

Energy Bill: GB energy system operator

Lead department	Department for Business, Energy and Industrial Strategy
Summary of proposal	The proposal would create a new independent future system operator (FSO) in GB's energy system. The FSO's roles and responsibilities in the electricity and gas systems would be determined through secondary legislation.
Submission type	Impact assessment (IA) – 22 December 2021
Legislation type	Primary legislation
Implementation date	2026
Policy stage	Final
RPC reference	RPC-BEIS-5076(2)
Opinion type	Formal
Date of issue	27 January 2022

RPC opinion

Rating¹	RPC opinion
Fit for purpose	The IA has assessed direct impacts on business in line with RPC guidance on primary legislation IAs. The IA includes a satisfactory assessment of impacts on small and micro businesses (SMBs) at this stage. The IA would benefit from strengthening its supporting evidence for some assumptions, particularly around transmission network cost savings, and its assessment of wider impacts.

Business impact target assessment

	Department assessment	RPC validated
Classification	Non-qualifying regulatory provision (pro-competition)	To be determined at secondary legislation IA stage
Equivalent annual net direct cost to business (EANDCB)	Not quantified	Further IAs to be submitted at secondary legislation and/or regulator stages for validation of an EANDCB figure
Business impact target (BIT) score	Not quantified	See above
Business net present value (NPV)	Not quantified	
Overall NPV	Not quantified	

¹ The RPC opinion rating is based only on the robustness of the EANDCB and quality of the SaMBA, as set out in the [Better Regulation Framework](#). RPC ratings are fit for purpose or not fit for purpose.

RPC summary

Category	Quality	RPC comments
EANDCB	Green	The Department's approach to estimating and accounting for impacts on business is in line with RPC guidance for primary legislation IAs. The IA presents an indicative EANDCB at this stage, explaining that a final figure is dependent upon policy detail to be determined for related secondary legislation, the impacts of which will be subject to further assessment. The RPC would expect to see such assessment(s) for validation of an EANDCB figure for BIT purposes.
Small and micro business assessment (SaMBA)	Green	The IA includes a SaMBA that is sufficient for this stage. The IA presents data on the size distribution of affected businesses and discusses disproportionality of impacts. Secondary legislation final stage IA(s) will need to consider mitigation measures further.
Rationale and options	Good	The IA provides a good summary of a market failure rationale for intervention and usefully includes an assessment of other options. The IA would benefit from providing further details of 'long-list' options considered by the Department and Ofgem.
Cost-benefit analysis	Satisfactory	The Department has used consultation to strengthen evidence and data for the IA. The IA would benefit from presenting evidence of the likely achievability of the assumed 1-5 per cent illustrative cost savings. Other areas in the IA, particularly around assumptions, risk and uncertainty, could be strengthened.
Wider impacts	Satisfactory	The IA provides a good assessment of distributional impacts but would benefit from further assessment of innovation impacts, energy consumer price effects and a proportionate discussion of any anticipated trade impacts.
Monitoring and evaluation plan	Good	The IA provides a good description of the objectives, likely data requirements and planned approach (at one-year and five-year points) for monitoring and evaluation.

Summary of proposal

The System Operator (SO) at the heart of GB's energy systems is currently owned by National Grid Plc, which also owns and maintains gas and electricity transmission assets. The IA states that this creates a potential, or perceived, conflict of interest and that a 2021 Ofgem review of GB Energy System Operation concluded the need for government to create a new independent FSO. The proposal is to create the FSO to undertake the following functions:

- Day-to-day operation of the electricity system operator.
- An increased role in planning the electricity system, compared to the existing SO.
- Facilitate competition.
- Increase co-ordination and advice on rule-making responsibilities.
- Long-term planning and forecasting for the gas National Transmission System.

The final proposal is subject to a sale process of the existing SO with National Grid Plc, and views collected through consultation. The IA notes that the proposal would require primary legislation.

The IA describes that the primary legislation, which is deemed as enabling only (paragraph 34), is not expected to impose significant costs and explains that the policy depends upon detail in secondary legislation, including the creation of the FSO (paragraphs 33-34). The IA provides illustrative policy implementation costs of £90 million to £270 million, covering legal, financial and consultancy, separation; and annual ongoing costs. The proposal is expected to result in around 1-5 per cent savings on transmission network costs estimated to range between £280 million and £3,100 million (using forecast total expenditure on the transmission network from 2022 to 2050). This results in an NPV of between £10 million and £2,900 million. This is illustrative only; due to particular uncertainty in the estimation, the IA does not present an NPV figure at this stage.

