



Department for  
Business, Energy  
& Industrial Strategy

# FOLLOW UP CONSULTATION ON PROPOSALS REGARDING THE PLANNING SYSTEM FOR ELECTRICITY STORAGE

Includes Government Response to original  
consultation

Closing date: 10 December 2019

October 2019



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Any enquiries regarding this publication should be sent to us at: [smartenergy@beis.gov.uk](mailto:smartenergy@beis.gov.uk)

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# General information

## Why we are consulting

The Department for Business, Energy and Industrial Strategy (BEIS) is conducting a follow up consultation on new proposed changes to the treatment of storage under the planning system. This new proposal takes into account responses and evidence received as part of our [original consultation on this area](#).<sup>1</sup> This document also contains the summary of responses and Government response to the initial consultation.

## Consultation details

**Issued:** 15 October 2019

**Respond by:** 10 December 2019

**Enquiries to:**

Smart Energy Team  
Department for Business, Energy and Industrial Strategy  
1 Victoria Street  
London  
SW1H 0ET

Tel: 0300 068 4000

Email: [smartenergy@beis.gov.uk](mailto:smartenergy@beis.gov.uk)

**Consultation reference:** Government response and follow up consultation on proposals regarding the planning system for electricity storage.

**Territorial extent:**

The proposals outlined in this consultation are intended to apply to England and Wales, the territorial sea adjacent to England and Wales, the Welsh Zone, and the Renewable Energy Zone except those parts in relation to which the Scottish Ministers have functions.

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<sup>1</sup> <https://www.gov.uk/government/consultations/the-treatment-of-electricity-storage-within-the-planning-system>

## How to respond

Your response will be most useful if it is framed in direct response to the questions posed, though further comments and evidence are also welcome. This consultation is open to everyone. We are keen to hear from a wide range of interested parties involved in the planning process.

**Where possible please respond via email to:** [smartenergy@beis.gov.uk](mailto:smartenergy@beis.gov.uk)

Hardcopy responses sent to the BEIS postal address will also be accepted.

### Write to:

Smart Energy Team  
Department for Business, Energy and Industrial Strategy  
1 Victoria Street  
London  
SW1H 0ET

## Confidentiality and data protection

Information you provide in response to this consultation, including personal information, may be disclosed in accordance with UK legislation (the Freedom of Information Act 2000, the Data Protection Act 2018 and the Environmental Information Regulations 2004).

If you want the information that you provide to be treated as confidential please tell us, but be aware that we cannot guarantee confidentiality in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not be regarded by us as a confidentiality request.

We will process your personal data in accordance with all applicable data protection laws. See our [privacy policy](#).

We will summarise all responses and publish this summary on [GOV.UK](#). The summary will include a list of names or organisations that responded, but not people's personal names, addresses or other contact details.

## Quality assurance

This consultation has been carried out in accordance with the Government's [consultation principles](#).

If you have any complaints about the way this consultation has been conducted, please email: [beis.bru@beis.gov.uk](mailto:beis.bru@beis.gov.uk).

# Executive Summary

Electricity storage is a key technology in the transition to a smarter and more flexible energy system. A study carried out for the Government estimated that the benefits of a smart and flexible energy system to the UK could be £17-40 billion to 2050.<sup>2</sup> Energy storage is a key part of the Government's Clean Growth and Industrial Strategies and will play an important role in helping to reduce emissions to net-zero by 2050.

In July 2017 the Government and Ofgem published the [Smart Systems and Flexibility Plan](#) ('the Plan')<sup>3</sup> which set out 29 actions for the Government, Ofgem and Industry to take forward to support the transition to a smarter and more flexible system, including removing barriers to electricity storage. One of the commitments in the Plan was to review how storage is treated in the planning system, following feedback from stakeholders. In October 2018 we published a [Progress Update to the Plan](#)<sup>4</sup>, which confirmed we would consult on the planning treatment of storage.

On 14 January 2019 the Government launched a [consultation](#)<sup>5</sup> on proposals to amend the treatment of storage within the planning system, this closed on 25 March 2019. We are publishing a follow up consultation as part of this Government response because, based on new evidence from stakeholders, **we have decided to change our consultation position and make further reforms to help remove barriers to electricity storage.**

The first, January 2019 consultation set out two main proposals for electricity storage:

- To **retain** the 50 megawatt (MW) Nationally Significant Infrastructure Project (NSIP) capacity threshold that applies to standalone storage facilities; and
- To **amend** the Planning Act 2008 to establish a new capacity threshold for composite projects including storage and another form of generation,<sup>6</sup> such that a composite project in England would only fall into the NSIP regime where either its capacity, excluding any electricity storage, is more than 50MW; or, the capacity of any electricity storage is more than 50MW. Therefore, where the capacity of both the storage and non-storage elements of the generating station are less than 50MW individually, but over 50MW in combination, the generating station would fall under the local planning regime.

We received 31 responses to the consultation. Respondents welcomed the consultation and supported the principle of providing clarity and a more appropriate threshold for composite projects involving storage. However, respondents largely disagreed with retaining the 50MW NSIP capacity threshold for standalone electricity storage, citing this as a significant barrier to the deployment of storage projects above this threshold. Respondents provided evidence which showed clustering of projects just below the 50MW threshold, as well as details of specific projects which had either been deliberately capped at 49.9MW or split into multiple 49.9MW projects in order to avoid the NSIP regime. In addition, respondents provided evidence on the planning impacts of battery storage compared to other forms of generation, highlighting the lower impacts of this type of storage.

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<sup>2</sup> [An analysis of electricity system flexibility for Great Britain](#), November 2016

<sup>3</sup> [The Smart Systems and Flexibility Plan](#), July 2017

<sup>4</sup> [Progress Update to the Smart Systems and Flexibility Plan](#), October 2018

<sup>5</sup> [Consultation on the treatment of electricity storage within the planning system](#), January 2019

<sup>6</sup> Not including onshore wind.

In the consultation document we proposed that the composite threshold would not apply to co-located projects consisting of storage and onshore wind. Therefore, in scenarios where co-located storage is deployed to support the operation of a new or existing onshore wind farm, they would continue to be consented by the Local Planning Authority (LPA). Feedback from respondents outlined a concern that this would create a loophole whereby a large storage facility could avoid the NSIP regime by installing a small wind turbine.

We have considered all of the evidence and arguments provided by respondents and as a result we have updated our policy position. As part of this Government response we are conducting a **follow-up consultation, closing on 10 December 2019** on our new preferred policy position, which is to;

- **Carve out electricity storage, except pumped hydro, from the NSIP regime in England and Wales**, meaning that the primary consenting route in England will be under the Town and Country Planning Act 1990 (TCPA). Section 35 of the Planning Act 2008 will continue to apply in England, allowing the Secretary of State to direct projects into the NSIP regime, where she considers it appropriate. In Wales, planning decisions for electricity storage (except pumped hydro) of any size will generally fall to be consented by the relevant Local Planning Authority under the TCPA regime, whereas currently this is only the case for electricity storage (except pumped hydro) below 350MW.
- **Retain the 50MW NSIP threshold in the case of pumped hydro storage**. Due to the larger planning impacts of pumped hydro projects and the fact that they often require other consents (e.g. authorisation for the compulsory acquisition of land) which can be provided through a Development Consent Order (DCO), it may be more efficient for it to go through the NSIP regime than seeking planning permission locally. Therefore, we believe that the NSIP regime remains the most appropriate consenting process for this technology.

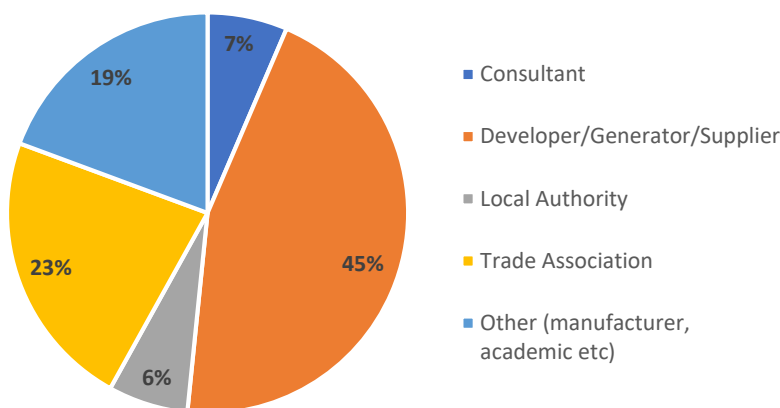
Alongside this Government response and follow-up consultation we have published draft legislation which would implement the policy outlined above.

As part of the previous consultation we also asked whether there were any other areas of the planning system which treat storage inappropriately. Following the responses received we have provided further clarifications around permitted development rights for premises where the existing function is not generation as well as rights for statutory undertakers. We have also provided some clarification over how the Environmental Impact Assessment legislation applies to electricity storage facilities.

# Chapter one: Summary of responses to our January 2019 consultation

This section sets out a summary of the responses received to each question and the Government’s response. We received 31 responses in total, from a range of stakeholders (see Annex B for a list of respondents and Chart 1 for the split by stakeholder type). We have not included all the feedback provided in our summaries below, but we have read all responses and considered them when developing our revised policy.

**Chart 1: Responses by stakeholder type**



**Original consultation question:**

- 1. The analytical assessment in Annex A that supports this consultation explores the costs and benefits of the preferred policy option. Do you agree with the analytical assessment and the assumptions that underpin it? Please provide evidence and analysis to support your answer where appropriate.**

## Question one summary of responses

Twenty-eight respondents answered question one, the majority of which agreed with our assessment of the approximate costs of seeking permission under each regime as well as the familiarisation costs of the proposed new composite threshold set out in the analytical annex. However, 64% of those that responded to question one disagreed with the rationale for discounting option 3 (amend the unit of the threshold) and option 4 (raise the level of the threshold) in the analytical annex, which was that the ‘NSIP threshold does not significantly distort sizing and investment decisions relative to other forms of generation’. These respondents argued that the only storage projects larger than 50MW which have sought planning consent are either pumped hydro projects or batteries co-located with another form of generation that is already captured under the NSIP regime. To support this, respondents cited Renewable UK’s database which shows that of 103 projects which are over 30MW, 67% are sized at 49-50MW.

