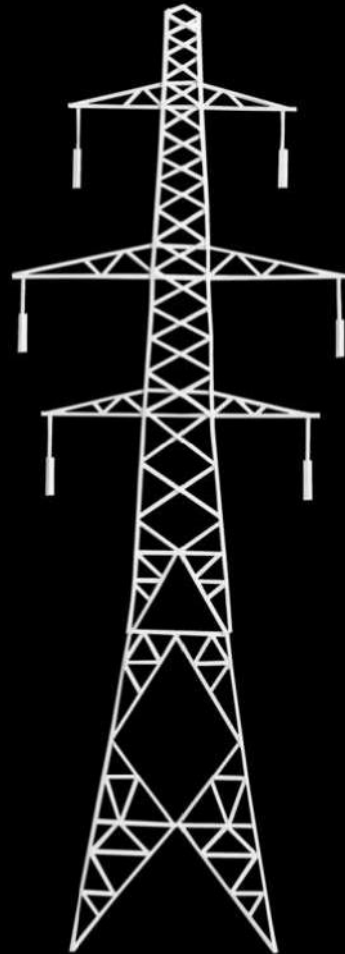

CATOs

Opportunities in onshore transmission



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CATOs – opportunities in onshore transmission

The Opportunity

Ofgem has proposed to introduce competitive tendering to new, separable and high value onshore electricity transmission assets with the first Competitively Appointed Transmission Owners (**CATO**) tender expected to be run by Ofgem in 2018.

Ofgem has run a series of consultations on CATOs since October 2015 and has consulted on the criteria and process for identifying when a competitive tender can be run, the pre-tender arrangements, as well as conflict mitigation measures (**Consultations**). Ofgem has published its first decision document in respect of the May 2016 consultation¹ on 25 November 2016.

This document provides a quick guide on how Ofgem currently considers the CATO regime may work. Some of the more detailed proposals in this document are the subject of consultation and so may be subject to change.

Only strategic wider works (large investment projects that are not part of the price control settlement funding) (**SWW**) will be included up to 31 March 2021.

CATOs will receive in general a 25-year fixed revenue stream, subject to certain incentives and adjustments to construct, own and operate and, in the long-term design, transmission projects.

Ofgem's informal estimate of the potential size of the competitive investment in respect of CATOs is one billion pounds (£1,000,000,000) to one billion five hundred million pounds (£1,500,000,000) of projects per annum until 31 March 2021.

However, the opportunity is widely anticipated to eclipse Offshore Transmission Owner (**OFTO**) investment currently two billion nine hundred and forty million pounds (£2,940,000)².

Background

Great Britain's onshore electricity transmission network is currently planned, constructed, owned and operated by three monopoly transmission owners (**TOs**): National Grid Electricity Transmission (**NGET**) in England and Wales, SP Transmission in the south of Scotland, and Scottish Hydro Electric Transmission in the north of Scotland. NGET is also the system operator (**SO**) for the whole of GB's onshore and offshore transmission network.

These networks are natural monopolies and therefore Ofgem sets price controls that allow the recovery of a reasonable return on investment in addition to the companies' costs, provided the TO's achieve the targets set by Ofgem. The onshore TOs are currently regulated under the RIIO (Revenue=Incentives + Innovation + Outputs) - T1 regime (**RIIO-T1**).

In March 2011 Ofgem introduced competition in the offshore transmission sector through the OFTO regime. A report commissioned by Ofgem (in August 2014) found that the OFTOs had generated significant savings³ across the first nine projects against the counterfactual price-control regime (the alternative policy option).⁴

Following the success of the OFTO regime in generating savings, Ofgem conducted its Integrated Transmission Planning and Regulation (**ITPR**) project in September 2015, and set out its decision to extend the role of competitive tendering to new, separable and high value onshore transmission assets.

² Data includes projects awarded in R1 to R4 OFTO.

