

CBA Option 1 - SSEH **SSEH - Basic Replacement Only - sensitivity check against 10 year refurb life extension**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.07 |
| 24 | -£0.06 |
| 32 | -£0.05 |
| 45 | -£0.04 |

first year of investment out flow |

| Calculation | Units | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | |
|--|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 |
| Investment | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) = investment + DNO benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | |
| Capitalised investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (3)=(1)x(2) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (4)=(1)-(3) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | £m | | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | |
| (5)=Σ(5) _t | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Cost of Capital | £m | (0.00) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| (6)=avg[(6 ^{cl}), (6 ^{op})]xWACC | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Net DNO benefits | £m | (0.07) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| (7)=(4)+(5)+(6) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal benefits (£m) i.e. costs avoided | | | | | | | | | | | | | | | | | | | | | | | | | |
| Losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| CO2e associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total societal net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Net benefits | £m | (0.07) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Discount factor | =1/[(1+SRTP)^n] | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | 0.44 |
| Discount factor (safety) | =1/[(1+PTPR)^n] | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | 0.70 |
| Discounted net benefits | £m | (0.07) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cumulative discounted net benefits | £m | (0.07) | (0.08) | (0.09) | (0.10) | (0.11) | (0.12) | (0.12) | (0.13) | (0.14) | (0.08) | (0.08) | (0.08) | (0.08) | (0.08) | (0.07) | (0.07) | (0.07) | (0.07) | (0.07) | (0.07) | (0.07) | (0.06) | (0.06) | (0.06) |

Non-DNO (eg societal) benefits

Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers.

| Societal net benefits (impact relative to business as usual scenario) | Units | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 | |
|---|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|
| Reduced losses | MWh | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions associated with losses | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors

<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>

Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.

All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpcheck.htm>

CBA Option 1.1 - SSEH **SSEH - Basic Replacement Only - sensitivity check against 5 year refurb life extension**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.02 |
| 24 | -£0.01 |
| 32 | -£0.01 |
| 45 | -£0.00 |

first year of investment out flow |

| | | | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | |
|--|---|-----------------|---|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|-------|-------|------|
| Calculation | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| | | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 |
| Investment | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | (1) = investment + DNO benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | (2) | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | |
| Capitalised investment | (3)=(1)x(2) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | (4)=(1)-(3) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | (5)=Σ(5) _t | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Cost of Capital | (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Net DNO benefits | (7)=(4)+(5)+(6) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal benefits (£m) i.e. costs avoided | Losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | CO2e associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total societal net benefits | | £m | | | | | | | | | | | | | | | | | | | | | | | |
| | Net benefits | | £m | | | | | | | | | | | | | | | | | | | | | | | |
| | Discount factor | =1/[(1+SRTP)^n] | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 |
| Discount factor (safety) | =1/[(1+PTPR)^n] | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | 0.70 |
| Discounted net benefits | | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Cumulative discounted net benefits | | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Non-DNO (eg societal) benefits | | | Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | |
| Societal net benefits (impact relative to business as usual scenario) | Reduced losses | MWh | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions associated with losses | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors
<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
 Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
 All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpccheck.htm>

CBA Option 1.2 - SSEH **SSEH - Basic Replacement Only - sensitivity check against 3 year refurb life extension**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | £0.00 |
| 24 | £0.01 |
| 32 | £0.01 |
| 45 | £0.02 |

first year of investment out flow |

| Calculation | Units | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | | |
|--|-------|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------|
| | | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 | |
| Investment | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) = investment + DNO benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | |
| Capitalised investment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| (3)=(1)x(2) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| (4)=(1)-(3) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | £m | | (0.00) | (0.00) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| (5)=Σ(5) _t | £m | | (0.00) | (0.01) | (0.00) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| Cost of Capital | £m | (0.00) | (0.01) | (0.00) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | £m | (0.00) | (0.01) | (0.00) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| Total Net DNO benefits | £m | (0.07) | (0.01) | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| (7)=(4)+(5)+(6) | £m | (0.07) | (0.01) | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| Societal benefits (£m) i.e. costs avoided | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| CO2e associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total societal net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Net benefits | £m | (0.07) | (0.01) | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| Discount factor | | =1/[(1+SRTP)^n] | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | 0.44 |
| Discount factor (safety) | | =1/[(1+PTPR)^n] | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | 0.70 |
| Discounted net benefits | £m | | (0.07) | (0.01) | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Cumulative discounted net benefits | £m | | (0.07) | (0.08) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |

Non-DNO (eg societal) benefits

Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers.

| Societal net benefits (impact relative to business as usual scenario) | Units | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 |
|---|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Reduced losses | MWh | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions associated with losses | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors

<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>

Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.

