operators: do DNOs transition towards DSOs directly managing customer service delivery, or do DNOs transition to DSOs contracting for different service levels with Suppliers? Both are major changes, and are fundamental to realising the potential of Demand Side Response, but they are mutually incompatible and different market players will have different requirements: how will these be reconciled?
8. It is the responsibility of BEIS to set the overall policy framework but other stakeholders can have an important role to play. We agree that strategically important modifications should be raised by industry rather than Ofgem, but there is a key oversight role to ensure that these modifications meet the requirements laid out in the strategic direction and are developed in the timescales required to deliver the transition to a low carbon energy system.
9. We have some concerns about the proposed introduction of a Consultative Board ("The Board") to identify and coordinate the cross-code changes required to deliver Ofgem's strategic direction. We believe that the existing code governance mechanisms need to be reformed to ensure greater coordination across codes. The creation of another organisation that may have no real authority and so may only be able to consult and coordinate, to sit over the top of the code panels, may not drive the strategic change that is needed. For example, will the Board have the power to over-ride the applicable objectives that are set out for each code?
10. A potential solution would be to introduce a Consultative Board to advise on strategic direction, backed up by an independent, licensed codes administrator to take responsibility for all the industry codes. The composition of the Consultative Board would need to be carefully balanced so that no interest groups could exert undue

influence and act as a blocker of real change. It would be essential for the Board to have both horizon-scanning and technical capabilities. Furthermore, given its pivotal role, it would need to engage in industry debate and keep its views under review.

11. For the appointment of code administrators, the ESC's preferred position is that, where practicable, they should be appointed through a competitive process as this would seem to offer the best value-for-money. However, given the uncertainty over how the industry will develop, it is very difficult to assess the range of skills and capacity that each Code Manager will require, creating the risk that the competitive process could lead to the appointment of a "lean" organisation that struggles to meet the challenge. Whatever arrangements are adopted, it is vital that the policy intent is not frustrated by the funding arrangements for the new Code Managers.

## **Detailed Response to Questions**

### **Scope of the New Arrangements (Chapter 2)**

***Question 1: Do you agree that the codes and functions we have identified (i.e. the codes within the scope of the CACoP<sup>1</sup> and their associated central system delivery functions) should be within scope of the new regime?***

12. The ESC agrees that the codes and functions identified by Ofgem i.e. the codes within the scope of the Code Administration Code of Practice (CACoP) such as the Connection and Use of System Code (CUSC), Balancing Services Code (BSC), Unified (Gas) Network Code, Grid Code, Smart Energy Code (SEC) etc, and their associated central system delivery functions should be within scope of the new regime. We believe that greater coordination of these codes should allow better identification and delivery of strategic change in the short term.

***Question 2: Are there any other codes or systems that should be within scope and if so please give your reasons?***

13. We agree that codes such as the SQSS (System, Security and Quality of Supply Standards) should not be part of the new regime – the SQSS is a very technical code and applies directly to the planning and operational standards that Transmission Operators (TOs) and the System Operator (SO) use to run the transmission systems in Great Britain. Furthermore, as the SQSS is a key driver of the network assets required, changes could create a step change in the size of the system, causing price controls to be re-opened and requiring significant derogations while the necessary construction work was completed.
14. We believe that the Data Transfer Service (DTS) systems delivery function should be part of the new regime as it plays a crucial role in the industry as an important part of the change of supplier process. This would help to ensure a more joined-up and efficient change of supplier process, especially as new Energy Service Providers enter the market in future, offering new business models and customer propositions.

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<sup>1</sup> *Code Administration Code of Practice* - It puts forward principles for Code Administrators to follow, but also sets out principles applicable to a Code Modification process

15. In future, as the heat market develops, it may be appropriate to introduce regulation to protect consumers and to develop a **“Heat Services Code”** to describe the obligations and requirements for heat service providers. We believe that such a code would need to be part of the new regime.

***Question 3: Are there any other factors you think we should consider when making this decision?***

16. No, our reasons are explained fully above.

**Licensing and Competition (Chapter 3)**

***Question 1: What are your views on our proposed approach of including the code manager and delivery body function in a single licence?***

17. We agree with the CMA recommendation that the provision of “*code administration (and delivery) services*” should be a licensable activity because that will establish a clearer role for code managers and delivery bodies, and also open up the market for code administration and delivery services to full competition.
18. We support Ofgem’s proposed approach of including the code manager and delivery body functions in a single licence. This is because the synergies of combining the two roles outweigh the and potential for conflicts of interest between combining the code management and delivery body roles. As the CMA identified, one of the main issues with code administration, and hence the ability to change the market rules, is the end-to-end delivery of code changes. This can be more effectively achieved if the two roles are combined under one licence as the difficulty and costs of system re-design can be factored in at the time of developing the modification, and more realistic timescales for delivery set.
19. The potential downsides of combining the code manager and delivery body functions, such as the potential promotion of a sub-optimal solution because it is easier to introduce through system changes under the delivery body responsibilities, can be managed through effective regulatory incentives – something that Ofgem has a long-standing experience of implementing.

