Common evaluation methodology and tool

CLIENT: Energy Networks Association

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Version History

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1 Introduction

1.1 Context

All the Distribution Network Operators (DNOs) in Great Britain have committed to 'market testing' potential flexibility solutions as an alternative means of releasing capacity compared to traditional asset reinforcement. In aggregate, DNOs have procured around [x] MW of flexibility thus far. Each DNO has developed its own methodology for decision making, and there is currently a lack of standardisation of approach.

The development of a common evaluation methodology will provide transparency on how decisions are made to choose the most suitable solution to meet network needs (as defined by the ENA[1]) between traditional network asset solutions (reinforcement) and procuring flexibility services from generators, storage operators or demand side response. It addresses a key action outlined in the Ofgem and BEIS Open Letter to the Energy Networks Association (ENA)[2] in July 2019. .

In October 2019, a joint workshop of the Electricity Regulation Group and Open Networks members committed to developing a common evaluation methodology (CEM) for network investment decisions, to be used by all DNOs from April 2021 for the remainder of RIIO ED1 and beyond. It was agreed that this work would be progressed within the Open Networks project under Workstream 1A (Flexibility Services) and this is an integral part of this pre-procurement decision-making process. The CEM would be used to decide which intervention to procure to mitigate a reinforcement need, whether that be a flexibility service, an asset reinforcement or an alternative innovative solution.

The objective is to align approaches across the DNOs and create greater transparency. In turn, this should provide greater visibility and confidence amongst flexibility providers and help stimulate volumes and competition in the market, ultimately reducing costs for network customers.

1.2 Scope of work

1.2.1 Purpose

The CEM and supporting Excel based tool (CEM tool) will deliver consistency in how DNOs evaluate network investment options, and supports the ENA's wider goal to facilitate visibility and accessibility and ensure network operators conduct procurement in an open and transparent manner.

1.2.2 Scope of this report

This report contains a description of the framework and key areas that make up the CEM. Table 1 below sets out how the elements of the methodology come together.

[1] http://www.energynetworks.org/assets/files/ON-WS1A-Product%20Definitions%20Updated-PUBLISHED.pdf

[2] https://www.ofgem.gov.uk/publications-and-updates/open-letter-ena-open-networks-project-ofgem-and-beis

The ENA has thus far defined four "Flexibility Products" that can meet specific network needs. The CEM tool is built to enable DNOs to make investment decisions when comparing Flexibility Products to traditional network interventions. In the next section, we describe how the methodology and tool can be used to evaluate these Flexibility Products (Sustain, Secure, Dynamic, Restore), as well as options for alleviating export constraints where curtailment of renewables is occurring.

There is some functionality within the methodology and tool that all DNOs will be expected to use consistently through every decision, which is referred to in this report as "core functionality". There is some additional functionality built in the model that is optional for DNOs to use at this stage in time to guide their decision-making, which is referred to in this report as "sandbox functionality". We expect that the degree of commonality will increase over time, as determined by the ongoing governance arrangements, and some of this sandbox functionality may become core. Likewise, there may be greater standardisation of input assumptions across DNOs in the future.

Table 1 - Key areas of the CEM

Key area	Description
Options the model is set to consider	
Outlines the purpose of the methodology and the key use cases for DNOs to put the methodology and tool to use.	
Defining the service requirement	
Load growth scenarios	As DNOs are assessing their network needs, they will utilise a scenario or a set of scenarios to determine what their needs would be. These scenarios are key to determine the volume of flex required into the future.
Flexibility requirements	One of the main uses cases for the CEM is the evaluation of flexibility as a network option. There is specific functionality within the tool for DNOs to input their flexibility requirements into the evaluation of options. This can be tied to the load growth scenarios, or can be input manually.
Point of view of economic assessment	
Ofgem CBA	The is built on the basis of the Ofgem CBA tool for network investment decisions[3], and as such there is consistency between the tool built and used by DNOs today. There are a number of inputs and values that will remain consistent from the original CBA, and some areas of the methodology that have been updated as a part of the scope of this project.