All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpccheck.htm>

CBA Option 1.3 - SSEH **SSEH - Basic Replacement Only - sensitivity check against 15 year refurb life extension**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.12 |
| 24 | -£0.10 |
| 32 | -£0.09 |
| 45 | -£0.08 |

first year of investment out flow |

| Calculation | Units | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | | |
|--|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--------|
| | | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 | |
| Investment | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | (1) = investment + DNO benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | (2) | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | |
| Capitalised investment | (3)=(1)x(2) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | (4)=(1)-(3) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | (5)=Σ(5) _t | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Cost of Capital | (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Net DNO benefits | (7)=(4)+(5)+(6) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal benefits (£m) i.e. costs avoided | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| CO2e associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total societal net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Discount factor | =1/[(1+SRTP)^n] | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | 0.44 |
| Discount factor (safety) | =1/[(1+PTPR)^n] | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | 0.70 |
| Discounted net benefits | £m | | (0.07) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cumulative discounted net benefits | £m | | (0.07) | (0.08) | (0.09) | (0.10) | (0.11) | (0.12) | (0.12) | (0.13) | (0.14) | (0.14) | (0.15) | (0.16) | (0.16) | (0.17) | (0.12) | (0.12) | (0.12) | (0.11) | (0.11) | (0.11) | (0.11) | (0.11) | (0.11) | (0.10) |

Non-DNO (eg societal) benefits
Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers.

| Societal net benefits (impact relative to business as usual scenario) | Units | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 | |
|---|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|
| Reduced losses | MWh | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions associated with losses | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors
<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpccheck.htm>

CBA Option 2.0 - SSEH **SSEH - Replacement in year 1 with capitalised loss unit (current policy) vs baseline**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.05 |
| 24 | -£0.01 |
| 32 | £0.02 |
| 45 | £0.05 |

first year of investment out flow |

| | | | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | | |
|--|---|-------|---|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|--------|-------|------|--|
| Calculation | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| | | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | |
| Investment | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Legal & Safety | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation (1) = investment + DNO benefits | | | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates (2) | | | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | | |
| Capitalised investment (3)=(1)x(2) | | | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed (4)=(1)-(3) | | | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation (5)=Σ(5) _t | | | £m | | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | | |
| Cost of Capital (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | | | £m | (0.00) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| Total Net DNO benefits (7)=(4)+(5)+(6) | | | £m | (0.10) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.07 | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | | |
| Societal benefits (£m) i.e. costs avoided | Losses | £m | - | 0.006 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | | | |
| | CO2e associated with losses | £m | - | 0.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| | Customer interruptions (CI) | £m | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | Customer minutes lost (CML) | £m | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | Other GHG emissions (CO2e) i.e. not associated with losses | £m | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | Fatality | £m | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | Major injury | £m | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | Oil leakage | £m | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| | Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total societal net benefits | £m | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | | |
| | Net benefits | | | £m | (0.10) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.08 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | | |
| | Discount factor =1/[(1+SRTP)^n] | | | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | | |
| Discount factor (safety) =1/[(1+PTPR)^n] | | | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | | | |
| Discounted net benefits | | | £m | (0.10) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | 0.06 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | | | |
| Cumulative discounted net benefits | | | £m | (0.10) | (0.11) | (0.11) | (0.12) | (0.12) | (0.13) | (0.13) | (0.14) | (0.14) | (0.08) | (0.08) | (0.07) | (0.07) | (0.06) | (0.06) | (0.05) | (0.05) | (0.04) | (0.04) | (0.03) | (0.03) | | | |
| Non-DNO (eg societal) benefits | | | Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal net benefits (impact relative to business as usual scenario) | Reduced losses | MWh | | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | | | |
| | Reduced emissions associated with losses | tCO2e | - | 64.17 | 62.26 | 60.36 | 58.46 | 56.55 | 54.65 | 52.74 | 50.84 | 48.93 | 47.03 | 45.12 | 43.22 | 41.31 | 39.41 | 37.50 | 35.60 | 33.69 | 31.79 | 29.88 | 27.98 | 26.08 | | | |
| | Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors
<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
 Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
 All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpcheck.htm>

CBA Option 2.1 - SSEH **SSEH - Low Loss Replacement Only - sensitivity check against 5 year refurb life extension**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | £0.00 |
| 24 | £0.04 |
| 32 | £0.06 |
| 45 | £0.09 |

first year of investment out flow |

| Calculation | Units | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | |
|---|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 |
| Investment | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Legal & Safety | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) = investment + DNO benefits | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% |
| Capitalised investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (3)=(1)x(2) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (4)=(1)-(3) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (5)=Σ(5) _t | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cost of Capital | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Net DNO benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (7)=(4)+(5)+(6) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal benefits (£m) i.e. costs avoided | | | | | | | | | | | | | | | | | | | | | | | | | |
| Losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| CO2e associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total societal net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Discount factor | =1/[(1+SRTP)^n] | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | 0.44 |
| Discount factor (safety) | =1/[(1+PTPR)^n] | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | 0.70 |
| Discounted net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Cumulative discounted net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Non-DNO (eg societal) benefits | | | | | | | | | | | | | | | | | | | | | | | | | |
| Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal net benefits (impact relative to business as usual scenario) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced losses | MWh | | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 |
| Reduced emissions associated with losses | tCO2e | | 64.17 | 62.26 | 60.36 | 58.46 | 56.55 | 54.65 | 52.74 | 50.84 | 48.93 | 47.03 | 45.12 | 43.22 | 41.31 | 39.41 | 37.50 | 35.60 | 33.69 | 31.79 | 29.88 | 27.98 | 26.08 | 24.17 | 22.27 |
| Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors
<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
 Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
 All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpccheck.htm>