EANDCB

In indicating the likely scale of impacts and explaining why an EANDCB figure cannot be submitted for validation at this stage, the IA meets the RPC's requirements for estimation of business impacts for primary legislation.² The Department is expected to produce (a) further IA(s) to inform decisions on final policy detail for the related secondary legislation (paragraph 134). Subject to Better Regulation Framework requirements at the time, the RPC would expect to see (a) further IA(s) for validation of an EANDCB figure for BIT purposes.

BIT classification – pro-competition assessment

The IA assesses that the proposal meets the Better Regulation Framework criteria for a pro-competition measure (pages 31-32) and, therefore, does not qualify for inclusion in the BIT. The Department will need to strengthen its assessment of the first two criteria, in particular, in the IA(s) supporting the related secondary

² <https://www.gov.uk/government/publications/rpc-case-histories-primary-legislation-ias-august-2019>.

The Department's approach is consistent with 'scenario 2' in this guidance (pages 4 and 7-8).

legislation, especially through providing evidence or other further support for the assessment that the proposal can be “...*expected to increase, either directly or indirectly, the number or range of sustainable suppliers...*” In doing so, the IA should provide, or reference, evidence of similar policies implemented previously (in the UK or overseas) and any relevant information from the Ofgem report or supporting literature (footnote 54). The assessment should also address the suggestion in the IA that “...*efficient network competitions may be achievable under the status quo through adequate design of competitive processes*” (paragraph 63), in particular whether the policy proposal extends beyond that necessary to achieve competition objectives.

Direct/indirect

The IA’s indicative assessment would benefit from consideration of whether these impacts (in particular, the table on pages 29-31) are direct or indirect. The measures required in secondary legislation would clearly result in direct costs to business, whereas the benefits from ‘improved whole systems decision making’ listed at paragraph 53 appear to be indirect. The final stage IA(s) supporting the related secondary legislation will need to include an assessment of whether business impacts are direct or indirect.

See also, comments below under ‘cost benefit analysis’.

SaMBA

The IA presents data on the distribution of businesses by number of employees in the electricity and gas industries. The SaMBA notes that learning and familiarisation costs relating to the new roles taken on by the FSO are likely to have a larger impact on smaller businesses. However, it also notes that any new-entrant smaller businesses might also benefit from the proposal. The SaMBA is sufficient at this stage but will need to be strengthened for the IA(s) supporting the related secondary legislation, through greater assessment of disproportionality of impacts and, particularly, consideration of mitigation measures, including exemption.

Rationale and options

The IA’s consideration of rationale and options is sufficient. As in the consultation stage IA, the present IA provides a good summary of the theoretical rationale for intervention. This is centred around a ‘principal-agent problem’, in particular misalignment of incentives and asymmetric information. Energy consumers (via Ofgem) are described as the ‘principal’ and the SO/FSO as the ‘agent’. The IA refers to a detailed Ofgem report, which appears to have recommended the creation of an independent SO, separate from National Grid Plc. As the IA notes there is no evidence that perceived conflicts of interest have led to any losses, it would benefit from discussing further the issue of evidence of the detriment resulting from the existing arrangements. The IA would benefit from describing further the nature of the principal-agent problem, for example if there are also ‘hidden actions’, to help inform potential mechanisms to address it. The IA could discuss further how the proposed separation and restructuring of the SO will specifically address the market failure.

The IA includes alternative options, where the FSO performs fewer (option 1) or more (option 3) functions than under the preferred option. These options are helpfully developed to a level of maturity similar to the preferred option. The IA

reports that alternative options to overcome perceived or potential SO conflicts of interest, such as the creation of a new ‘Energy Agency’, responsible for the new and enhanced functions proposed, were considered and deemed less desirable in the Ofgem report (paragraph 17). The IA also reports that long-listed options under each category of choice were assessed against the overarching objective to achieve Net Zero at the least cost [to society] while maintaining security of supply alongside the relevant critical success factors listed in the Treasury Green Book (paragraph 20). The IA would benefit from proportionately providing additional information on other options considered and discarded. The assessment would also benefit from explaining what is meant by a “*network competition*” and discussing potential options for achieving “*efficient network competitions... under the status quo through adequate design of competitive processes*” (paragraph 63).