[3] https://www.ofgem.gov.uk/ofgem-publications/47147/riioed1sconbusinessplans.pdf

Key area	Description
Time horizon	The methodology sets out to analyse the discounted cash flow of each solution over the life time of an asset, or 45 years. The discounted cash flow will start at the beginning of the deferral period (given that an alternative solution would be used for the duration of the deferral period), and the discounted cash flow will extend for 45 years from the end of the deferral period (given that the asset would be utilised fully from that point in time). There is a transition in the treatment of depreciation in ED1 with a gradual transition to 45-year asset lives, which is complete by 2022/23 but means that depreciation is different in each year. In ED2, this will stay at a 45-year asset life, and is how asset lives are treated within this tool.
Totex treatment	Within the Ofgem CBA, the sharing factor from the Totex Incentive Mechanism (TIM) is applied to all costs. The CEM tool will follow the Ofgem CBA template, and not explicitly include the impact of the TIM sharing factor in cash flows.
Assessment of options	
Costs	DNOs will input the appropriate costs across the baseline scenario and all network intervention scenarios.
Value of reinforcement deferral	A key element of value within the alternative assessment is the value of deferring network reinforcement into the future. When comparing two scenarios (a baseline and an alternative), in many cases the alternative solution will involve the option to defer the decision to reinforce the network to some point in the future, and use flexibility in the meantime. Through demonstrating the potential future value across a range of scenarios, this methodology allows DNOs to explore the potential option value that is created in the future by decisions that they would make today. There is a facility within the tool to explore this option value further.
Wider network and societal impacts	The methodology considers some of the wider network and societal impacts of the different network interventions. This includes the impact of network losses, potential asset condition driven changes in CIs and CMLs, carbon emissions, and a range of other impacts measured in the original Ofgem CBA tool. Some of these are required for the core function of the model, and others are included as sandbox functionality for optional use.
Outputs	

Key area	Description
The outputs from CEM tool include: • Table and charts showing, for each scenario and for a range of years, the benefit of flexibility at a specified price • A table showing the maximum ('ceiling') flexibility price that could be justified given the benefits of deferral • Detailed CBA results for a given number of deferral years for a given scenario • Additional insights and reporting around those results, as demonstrated in detail in Section 6.2	

2 Options the model is set to consider

Consistent with the Ofgem CBA template, DNOs must clearly identify the range of options that were considered to meet the specific network need. We consider the baseline scenario to be that which involves the minimum level of intervention that would be required to remain compliant with all relevant security standards. For each investment decision, the DNO should clearly explain in supporting commentary boxes and tabs in the CEM tool, what assumptions have been used and which regulations the minimum level of intervention relates to, as well as any calculations that have been done external to the tool.

There are no direct benefits (i.e. avoided costs) accrued under the baseline scenario and these cells have been blanked out in the CEM tool. Some of the wider and societal impacts will still be accrued under the baseline scenario (e.g. losses, carbon) and these should be taken into account when calculating the baseline NPV. The NPV of each of the options identified within the CBA is compared against the Baseline NPV.

We have included a section in the CEM tool for DNOs to identify and clearly list the options they have considered for each investment decision. This list of options should include those that have been considered and rejected before full costing, and the shortlist of those options that have been considered and costed, with a clear rationale for including/excluding them, which is to be summarised (i.e. a few lines or bullets) in the comment box.

One of the primary use cases for this tool will be to evaluate investment in flexibility services. When utilising the methodology for flexibility, the model aligns with the standard definitions for flexibility products as defined by the ENA[4] and in

[4] http://www.energynetworks.org/assets/files/ON-WS1A-Product%20Definitions%20Updated-PUBLISHED.pdf

Table 2 below. The methodology assumes that the flexibility products are compared to the baseline scenario of network investment.

The model is built as a cost and benefit comparison tool for all DNOs to utilise when making network investment decisions on an asset by asset level basis. Given that some network interventions will meet more than one network need, there may be a need to utilise multiple instances of the CEM tool to complete analysis across multiple network needs.