In addition, a number of respondents felt that the time associated with seeking consent through the NSIP regime should be factored into the analysis. It was argued that the extra time required to go through this regime rather than local planning is commercially significant, as it is



long enough that the business case for the project may change within the period of assessment, making it difficult to secure investment. Some respondents also felt that using the costs of planning relative to capex was misleading, arguing that although they agreed that planning costs make up a small proportion of total project costs, it is the timing of this cost that is critical to the investment decision. Respondents therefore suggested that planning costs should be looked at relative to pre-development costs rather than total project costs.

Finally, two respondents noted that the analysis did not factor in the possibility that projects may be split and consented in smaller parts to avoid triggering the NSIP regime.

## Question one Government response

**Action: we have updated the original analytical annex to factor in some of the comments and evidence that was submitted in the consultation responses.** The updated analysis can be found in Annex A of this document. We have used the evidence provided to reconsider our preferred approach, the details of which are outlined under the Government response to question two and in Chapter two of this document.

In particular we have updated the analysis in light of the details we received of projects which have been capped at 49.9MW and the updated Renewable Energy Planning Database.<sup>7</sup> We have also now factored in the scenario where a project is split into multiple projects to avoid triggering the NSIP regime into our prediction of the number of projects affected. With regards to accounting for the time that it takes to receive consent under the NSIP regime, this was captured in the relative cost estimates for obtaining consent under the different planning regimes. We have also captured this as qualitative feedback within the analysis.

Respondents disagreed with our conclusion that the NSIP regime does not distort sizing and investment decisions; however, the majority did not refer to this being relative to other forms of generation as per the conclusion in the consultation. Based on the evidence submitted through the consultation we have reconsidered whether it is appropriate to treat storage relatively to other forms of generation within the planning system. This is explored in more detail in response to question two below.

### Original consultation question:

**2. Do you agree with our conclusion that it would be disproportionate to amend the threshold for triggering the NSIP regime?** If not please provide evidence to support your argument, including to support what an alternative threshold should be in terms of level and/or unit.

## Question two summary of responses

Twenty-nine respondents answered question two, 76% of whom disagreed with our proposal to retain the 50MW NSIP capacity threshold for electricity storage. Respondents provided several examples of projects where more land and a larger grid connection were available, but the developer chose to cap the project at 49.9MW to avoid the NSIP regime. Respondents felt that this is because the NSIP regime is too burdensome in terms of cost and time for the types of storage projects that are currently being developed, which mostly consists of battery technology. Many respondents also noted that the Welsh Government have carved out storage (except pumped hydro) from their Developments of National Significance (DNS) regime,

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<sup>7</sup> [Renewable Energy Planning Database](#)

meaning that storage (except pumped hydro) sized below 350MW in Wales is consented by the relevant LPA. Respondents argued that for consistency a similar approach should be taken in England.

Some respondents argued that with the NSIP threshold set at 50MW for storage projects, larger projects will not be deployed, hindering the transition to a smarter and more flexible energy system. Respondents maintained that the treatment of storage within the planning system should be proportionate to the impact that these projects may have on their surrounding areas, with escalation to the NSIP regime only where the impacts warrant such treatment. Many respondents added that storage, and batteries in particular, have much lower planning impacts in comparison to other forms of generation, both in terms of the footprint of the facility as well as the total construction time. A summary of some of the evidence they provided can be seen in Table 1. On this basis they argued that it is not appropriate to treat storage projects in the same way as conventional generation stations and that the 50MW capacity threshold for the NSIP regime is therefore not appropriate for storage.

**Table 1: Evidence submitted on physical footprint impacts of generating stations.**

Technology	Footprint
50MW Battery Storage Facility	0.7-1.5 hectares
50MW Solar Farm	100-150 hectares
50MW Wind Farm	300 hectares

The respondents who disagreed with our proposal made diverse suggestions for what the level and/or unit of the threshold should be set at. A number suggested amending the unit of the threshold from megawatts (MW) to megawatt hours (MWh), arguing that the latter tends to more accurately correlate to the footprint of electricity storage projects and, therefore, planning impacts. A number of alternative thresholds were suggested, ranging from 100 to 1000 MWh. Some of these respondents recognised the complexity associated with introducing a different unit for the threshold, but felt that the benefits of this approach outweighed its disadvantages. Conversely, some respondents felt that amending the unit to MWh would in fact be disproportionately complex and also noted that it would be more difficult to set a single new threshold in MWh that was appropriate for all storage technologies. These respondents, as well as a number of others, supported keeping the threshold unit in MW but raising it to a higher level. Many of the respondents who argued for a MWh threshold also stated that as a secondary option, raising the current MW threshold would be more appropriate than the current 50MW threshold. Whilst a range of levels in both MW and MWh were suggested by respondents, raising the level to 350MW was the figure that was proposed most frequently.

A few stakeholders argued that there should not be a threshold at all for storage and that it should always be consented by the Local Planning Authority. They argued that the planning impacts tend to be relatively small (in terms of footprint and height) and similar to developments such as agricultural buildings, warehouses or electricity substations, which are not automatically subject to the NSIP regime. They also argued that regulations implementing the Environmental Impact Assessment (EIA) regime are in place to assess any significant environmental impacts, regardless of whether the project is ultimately assessed under the NSIP regime or through the local planning system. These stakeholders noted that approaches such as carving storage out of the NSIP regime, or significantly raising the 50MW threshold, would align with the ambitions set out in Government publications such as the Smart Systems and Flexibility Plan and Clean Growth Strategy.

## Question two Government response

**Action: we are launching a follow-up consultation on a new proposal which is to carve out electricity storage, except pumped hydro, from the NSIP regime (see pages 20-23).**

Electricity storage has an important part to play in ensuring that energy supplies are secure, affordable and clean. It is a key technology in the transition to a smarter and more flexible energy system, which we support. As outlined in the Plan, the Government is committed to removing policy and regulatory barriers to storage where appropriate, and reviewing the treatment of storage within the planning system is a key part of this.

Although we define storage as a distinct subset of generation for planning and licensing purposes (and will define storage in this way in primary legislation when parliamentary time allows), we agree that it is not always suitable to treat storage in precisely the same way as other forms of generation, as this may fail to account for its distinctive characteristics and benefits to the energy system.

In our initial consultation we proposed retaining the 50MW threshold on the basis that it was not significantly distorting sizing and investment decisions, relative to other forms of generation. However, responses to our consultation have provided evidence such as, anecdotal evidence of projects which developers have capped at 49.9MW to avoid the NSIP regime; information from the Renewable UK database showing clustering of projects just below the 50MW threshold; and, details on the planning impacts of storage relative to other forms of generation. **This evidence has led us to reconsider whether the 50MW NSIP capacity threshold is appropriate for electricity storage.**

The NSIP regime was established to assess projects which are of national significance, as set out in the Planning Act 2008. For projects of national significance, whilst the impacts of a project may be local, the project may contribute to meeting a national need. In these situations, it is appropriate for the Secretary of State to weigh up the planning balance between the benefits and impacts of the project. With respect to the types of electricity storage that are currently deploying in GB (e.g. batteries), we are not aware of evidence to suggest that LPAs are not able to appropriately assess and determine applications through the TCPA regime now and in the future. Furthermore, in line with the consultation responses and our updated analysis of the planning impacts of electricity storage (except pumped hydro), the 50MW threshold does not appear to be a suitable proxy to indicate when these types of project become nationally significant for the purposes of the NSIP regime.

Considering the purpose of the NSIP regime as set out above and the evidence provided by respondents, **we have revised our proposal**. Based on the potential planning impacts of electricity storage, relative to other 'nationally significant' infrastructure forms of generation **we intend to carve out electricity storage, except pumped hydro, from the NSIP regime in England and Wales**. In England, s.35 of the Planning Act 2008 will continue to apply, allowing requests to be made to the Secretary of State for the project to be directed into the NSIP regime for consent.

In Wales, electricity storage (except pumped hydro) of any size will generally need to seek consent from the relevant LPA, whereas currently this is only the case for electricity storage (except pumped hydro) below 350MW.

To ensure that we considered all forms of electricity storage when formulating this proposal, we categorised the technology into three types. Our rationale for the treatment of each of these categories is outlined in Table 2 below.

**Table 2: Rationale for approach according to storage category**

Type of electricity storage	Carved out of the NSIP regime under new proposal?	Justification
Pumped hydro storage	<b>No</b> – pumped hydro will remain within the NSIP regime, meaning that it is subject to existing NSIP capacity thresholds.	The planning impacts of pumped hydro are much greater than other storage technologies. In addition, this type of project often requires a number of other consents which can be provided through a Development Consent Order, which makes the NSIP regime a more appropriate consenting route for this type of project.
Battery storage	<b>Yes</b> – carved out of NSIP regime to be consented by the relevant LPA, unless it is directed into the NSIP regime under s.35 of the Planning Act 2008 or consented as associated development as part of a composite project where the other form of generation falls into the NSIP regime.	Evidence indicates that battery storage has relatively low planning impacts when compared to other forms of generation, and that it tends not to have significant local impacts that would make it difficult for local authorities to balance national benefits against local impacts. Therefore, it would be more proportionate for the planning impacts from this type of development to be considered and determined by LPAs under the local TCPA 1990 regime.
Other forms of storage (e.g. compressed air energy storage, liquid air energy storage)	<b>Yes</b> – carved out of NSIP regime to be consented by the relevant LPA, unless directed into the NSIP regime under s.35 of the Planning Act 2008 or consented as associated development as part of a composite project where the other form of generation falls into the NSIP regime.	We have not yet seen these technologies deploy commercially and/or at scale in GB, and therefore do not have a detailed understanding of how they may develop. However, initial evidence suggests that although the planning impacts of these technologies may be slightly greater than batteries, they are lower than the impacts of other forms of generation and pumped hydro storage. We therefore consider that they should be carved out of the NSIP regime unless sufficient evidence emerges to demonstrate that their inclusion in the NSIP regime is appropriate. This approach has been taken for other emerging technologies, which are often by default consented through the TCPA until such a point that Government decides they should be in the NSIP.