CBA Option 2.2 - SSEH **SSEH - Low Loss Replacement Only - sensitivity check against 3 year refurb life extension**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | £0.02 |
| 24 | £0.06 |
| 32 | £0.08 |
| 45 | £0.11 |

first year of investment out flow |

| Calculation | Units | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | |
|--|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 |
| Investment | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Legal & Safety | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) = investment + DNO benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | (2) % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% |
| Capitalised investment | (3)=(1)x(2) £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | (4)=(1)-(3) £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | (5)=Σ(5); £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Cost of Capital | (6)=avg[(6 ^d),(6 ^{op})]xWACC £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Net DNO benefits | (7)=(4)+(5)+(6) £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| CO2e associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total societal net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Discount factor | =1/[(1+SRTP)^n] | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | 0.44 |
| Discount factor (safety) | =1/[(1+PTPR)^n] | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | 0.70 |
| Discounted net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Cumulative discounted net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |

Non-DNO (eg societal) benefits

Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers.

| Societal net benefits (impact relative to business as usual scenario) | Units | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|--------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Reduced losses | MWh | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 |
| Reduced emissions associated with losses | tCO2e | | 64.17 | 62.26 | 60.36 | 58.46 | 56.55 | 54.65 | 52.74 | 50.84 | 48.93 | 47.03 | 45.12 | 43.22 | 41.31 | 39.41 | 37.50 | 35.60 | 33.69 | 31.79 | 29.88 | 27.98 | 26.08 | 24.17 | 22.27 |
| Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors

<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>

Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.

All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpcheck.htm>

CBA Option 2.3 - SSEH **SSEH - Low Loss Replacement Only - sensitivity check against 15 year refurb life extension**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.10 |
| 24 | -£0.06 |
| 32 | -£0.02 |
| 45 | £0.01 |

first year of investment out flow |

| | | | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | | |
|--|---|-----------|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------|
| Calculation | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| | | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | |
| Investment | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Legal & Safety | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | (1) = investment + DNO benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | (2) | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | | |
| Capitalised investment | (3)=(1)x(2) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | (4)=(1)-(3) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | (5)=Σ(5) _t | £m | | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | |
| Cost of Capital | (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | £m | (0.00) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| Total Net DNO benefits | (7)=(4)+(5)+(6) | £m | (0.10) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| Societal benefits (£m) i.e. costs avoided | Losses | £m | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | | |
| | CO2e associated with losses | £m | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| | Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total societal net benefits | | £m | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| | Net benefits | | £m | (0.10) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.08 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| Discount factor | =1/[(1+SRTP)^n] | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | 0.44 | |
| Discount factor (safety) | =1/[(1+PTPR)^n] | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | 0.70 | |
| Discounted net benefits | | £m | (0.10) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | 0.05 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | |
| Cumulative discounted net benefits | | £m | (0.10) | (0.11) | (0.11) | (0.12) | (0.12) | (0.13) | (0.13) | (0.14) | (0.14) | (0.14) | (0.15) | (0.15) | (0.15) | (0.15) | (0.10) | (0.10) | (0.09) | (0.09) | (0.08) | (0.07) | (0.07) | (0.06) | (0.06) | (0.06) | |
| Non-DNO (eg societal) benefits | | | Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal net benefits (impact relative to business as usual scenario) | Reduced losses | MWh | | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | |
| | Reduced emissions associated with losses | tCO2e | | - | 64.17 | 62.26 | 60.36 | 58.46 | 56.55 | 54.65 | 52.74 | 50.84 | 48.93 | 47.03 | 45.12 | 43.22 | 41.31 | 39.41 | 37.50 | 35.60 | 33.69 | 31.79 | 29.88 | 27.98 | 26.08 | 24.17 | 22.27 |
| | Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors
<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
 Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
 All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpcheck.htm>

CBA Option 3.0 - SSEH **SSEH - Replacement year 1 with very low loss unit vs baseline**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.23 |
| 24 | -£0.20 |
| 32 | -£0.28 |
| 45 | -£0.37 |

first year of investment out flow |

| Calculation | Units | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | |
|--|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 |
| Investment | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Legal & Safety | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) = investment + DNO benefits | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% |
| Capitalised investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (3)=(1)x(2) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (4)=(1)-(3) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | £m | | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| (5)=Σ(5) _t | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cost of Capital | £m | (0.01) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) |
| (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Net DNO benefits | £m | (0.22) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | 0.06 | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| (7)=(4)+(5)+(6) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal benefits (£m) i.e. costs avoided | | | | | | | | | | | | | | | | | | | | | | | | | |
| Losses | £m | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| CO2e associated with losses | £m | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total societal net benefits | £m | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| Net benefits | £m | (0.22) | (0.02) | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) | (0.01) | (0.01) | 0.08 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Discount factor | =1/[(1+SRTP)^n] | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | 0.44 |
| Discount factor (safety) | =1/[(1+PTPR)^n] | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | 0.70 |
| Discounted net benefits | £m | (0.21) | (0.02) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cumulative discounted net benefits | £m | (0.21) | (0.22) | (0.24) | (0.25) | (0.27) | (0.28) | (0.29) | (0.30) | (0.30) | (0.25) | (0.25) | (0.25) | (0.24) | (0.24) | (0.24) | (0.23) | (0.23) | (0.22) | (0.22) | (0.22) | (0.21) | (0.21) | (0.21) | (0.20) |

Non-DNO (eg societal) benefits

Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers.

| | | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 |
|--|--------|-----|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Societal net benefits (impact relative to business as usual scenario) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced losses | MWh | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions associated with losses | tCO2e | | 128.34 | 124.53 | 120.72 | 116.91 | 113.10 | 109.29 | 105.48 | 101.67 | 97.86 | 94.05 | 90.24 | 86.44 | 82.63 | 78.82 | 75.01 | 71.20 | 67.39 | 63.58 | 59.77 | 55.96 | 52.15 | 48.34 | 44.53 |
| Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors

<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>

Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.