Table 2 - DNO Flexibility Products and Baselines

Service	Scheduled Constraint Management	Pre-Fault Constraint Management		Post-Fault Constraint Management	Restoration Support
		Manual	Automatic		
Flexibility Product	Sustain	Secure		Dynamic	Restore
Baseline	Reinforcement deferral				Customer Interruptions (CIs)/Customer Minutes Lost (CMLs)/Cost of stand-by generation

3 Defining the service requirements

3.1 Load growth scenarios

As a part of network planning processes, DNOs will have individual approaches to define load growth scenarios, and assess network needs against alternative scenarios.

As well as the Distribution Future Energy Scenarios (DFES)[5] developed by each DNO, they may also have a best view.

For all flexibility products that have network reinforcement as their baseline[6], these scenarios provide DNOs with a view of what the annual exceedance at the particular asset that is under assessment the amount by which electricity flows will exceed capacity, will be for a particular asset across a range of potential outcomes. There are a number of inputs that are required to determine the timeframe and windows for the decision being made. The "current year" is the year in which the decision to reinforce needs to be taken. Within the input section of the tool, DNOs will manually input the current maximum capacity for the asset (e.g. 30 MVA) and the forward-looking peak network load across the range of scenarios that are being considered within the tool. Peak load is then compared to the current asset capacity to determine the exceedance per year per scenario.

If the use case does not include reinforcement deferral (e.g. using flexibility to reduce CI/CML risk), the user can disable the model logic relating to network exceedance. The user then inputs the flexibility requirements and the Social Impacts manually.

3.2 Flexibility requirements

For all use cases where DNOs will be evaluating flexibility as a network option, they will be required to input the annual flexibility requirements (MVA) per year per scenario. The model assumes that enough flexibility is procured to cover both the exceedance and any over-procurement required. The user specifies the over-procurement factor (e.g. 10%) which, conceptually, addresses two sources of uncertainty: uncertainty over the peak network load forecast, and uncertainty around the reliability of delivery by the flexibility providers.

There are two options for inputting the required flexibility volume:

1. **Automatic:** The model assumes that flexibility volume is procured to cover the exceedance and the over-procurement factor
2. **Manual:** The user specifies the flexibility volume.

In addition, the user needs to input manually, for each scenario and year, the following:

- The number of hours per day the flexibility service will need to be available
- The number of days per year the flexibility service will need to be available
- The number of dispatch (utilisation) events expected each year
- The average dispatch (utilisation) duration in hours

[5] https://www.energynetworks.org/assets/files/WS1B%20Product%202%20Scenarios%20Publication%20Timeline.pdf

[6] The differences for other flexibility use cases have been explained in Table 3.

The user also specifies the proportion of available flexibility they expect to utilise on average. For example, if 1MW of flexibility is available, the DNO may only dispatch only 0.2MW of that flexibility when the exceedance is small, but up to 1MW when the exceedance is at its maximum. This will depend on the way in which the DNO dispatches these assets, and whether there is a non-zero utilisation cost associated with doing so.

There is an empty tab within the model for DNOs to include any justification and/or assumptions around the external calculations for availability and utilisation that are used within the model.

4 Basis of economic assessment

4.1 Standard inputs

The tool that has been developed is built to replicate how costs and benefits are realised by DNOs through the price control framework. As such, it is largely based on the Ofgem CBA tool, and as this framework evolves, the CEM tool should evolve as well.

There are a number of inputs and values that will remain consistent from the original Ofgem CBA, and a few key areas of the methodology that have been updated as a part of the scope of this project.

The standard inputs from the Ofgem CBA that this methodology uses are listed in Table 3 below. The non-standard inputs (e.g. costs, wider and societal impacts) are explained in detail in Section 5.