³ Two to four hundred million pounds against one billion one hundred million pounds worth of investment

⁴ <https://www.ofgem.gov.uk/ofgem-publications/87717/cepabdotr1benefitsassessmentfinalreport.pdf>

¹ https://www.ofgem.gov.uk/system/files/docs/2016/05/ecit_may_2016_consultation_0.pdf

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Eligibility

Projects defined

Onshore transmission projects that are new, separable and high value will be eligible for competitive tendering. A project is defined by Ofgem in the Consultations document as an efficient package of works, or multiple packages of work to be delivered together which have been identified to meet a common need on the transmission system⁵ (**Project**).

New, separable and high value

New – To be eligible, a transmission Project must be new - this would include installation of brand new overhead lines, cables and sub-stations, as well as the complete replacement of existing lines, cables and sub-stations.

Separable - The Project must be separable from the existing transmission network. Ofgem proposals do not require electrical separability (for example, the use of a circuit breaker at each interface) in order for a Project to be eligible to be tendered. The CATO's assets (**Assets**) also do not need to be directly and physically connected to each other in order to be tendered, however they must form part of a coherent package.

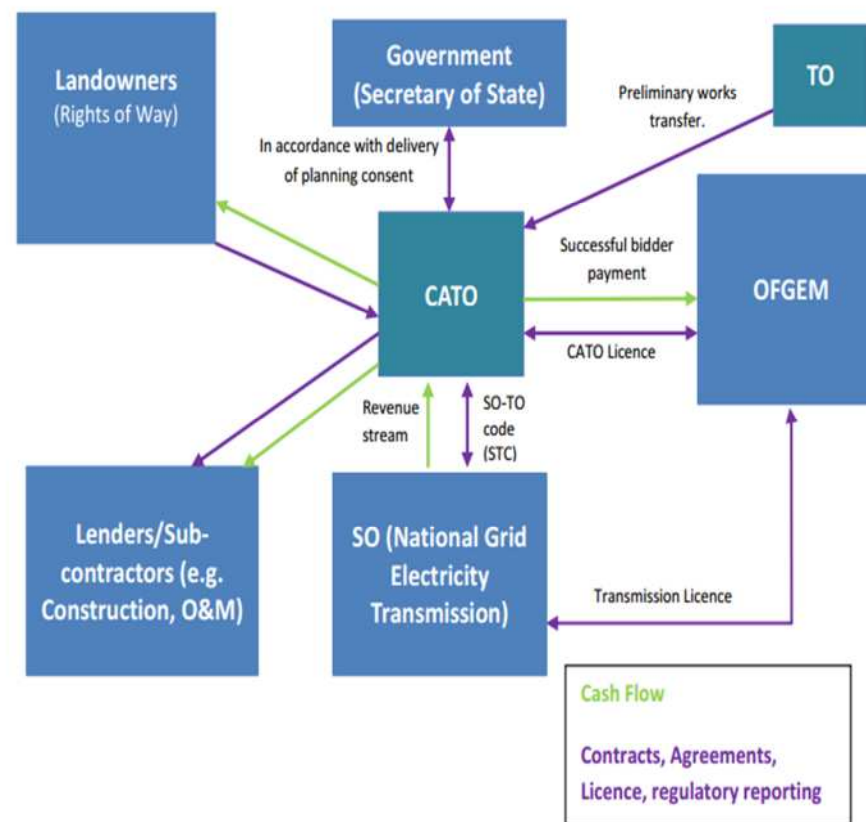
Interface management issues are expected to be dealt with by way of commercial negotiation as they are dealt with under the current system.

Nevertheless, under the proposals, the SO would be able to make a case for additional electrical separability if it can show a cost-benefit justification based on system operability.

High Value – Ofgem intends to define high value as one hundred million pounds (£100,000,000) or above of expected capital expenditure (**Capex**) at the point of Ofgem's initial assessment. Ofgem believes that this level of value will ensure that the tendering benefits outweigh the tender costs and will attract competitive market interest from potential bidders.

During the RIIO-T1 period (2013-21)

Only SWW Projects will be eligible for competitive tendering during the RIIO-T1 period until 2021.