All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpcheck.htm>

CBA Option 3.1 - SSEH **SSEH - Super Low Loss Replacement Only - sensitivity check against 5 year refurb life extension**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.18 |
| 24 | -£0.15 |
| 32 | -£0.24 |
| 45 | -£0.33 |

first year of investment out flow |

| Calculation | Units | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | |
|---|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 |
| Investment | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Legal & Safety | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) = investment + DNO benefits | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | |
| Capitalised investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (3)=(1)x(2) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (4)=(1)-(3) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | £m | | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | |
| (5)=Σ(5) _t | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cost of Capital | £m | (0.01) | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | |
| (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Net DNO benefits | £m | (0.22) | (0.03) | (0.03) | (0.03) | 0.06 | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | |
| (7)=(4)+(5)+(6) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal benefits (£m) i.e. costs avoided | | | | | | | | | | | | | | | | | | | | | | | | | |
| Losses | £m | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| CO2e associated with losses | £m | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total societal net benefits | £m | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | |
| Net benefits | £m | (0.22) | (0.02) | (0.02) | (0.02) | 0.07 | (0.00) | (0.00) | (0.00) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| Discount factor =1/[(1+SRTP)^n] | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | |
| Discount factor (safety) =1/[(1+PTPR)^n] | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | |
| Discounted net benefits | £m | (0.21) | (0.02) | (0.01) | (0.01) | 0.06 | (0.00) | (0.00) | (0.00) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Cumulative discounted net benefits | £m | (0.21) | (0.22) | (0.24) | (0.25) | (0.19) | (0.20) | (0.20) | (0.20) | (0.19) | (0.19) | (0.19) | (0.19) | (0.19) | (0.18) | (0.18) | (0.18) | (0.17) | (0.17) | (0.17) | (0.16) | (0.16) | (0.16) | (0.15) | |
| Non-DNO (eg societal) benefits | | | | | | | | | | | | | | | | | | | | | | | | | |
| Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced losses | MWh | | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | |
| Reduced emissions associated with losses | tCO2e | | - | 128.34 | 124.53 | 120.72 | 116.91 | 113.10 | 109.29 | 105.48 | 101.67 | 97.86 | 94.05 | 90.24 | 86.44 | 82.63 | 78.82 | 75.01 | 71.20 | 67.39 | 63.58 | 59.77 | 55.96 | 52.15 | |
| Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors
<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
 Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
 All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.
² <http://www.hse.gov.uk/risk/theory/alarpcheck.htm>

CBA Option 3.2 - SSEH **SSEH - Super Low Loss Replacement Only - sensitivity check against 3 year refurb life extension**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.16 |
| 24 | -£0.13 |
| 32 | -£0.22 |
| 45 | -£0.31 |

first year of investment out flow |

| | | | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | |
|--|---|-----------------|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------|------|
| Calculation | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| | | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 |
| Investment | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Legal & Safety | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation (1) = investment + DNO benefits | | | £m | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | (2) | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | | |
| Capitalised investment | (3)=(1)x(2) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | (4)=(1)-(3) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | (5)=Σ(5) _t | £m | | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | | |
| Cost of Capital | (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | £m | (0.01) | (0.02) | (0.02) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | | |
| Total Net DNO benefits | (7)=(4)+(5)+(6) | £m | (0.22) | (0.03) | 0.05 | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | | |
| Societal benefits (£m) i.e. costs avoided | Losses | £m | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | | |
| | CO2e associated with losses | £m | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| | Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total societal net benefits | | £m | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | | |
| | Net benefits | | £m | (0.22) | (0.02) | 0.07 | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| | Discount factor | =1/[(1+SRTP)^n] | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | |
| Discount factor (safety) | =1/[(1+PTPR)^n] | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | | |
| Discounted net benefits | | £m | (0.21) | (0.02) | 0.06 | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | |
| Cumulative discounted net benefits | | £m | (0.21) | (0.22) | (0.16) | (0.17) | (0.17) | (0.17) | (0.17) | (0.17) | (0.17) | (0.17) | (0.17) | (0.17) | (0.16) | (0.16) | (0.16) | (0.15) | (0.15) | (0.15) | (0.14) | (0.14) | (0.14) | (0.13) | | |
| Non-DNO (eg societal) benefits | | | Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | |
| Societal net benefits (impact relative to business as usual scenario) | Reduced losses | MWh | | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | | |
| | Reduced emissions associated with losses | tCO2e | | - | 128.34 | 124.53 | 120.72 | 116.91 | 113.10 | 109.29 | 105.48 | 101.67 | 97.86 | 94.05 | 90.24 | 86.44 | 82.63 | 78.82 | 75.01 | 71.20 | 67.39 | 63.58 | 59.77 | 55.96 | | |
| | Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors
<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
 Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
 All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpcheck.htm>