Table 3 - Standard inputs from Ofgem CBA

Input	Description
Customer Interruptions (CIs)	In order to evaluate certain asset condition related impacts of network interventions and also to evaluate the Restore flexibility products there is a need to quantify and value CIs. The CEM tool utilises the Ofgem standardised value of £s per interruption. DNOs are able to manually insert the number of interruptions into the tool.
Customer Minutes Lost (CMLs)	In order to evaluate certain asset condition related impacts on network interventions, there is a need to quantify and value CMLs. The CEM tool will utilise the Ofgem standardised value of £s per minute lost. DNOs will be able to manually insert the number of minutes lost into the tool.
Weighted Average Cost of Capital (WACC)	This value will be unique to each DNO, and is used to convert capital costs into annual costs using each individual DNO's cost of capital.
Discount rates	As defined by the Treasury's Green Book[7], this model uses the Social Time Preference Rate (STPR) of 3.5% (less than or equal to 30 years); 3% (greater than 30 years) to discount all costs and benefits, except safety where the Health Discount Rate (HDR) of 1.5% (less than or equal to 30 years); 1.2857% (greater than 30 years) should be used.
Losses value	Where expenditures are justified using the reduction of electricity lost, we have utilised the standardised value for £/MWh lost used within the Ofgem CBA, which is based on average wholesale electricity prices in 2016/17 less the EU Emissions Trading Scheme (ETS) cost of carbon - which we are stripping out of the wholesale price, given carbon is reported separately, as described below. .

[7] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/685903/The_Green_Book.pdf

Input	Description
Carbon prices	In order to calculate the cost of carbon associated with losses, the CEM tool utilises the BEIS traded carbon price[8] (in line with the Ofgem CBA). The CEM tool remains consistent with the Ofgem CBA to quantify carbon emissions that result from network losses. This is included as core functionality within the tool, but explicit consideration of carbon emissions of alternative network interventions is included within the sandbox functionality.
Cost per injury/fatality	In some use cases, DNOs may need to quantify benefits associated with reducing or preventing fatalities and injuries. The treatment in the CEM too is consistent with the Ofgem CBA and requires DNOs to draw on guidance set out in HM Treasury Green Book[9] and the HSE[10]. However, for the purpose of evaluating flexibility solutions there is no expectation that these sort of inputs would be required for the analysis.
CPIH Index	The tool utilises the CPIH index[11] in line with the Ofgem CBA.

4.2 Time horizon

The methodology sets out to analyse the discounted cash flow of each solution over the life time of an asset, or 45 years. The discounted cash flow will start at the beginning of the deferral period (given that an alternative solution would be used for the duration of the deferral period), and the discounted cash flow will extend for 45 years from the end of the deferral period (given that the asset would be utilised fully from that point in time).

There is a transition in the treatment of depreciation in ED1 with a gradual transition to 45-year asset lives, which is complete by 2022/23 but means that depreciation is different in each year. In ED2, this will stay at a 45-year asset life, and is how asset lives are treated within this tool.

4.3 Totex treatment

Within the Ofgem CBA, the sharing factor from the Totex Incentive Mechanism (TIM) is applied to all costs. The CEM tool follows the Ofgem CBA template, and does not explicitly include the impact of the TIM sharing factor in the evaluation logic, since the TIM is applied equally to the different solution options.

[8] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/48184/3136-guide-carbon-valuation-methodology.pdf

[9] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/685903/The_Green_Book.pdf

[10] https://www.hse.gov.uk/economics/eauappraisal.htm

[11] https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/l522/mm23

5 Assessment of options

5.1 Costs

5.1.1 Baseline costs

In order to evaluate the costs and benefits of different network options, the model requires DNOs to input the costs of the baseline intervention. It is assumed that the baseline will usually involve asset reinforcement, but the user can specify other costs (e.g. those associated with losses, CI/CMLs or carbon emissions), provided they can be deferred (or avoided) through the use of flexibility.

5.1.2 Alternative intervention costs

In the alternative assessment, these values should reflect the cost to the DNO of the alternative solution that is being assessed. In the case of flexibility, the user can either specify the volume and unit cost of flexibility being assumed, or can input the volume of flexibility required and allow the model to find the maximum price of the flexibility solution, beyond which it is no longer cost effective to defer the reinforcement (i.e. a net cost benefit of zero).

5.2 Value of reinforcement deferral

The value of the Secure, Sustain and Dynamic flexibility products is primarily derived from the time value of money from deferring large capex expenditure associated with network reinforcement. The CEM tool compares the Net Present Value (NPV) of discounted cash flows of the baseline (reinforcement scenario) with the alternative (flexibility solution) scenario. The CEM tool provides a view of the potential outcomes in terms of NPV for each set of forward-looking load growth scenarios. The outcomes of this analysis are demonstrated below.