⁵ Paragraph 2.31 of the Consultation document.

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SWW Projects are large projects for which funding has not been awarded to incumbent TOs as part of the price control settlement. Projects that are covered by price settlement funding are procured under EPC frameworks set up by NGET⁶.

From the start of RIIO-T2 (post 2021)

Ofgem anticipates that post the RIIO-T1 period, the Network Options Assessment (**NOA**) will be the primary route for identification of projects for tendering purposes.

It is anticipated that all new Assets that meet the eligibility criteria will be capable of being bid for by CATOs from the start of RIIO-T2.

The SO is expected to be responsible for identifying eligible tender projects based on the needs of the transmission system through a network options assessment.

Ofgem will ultimately make the final decision, based on the SO's analysis, as to whether a tender should be held for a Project.

CATO Appointment process

1. The SO will be responsible for identifying SWW Projects (as well as developing the needs case – i.e. whether there is a technical and economic need for the SWW Project) and submitting the identified Projects to Ofgem for review.
2. Ofgem will assess the need for the projects and also consider other factors such as deliverability and transferability in deciding whether to approve the particular projects for tender. For projects to start construction during RIIO-T1).

3. If an SWW Project is approved by Ofgem (**Initial Tender Decision**), the relevant TO will return with a complete tender specification for Ofgem's final assessment point (**Final Tender Checkpoint** or **FTC**) following which, Ofgem will validate the Project scope and tender specification and make a final decision on whether to commence a tender.
4. Should Ofgem decide to then commence the tender, it will undertake a three stage tender process comprising an enhanced prequalification stage, an outline proposals stage and invitation to tender stage.
5. The relevant TOs will also be funded by Ofgem at that point to complete pre-construction works in respect of the Project which shall include initial solution design, surveys, environmental impact assessments, DCO and/or section 37 consents, easements, wayleaves, etc (**Preliminary Works**).
6. Ofgem will typically start the Invitation to Tender (**ITT**) stage once project certainty is established through planning consent being in



- place.
7. Bidders will be required to submit detailed design work and supply chain engagement during the tender process and provide "robust" fixed price bids at the ITT stage.

⁶ The Onshore Underground Cable Framework and The Overhead Lines Design & Build Framework.

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8. The ITT stage evaluation will focus on a combination of price and robustness/deliverability of proposals weighted equally and will incorporate criteria measuring design, approach to construction, management of risk, overall project management, and cost.
9. Ofgem will then shortlist bidders based on an evaluation of the bidder's technical and financial capability, and issues ITT to shortlist bidders and evaluate tender offers against criteria covering capability/deliverability, costs and robustness of offer.
10. Following the tender, the CATO will then be responsible for construction and operation of the project and be provided with a fixed revenue stream (generally to be over 25 years) subject to application of incentives and adjustments, and compliance with licence obligations.
11. The CATO will be granted a transmission licence and will need to comply with the industry codes and standards as all TOs do.
12. All preliminary works for the project, including planning consents and land rights, will transfer to the CATO on appointment (i.e. at licence grant/financial close).
13. Ofgem will oversee the finalisation of arrangements between the preferred bidder and relevant TO to reach financial close.

Paying for the CATO

Although Ofgem will determine the final market offering for a particular CATO nearer the time of the tender based on project specifics and the prevalent market conditions, the regulated revenue package and incentives proposed for a CATO are as follows:

Fixed 25-year revenue term (in general)

The CATO's annual revenue for the construction and operation of the Assets will be fixed in general for a period of 25 years without any periodic reviews subject to limited reopeners for construction and operations risks

which would not be economic and efficient for bidders to price into their bids.

Such risks could potentially include foreign exchange rates, movement in base interest rates, unexpected ground conditions, extreme weather events and financing costs beyond the commitment periods.

Proposed Revenue Arrangements

Revenue to be paid through an annual Tender Revenue stream (TRS) bid during the tender process.

25 year revenue term, usually commencing from completion of construction.