CBA Option 3.3 - SSEH **SSEH - Super Low Loss Replacement Only - sensitivity check against 15 year refurb life extension**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.28 |
| 24 | -£0.25 |
| 32 | -£0.32 |
| 45 | -£0.41 |

first year of investment out flow |

| Calculation | Units | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | |
|--|-----------------|----------|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|--------|--------|------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 |
| Investment | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Legal & Safety | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) = investment + DNO benefits | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | |
| Capitalised investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (3)=(1)x(2) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (4)=(1)-(3) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | £m | | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | |
| (5)=Σ(5) _t | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cost of Capital | £m | (0.01) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | |
| (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Net DNO benefits | £m | (0.22) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | 0.06 | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | |
| (7)=(4)+(5)+(6) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal benefits (£m) i.e. costs avoided | | | | | | | | | | | | | | | | | | | | | | | | | |
| Losses | £m | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| CO2e associated with losses | £m | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total societal net benefits | £m | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | |
| Net benefits | £m | (0.22) | (0.02) | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.08 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| Discount factor | =1/[(1+SRTP)^n] | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | |
| Discount factor (safety) | =1/[(1+PTPR)^n] | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | |
| Discounted net benefits | £m | (0.21) | (0.02) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Cumulative discounted net benefits | £m | (0.21) | (0.22) | (0.24) | (0.25) | (0.27) | (0.28) | (0.29) | (0.30) | (0.30) | (0.31) | (0.32) | (0.32) | (0.33) | (0.33) | (0.28) | (0.28) | (0.27) | (0.27) | (0.27) | (0.26) | (0.26) | (0.25) | (0.25) | |

Non-DNO (eg societal) benefits

Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers.

| | | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | 263 | |
|--|--------|-----|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Societal net benefits (impact relative to business as usual scenario) | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced losses | MWh | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions associated with losses | tCO2e | | 128.34 | 124.53 | 120.72 | 116.91 | 113.10 | 109.29 | 105.48 | 101.67 | 97.86 | 94.05 | 90.24 | 86.44 | 82.63 | 78.82 | 75.01 | 71.20 | 67.39 | 63.58 | 59.77 | 55.96 | 52.15 | 48.34 |
| Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors

<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>

Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.

All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpcheck.htm>

CBA Option 4.0 - SSEH **SSEH - Refurbishment year 1 giving 10 year life extension, followed by replacement with capitalised loss unit**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | £0.00 |
| 24 | £0.03 |
| 32 | £0.04 |
| 45 | £0.06 |

first year of investment out flow |

| Calculation | Units | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | |
|--|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 |
| Investment | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Legal & Safety | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) = investment + DNO benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% |
| Capitalised investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (3)=(1)x(2) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (4)=(1)-(3) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (5)=Σ(5) _t | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Cost of Capital | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (6)=avg[(6) ^{cl} , (6) ^{op}]xWACC | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Net DNO benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (7)=(4)+(5)+(6) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal benefits (£m) i.e. costs avoided | | | | | | | | | | | | | | | | | | | | | | | | | |
| Losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| CO2e associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total societal net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Discount factor | | | | | | | | | | | | | | | | | | | | | | | | | |
| =1/[(1+S RTP)^n] | | | | | | | | | | | | | | | | | | | | | | | | | |
| Discount factor (safety) | | | | | | | | | | | | | | | | | | | | | | | | | |
| =1/[(1+PTPR)^n] | | | | | | | | | | | | | | | | | | | | | | | | | |
| Discounted net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Cumulative discounted net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |

Non-DNO (eg societal) benefits

Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers.

| Societal net benefits (impact relative to business as usual scenario) | Units | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
|---|--------|---|---|---|---|---|---|---|---|---|----|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Reduced losses | MWh | | | | | | | | | | | | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | |
| Reduced emissions associated with losses | tCO2e | | | | | | | | | | | | 47.03 | 45.12 | 43.22 | 41.31 | 39.41 | 37.50 | 35.60 | 33.69 | 31.79 | 29.88 | 27.98 | 26.08 | 24.17 | 22.27 |
| Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors

<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>

Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.

All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpccheck.htm>

CBA Option 4.1 - SSEH **SSEH - Refurb - low loss Tx - against 5yr refurb life extension**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.04 |
| 24 | -£0.01 |
| 32 | £0.01 |
| 45 | £0.04 |

first year of investment out flow |

| | | | RIIO-ED1 | | | | | RIIO-ED2 | | | | | RIIO-ED3 | | | | | | | | | | | | | | |
|--|---|-----------|---|-------|-------|-------|-------|----------|-------|-------|-------|-------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Calculation | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| | | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | |
| Investment | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Legal & Safety | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | (1) = investment + DNO benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | (2) | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | |
| Capitalised investment | (3)=(1)x(2) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | (4)=(1)-(3) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | (5)=Σ(5) _t | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cost of Capital | (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Net DNO benefits | (7)=(4)+(5)+(6) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal benefits (£m) i.e. costs avoided | Losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CO2e associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total societal net benefits | | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Net benefits | | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Discount factor | =1/[(1+SRTP)^n] | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | 0.44 | |
| Discount factor (safety) | =1/[(1+PTPR)^n] | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | 0.70 | |
| Discounted net benefits | | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cumulative discounted net benefits | | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Non-DNO (eg societal) benefits | | | Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal net benefits (impact relative to business as usual scenario) | Reduced losses | MWh | | | | | | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | |
| | Reduced emissions associated with losses | tCO2e | | | | | | | 56.55 | 54.65 | 52.74 | 50.84 | 48.93 | 47.03 | 45.12 | 43.22 | 41.31 | 39.41 | 37.50 | 35.60 | 33.69 | 31.79 | 29.88 | 27.98 | 26.08 | 24.17 | 22.27 |
| | Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors
<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
 Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
 All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.
² <http://www.hse.gov.uk/risk/theory/alarpccheck.htm>