We considered raising the level or amending the unit of the threshold however this is not our preferred approach as we do not currently consider that the NSIP regime is appropriate for storage (except pumped hydro), given the current evidence of its planning impacts. The most common proposal put forward was to raise the level of the threshold to 350MW to align with the threshold in Wales. However, we do not consider that pursuing this figure simply to align with Wales would be appropriate in the context of the NSIP regime as the threshold of 350MW

in Wales relates to the wider devolution settlement under the Wales Act 2017, rather than a figure that has been established specifically for storage projects. Bearing in mind the planning impacts of different storage technologies and the purpose of the NSIP regime outlined earlier, we do not believe it is appropriate to establish a specific NSIP threshold for electricity storage (except pumped hydro). Instead we believe that it would be more appropriate that projects of this kind are considered and determined by LPAs, with s.35 in the Planning Act 2008 remaining available for certain cases as a means for individual projects to be directed to the Secretary of State for consenting under the NSIP regime where necessary.

In addition, by amending the NSIP regime to provide that electricity storage (except pumped hydro) is no longer a form of development which requires development consent under the NSIP regime we can address some further issues that were raised in the consultation responses. Having a threshold for storage results in complexity for enlargement of existing projects and for those co-located with other forms of generation – raising the threshold only serves to shift this complexity to a different suite of storage projects.

For example under the new proposal, where storage is developed as an extension to an existing generating station which already exceeds the current NSIP capacity thresholds, developers may be able to seek planning consent for the extension from the LPA under the TCPA regime rather than automatically being required to seek a Development Consent Order.<sup>8</sup> Treating storage in this way also resolves certain issues that may arise where storage is deployed as part of a composite project involving onshore wind (which has its own carve out from the NSIP regime). It also provides greater flexibility for statutory undertakers to use existing permitted development rights to develop storage on operational land. More details on these matters are provided in our response to questions 4 and 5 respectively.

#### Original consultation question

**3. Do you agree with our approach to amending the Planning Act 2008 to allow a more appropriate approach to the NSIP threshold for composite projects involving electricity storage and another form of onshore non-wind generation?** Please provide evidence and analysis to support your answer where appropriate.

#### Question three summary of responses

Twenty-eight respondents answered this question, 79% of those who answered agreed that a new capacity threshold for composite projects involving storage and another form of onshore non-wind generation was appropriate. This was on the basis that it encourages greater use of existing sites and grid connections, enabling developers to optimise efficiencies. Whilst respondents largely agreed with the principle, many noted that the threshold for the storage element of the composite project should not be 50MW, but aligned with a new threshold for standalone storage, as discussed under question two. For example, if the NSIP threshold for standalone storage was raised to 350MW, the NSIP threshold for composite projects should be 350MW for the electricity storage element and 50MW for the other generation element.

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<sup>8</sup> A Development Consent Order may still be required where the extension also involves non-storage development. Additionally, existing generating stations which exceed NSIP capacity thresholds are likely to have been consented by a Development Consent Order granted under the Planning Act 2008 or under s.36 of the Electricity Act 1989. Developers proposing storage-based extensions will need to consider whether any new planning permission granted under the TCPA regime would be compatible with existing consent(s) and/or whether an amendment or variation of the existing consent(s) may be required.

A couple of respondents suggested that a combined 100MW threshold would be more suitable, providing more flexibility to developers to determine the optimal layout. For example, in one location it may be more suitable to have 60MW of solar generation and 30MW of storage and in another, the other way around. One respondent did however note that this would likely require minimum size requirements to prevent a 70MW solar farm coming forward with a 1MW battery purely to avoid the NSIP regime.

The other area that was raised in response to question three was a lack of clarity over “retrofit” projects i.e. where storage is added to an existing generating station which already exceeds NSIP capacity thresholds and was previously consented by a Development Consent Order or under s.36 of the Electricity Act 1989. Respondents noted that the addition of a small amount of storage (e.g. 10MW) to a >50MW existing generation plant could require either an amendment or variation to an existing consent or a new Development Consent Order authorising the extension of the existing station under the NSIP regime. Respondents felt this did not align with the principle of the new approach and would discourage developers from adding storage in these situations.

### Question three Government response

**Action: We are proposing to carve out electricity storage, except pumped hydro, from the NSIP regime in England and Wales.** In the consultation we recognised that the current legislation covering generating stations in the planning system does not distinguish between standalone projects involving one type of technology and scenarios involving two or more types of generation. We also outlined that in some cases it may be appropriate in planning terms to treat particular co-location scenarios as comprising a single composite generating station for the purposes of applying the existing NSIP capacity thresholds, whilst in others it may be appropriate to treat the different elements as comprising two or more distinct generating stations in their own right. This principle remains. However, under our new proposal, where composite projects involve electricity storage (except pumped hydro) facilities deployed alongside other forms of generation which remain subject to the NSIP regime, the capacity of the storage facility would not form part of the overall capacity of the generating station against which NSIP capacity thresholds are measured. The project would therefore only qualify as a NSIP where its non-storage generating capacity exceeded the NSIP capacity thresholds. In light of the concerns raised by respondents, we are providing the following clarifications around some further scenarios which may arise under our new proposal:

- For new composite generating stations which would still exceed NSIP capacity thresholds, storage facilities which form part of the generating station could still be consented within the same Development Consent Order if they qualify as “associated development” within the meaning of section 115 of the Planning Act 2008.
- For “retrofit” projects, where an existing generating station which already exceeds NSIP capacity thresholds, and which was previously constructed pursuant to a Development Consent Order or under a s.36 consent, is extended by the addition of storage facilities, developers will be able to seek consent for the extension from the LPA under the TCPA regime rather than automatically being required to seek a Development Consent Order.<sup>9</sup>
- Where a generating station has been consented by a Development Consent Order or a section 36 consent which has not yet been commenced or where construction has not

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<sup>9</sup> See footnote 8 above.

yet completed, it may also be possible to include additional storage facilities within the development by applying to amend or vary the existing consent.<sup>10</sup>

#### Original consultation question

**4. Do you agree that the current carve out from the NSIP regime for onshore wind generating stations is sufficiently clear to cover composite projects involving storage and onshore wind?** Please provide reasons to support your answer including, where relevant, details of any particular projects which are expected to come forward in future.

#### Question four summary of responses

Twenty-one respondents answered this question, with their views largely split on whether the current carve out for onshore wind from the NSIP regime is sufficiently clear to cover composite projects involving storage and onshore wind. Overall, 43% of respondents felt that the carve out was sufficient, 48% felt that it was not, and the remainder did not specify. The reasons that respondents disagreed with this question centred around whether the carve out for onshore wind created a loophole whereby a large storage facility could simply add a small wind turbine and be consented through the local planning regime (whereas if it didn't have the wind turbine, it would fall into the NSIP regime). Respondents questioned whether this scenario was plausible under the current system. Respondents also suggested that such a loophole could introduce a distortion in the market by advantaging storage deploying alongside onshore wind. Some respondents argued that a carve out should be applied to storage which is co-located with other types of generation, such as solar.

#### Question four Government response

**Action: As outlined in the Government response to questions two, our new proposal is to carve out electricity storage, except pumped hydro, from the NSIP regime in England and Wales.** This would result in both onshore wind and storage being carved out of the NSIP regime, and therefore as per the original consultation proposal composite projects involving storage and onshore wind would always be consented by the Local Planning Authority (LPA) under the TCPA regime, unless directed into the NSIP regime under s.35 of the Planning Act 2008.

This means that in line with feedback received by respondents, where storage facilities are co-located with any other form of generation, the capacity of the storage facilities will not trigger the NSIP capacity thresholds. This also addresses respondents' concerns about a potential loophole where a large storage facility co-locates with a small wind turbine simply to avoid the NSIP regime. Under the new proposal, where the capacity of the other generation triggers the NSIP regime, the storage facility can still be consented as "associated development" as part of a single Development Consent Order.

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<sup>10</sup> Schedule 6 to the Planning Act 2008 provides for material and non-material changes to Development Consent Orders. Section 36C of the Electricity Act 1989 provides for the variation of s.36 consents.

### Original consultation question

**5. Are there any other areas of the planning system that you consider treat storage inappropriately relative to other forms of generation and therefore impact on its deployment?** Please provide evidence to support your answer where appropriate.

### Question five summary of responses

Twenty-two respondents answered this question, with 86% of those that responded answering yes. Many respondents interpreted this question as asking whether there are any other areas of the planning system which require further clarification for storage. They detailed a number of areas where this is required, which are outlined below.

#### **Permitted development rights for adding storage to existing premises where the primary function is not generation**

In our original consultation document we set out that, subject to limits on footprint and height (set out in legislation<sup>11</sup>), permitted development rights may be used to extend existing business premises where the primary function is not generation, which could be used to add storage. We outlined that where this is used the majority of the electricity stored should be used on the premises. Some respondents felt that it was not clear how much storage could be added under these rights and sought a specific permitted development right for electricity storage. A few respondents questioned whether the majority of electricity stored by the storage facility should be used on site. This was on the basis that battery storage in particular can be used to export to the grid and therefore the requirement for onsite use of stored electricity would restrict the type of premises which would be able to use permitted development rights to add electricity storage.