Revenue stream should be largely fixed, with a limited number of reopeners.

Asset depreciation period aligned with the revenue term.

Assets would remain the property of the CATO at the end of the revenue term and will most likely be subject to ongoing price control.

Gains made by CATO through debt refinancing should be subject to some sharing mechanism with consumers.

The proportion of annual revenue indexed to inflation should be proposed by bidders.

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It is expected that this will allow other costs to be fixed and for bidders to access a broad range of financing options as well as provide scope for financial innovation. For very large Assets or those with a very long construction timetable, an exception may be made to allow partial revenue generation.

Construction risk is an inherent part of the structure as the annual revenue will only commence upon completion of construction to incentivise timely project delivery.

Asset delivery.

A proportion of revenue (to be proposed by the bidder in percentage terms) will be index linked to inflation.

Asset depreciation

Consumers will pay for all the Assets over the fixed revenue term (generally to be 25 years).

The Asset depreciation period will be aligned with the revenue term, and Assets will remain property of the CATO at the end of the revenue term.

Ofgem has proposed that gains made by CATO through debt financing and equity sales should be subject to some sharing with consumers.

Asset transfer

Preliminary works will transfer to the CATO at the point where an electricity transmission licence is granted to the CATO.

No change has been deemed necessary to the compulsory purchase powers in Scotland to allow uniform application of the Asset transfer provisions across England, Wales and Scotland, as the title to land acquired using such powers is capable of being transferred between licensees and therefore may be transferred to a CATO.

Ofgem is working to address the issue of transfer of necessary wayleaves to ensure that the planning regime and legislative framework support effective competition in Scotland.

The regulatory approach

CATOs will be subject to the same regulatory framework as all other transmission operators (TOs) and will be granted an electricity transmission licence.

CATOs are expected to enter into third party commercial agreements like TOs and will have to adhere to applicable industry codes and standards which are outlined in Appendix 4 of the Consultation (changes necessary to industry codes to accommodate CATOs will be considered at a later date).

Obligations and Incentives

Category	Proposed baseline CATO incentive
Safety	Compliance with existing law.
Reliability	Availability based financial incentive with penalties for poor performance and bonuses for outperformance to ensure CATOs' assets will be available when they are needed. This would complement a range of technical requirements and operational processes in the wider regulatory framework.
Availability	Availability based incentive and obligation to develop a Network Access Policy (NAP).
Connections	Financial penalty worth up to 0.5% of annual base revenue for failure to meet obligations to connect additional users to the CATO's network.
Asset delivery	'Payment on completion' – CATO revenue stream typically starts once construction is complete.
Environmental outcomes	SF6 incentive (to minimise leakage) – financial incentive based on performance against a target leakage rate. CATOs to report annually on transmission losses, business carbon footprint and work on visual amenity (where relevant, e.g. for new asset investment).
Asset management	Asset management incentive – periodic reporting on asset condition alongside a performance bond on asset condition at the end of the revenue term.

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Timely project delivery

CATOs will only receive revenue upon completion of construction of the project.

Availability based incentive

An incentive based on meeting a percentage availability target may be offered (potentially with a capped upside and downside of annual revenue for over or underperformance) to secure system reliability (similar to the position under OFTOs).

Ofgem proposes that up to 10 per cent of a CATO's annual revenue should be at risk through underperformance against the contractual on-demand availability threshold.

Long term asset management

A long term asset management obligation during the fixed-revenue term (generally to be 25 years) with a further obligation to fund all necessary new asset investment required within a CATO's area (capped at £100m for each tranche of new investment).

Report on Asset condition at regular intervals – revenue will be at risk through a performance bond if the Assets are not in the expected condition at the end of the revenue term;

Refinancing gain-share mechanism

The proposed refinancing gain-share mechanism will return a proportion of any refinancing gain during the fixed revenue term (generally to be 25 years) to consumers.

A loss sharing mechanism is not however envisaged, as Ofgem does not think that consumers should contribute to any refinancing losses incurred by a CATO.