CBA Option 4.2 - SSEH **SSEH - Refurb - low loss Tx - against 3yr refurb life extension**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.06 |
| 24 | -£0.03 |
| 32 | -£0.00 |
| 45 | £0.02 |

first year of investment out flow |

| Calculation | Units | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | |
|--|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 |
| Investment | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Legal & Safety | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) = investment + DNO benefits | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% |
| Capitalised investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (3)=(1)x(2) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (4)=(1)-(3) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (5)=Σ(4) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cost of Capital | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (6)=avg[(6 ^d),(6 ^{op})]xWACC | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Net DNO benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (7)=(4)+(5)+(6) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal benefits (£m) i.e. costs avoided | | | | | | | | | | | | | | | | | | | | | | | | | |
| Losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| CO2e associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total societal net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Discount factor | | | | | | | | | | | | | | | | | | | | | | | | | |
| =1/[(1+SRTP)^n] | | | | | | | | | | | | | | | | | | | | | | | | | |
| Discount factor (safety) | | | | | | | | | | | | | | | | | | | | | | | | | |
| =1/[(1+PTPR)^n] | | | | | | | | | | | | | | | | | | | | | | | | | |
| Discounted net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Cumulative discounted net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |

| Non-DNO (eg societal) benefits | | Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|--|--|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Societal net benefits (impact relative to business as usual scenario) | Reduced losses | MWh | | | | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | 131 | |
| | Reduced emissions associated with losses | tCO2e | | | | 60.36 | 58.46 | 56.55 | 54.65 | 52.74 | 50.84 | 48.93 | 47.03 | 45.12 | 43.22 | 41.31 | 39.41 | 37.50 | 35.60 | 33.69 | 31.79 | 29.88 | 27.98 | 26.08 | 24.17 | 22.27 |
| | Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors <http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpcheck.htm>

CBA Option 4.3 - SSEH **SSEH - Super Low Loss Replacement Only - sensitivity check against 15 year refurb life extension**

| Term (years from first out flow) | NPV (£m) |
|-----------------------------------|----------|
| 16 | £0.03 |
| 24 | £0.05 |
| 32 | £0.07 |
| 45 | £0.08 |
| first year of investment out flow | I |

| Calculation | Units | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | |
|--|---|----------|--------|--------|--------|--------|--------|--------|--------|----------|--------|-------|-------|-------|-------|--------|--------|----------|--------|--------|--------|--------|--------|--------|------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 |
| Investment | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Legal & Safety | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | (1) = investment + DNO benefits | £m | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | (2) | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | |
| Capitalised investment | (3)=(1)x(2) | £m | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | (4)=(1)-(3) | £m | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | (5)=Σ(5) _t | £m | | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | |
| Cost of Capital | (6)=avg[(6) ^{cl} , (6) ^{op}]]xWACC | £m | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | |
| Total Net DNO benefits | (7)=(4)+(5)+(6) | £m | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | 0.08 | 0.01 | 0.01 | 0.01 | 0.01 | (0.10) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | |
| Societal benefits (£m) i.e. costs avoided | | | | | | | | | | | | | | | | | | | | | | | | | |
| Losses | £m | | | | | | | | | | | | | | | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| CO2e associated with losses | £m | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total societal net benefits | £m | | | | | | | | | | | | | | | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| Net benefits | £m | | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | 0.08 | 0.01 | 0.01 | 0.01 | 0.01 | (0.10) | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| Discount factor | =1/[(1+SRTP)^n] | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | |
| Discount factor (safety) | =1/[(1+PTPR)^n] | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | |
| Discounted net benefits | £m | | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | 0.06 | 0.01 | 0.01 | 0.01 | 0.01 | (0.06) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Cumulative discounted net benefits | £m | | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | 0.06 | 0.07 | 0.08 | 0.08 | 0.09 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.05 | 0.05 | |

Non-DNO (eg societal) benefits
Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers.

| Societal net benefits (impact relative to business as usual scenario) | Units | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 |
| Reduced losses | MWh | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions associated with losses | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors
<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpccheck.htm>

CBA Option 5 - SSES **SSES - Replacement in year 1 with cheapest available unit vs baseline**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.13 |
| 24 | -£0.13 |
| 32 | -£0.13 |
| 45 | -£0.12 |

first year of investment out flow I

| Calculation | Units | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | | |
|--|---|-----------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | |
| Investment | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | (1) = investment + DNO benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | (2) | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | | |
| Capitalised investment | (3)=(1)x(2) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | (4)=(1)-(3) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | (5)=Σ(5) _t | £m | | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | |
| Cost of Capital | (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | £m | (0.00) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| Total Net DNO benefits | (7)=(4)+(5)+(6) | £m | (0.10) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| Societal benefits (£m) i.e. costs avoided | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| CO2e associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total societal net benefits | £m | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Net benefits | £m | £m | (0.10) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| Discount factor | =1/[(1+SRTP)^n] | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | 0.44 |
| Discount factor (safety) | =1/[(1+PTPR)^n] | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | 0.70 |
| Discounted net benefits | | £m | (0.09) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cumulative discounted net benefits | £m | £m | (0.09) | (0.11) | (0.12) | (0.13) | (0.14) | (0.15) | (0.16) | (0.17) | (0.18) | (0.13) | (0.13) | (0.13) | (0.13) | (0.13) | (0.13) | (0.13) | (0.13) | (0.13) | (0.13) | (0.13) | (0.13) | (0.13) | (0.13) | (0.13) |

| Non-DNO (eg societal) benefits | | Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Societal net benefits (impact relative to business as usual scenario) | Reduced losses | MWh | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions associated with losses | tCO2e | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors
<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
 Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
 All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpccheck.htm>