#### **Permitted development rights for licensed operators<sup>12</sup>**

A number of respondents also sought clarification on whether statutory undertakers could use their permitted development rights to add storage to existing generating stations. They suggested there should be an amendment to the permitted development rights for Electricity Undertakings set out in Class B of Part 15 of Schedule 2 to the Town and Country Planning (General Permitted Development) (England) Order 2015, as amended (the Permitted Development Order).

#### **Environmental Impact Assessments**

Some respondents sought clarification on the requirements of the Environmental Impact Assessment (EIA) legislation. Firstly, one respondent asked whether electricity storage falls under “industrial installation for the production of electricity” within the meaning of Schedule 2 to the Town and Country Planning (Environmental Impact Assessment) Regulations 2017. Secondly, some respondents sought clarification over when the EIA is triggered, particularly for composite projects where storage is proposed to be added as part of a retrofit to an existing generating station.

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<sup>11</sup> Part 7 of Schedule 2 to the Town and Country Planning (General Permitted Development) (England) Order 2015, as amended.

<sup>12</sup> Article 2(1) of the Town and Country Planning (General Permitted Development) (England) Order 2015 and article 1(1) of the Town and Country (General Permitted Development) Order 1995 (which continues to apply in Wales) define “statutory undertakers” to include licence holders under section 6 of the Electricity Act 1989.



## Guidance

Finally, a couple of respondents noted that some Local Authorities have a limited understanding of electricity storage as a technology and, consequently, requested that Government assess the current guidance that is available and consider endorsing any existing guidance. Related to this they mentioned that the National Policy Statements (NPS) do not refer to electricity storage, which contributes to a perceived lack of understanding among Local Authorities of the technology and its importance.

## Question five Government response

**Action: below we have provided clarificatory text around the main areas raised in response to question 5.**

### **Permitted development rights for adding storage to existing premises where the primary function is not generation**

In the consultation we confirmed the following:

- Where storage is installed **within an existing premises** to support its primary use, there are no external changes proposed to the premises, and the majority of electricity is used on the premises, it would be unlikely that a material change of use had occurred and therefore it would not be considered 'development' requiring planning permission.
- Permitted development rights allow the extension of certain existing premises to provide additional space to accommodate electricity storage where this is ancillary to the primary use of a premises and the majority of electricity stored is used on the premises. Those wishing to make use of these rights should ensure extensions are within the limits (footprint, height etc) outlined in Part 7 of Schedule 2 to the Permitted Development Order.

In view of respondents' concerns around the limits on the use of the electricity stored, we have worked with the Ministry for Housing, Communities and Local Government (MHCLG) to clarify that the majority of the electricity stored **does not** need to be used on site, but that, **the storage must be ancillary to the primary use of the premises**. If the premises were to be primarily used for electricity storage this may be considered a material change of use and therefore development for which an application for planning permission would be required.

### **Permitted development rights for licensed operators<sup>13</sup>**

The permitted development rights available for electricity undertakings are set out in Class B in Part 15 of Schedule 2 to the Permitted Development Order. These rights allow an electricity undertaker to extend existing buildings or erect new buildings to protect plant or machinery on operational land,<sup>14</sup> subject to size limits and conditions set out in the legislation.

Respondents suggested there was some uncertainty as to whether these permitted development rights for electricity undertakings allow the addition of electricity storage on their operational land. Permitted development rights are a national grant of planning permission, subject to limits and conditions set out in the Permitted Development Order. They do not grant

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<sup>13</sup> Article 2(1) of the Town and Country Planning (General Permitted Development) (England) Order 2015 and article 1(1) of the Town and Country (General Permitted Development) Order 1995 (which continues to apply in Wales) define "statutory undertakers" to include licence holders under section 6 of the Electricity Act 1989.

<sup>14</sup> Operational land is further defined within paragraph B5 in Part 15 of Schedule 2 to the Town and Country Planning (General Permitted Development) (England) Order 2015.

planning permission for development which forms part of a NSIP for which development consent is required under the Planning Act 2008. However, we consider that if electricity storage, as proposed, is carved out of the NSIP regime, there will be greater opportunities for electricity undertakers to use these permitted development rights to extend or erect a building to add electricity storage, within the limits set out under these rights. Some development for electricity storage, which would previously have required consent under the NSIP regime, will instead require planning permission under the Town and Country Planning Act 1990. This may be granted on an application to the local planning authority or, where applicable, through a permitted development right.

We therefore do not consider it necessary to amend the legislation to include electricity storage specifically.

## Environmental Impact Assessment

The Environmental Impact Assessment (EIA) process ensures that the impacts of proposed developments which are likely to have significant effects on the environment are assessed and considered through the planning process. Our proposals to amend the planning regime for electricity storage **are not intended** to affect the application of the existing legislation which implements the EIA process for the NSIP and TCPA regimes (See the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 and the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017). However, our proposals may see a greater range of development proposals involving storage being considered under the TCPA regime than has previously been the case.

Whether particular development proposals involving electricity storage constitute EIA development is a matter for the relevant planning authority to determine on a case by case basis. We recognise that electricity storage is not expressly identified as a category of Schedule 1 development (for which EIA is mandatory) or Schedule 2 development (which may require EIA if likely to have significant environmental effects) within the existing legislation. However, as identified by consultees, the existing legislation does describe “industrial installations for the production of electricity” to be a form of Schedule 2 development. In line with our view that electricity storage constitutes a form of generation, we consider that it will, in general, be appropriate to describe storage facilities in this way. Under the TCPA regime, this category of Schedule 2 development is subject to an additional area threshold of 0.5 hectares. Developers and planning authorities should consider the need to screen developments which exceed this threshold to determine whether EIA is required.

Where storage facilities are developed as part of a composite project alongside other forms of conventional or renewable generation, developers and planning authorities may also need to consider whether any other descriptions, thresholds or criteria for Schedule 1 or Schedule 2 development apply to the project. Some examples of other categories which may be relevant in this context include, those for thermal power stations and other combustion installations with a heat output of 300 megawatts or more which are separately identified as a form of Schedule 1 development, and those for hydroelectric installations designed to produce more than 0.5MW, and for wind farms with more than 2 turbines or with a hub height over 15m, which are separately identified in Schedule 2. In some scenarios it may also be appropriate to describe the development as a change to, or extension of, a Schedule 1 or a Schedule 2 development which is already authorised, executed or in the process of being executed. Changes and extensions of this kind will constitute Schedule 2 development in their own right if they may give rise to significant adverse effects on the environment or if any applicable criteria or thresholds are met or exceeded.

## **Guidance**

With regards to guidance for Local Authorities, we are working with the Ministry of Housing, Communities and Local Government (MHCLG) to update the Renewable and low carbon energy planning practice guidance to refer specifically to electricity storage. The planning practice guidance supports the National Planning Policy Framework which sets out the Government's planning policies for England and how these are expected to be applied.

## Chapter two: New consultation

As set out in the ‘Government response’ sections in chapter one we have considered the evidence submitted through consultation responses and have updated our proposals. On this basis we are now carrying out a follow up consultation on our new proposal to **carve out electricity storage, except pumped hydro, from the NSIP regime in England and Wales**. We have also drafted legislation which will implement this proposal, which has been published alongside this document.

The effect of this policy is that standalone electricity storage (except pumped hydro) in England will always be consented under the TCPA regime, unless a request is made and granted by the Secretary of State to direct the project into the NSIP regime under s.35 of the Planning Act 2008. For composite projects involving storage, the storage element of a new or extended composite generating station would never trigger the NSIP capacity threshold regime by itself. However, developers will be able to include storage within a Development Consent Order as associated development if, in a composite scenario, the other form of generation has fallen into the NSIP regime.

These changes do not impact the overall classification of storage and it will continue to be considered as a distinct subset of generation for planning and licensing purposes. However, electricity storage (except pumped hydro) should no longer be considered as a form of generating station subject to the NSIP regime thresholds. Therefore, it will not be a form of development that requires Development Consent under section 31 of the Planning Act 2008.

On this basis, these changes should enable developers to seek planning permission from the LPA to add storage to existing Development Consent Order/s.36 consented generating stations, rather than amending their current consent or seeking a new Development Consent Order. However, should developers consider it appropriate, the option for amending the Development Consent Order/s.36 consent will still be available. This approach also enables greater flexibility over statutory undertakers permitted development rights being used to add storage to existing licensed sites. Please see the Government response to question five in chapter one for how these permitted development rights can be used.

As summarised in chapter one, we consider it appropriate for pumped hydro storage to remain in the NSIP regime and subject to the 50MW NSIP capacity threshold due to the larger planning impacts of this technology. Our evidence shows that pumped hydro storage has much larger impacts than other storage technologies. In addition, pumped hydro storage often requires other types of consents which can be provided with the Development Consent Order, meaning it may be more efficient for it to go through the NSIP regime than seeking planning permission locally. Finally, this approach aligns with that taken in Wales, where the Welsh Government also chose to keep pumped hydro storage within the Developments of National Significance (DNS) regime.

### **Extending the carve out to Wales**

Under the current regime, Welsh onshore generating stations with a capacity of up to and including 350MW are removed from the NSIP regime and the consenting of such projects is now a devolved matter. This was implemented on 1 April 2019 through section 39 of the Wales Act 2017. Currently for storage facilities, except pumped hydro, up to and including 350MW,

consent is sought from the relevant LPA, whereas for storage projects with a capacity of more than 350MW consent is sought from the SoS as a NSIP.