Other types of incentives

Environmental performance: financial and reputational incentives are proposed to promote good stakeholder and environmental performance, covering leakage of SF₆, transmission losses and wider CATO environmental and stakeholder performance; and

Enabling new customer connections: CATOs will bear a penalty for failing to fulfil obligations to enable new connections to the transmission network.

Risk Mitigation

Mitigation measures

CATOs will be required to have appropriate financial structures in place to ensure stability. Ofgem proposes to adopt a range of mechanisms similar to the ones used in respect of TOs and OFTOs. The main distress mitigation provisions proposed are as below:

- setting clear outputs through the tender specification, for example protections around events having a material adverse impact;
- appropriate allocation of risk – (see chapter 4 of the Consultation);
- financial licence conditions for CATOs similar to those in place for other TOs – including financial ring-fencing and regulatory reporting;
- a robust tender evaluation process; and
- stipulating CATO funder requirements (eg funders' due diligence and requirements around levels of gearing/protections).

In addition, one or more of the following measures may also be used by Ofgem:

- baseline finance structure requirements (eg around the maximum level of gearing CATOs should have);

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- requirement for CATOs to hold investment grade credit rating during construction and operations;
- requirement for a minimum CATO spend to be financed from equity at any given point (ie a certain percentage of equity to be used upfront); and/or
- a requirement to post a construction security under the STC (eg posting security with the SO for a percentage of capex during construction).

"CATO of last resort"

Ofgem has also proposed to put in a "CATO of last resort" mechanism to help diminish the impact of CATO default if it occurs.

The mechanism will involve the appointment of another existing transmission licensee to take on the Assets.

CATO of last resort mechanism proposed will echo the existing OFTO provisions.

Tender Models

Ofgem has proposed to develop two CATO tender models - the "Early Build Model" and the "Late Build Model". The difference between the two is the stage at which the tender process is run.

Under the Early Build Model, a CATO will be appointed to undertake most of the Preliminary Works whereas under Late Build Model the SO or TO would complete all necessary Preliminary Works. Ofgem would then run a tender to appoint a CATO only for the construction and operation of the Project.

In the short to medium term, Ofgem will adopt the Late Build Model as RIIO-T1 SWW Projects are likely to be too far advanced for the first CATO tender to be procured under the Early Build Model. Ofgem also believes

that the Late Build Model is closer to existing public infrastructure procurement models and therefore would initially be more attractive to potential bidders. The Early Build Model is expected to be used where the project design could benefit from competition.

Ofgem has indicated that a Late Build Model tender will typically start around four to five years before the assets are needed, whereas the period would typically be around seven to nine years in the case of an Early Build Model.

Other main differences between the two models include:

- Under the Late Build Model, bidders would bid a fixed price for construction and operation on the basis that they should have a high level of certainty over the Project and its output requirements⁷.
- Under the Early Build Model, bidders would bid a fixed return on equity, a fixed gearing and an indicative cost of debt. This reflects the possibility that the Project scope may change during the Preliminary Works period.

Conflict Mitigation

Ofgem has proposed that the incumbent TOs be allowed to compete against third parties in the tender process to ensure a level playing field between the bidders.

This requires mechanisms to prevent conflicts of interest arising from the roles of the SO and existing TOs in relation to tendered Projects, or from other bidders with knowledge of a Project.

⁷ There may be some limited cost re-openers for risks during construction and operation that would mean that it would not be economic and efficient for a CATO to manage or for bidders to price into their bids at the tender stage.

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The measures for addressing conflicts of interest in respect of bidders other than SO and TOs mirror those that apply in the case of the OFTO regime.

Ofgem highlights that there is more risk of conflicts of interest arising in the case of NGET given its role as SO and TO. However, conflict mitigation measures that apply in relation to SOs will be proposed in due course following Ofgem's wider work on the SO's role in relation to CATOs.