Figure 1 - Discounted cash flow charts - baseline vs best view

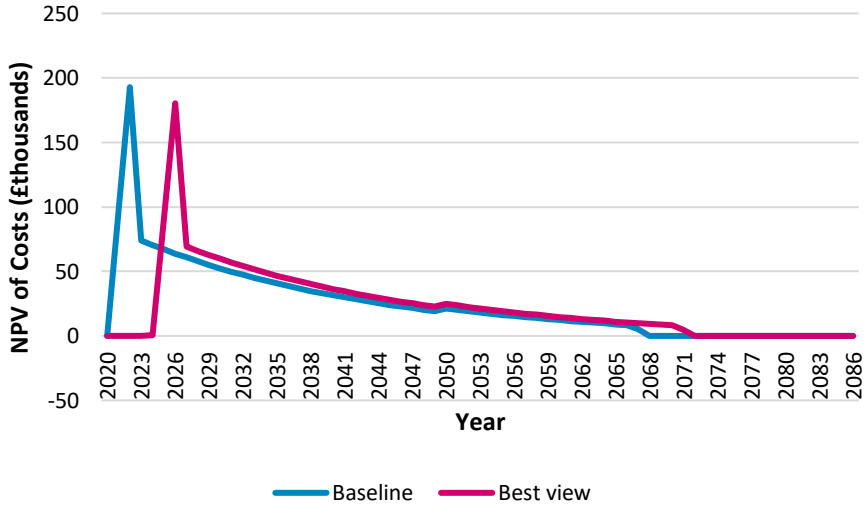
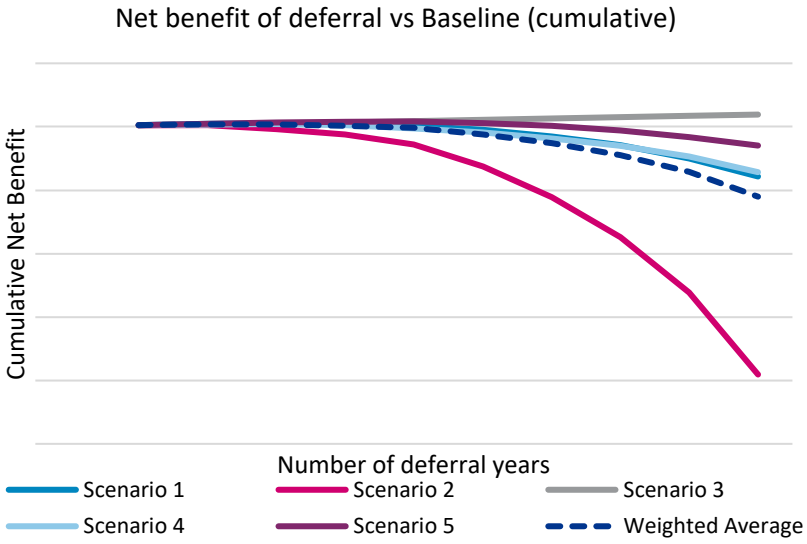


Figure 2 - Net benefit of reinforcement deferral vs the baseline (cumulative)



Through demonstrating the potential outcomes across a range of scenarios, this methodology allows DNOs to explore the potential option value that is created in the future by decisions that they would make today. There is functionality within the CEM tool that enables DNOs to further explore this option value, by applying probabilities to each load growth scenario, basing decisions on an expected result rather than a single scenario. In following this probabilistic approach, DNOs are able to better understand what future option value they might be able to access through an investment decision made today, or to be used as a part of a lowest expected cost strategy. However, applying probabilities to scenarios involves a degree of subjectivity which needs to be recognised.

In the core functionality of the model, DNOs input the number of years of reinforcement deferral that is possible through flexibility solutions. There is an additional option within the sandbox functionality that provides a view of the optimal number of years of deferral based on network costs across a range of scenarios.

5.3 Wider network and societal impacts

5.3.1 Impact on losses

Different network interventions will have an impact on the amount of electricity lost whilst transporting through the network. The tool accounts for this by utilising the value that is standardised and set by Ofgem in £/MWh, and allowing for DNOs to manually input the volume of losses that they would face with the specific network intervention that is being assessed. The Ofgem input for the £/MWh losses is included in the fixed inputs tab.