In our previous consultation we only proposed making changes to the planning regime in England, however under our new proposals we consider it appropriate to extend the carve out to Wales. This is because otherwise a 400MW battery storage facility deployed in Wales would fall under the NSIP regime whilst a battery of the same size in England, could be consented by the Local Planning Authority under the TCPA regime. We therefore want to ensure that there is consistency and a level footing in terms of economic competitiveness in how storage facilities are treated across all the areas which are subject to the NSIP regime.

The effect of extending this carve out to Wales is that electricity storage (except pumped hydro) facilities of any size in Wales<sup>15</sup> will generally be consented by the relevant LPA. For pumped hydro storage, where the capacity is between 10MW and 350MW consent will be sought from Welsh Ministers under the DNS regime, whereas for pumped hydro facilities with a capacity above 350MW, they will be consented by the SoS as a NSIP.

### New Consultation Question

- 1. Do you agree that it is appropriate to carve out electricity storage, except pumped hydro from the NSIP regime in England and Wales?** If not, please provide justification and evidence to support your answer.

### Offshore generating stations

To create a uniform position for electricity storage (except pumped hydro) within the planning system, ensuring clarity for the sector, **we are minded to apply the carve out of electricity storage (except pumped hydro) to the offshore planning regime as well as the onshore regime.** Section 35 of the Planning Act 2008 will continue to be available for onshore projects in England and offshore projects, except those in the territorial sea adjacent to Wales or the Welsh Zone, allowing industry to make a request to the Secretary of State for the project to be directed into the NSIP regime for consent.

Currently for offshore generating stations, the NSIP regime applies where the capacity is above 100MW (or above 350MW in waters adjacent to Wales up the seaward limit of the territorial sea or in the Welsh Zone). Generally, the TCPA regime does not apply offshore but section 36 of the Electricity Act 1989 does continue to be used to consent new projects which fall below the NSIP threshold and which do not otherwise fall within the TCPA regime. Section 36 consent is required in relation to England for:

- all generating stations between 50MW-100MW located in waters in or adjacent to England up to the seaward limits of the territorial sea or in the renewable energy zone (except the “Welsh Zone” or any area of the Renewable Energy Zone in relation to which Scottish Ministers have functions);

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<sup>15</sup> Under Schedule 7A to the Government of Wales Act 2006, planning in relation to “relevant nationally significant infrastructure projects” is a reserved matter. This includes projects falling within section 14(1)(a) of the Planning Act 2008 (the construction or extension of a generating station). Under our proposals, electricity storage (except pumped hydro) facilities would no longer fall within this reservation.

- all wind or water driven generating stations between 1-50MW located in waters in or adjacent to England up to the seaward limits of the territorial sea;

Section 36 consent is required in relation to Wales for:

- all generating stations between 50-350MW located in the “Welsh Zone”;
- all wind and water driven stations between 1MW-350MW located in waters in or adjacent to Wales up to the seaward limits of the territorial sea.

For England the s.36 consenting function has been transferred to the Marine Management Organisation (MMO) whilst for Wales this function now sits with Welsh Ministers.

Carving out electricity storage from the current offshore regime for generating stations (NSIP and section 36), will mean that the remaining consenting requirement for storage will be the marine licence which must be granted under the Marine and Coastal Access Act 2009. The marine licence is provided by the MMO in England and Natural Resources Wales (NRW) in Wales. In line with the future projects that are expected to deploy (as outlined in the analytical annex) we are not aware of any offshore deployment of electricity storage, however if this type of project did come forward, we consider that the marine licensing regime is a suitable consenting process.

#### **New Consultation Question**

- 2. Do you agree that we should carve out electricity storage, except pumped hydro, from the offshore planning regime (NSIP and s.36 consent)?** Please provide evidence to support your answer where appropriate.

### **Legislative changes**

Alongside this document we are publishing a draft of the secondary legislation which would need to be made in order to implement our proposal to carve out electricity storage, except pumped hydro, from the NSIP regime in England and Wales.

To achieve the proposed carve out we will need to make an order under section 14(3) of the Planning Act 2008 to vary the circumstances in which the construction or extension of a generating station constitutes a NSIP.

The draft order proposes new definitions for “electricity storage facility”, “exempt electricity storage facility” and “pumped hydroelectric storage facility” and amends section 15 of the Planning Act 2008 to ensure that electricity storage (except pumped hydro), whether comprising a freestanding generating station or part of a composite generating station, no longer requires development consent. Pumped hydro storage will remain subject to existing NSIP capacity thresholds.

We also propose to make an order under s.36 of the Electricity Act 1989 to exempt electricity storage (except pumped hydro) facilities from the requirement to obtain consent under that section to ensure that the position is aligned with the NSIP regime as far as possible in England and Wales. Section 36 is executive devolved to Welsh Ministers in relation to generating stations in Wales and Welsh waters which do not exceed the devolved capacity of 350MW. In order to fully align the regime offshore in both England and Wales, the Welsh Government will need to pass an order under s.36 of the Electricity Act 1989 which disapplies the need for consent to construct or operate a generating station where it concerns electricity

Government response and follow up consultation on proposals regarding the planning system for electricity storage

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storage (except pumped hydro) which is offshore. We are working closely with the Welsh Government to coordinate approaches.

### **Transitional arrangements**

We intend that these changes will come into force for new storage facilities whether as part of a composite project or standalone, and new extensions of storage to existing s.36/Development Consent Order consented generating stations from the date the legislation comes into force.

Storage facilities which are already within the NSIP regime when the changes are introduced will continue to be consented under NSIP consenting process.

#### **New Consultation Question**

**3. Do you have any comments on the draft legislation or transitional arrangements?** Please specify which areas of the legislation you are referring to.

# Catalogue of consultation questions

- 1. Do you agree that it is appropriate to carve out electricity storage, except pumped hydro from the NSIP regime in England and Wales?** If not, please provide justification and evidence to support your answer.
- 2. Do you agree that we should carve out electricity storage, except pumped hydro, from the offshore planning regime (NSIP and s.36 consent)?** Please provide evidence to support your answer where appropriate.
- 3. Do you have any comments on the draft legislation or transitional arrangements?** Please specify which areas of the legislation you are referring to.



# Annex A: An analytical assessment of the impacts of the preferred policy option considered in this consultation

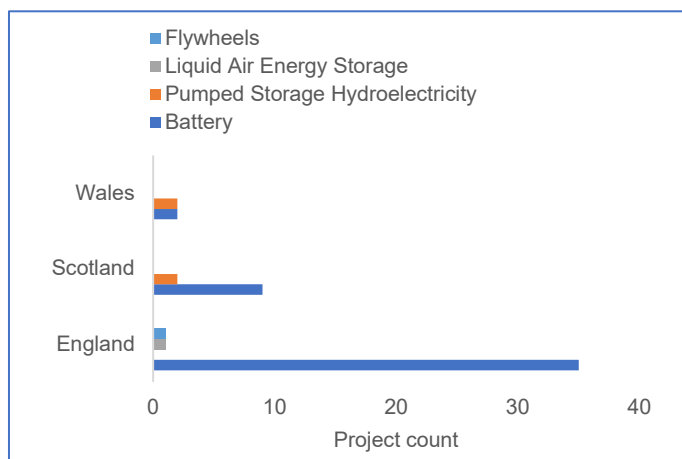
This section outlines the assessment of the potential costs and benefits of the revised proposal to carve out electricity storage, except pumped hydro, from the Nationally Significant Infrastructure Projects (NSIP) regime in England and Wales, relative to the counterfactual (i.e. retaining the existing 50MW capacity threshold in England and 350MW capacity threshold in Wales).

## Policy overview and rationale for intervention

The Government considers that electricity storage facilities are a form of generating station for planning purposes. Therefore, if these facilities have a generating capacity of 50MW or less in England or 350MW or less in Wales they require planning permission from the relevant Local Planning Authority, while those that exceed the capacity threshold constitute 'nationally significant' developments requiring consent from the Secretary of State under the NSIP regime.<sup>16</sup>

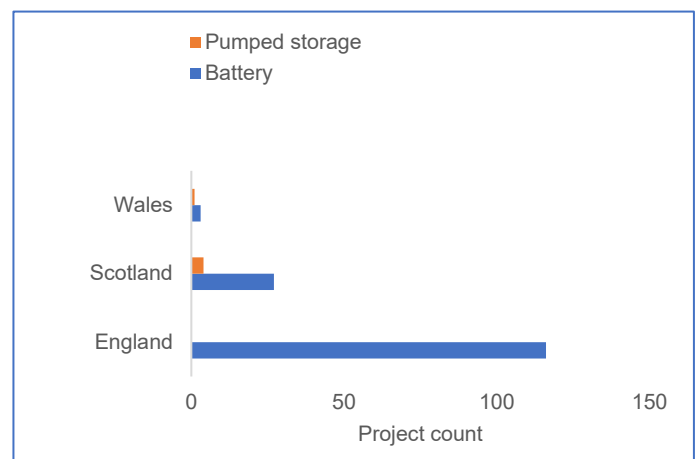
According to the Renewable Energy Planning Database (REPD)<sup>17</sup> over 90% of known operational and prospective<sup>18</sup> storage projects in GB are made up of battery storage. Most of these battery storage projects (around 80%) are currently/expected to be deployed in England with only a small proportion (<5%) of GB projects currently/expected to be deployed in Wales (see figures 1-2 below).