The Consultation document sets out Ofgem's proposals to address conflicts of interest arising from the following:

- the SO's role in relation to onshore competition;
- the TOs' roles in relation to onshore competition, in particular where a TO undertakes Preliminary Works for a tendered Project in RIIO-T1; and
- any other bidder with knowledge of a tendered Project.

Ofgem has proposed to address potential conflicts by placing the following key obligations:

Obligations on conduct: to act transparently, efficiently and in a way that does not give the TO or any other party an undue advantage over other participants in the CATO tender process;

Business separation measures: TO bidding party's access to the information should be the same as other participants, with clear division in management responsibility and restrictions on employee involvement, and physical financial, and legal separation between the TO Preliminary Works team and the TO bidding party; and

Scrutiny: Ofgem has proposed that at a minimum, there should be internal scrutiny by a person appointed by the TO to oversee its compliance with

the conflict mitigation measures and independent scrutiny should be considered.

The TO will be required to confirm its intention to bid and begin to implement conflict mitigation arrangements within eight weeks of Ofgem making an Initial Tender Decision (unless otherwise specified) and in any event six months before the specified FTC date.

Timetable for Implementation

Potential CATO Project Pipeline

The North West Coast Connections (NWCC) project

Description: Transmission project to connect a nuclear power station in Cumbria

Timeline: Initial Needs Case (INC) has been submitted to Ofgem by NGET (NGET is currently consulting on its proposed design for NWCC as part of the planning process, and further information about the project is available on NGET's website).

December 2016: Consultation on Ofgem's initial views on the project's needs case and suitability for competition

Spring 2017: Initial Tender Decision (this will not represent a formal decision until the regulatory framework for tendering is in place).

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Hinkley-Seabank Connection

Description: Transmission project to connect EDF's Hinkley Point C nuclear power station in Somerset

Timeline: Ofgem expects to receive a revised Final Needs Case (FNC) submission from NGET (where projects have not had an INC, Ofgem is expected to make its tendering assessment at the FNC stage).

Summer 2017: Ofgem's views on the project's needs case and suitability for competition.

Other T1 projects

The RIIO-T1 Final Proposals stated that potentially any SWW projects that meet the criteria for tendering could be opened to competition. The full list

of potential SWW projects is available here as well as in the most recent NOA report. (More detail about the status of those projects can be seen on the developing TOs' websites.)

Legislative progress

On 21 January 2016, DECC published the draft primary legislation to be used to implement CATOs in its Draft Legislation on Energy (**Draft Legislation**).

On 3 May 2016 the House of Lords (**HOL**) agreed in principle with the proposals to introduce competitive tendering for certain onshore transmission assets.

Draft clause 16 and the schedule to the Draft Legislation relate to competitive tendering for onshore transmission and distribution licences.⁸

⁸ The Government has proposed extending the competitive tendering regime to distribution networks as well, with a view to future proofing the Draft Legislation however this has been criticised by the Energy Networks Association for not being in consideration of potential implications although the Government has clarified that distribution assets will only be included in a competitive regime after due consultation and in any event only post 2023 upon completion of the current distribution price control period

The proposed schedule amends the Electricity Act 1989, by inserting new section 6CA which changes the provisions for recovering costs after a tender exercise (currently in section 6D). It broadens the class of potential contributors to include those who had made a connection request in relation to a previous tender exercise, and to existing licence holders.

Licence amendments

Ofgem intends to implement the revised roles and obligations on the SO and TOs in respect of CATOs by raising modifications to their licences following consultation.

Ofgem launched its consultation on TO licence modifications on 25 November 2016 which cover: project identification; tender commencement; tender support; and conflict mitigation.

SO licence modifications to support onshore competition will be linked to Ofgem's wider work on the future SO role (detailed consultation proposals are expected to be initiated next year with a view to implementation by late 2017 or early 2018).

Next steps

Ofgem is now consulting on the proposed licence changes to give effect to the decisions in this document with a view to implementation by Summer 2017.

Ofgem is expected to publish a further consultation in Spring 2017 on its tender models and market offering work.

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