CBA Option 5.1 - SSES **SSES - Sensitivity check: Option 1 with 5yr refurb life extension**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.08 |
| 24 | -£0.08 |
| 32 | -£0.08 |
| 45 | -£0.08 |

first year of investment out flow |

| Calculation | Units | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | |
|--|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 |
| Investment | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) = investment + DNO benefits | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | |
| Capitalised investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | £m | | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | |
| Cost of Capital | £m | (0.00) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| Total Net DNO benefits | £m | (0.10) | (0.01) | (0.01) | (0.01) | 0.07 | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | |
| Societal benefits (£m) i.e. costs avoided | | | | | | | | | | | | | | | | | | | | | | | | | |
| Losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| CO2e associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total societal net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Net benefits | £m | (0.10) | (0.01) | (0.01) | (0.01) | 0.07 | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | |
| Discount factor | =1/[(1+SRTP)^n] | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | | |
| Discount factor (safety) | =1/[(1+PTPR)^n] | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.71 | | |
| Discounted net benefits | £m | (0.09) | (0.01) | (0.01) | (0.01) | 0.06 | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | |
| Cumulative discounted net benefits | £m | (0.09) | (0.11) | (0.12) | (0.13) | (0.07) | (0.07) | (0.07) | (0.07) | (0.07) | (0.07) | (0.07) | (0.07) | (0.07) | (0.08) | (0.08) | (0.08) | (0.08) | (0.08) | (0.08) | (0.08) | (0.08) | (0.08) | | |

Non-DNO (eg societal) benefits

Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers.

| Societal net benefits (impact relative to business as usual scenario) | Units | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 |
|---|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Reduced losses | MWh | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions associated with losses | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors
<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
 Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
 All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpccheck.htm>

CBA Option 5.2 - SSES **SSES - Sensitivity check: Option 1 with a 3yr refurb life extension**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.05 |
| 24 | -£0.06 |
| 32 | -£0.06 |
| 45 | -£0.06 |

first year of investment out flow |

| | | | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | | |
|--|---|-------|---|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|--------|--------|--------|------|
| Calculation | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| | | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | |
| Investment | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation (1) = investment + DNO benefits | | | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates (2) | | | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | | |
| Capitalised investment (3)=(1)x(2) | | | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed (4)=(1)-(3) | | | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation (5)=Σ(5) _t | | | £m | | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | | |
| Cost of Capital (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | | | £m | (0.00) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | | |
| Total Net DNO benefits (7)=(4)+(5)+(6) | | | £m | (0.10) | (0.01) | 0.07 | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | | |
| Societal benefits (£m) i.e. costs avoided | Losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CO2e associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total societal net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Net benefits | | | £m | (0.10) | (0.01) | 0.07 | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | |
| Discount factor =1/[(1+SRTP)^n] | | | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | 0.44 |
| Discount factor (safety) =1/[(1+PTPR)^n] | | | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | 0.70 |
| Discounted net benefits | | | £m | (0.09) | (0.01) | 0.06 | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | |
| Cumulative discounted net benefits | | | £m | (0.09) | (0.11) | (0.04) | (0.04) | (0.04) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) | (0.06) | (0.06) | (0.06) | (0.06) | |
| Non-DNO (eg societal) benefits | | | Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal net benefits (impact relative to business as usual scenario) | Reduced losses | MWh | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions associated with losses | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors
<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
 Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
 All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpcheck.htm>

CBA Option 5.3 - SSES **SSES - Sensitivity check: Option 1 with 15yr refurb life extension**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.17 |
| 24 | -£0.17 |
| 32 | -£0.17 |
| 45 | -£0.16 |

first year of investment out flow |

| Calculation | Units | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | | |
|--|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--|
| | | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 | |
| Investment | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | (1) = investment + DNO benefits £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | (2) % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | |
| Capitalised investment | (3)=(1)x(2) £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | (4)=(1)-(3) £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | (5)=Σ(5) £m | | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | |
| Cost of Capital | (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC £m | (0.00) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Total Net DNO benefits | (7)=(4)+(5)+(6) £m | (0.10) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Societal benefits (£m) i.e. costs avoided | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| CO2e associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total societal net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Net benefits | £m | (0.10) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Discount factor | =1/[(1+SRTP)^n] | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | 0.44 | |
| Discount factor (safety) | =1/[(1+PTPR)^n] | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | 0.70 | |
| Discounted net benefits | £m | (0.09) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Cumulative discounted net benefits | £m | (0.09) | (0.11) | (0.12) | (0.13) | (0.14) | (0.15) | (0.16) | (0.17) | (0.18) | (0.19) | (0.20) | (0.21) | (0.21) | (0.22) | (0.18) | (0.17) | (0.17) | (0.17) | (0.17) | (0.17) | (0.17) | (0.17) | (0.17) | (0.17) | |

| Non-DNO (eg societal) benefits | | Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Societal net benefits (impact relative to business as usual scenario) | Reduced losses | MWh | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions associated with losses | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors
<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
 Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
 All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpcheck.htm>