Clarification of the proposal

The IA outlines the proposed functions of the FSO, but this would benefit from clarification in places, in particular the nature of:

- ‘facilitate competition’, including whether it would be controlled under the competition powers of Ofgem and involve competition in the generation and/or distribution layers; and
- ‘co-ordination and advice on rule-making responsibilities’, including who is coordinating with whom; whether advice is to be provided to Ofgem; and if the advice pertains to rules or the architecture of governance.

Cost-benefit analysis

Evidence and data

The IA has been strengthened since the consultation stage; the Department helpfully sets out the changes to analysis as a result of consultation, such as an increase in the range of scenarios sensitivity-tested (paragraph 14). The illustrative monetised costs and benefits of secondary legislation appear to be proportionate at this stage. Legal, financial and consultancy estimates have been produced using internal estimates of BEIS and Ofgem project budgets; separation and ongoing cost estimates are produced by *FTI Consulting*.

Explanation of how benefits arise

The IA notes that the common ownership of the SO and Transmission Operator may result in overstating the need for network assets, due to potential informational or financial conflicts of interest regarding transmission network asset solutions to energy system problems. The IA would benefit from discussing whether this is an ‘Averch-Johnson effect’ (where regulation induces ‘bloat’ of the capital base) and the potential for common ownership or vertical integration to address the problem.

It appears that addressing this potential conflict of interest would lead to “improved whole systems decision making” and the IA monetises this as transmission network cost savings. The IA would benefit significantly from providing evidence of sub-optimal decisions to date linked to common ownership and from describing more clearly, with supporting evidence, the mechanisms through which the expected benefits would arise.

Assumptions, risk and uncertainty

The IA provides a useful sensitivity analysis of monetised impacts and an assessment of risk and uncertainty (pages 20-23 and 25-27). These could be strengthened, in particular, through providing:

- evidence to inform the likely achievability of the assumed illustrative 1-5 per cent cost savings and the ‘break-even’ levels of 0.1-0.8 per cent;
- further discussion and potential application of optimism bias adjustments (for example to inform ‘cost overruns and delays’ – paragraph 96); and
- the basis for the assumed percentage adjustments to arrive at low and high estimates.

The IA would also benefit from discussing further the potential inefficiencies of bringing the SO function into the public sector, drawing upon the 2019 findings by National Economic Research Associates on the performance of network operators (paragraph 25).

The assessment would also benefit from discussing whether there is a cost-benefit case for this measure, independent of the Net Zero policy.

The very wide NPV range is illustrative-only; the Department should aim to improve its evidence and analysis to provide a more meaningful figure at secondary legislation IA stage.

Treatment of capital costs/transfer of assets

The IA excludes “*capital costs associated with FSO implementation*” on the basis they are commercially sensitive but notes that this exclusion has “...*minimal impacts on the conclusions of this IA*” (paragraph 37). The latter appears to be because this effect is largely distributional (the impacts are described in table 6), with the public sector purchasing an asset with an associated revenue stream from the private sector. The IA would, however, benefit from further clarification and explanation around the treatment of asset sales/transfers.

Non-monetised impacts

The IA notes that a substantial amount of costs and benefits remain unquantified but provides a useful discussion of non-monetised impacts (paragraph 23-25). The IA also sets out a useful comparison of scale for distribution network savings (paragraph 70) but would benefit from discussing why it is reasonable to assume the same percentage savings as for transmission costs. The IA would benefit from some indication of the possible scale of non-monetised impacts more generally, relative to those monetised. The final stage IA(s) for the related secondary legislation should quantify these impacts, where it is proportionate to do so.

Appraisal period

The IA refers to the “timeframe for the analysis” being 2022-2050. The IA would benefit from providing further clarity of the appraisal period used for the illustrative estimates; this will be required for the final stage IA supporting the related secondary legislation.

Wider impacts

The IA provides a good assessment of distributional impacts and briefly discusses impacts on energy prices and bills. However, the IA would benefit from further assessment of innovation impacts (an increase in innovation is stated as a key intended outcome) and a proportionate discussion of any anticipated trade impacts. The 'wider impacts' section would benefit from bringing together expected impacts on competition or at least referencing where competition impacts are discussed elsewhere in the IA. The IA would also benefit from discussing the impacts on other sectors such as transport and provision of fuel for heating purposes.

Monitoring and evaluation plan

The IA provides a good monitoring and evaluation plan. This outlines the objectives, the likely data requirements and the planned approach (at one-year and five-year points). The IA presents a detailed 'theory of change' to assist monitoring and evaluation. The IA notes that additional detail will be required to refine and develop the plan alongside implementation.

Regulatory Policy Committee

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