DNOs are required to input the expected reduction in losses for the baseline scenario as well as all alternative scenarios. The change in expected losses is therefore factored into the assessment of alternative flexibility solutions.

5.3.2 Impact on asset health

In some cases, asset condition related replacement will need to happen. It is assumed that reinforcement cannot be put off indefinitely, and as such the model allows for reinforcement deferral to be limited to a specific date, at which point it will be assumed that flexibility is no longer an option and reinforcement occurs.

DNOs can choose whether to use this functionality within the model, depending on the circumstance. They can do so by inputting the date that condition related replacement would be required.

In other cases, there is an option in the model for when DNOs would want to do a like for like asset replacement at some point in the future. There is no calculation captured within the model to quantify the CIs and CMLs, and it was agreed that DNOs would work together in parallel to agree a common approach to quantifying this.

In order to quantify CIs and CMLs (in the method appropriate for the use case being considered, as explained in Table 4), DNOs are expected to manually input the CIs and CMLs that are associated with asset reinforcement into this section of the model. To account for this, there is a placeholder in the model for DNOs to account for the increase in CIs and CMLs that would be expected from not reinforcing early on, and instead reinforcing down the line. The CEM tool captures the time period between the baseline (reinforcing early) and the alternative (reinforcing down the line), and can account for the increase in CIs/CMLs between the two. The value of CIs/CMLs is based on the Ofgem values.

In some specific cases, there will be an interaction between network reinforcement and asset replacement activities that should be reflected in the model. There may be some instances in which qualitative judgments are made as to how to plan network reinforcement in a coordinated way. These instances would be limited to exceptional cases (e.g. larger, more complex reinforcement programmes) and should be documented clearly, demonstrating how and why the approach might deviate from a standard reinforcement approach. The guidance on how to document this would be to first complete a check on whether the asset needs replacing in the near future. If so, complete a check on the benefits of reinforcing at the same time. This analysis would be completed in parallel to the commercial analysis, and recorded for transparency and completeness.

Whilst the interaction between reinforcement and replacement can be complex, the model allows aspects to be represented quantitatively, as discussed below.

5.3.3 Carbon emissions

The CEM tool remains consistent with the Ofgem CBA to quantify carbon emissions that result from network losses. This is included as core functionality within the tool.

The option for DNOs to explicitly include the carbon value of different network solutions is included as sandbox functionality in the tool. In some use cases, there may be additional carbon emissions from alternative network interventions (e.g. using a diesel generator for flexibility). There is a series of manual input options for DNOs to incorporate into the model at a point in time when there is an agreed methodology for DNOs to follow when quantifying carbon emissions of different network interventions.

The tool calculates the amount of carbon emissions associated with losses, using the standard Ofgem assumptions.

There is also an option for DNOs to manually incorporate any other changes in emissions associated with flexibility solutions, such as emissions from flexible generators, or reductions in the curtailment of renewables. Input assumptions to support this would be calculated outside of the tool and input manually where appropriate.

5.3.4 Other societal impacts

There is a range of other societal impacts that are included in the Ofgem CBA template, and captured in the CEM tool. These are unlikely to be affected by the choice of network solution, and hence are not expected to be used. However, there is an empty tab within the model for DNOs to include any justification and/or assumptions around the external calculations for all societal impacts where appropriate.

5.4 Key differences in assessment of options

Through discussions with DNOs, there is an understanding that the primary use case for this methodology and tool will be for DNOs to compare traditional network investment to the use of Flexibility Products where network reinforcement would be the baseline scenario (i.e. the Sustain, Secure and Dynamic Flexibility Products). As such, the methodology and report have been developed with this in mind. However, this methodology and tool can also be used to test alternative investment use cases, such as the Restore Flexibility Product, and alternatives for managing export constraints/curtailment. The differences in the ways that these examples would be applied to the methodology have been explained in Table 4 below.