***Question 2: What are your views on strengthening the licence of NGET to include new code management requirements rather than holding a tender to identify an appropriate code manager?***

20. There is no doubt that NGET occupies a pivotal position in the market through its asset ownership, system operation and code administration roles. There may well be occasions where there is a conflict of interest between NGET’s commercial position and its role as administrator of the CUSC, Grid Code or STC. However, the recent announcements about greater separation of the SO role within National Grid should act to reduce these. The ESC’s preferred position is that, where practicable, code administrators should be appointed through a competitive process as this would seem

to offer the best value-for-money (as evidenced by the savings made in offshore transmission). However, we believe that the CUSC and Grid Code already have effective change modification procedures and so it would seem to be more appropriate that NGET's licence is strengthened to include new code management requirements rather than holding a tender to identify an alternative code manager. The case for holding a tender is even less clear at present in the case of the STC but this may change as more independent transmission owners are appointed.

**Question 3: What are your views on the merits and drawbacks of the four identified models for competitively licensing code management where applicable? & Question 4: What are your views regarding which model(s) may be appropriate for different codes, or types of codes?**

21. Of the four models discussed on pages 25 – 26 of the consultation document, we believe that a combination of *Model 3 (Sole Provider Licensing with a tender run by Ofgem)* and *Model 2 (Permissive Licensing with Other Body running tenders for individual contracts)* offers the best solution. This would seem to give the right balance between the effective treatment of more complex industry codes, using Model 3, and the flexibility offered by Model 2 when addressing smaller industry codes that have fewer direct consumer impacts. This approach, using Model 3 for the larger codes, would also seem to address the concerns raised by the CMA and facilitate the combination of the system delivery function and code management role.
22. We believe that it is right that Ofgem should maintain a key role in running tenders to select code managers where there is a well-defined consumer impact but this is not as important for smaller codes where there is less direct impact.

**Strategic Direction (Chapter 4)**

**Question 1: Do you agree with the purpose of the strategic direction?**

23. There is no doubt that the gas and electricity supply industry faces significant change over the next 20 – 30 years as the decarbonisation of electricity generation, heating and transport gathers pace. These changes will require more cross-vector coordination and changes to a number of different codes at once. For instance, the implementation of heat networks, fuelled by gas-fired<sup>2</sup> CHP plant, could require changes to the BSC, CUSC, Distribution Code, UNC (and/or IGTUNC) and any associated codes developed for the supply and trading of heat. Therefore, developing a coherent strategy for the development of industry codes will be key to effecting the significant changes required to existing market and trading arrangements.
24. We agree with the purpose of the strategic direction as described in Chapter 4 (page 28) – the implementation of an effective strategy will be central to aligning code parties' objectives with Ofgem's consumer interest requirements and in providing a steer to the industry regarding expectations for wider market changes. It is vital that this strategic direction takes account of the major changes that will be required to

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<sup>2</sup> Could be bio-gas or hydrogen

move to a “smart”, decarbonised energy system; these changes will require significant structural and regulatory upgrades. One example is the provision of demand flexibility: this will require changes to the existing energy retail model, moving away from an “input-based” retail offering, based on selling kilowatt-hours at a fixed price, to a more “output-based” model where, for instance, customers buy a level of comfort rather than a volume of energy. This would require changes to licensing, metering, energy settlement, consumer protection etc.

**Question 2: Do you have any views on how the strategic direction should be developed and implemented?**

25. We support the basic approach to the development and implementation of the strategic direction in the short term as outlined on pages 29 – 31 of the consultation document, but have some concerns whether this approach will be robust enough to deliver the longer-term paradigm shift that is required in the longer term. We are pleased to see that all stakeholders will “...*have a role in delivering industry change in line with the strategic direction*”. The ESC would like to be closely involved with the process to effect the changes necessary to meet the UK’s climate change objectives. These will include the growth of electricity generation, phasing out/re-purposing of the gas networks, the implementation of district heat networks and potentially significant changes to the way energy is marketed and sold. These changes will require major upgrades to existing licences and codes, such as the BSC, CUSC and UNC, and, potentially, the development of new licences and codes, for instance for the supply and trading of heat.
26. We agree that strategically important modifications should be raised by industry rather than Ofgem, but Ofgem has a key oversight role to ensure that these modifications meet the requirements laid out in the strategic direction. The work of the proposed Consultative Board will be important in ensuring that the necessary changes are made to the industry codes in order to meet the UK’s climate change and other strategic objectives such as security of supply and affordability.

**Question 3: How much detail do you consider should be included in the strategic direction?**

27. The strategic direction will need to contain enough detail to allow stakeholders to understand the necessary changes that are required to the industry codes, as a result of high-level policy and market changes. Some of these changes, such as the development of a more flexible and smart energy system will require significant changes to the operation of the wholesale and balancing mechanisms and network charging arrangements, as well as the introduction of new smart appliances. This will require major modifications to the CUSC, BSC, Grid and Distribution Codes, the SEC etc. In order for industry parties to raise these modifications, they will need to be clear on the overall strategic objectives.