**Figure 1: Existing storage**



Source: REPD

**Figure 2: Prospective storage**



Source: REPD

Pumped storage projects are generally significant in scale (see figures 3-4) with existing and prospective projects generally sized in the hundreds of MWs with durations in excess of 4 hours, therefore offering significant MWhs (storage capacity) for the system. Deployment of

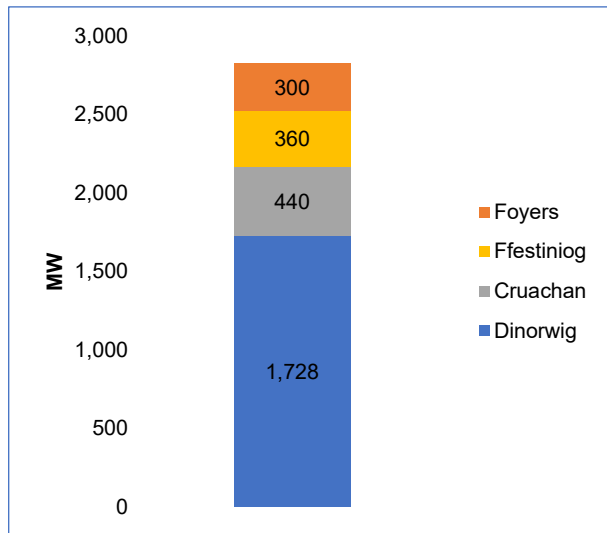
<sup>16</sup> Energy infrastructure consenting is devolved in Scotland and Northern Ireland

<sup>17</sup> BEIS, [Renewables Energy Planning Database \(REPD\)](#) – June 2019

<sup>18</sup> In this analysis the term 'prospective' is used to denote projects with a planning status of either 'submitted', 'granted', 'awaiting construction' or 'under construction', where the end capacity is known.

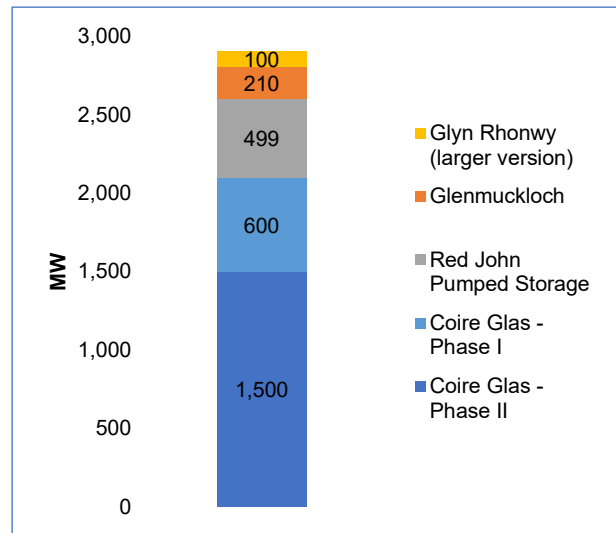
this technology depends on the availability of natural reservoirs and favourable geographic sites, as a result, all the existing and prospective pumped storage capacity is currently/expected to be deployed in either Wales or Scotland.<sup>19</sup> These projects are large and complex and can take several years to obtain the necessary planning approvals before construction begins.

**Figure 3: Existing pumped storage**



Source: REPD

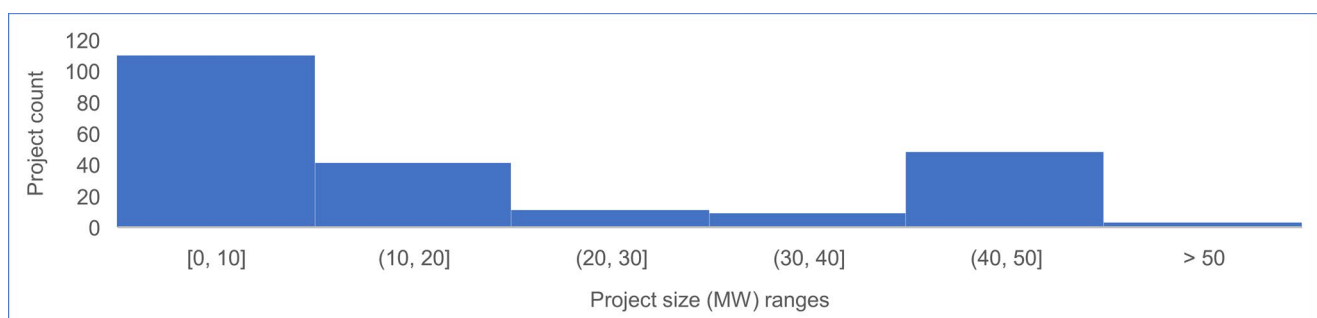
**Figure 4: Prospective pumped storage**



Source: REPD

In contrast, most of the existing/prospective battery projects in GB have been sized below 50MW and have durations below 4 hours. Figure 5 illustrates that for this technology there appears to be a clustering effect just below the 50MW capacity threshold, with just over one quarter of projects sized between 40-50MWs (of which around 90% are sized between 49-50MW). Responses to the previous consultation have suggested that this clustering, as well as the fact that there are no operational battery storage facilities with capacities above the threshold, is evidence that the existing NSIP capacity threshold has a distortionary effect on deployment. Prior to our original consultation, our stakeholder engagement had led us to conclude that there were other reasons for the clustering effects (revenues, connection costs, capital costs etc). The preferred option has been revised based on evidence received in response to the previous consultation which has suggested that the NSIP capacity threshold itself has been distorting sizing/investment decisions for storage.

**Figure 1: Existing and prospective battery size ranges**



Source: REPD

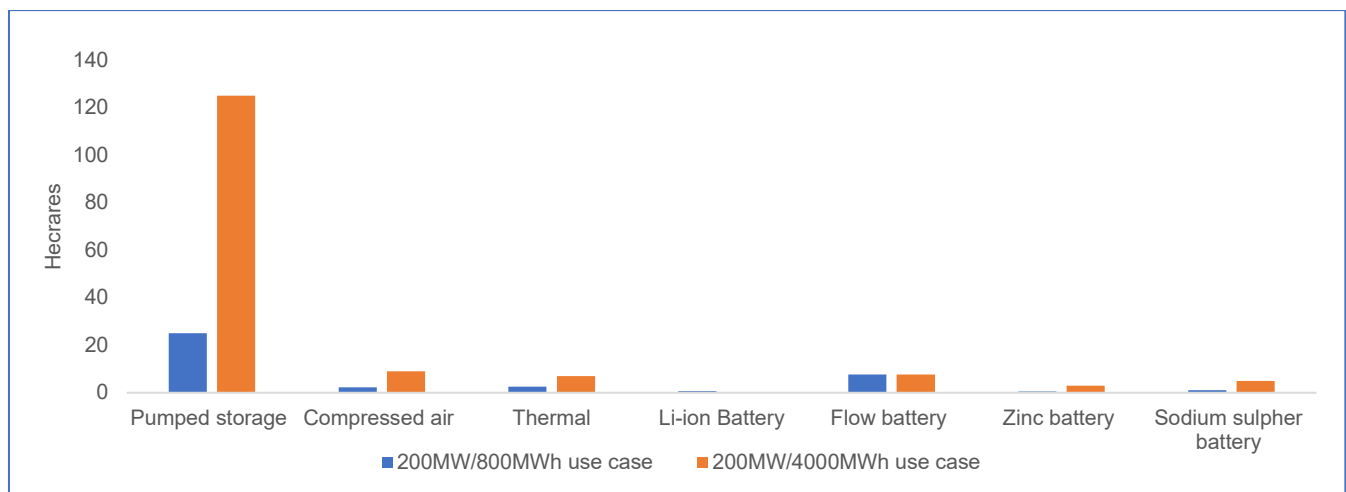
In addition, it is expected that the planning impacts of battery storage technologies will be much less significant than those of other forms of generation. Responses to the previous

<sup>19</sup> BEIS, [Renewables Energy Planning Database](#) (REPD) – June 2019

consultation suggested that the footprint of a 50MW lithium-ion battery storage plant is likely to be in the order of around 1 hectare, whereas a 50MW solar or wind farm is likely to have a footprint in excess of 100 hectares. This relative assessment of footprints is consistent with data on existing planning applications for these technologies. Although footprint is not a necessary and/or sufficient condition for a project to be deemed nationally significant, it is considered a reasonable proxy for a number of the planning impacts that could be expected from a project (relating to visual, environmental, landscape, security of supply impacts and noise).

There are also other forms of electricity storage that could deploy at scale in the future as the technology matures, costs decline and new revenue opportunities become available. This includes liquid air (cryogenic storage), sodium/metal/zinc/flow batteries, compressed air energy storage (CAES) and certain forms of thermal and hydrogen storage, among others. The evidence available for a sample of these storage technologies (see figure 6) indicates that although some of these technologies are likely to have slightly larger footprints than lithium-ion battery storage, their footprints are expected to be significantly less than pumped storage. Moreover, we have seen limited deployment of these technologies to date, and as such have not uncovered evidence that it would be appropriate for them to be consented under the NSIP regime.

**Figure 2: Footprint for a sample of different storage technologies<sup>20</sup>**



Source: BEIS estimates

Based on the evidence available, it is considered that the NSIP capacity threshold for generating stations is currently not appropriate for all electricity storage technologies given the likely scale of the technologies' planning impacts relative to other forms of generation.

Our revised preferred option is to carve out electricity storage, except pumped hydro, from the NSIP regime in England and Wales on the basis that consent under the TCPA regime is deemed more appropriate for this technology for the following reasons:

- I. Although storage is considered by Government to be a distinct subset of generation for planning and licensing purposes, it is not always suitable to treat storage in precisely the same way as other forms of generation, as this may fail to account for its distinctive characteristics and benefits to the energy system.
- II. For projects of national significance, while the impacts of a project may be local, the project may contribute significantly to meeting a national need. In these situations, it

<sup>20</sup> Does not include below surface measurements.