Table 4 - Additional use cases for CEM methodology

Use Case	Key differences in application of methodology
Flexibility – Sustain, Secure and Dynamic products *Using flexibility to defer network reinforcement*	• Base case is reinforcement, triggered by, for example: • Expected demand growth in an import-constrained area • Expected net export growth (e.g. fall-off in local I&C demand) in an export-constrained area • Model allows up to 5 network load growth scenarios to be tested • Model shows the benefit of deferring that reinforcement by procuring flex for 1 or more years, along with associated benefits (e.g. losses, carbon, CI/CML) • User specifies the flex that would need to be procured to achieve each year of deferral • Output shown in two ways: ○ ***Net benefit of deferral*** by n years given a pre-specified flexibility price (availability and utilisation). User can see both the benefit of deferring **by n years** and the benefit of deferring by **each additional year** ○ ***Maximum flexibility price*** that can be justified by reinforcement and associated costs/benefits. Again, this can be seen as the maximum price for, say, a 3-year contract, or the maximum price that can be justified in the 3rd year of deferral
Flexibility – Restore product *Using flexibility to manage the re-energisation of the network, reducing the number and duration of customer interruptions*	• The key difference for the Restore product is that the counterfactual/baseline scenario is the cost of CIs/CMLs and/or the cost of stand-by generation, rather than the cost of network reinforcement • Because this product does not relate to network reinforcement, there is no input required into the load growth scenarios • Manual inputs would be required to determine the flexibility requirements, because the flexibility requirements are not driven by the network asset exceedance • There would be zero capex for the baseline approach • For CIs/CMLs inputs – there are two approaches the user could take 1) input zero for the baseline and the incremental change in CIs/CMLs in the alternative, or 2) input the absolute number of CIs and CMLs in the baseline and alternative

Use Case	Key differences in application of methodology
Flexible connections – current charging regime *Generators connecting to export-constrained networks incur reinforcement costs up to 2 voltage levels above the point of connection, but the DNO incurs any additional costs. The assumption is that this would be facilitated through ANM, where ANM curtails export at network peak loads, allowing faster and cheaper connections*	• The CEM tool should only be used to evaluate options against the DNO's share of reinforcement costs • The baseline is network reinforcement, driven by an export constraint and the connection of exporting assets (e.g. Distributed Generation or batteries) • The user will need to enter the revised DNO-attributable reinforcement cost profile under the ANM scenario(s) • All other inputs within the model would remain the same, assuming that the TIM would be applied in the same way

Flexible connections – shallow charging regime *As above, but assume the DNO incurs all reinforcement costs above Point of Connection, and has to compensate for curtailment*	• As above, except for the following changes:
	  ○ DNO incurs more/all reinforcement costs in the baseline and (if any) in the ANM scenario
	  ○ DNO incurs flex costs corresponding to the expected bids for curtailment

Future technology (e.g. dynamic network reconfiguration)	• The CEM tool is able to accommodate any consideration of future technology applications, and provides options for users to input the appropriate costs into the CEM tool

6 Outputs

6.1 Results

The CEM tool displays results in three ways:

1. **Ceiling price for flexibility:** For a given set of baseline costs, the model shows the maximum cost of the flexibility solution before it becomes less economic than the traditional asset solution.
2. **Net benefit at the specified flexibility price:** For a given set of baseline costs, and a user-specified cost of flexibly (availability, utilisation and annual fixed cost), the model shows the net benefit of the flexibility solution over the baseline.
3. **Summary CBA:** The user specifies the number of years it is considering opting for flexibility, and can see the CBA breakdown for a particular scenario, showing the relative impact on reinforcement costs, flexibility, losses, emissions, CI/CMLs and other societal costs.

6.2 Additional reporting and insights

It is expected that the user will be able to use the results tabs to make decisions about whether to use flexibility.

In order to support the investment decisions that DNOs will make and to facilitate a standardised way for DNOs to evaluate the costs and benefits of a set of options, a reporting tab contains the following:

- Summary statistics around the use of flexibility, e.g. the level of over-procurement
- Summary tables showing, for example, the maximum potential benefit of flexibility, and the optimal number of years of baseline cost deferral
- Insights around the use of flex under a lowest expected cost strategy (for which the user will need to assign probabilities to each scenario)