**Question 4: Which specific projects do you consider should be included in the initial strategic direction?**

28. We agree with the basic approach as described in paragraph 4.12 of the consultation document where the work to coordinate the individual code forward work plans, and the Consultative Board's work on the joint industry plan will be used to develop a high-level road map of reforms to codes. We believe that the key activities and projects as outlined in Table 4 (page 29 of the consultation document) are a reasonable starting point for the development of the industry in the short-to-medium term. However, in the longer term, more radical changes may be required to meet the UK's decarbonisation objectives. The transition to a more decentralised, smart, flexible energy system will need to start by the mid-2020s and so we will need to start planning for this now. It is important that the strategic direction takes this transition fully into account and is flexible enough to cope with changes as they occur.

### **Consultative Board (Chapter 5)**

#### ***Question 1: What do you see as the core role and functions of the consultative board?***

29. We have some concerns about the proposed introduction of a Consultative Board ("The Board") to identify and coordinate the cross-code changes required to deliver BEIS/Ofgem's strategic objectives. We believe that the existing code governance mechanisms need to be reformed to ensure greater coordination across codes. The creation of another organisation that may have no real authority and so may only be able to consult and coordinate, to sit over the top of the code panels, may not drive the strategic change that is needed. For example, will the Board have the power to over-ride the applicable objectives that are set out for each code?
30. It is the responsibility of BEIS to set the overall policy framework but other stakeholders can have an important role to play. We agree that strategically important modifications should be raised by industry rather than Ofgem, but Ofgem has a key oversight role to ensure that these modifications meet the requirements laid out in the strategic direction.
31. A potential solution would be to introduce a Consultative Board to advise on strategic direction, backed up by an independent, licensed codes administrator to take responsibility for all the industry codes. The composition of the Consultative Board would need to be carefully balanced so that no interest groups could exert undue influence and act as a blocker of real change. It would be essential for the Board to have both horizon-scanning and technical capabilities. Furthermore, given its pivotal role, it would need to engage in industry debate and keep its views under review.
32. We believe that a key role is to identify and coordinate the cross-code changes required to deliver the strategic direction. The coordination of cross-code changes is difficult to manage under the current code governance arrangements due to the "silo" nature of codes administration. Introducing a single, independent, licensed codes administrator to take over all the industry codes would leave the Consultative Board to concentrate on providing strategic direction. This codes administrator would disseminate best practice and operate to a single set of objectives. The major advantages of this solution would be that major changes could be better coordinated

across codes and it could reduce duplication. The major disadvantages are that the single codes administrator would have a very large area to cover, requiring a broad range of expertise, and it could be a complex administrative operation.

33. In the short-term, a core function of the Consultative Board or single codes administrator should be to develop, maintain and monitor delivery of the joint industry cross-code change plan. In the longer term, it may be appropriate that the focus changes to become more strategic, looking at tackling longer-term system level issues. However, the ESC does have some doubts that the Board as proposed would have the expertise and capability to be able to fulfil both its operational requirements and deliver the strategic direction that the industry needs. We look forward to seeing Ofgem's proposals on the Board's composition, terms of reference and appointment process.

## **Moving to New Arrangements (Chapter 6)**

### ***Question 1: What are the main impacts of the proposed new arrangements on existing projects?***

34. The changes recommended by the CMA and Ofgem's Code Governance Review, build on reforms that have already been introduced. These seek to improve existing code governance so that codes can develop within the broader regulatory framework in order to meet the major market changes that need to happen over the next 30 years, to support the low carbon transition and smart operation. It is clear that these market changes are already *"driving reform to the detailed rules that underpin the industry"*. This is inevitable and will need to continue if the UK is to meet its 2050 climate change targets.

### ***Question 2: Would Ofgem's enhanced powers over strategically important modification proposals mean that our Significant Code Review (SCR) powers will be obsolete, and will the new powers form an effective substitute? Please explain your reasoning.***

35. We believe that the enhanced powers over strategically important modification proposals will mean that Ofgem no longer requires the Significant Code Review (SCR) powers. The powers to initiate and prioritise strategically important modification proposals and the creation of a backstop *"call-in"* power, that would enable Ofgem to take control of strategically important modification proposals in certain exceptional circumstances, will, in our view, more than compensate for the removal of the SCR powers. Under the new arrangements, Ofgem will be able to initiate, direct and deliver new code modifications – this gives it a unique and powerful role in the industry. We believe that these new powers should only be used if there is a defined and agreed<sup>3</sup> need to address a specific market failure.

### ***Question 3: What are your views on staggering the implementation of competitive applications for licences?***

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<sup>3</sup> With BEIS, the Consultative Board, Code Managers and Code Panels



36. The ESC supports simplicity and equitability wherever possible in the implementation of competitive applications for licences. We are unclear at this stage whether staggering the competitive applications process will deliver any benefit to the applicants themselves or the wider industry.