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- is appropriate for the Secretary of State to weigh up the planning balance between the benefits and impacts of the project. With respect to the types of electricity storage that are currently deploying in GB (e.g. batteries), there is currently no evidence to suggest that LPAs are not able to appropriately assess and determine applications through the TCPA regime now and in the future.
- III. Existing evidence indicates that (lithium-ion) battery storage has relatively low planning impacts when compared to other forms of generation, and that it tends not to have any specific impacts that would make it difficult for local authorities to balance national benefits against local impacts.
  - IV. With respect to storage technologies beyond pumped hydro and lithium-ion battery systems, these technologies have not yet reached full commercial maturity and/or been deployed at scale. As such, there remains some uncertainty around how they are likely to develop. However, initial evidence suggests that although the planning impacts of these technologies may be slightly greater than lithium-ion batteries, they are likely to be significantly lower than the impacts of other forms of generation and pumped storage (Figure 6). It is therefore considered appropriate that they should be carved out of the NSIP regime unless evidence is uncovered through this consultation, or at a later date, that their inclusion in the NSIP regime is appropriate. It is the Government's intention to ensure the appropriate treatment of different storage technologies in the planning regime and we will therefore keep this under review. In the shorter term such projects in England could still be directed into the national regime if needed using s.35 of the Planning Act 2008.
  - V. Due to the larger planning impacts of pumped hydro projects and the fact that they often require other consents (e.g. authorisation for the compulsory acquisition of land) which can be provided through the Development Consent Order, it is currently considered that the NSIP regime remains the most appropriate consenting process for this technology.

The overarching policy aim is to support the deployment of electricity storage by ensuring the planning system treats storage appropriately relative to its impacts and doesn't impose any significant barriers in England and Wales (as energy consenting is fully devolved in Scotland and Northern Ireland). This policy aims to increase investor confidence, remedy the potential distortionary impacts on developers sizing/investment decisions – especially those who would otherwise have sized their project just below threshold – and reduce any inappropriate costs for developers seeking to develop larger co-located or standalone storage projects. Other policy options that were considered, including doing nothing, were discounted on the basis that they did not meet the policy aims.

The key policy options that have been considered in this analysis are as follows:

### **Option 1 - Do nothing (counterfactual) scenario**

The 'Do nothing' baseline option means that no changes would be made to the current consenting process for larger co-located and/or standalone electricity storage projects. Projects above the relevant the capacity thresholds in England/Wales would be consented under the NSIP regime.

This baseline option has been discounted on the basis that it does not support the policy objectives and intended outcomes outlined in previous sections. Under this option the capacity thresholds would still potentially distort sizing/investment decisions at the margin and would still result in inappropriate planning costs for some larger co-located/standalone projects.

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## **Option 2 – (Discounted) amending the threshold**

Under this option the appropriate level of the threshold would need to be determined to ensure storage projects are consented under the appropriate planning regime. This option was discounted on the basis that we are not currently aware of evidence to suggest that LPAs are not able to appropriately assess and determine storage applications through the TCPA regime, regardless of size now and in the future.

## **Option 3 – Preferred option: carve out for electricity storage technologies (excluding pumped hydro)**

The preferred option is to carve out electricity storage, except pumped hydro, from the NSIP regime. In England, industry will retain the ability (via s.35 of the Planning Act) to ask the Secretary of State to consider treating their project as a NSIP if this is deemed appropriate. Under this option LPAs would be primarily responsible for consenting standalone storage projects. For composite projects, the storage element of a project would no longer trigger the NSIP regime. This approach mitigates the distortionary impacts of the current threshold and recognises the lower planning impacts of storage, particularly batteries. The approach also enables greater flexibility over the treatment of storage within various areas of the planning system. For example, existing generating stations that have a Development Consent Order or s.36 consent (granted under the regime that was superseded by the NSIP regime) and want to add storage as part of the same generating station may be able to do so without amending their existing Development Consent Order/s.36 consent.

This is the preferred option as it meets the policy objectives and intended outcomes set out in the previous paragraphs. There are no alternative non-regulatory options for the implementation of the policy objectives.

## **Direct Costs and benefits**

This section presents the direct costs and benefits of the preferred option relative to the counterfactual only.

### **Familiarisation costs (one-off costs to businesses interested in investing in storage)**

There may be one-off familiarisation costs for market participants to read and understand the proposed legislation. These are estimated to be approximately £70,000,<sup>21</sup> using a central estimate for the number of businesses who are likely to read the proposed legislation (150)<sup>22</sup> and assuming each would require a full day (8 hours) of additional legal and managerial resource at £65 per hour.<sup>23</sup>

### **Transitional costs**

There may be some projects in England and Wales that incur some transitional costs as a result of this measure if they are at the pre-application phase by the time this measure is enacted (developers may have started to undertake work and incur costs associated with obtaining consents). The type and magnitude of such projects is uncertain, however, it is considered reasonable to assume that the potential transitional costs associated with this measure are likely to be broadly negligible given that:

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<sup>21</sup> Discounted, 2018 prices and base year. Familiarisation costs assumed to be incurred in 2020.

<sup>22</sup> The number of interested parties in 2020 (who would likely read the new legislation) is based on the number of responses to the Government and Regulator's Call for Evidence in 2016.

<sup>23</sup> Undiscounted, including non-wage-costs of around 20%. Wage costs based on ONS – ASHE: Table 14.5a

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- The measure is expected to be enacted around 6 months after it has been consulted on, so developers have some time to factor this into their planning; and
  - It could be expected that a significant proportion of the work undertaken at this early stage in the planning process would have been incurred and will continue under the Town and Country Planning Act, for example work on the Environmental Impact Assessments, consultations, design work, and legal fees. Any work and associated costs incurred under the Planning Act that would have been required under the Town and Country Planning Act are by definition not incremental to the policy, relative to the baseline.

### **Direct costs to business (one-off cost savings to businesses investing in storage)**

Relative to the counterfactual, this measure is expected to result in efficiency savings in the form of reduced planning costs (which are made up of planning fees, legal/project management resource, surveys, ground investigations, consultations) and/or infrastructure costs (which are made up of electrical connections) for some developers seeking to build out larger co-located/standalone projects for the following reasons:

- The capacity threshold will no longer potentially distort the sizing/investment decisions of some developers (especially those that would have sized just under the existing threshold or who would have split a prospective project into multiple applications) and;
- The measure will help ensure that storage projects do not incur undue additional planning costs.

The overall magnitude of these savings will depend on several factors including the type and number of storage businesses affected.

### **Type of business affected**

There is uncertainty around the types of storage projects that are likely to deploy over the appraisal period. Based on the evidence gathered to date, this analysis assumes the following regarding the possible behavioural impacts of the preferred policy option:

- Decisions to invest in storage (rather than not) will not be directly affected by the proposed measure; and
- Decisions on how to size storage projects especially at the margin and whether to co-locate with other forms of generation may be affected by this policy.

Relative to the assumed counterfactual it is expected that the proposed measure could result in different one-off cost savings for different types of businesses looking to deploy storage. The different types of storage technologies that could be affected are summarised in Table 1 and the assumptions underpinning the cost estimates are outlined in the assumptions Table 2.

### **Number of businesses affected**

The expected number of storage projects deployed in any given year over the appraisal period is uncertain. The number is expected to vary over time as it will depend on future revenue streams and business models. BEIS's 2018 Energy Emissions Projections (EEP) and National Grid's 2019 Future Energy Scenarios both suggest that on average, around 500MW of storage

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could be deployed per annum ).<sup>24</sup> If the existing average size of 30MW<sup>25</sup> for prospective<sup>26</sup> storage projects (excluding pumped storage) remains broadly constant over the appraisal period this could mean that on average, around 20 projects could be commissioned per annum over this period. As a sense-check, there are currently around 40<sup>27</sup> known operational storage projects that have been deployed to date with the majority of these deployed in the last 2-3 years which is consistent with the assumption used in this analysis.

Given the uncertainty around the number of businesses that this measure is likely to affect per annum (as this will depend on future revenue streams and business models), it is considered reasonable to assume that around 50% of commissioned projects could be affected (or 10 projects per annum) with a range of 5 - 20 projects per annum to reflect this uncertainty.

## Impact

The relative likelihood of the deployment of the type of storage projects affected by this measure is uncertain as this will depend on several factors including future costs, revenues and business models. Hence, for this analysis it has been assumed that it is equally likely for the businesses affected by this measure to be Types A-F (see Table 1). This implies that for this analysis the average one-off cost savings for the representative business that is likely to be affected by this measure is assumed to be around £400,000 (with a range of between £200,000 and £800,000).<sup>28</sup>

Over the 10 year appraisal period, the total discounted net benefit to businesses is estimated to be £30m with a range of £10m-130m to reflect the uncertainties around the number and type of businesses that this policy is likely to affect as well as the uncertainties around the potential cost savings to these businesses.<sup>29</sup> The annual discounted savings are estimated to be around £3m.

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<sup>24</sup> BEIS, [Energy Emissions projections](#). 2018.

National Grid, Electricity Market Reform Delivery Body. 2019. [Future Energy Scenarios \(FES\) Two degrees scenario](#)

<sup>25</sup> BEIS, [Renewables Energy Planning Database](#) – June 2019

<sup>26</sup> Prospective definition: planning status either – submitted, granted, awaiting construction, under construction and if the capacity for the project is known.

<sup>27</sup> BEIS, [Renewables Energy Planning Database](#) – June 2019

<sup>28</sup> Undiscounted, 2018 prices

<sup>29</sup> Appraisal period 10 years (2020 – 2029) including one year of familiarisation, discount rate of 3.5% was used and figures are in 2018 prices and base year. The equivalent annualised cost to business is around negative £3m with a range of negative £1m-15m (2015 base year and 2014 prices).

**Table 1: Types of businesses likely to be affected by this measure**

	Type	Impact of preferred option	Average one-off cost savings for each business that falls under each type category
A	Small standalone storage project (< than the capacity threshold) in the counterfactual but chooses to co-locate as a larger project (that breaches the threshold)	<p><i>Infrastructure cost savings</i></p> <p>Behaviour change: incentivised to co-locate as a larger joint project and make more efficient use of site and grid capacity</p>	<p>£160k</p> <p>Range: (£60-380k)</p>
B	Large standalone storage project (> than the capacity threshold) in the do something and counterfactual scenarios	<p><i>Planning cost savings</i></p> <p>No behaviour change: saves on planning costs as a result of now having to obtain consent under the appropriate planning regime (local) rather than the national planning regime</p>	<p>£820k</p> <p>Range: (£410-1.64m)</p>
C	Two small standalone storage projects in the counterfactual (separated out to avoid triggering the threshold) but one large (> than the capacity threshold) project in the do something scenario	<p><i>Planning and infrastructure cost savings</i></p> <p>Behaviour change: incurs half the planning and infrastructure costs that it would have in the counterfactual</p>	<p>£340k</p> <p>Range: (£150-740k)</p>
D	Small storage project co-located with existing NSIP plant (> than the capacity threshold)	<p><i>Planning cost savings</i></p> <p>More likely to go through local planning route which could result in planning cost savings assumed to be equivalent to a local planning application</p>	<p>£180k</p> <p>Range (£90-360k)</p>
E	Co-located NSIP project in the do something scenario, where the storage element triggers the threshold in the counterfactual scenario	<p><i>Planning cost savings</i></p> <p>No behaviour change: incurs more appropriate planning costs (local instead of NSIP)</p>	<p>£820k</p> <p>Range (£410-1.64m)</p>
F	Standalone chooses to increase project size	<p><i>Negligible</i></p> <p>Behaviour change: Projects sized at the margin of the threshold in the counterfactual are more likely to be this type, but the impact on these projects is expected to be negligible because in either scenario local planning fees will be incurred with the key benefit being a reduction in the sizing distortions at the margin so that businesses can choose to size above the threshold if it is profitable to do so.</p>	<p>Negligible</p>



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## **Wider Impacts and Transfers**

This measure may result in an indirect benefit in the form of increased investor confidence for the storage sector. This is because it will help to demonstrate that the Government is committed to developing a more appropriate, consistent and supportive regulatory framework for storage especially for those looking to deploy larger standalone and/or co-located projects in England and Wales. It has not been possible to quantify this potential indirect benefit of increased investor confidence. Responses to the previous consultation have also referred to this potential impact and it is therefore considered reasonable to assume that this would have a net beneficial impact.

The number of applications consented by local planners and national planners may change, and the total net change will depend on the types of storage projects that come forward. Overall the impact on broader Government of this measure is expected to be zero or broadly negligible given that the planning fees that are charged by both national and local planners are expected to cover the resources required to consent the projects.

Finally, it is expected that the cost of delivering the legislation will be absorbed within existing resources. Consequently, the additional costs to broader Government are also expected to be zero or negligible.

## **Impacts on small businesses**

The proposed measure will apply to all electricity storage developers regardless of the size of the business. This measure is not expected to result in a disproportionate impact on small businesses.

## **Key assumptions and uncertainties for initial assessment**

As outlined in the previous sections, the key uncertainties related to this analysis are the number and type of businesses that are likely to be affected as well as the associated cost savings to these businesses. Ranges have been used to reflect these uncertainties where appropriate. The level of analysis that supports the preferred option set out in this document is considered proportionate and where possible has incorporated feedback from the previous consultation. Any additional evidence provided by stakeholders will be incorporated into the updated analysis.

**Table 3: Key inputs, assumptions and uncertainties**

Assumptions/ inputs	Detail	Source
Appraisal period	1 year of familiarisation (2020) and 10 years (2020–2029) for policy appraisal	Standard assumption
Discount rate	3.5%	Standard assumption
Price Base/Base year	2018 unless otherwise stated	Standard assumption
Familiarisation costs	<p>Estimated number of parties who would likely read the legislation: 150</p> <p>Additional resource required to read and understand the legislation: 1 full day (8 hours) of additional legal and managerial resource</p> <p>Wage rate £65 per hour</p>	<p>BEIS estimate for the number of parties likely to incur familiarisation costs is based on the number of responses (on storage) to the Government and Regulator’s Call for Evidence in 2016:  <a href="https://www.ofgem.gov.uk/system/files/docs/2017/07/ssf_plan_-_summaries-responses.pdf">https://www.ofgem.gov.uk/system/files/docs/2017/07/ssf_plan_-_summaries-responses.pdf</a></p> <p>Wage costs based on ONS – ASHE: Table 14.5a (legal profession and corporate managers and directors at the 90th percentile):  <a href="https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/datasets/occupation4digitsoc2010ashetable14">https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/datasets/occupation4digitsoc2010ashetable14</a></p> <p>Non-wage cost uplift factor of 20% has been applied to account for employer’s national insurance contributions, superannuation and accommodation costs.</p>
Planning costs	<p>Additional cost of going through the NSIP regime rather than the TCPA system per project: £800,000 (Range £400,000-£1,600,000).</p> <p>This assumption is based on an average estimate of planning costs for &lt;50MW storage projects (£200,000) and an average planning cost estimate for &gt;50MW storage projects (£1,000,000). These estimates were used as a proxy for the possible additional planning costs (due to possible additional fees, resource required to produce applications and time to obtain full consent which could be in the order of 1-2 years) for larger co-located/standalone storage projects that breach the NSIP threshold.</p> <p>In reality these costs will depend on a number of factors that are project specific, including but not limited to: the number and type of permits/consents, consultations, environmental assessments and the number planning inspectors required. A range (+/-100% on the central estimate) has been used to reflect this uncertainty.</p> <p>We are however seeking views on this and welcome any alternative views on the potential additional costs of obtaining consent under the NSIP regime rather than the TCPA system for larger co-located/standalone storage projects that are likely to be deployed going forward.</p>	BEIS estimates based on internal figures

<p>Infrastructure costs</p>	<p>Infrastructure cost savings per co-located project: £200,000 (range £100,000-400,000).</p> <p>This assumption is based on half the estimated range of the possible infrastructure costs for a 50MW/50MWh storage project to illustrate the potential cost savings for a co-located project relative to a standalone project.</p> <p>These costs are expected to vary between different types of storage projects, a range (+/-100% on the central estimate) has been used to reflect some of this uncertainty. We are however seeking views on this and welcome any alternative views on the potential infrastructure cost savings for co-located projects.</p>	<p>BEIS estimates based on internal figures</p>
<p>Number and type of storage projects affected by the proposed policy</p>	<p>Assumed number of storage projects affected by the preferred option: 10 (range around 5-20) per annum. For this analysis it has been assumed that half of the estimated number of projects (around 20) that are commissioned in each year could be affected by this policy.</p> <p>The number and type of projects affected by this policy in each year of the appraisal period is uncertain. There may be more projects or fewer projects than is currently assumed in the central scenario. A range has been used to capture some of this uncertainty.</p> <p>Table 1 outlined the key type of storage projects that could be affected by this measure. However, the likely incidence of each type of project is uncertain as this will depend on future costs, revenues and business models. Hence, for this analysis it has been assumed that each type of storage project is equally likely to be affected by this measure.</p>	<p>Sources underlying the estimate</p> <p><b>Average annual storage deployment to 2030: 500MW</b></p> <p>National Grid, 2019 Future Energy Scenarios (FES), Data Workbook, Two degrees:<sup>30</sup>  <a href="http://fes.nationalgrid.com/fes-document/">http://fes.nationalgrid.com/fes-document/</a></p> <p>2018 Energy and Emissions Projections, Annex H/Annex I:<sup>31</sup>  <a href="https://www.gov.uk/government/publications/updated-energy-and-emissions-projections-2018">https://www.gov.uk/government/publications/updated-energy-and-emissions-projections-2018</a></p> <p><b>Average size of prospective<sup>32</sup> storage projects: 30MW</b></p> <p>Around 20 storage projects are assumed to be commissioned per annum on average. This was based on the estimate of around 500MW of storage that could be deployed per annum on average out to 2030 (given an average size assumption of 30MW based on prospective storage projects in the REPD).<sup>33</sup></p> <p>Renewables Energy Planning Database (REPD), June 2019:  <a href="https://www.gov.uk/government/publications/renewable-energy-planning-database-monthly-extract">https://www.gov.uk/government/publications/renewable-energy-planning-database-monthly-extract</a></p>

<sup>30</sup> Although this policy will only apply in England and Wales, it is considered reasonable to use these estimates given that most prospective storage projects are expected to be deployed in England.

<sup>31</sup> As above.

<sup>32</sup> In this analysis the term 'prospective' is used to denote projects with a planning status of either 'submitted', 'granted', 'awaiting construction' or 'under construction', where the capacity is known.

<sup>33</sup> For context, around 40 known storage projects have been deployed in England/Wales with a maximum outturn annual deployment figure of around 15 projects thus far.

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## Annex B: List of respondents

- Anesco Ltd
- Anglo American
- Capbal
- Cleve Hill Solar Park Ltd and New Stream Renewables Ltd.
- EDF Energy
- Electricity Storage Network
- Energy UK
- Greater London Authority
- Innogy Renewables UK Limited
- National Grid
- National Infrastructure Planning Association
- PCAH
- Pivot Power
- Private response 1
- Private response 2
- Private response 3
- Private response 4
- Private response 5
- Private response 6
- Private response 7
- Renewable Energy Association
- Renewable UK
- RWE Generation UK plc
- Scottish Power
- Solar Trade Association
- Storelectric
- University of Southampton
- Stratford-on-Avon District Council
- The Law Society
- Wartsila Energy Business
- Zenobe Energy Ltd

This consultation's available from: <https://www.gov.uk/government/consultations/the-treatment-of-electricity-storage-within-the-planning-system>

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