CBA Option 6.0 - SSES **SSES - Replacement in year 1 with capitalised loss unit (current policy) vs baseline**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.10 |
| 24 | -£0.06 |
| 32 | -£0.03 |
| 45 | £0.00 |

first year of investment out flow |

| | | | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | | |
|--|---|--------|---|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|--------|-------|------|--|
| Calculation | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| | | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | |
| Investment | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation (1) = investment + DNO benefits | | | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates (2) | | | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | | |
| Capitalised investment (3)=(1)x(2) | | | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed (4)=(1)-(3) | | | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation (5)=Σ(5) _t | | | £m | | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | | |
| Cost of Capital (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | | | £m | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | | |
| Total Net DNO benefits (7)=(4)+(5)+(6) | | | £m | (0.13) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | 0.07 | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | | |
| Societal benefits (£m) i.e. costs avoided | Losses | £m | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | | | |
| | CO2e associated with losses | £m | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| | Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total societal net benefits | | | £m | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | | |
| | Net benefits | | | £m | (0.13) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.08 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | | |
| Discount factor =1/[(1+SRTP)^n] | | | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | | | |
| Discount factor (safety) =1/[(1+PTPR)^n] | | | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | | | |
| Discounted net benefits | | | £m | (0.13) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | 0.06 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | | | |
| Cumulative discounted net benefits | | | £m | (0.13) | (0.14) | (0.15) | (0.15) | (0.16) | (0.17) | (0.17) | (0.18) | (0.18) | (0.13) | (0.12) | (0.12) | (0.11) | (0.11) | (0.10) | (0.10) | (0.09) | (0.09) | (0.08) | (0.08) | (0.07) | | | |
| Non-DNO (eg societal) benefits | | | Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal net benefits (impact relative to business as usual scenario) | Reduced losses | MWh | | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | | | |
| | Reduced emissions associated with losses | tCO2e | | - | 85.56 | 83.02 | 80.48 | 77.94 | 75.40 | 72.86 | 70.32 | 67.78 | 65.24 | 62.70 | 60.16 | 57.62 | 55.08 | 52.54 | 50.00 | 47.47 | 44.93 | 42.39 | 39.85 | 37.31 | | | |
| | Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors
<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
 Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
 All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpccheck.htm>

CBA Option 6.1 - SSES

SSES - Sensitivity check: Option 2 with 5yr refurb life extension

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.04 |
| 24 | -£0.01 |
| 32 | £0.02 |
| 45 | £0.05 |

first year of investment out flow |

| | | | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | | |
|--|---|-------|---|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|--------|-------|------|--|
| Calculation | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| | | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | |
| Investment | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation (1) = investment + DNO benefits | | | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates (2) | | | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | | |
| Capitalised investment (3)=(1)x(2) | | | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed (4)=(1)-(3) | | | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation (5)=Σ(5) _t | | | £m | | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | | |
| Cost of Capital (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | | | £m | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | | |
| Total Net DNO benefits (7)=(4)+(5)+(6) | | | £m | (0.13) | (0.02) | (0.02) | (0.02) | 0.07 | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | | |
| Societal benefits (£m) i.e. costs avoided | Losses | £m | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | | | |
| | CO2e associated with losses | £m | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| | Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total societal net benefits | £m | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | | |
| | Net benefits | | | £m | (0.13) | (0.01) | (0.01) | (0.01) | 0.08 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | | |
| | Discount factor =1/[(1+SRTP)^n] | | | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | | |
| Discount factor (safety) =1/[(1+PTPR)^n] | | | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | | | |
| Discounted net benefits | | | £m | (0.13) | (0.01) | (0.01) | (0.01) | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| Cumulative discounted net benefits | | | £m | (0.13) | (0.14) | (0.15) | (0.15) | (0.09) | (0.09) | (0.08) | (0.08) | (0.08) | (0.07) | (0.07) | (0.06) | (0.06) | (0.05) | (0.05) | (0.04) | (0.04) | (0.03) | (0.03) | (0.02) | (0.02) | | | |
| Non-DNO (eg societal) benefits | | | Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal net benefits (impact relative to business as usual scenario) | Reduced losses | MWh | | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | | | |
| | Reduced emissions associated with losses | tCO2e | | - | 85.56 | 83.02 | 80.48 | 77.94 | 75.40 | 72.86 | 70.32 | 67.78 | 65.24 | 62.70 | 60.16 | 57.62 | 55.08 | 52.54 | 50.00 | 47.47 | 44.93 | 42.39 | 39.85 | 37.31 | | | |
| | Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors <http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpccheck.htm>

CBA Option 6.2 - SSES

SSES - Sensitivity check: Option 2 with 3yr refurb life extension

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.02 |
| 24 | £0.01 |
| 32 | £0.04 |
| 45 | £0.06 |

first year of investment out flow |

| Calculation | Units | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | |
|---|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 |
| Investment | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) = investment + DNO benefits | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% |
| Capitalised investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (3)=(1)x(2) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (4)=(1)-(3) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | £m | | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | |
| (5)=Σ(5) _t | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cost of Capital | £m | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | |
| (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Net DNO benefits | £m | (0.13) | (0.02) | 0.07 | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | |
| (7)=(4)+(5)+(6) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal benefits (£m) i.e. costs avoided | | | | | | | | | | | | | | | | | | | | | | | | | |
| Losses | £m | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| CO2e associated with losses | £m | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total societal net benefits | £m | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| Net benefits | £m | (0.13) | (0.01) | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| Discount factor | | | | | | | | | | | | | | | | | | | | | | | | | |
| =1/[(1+SRTP)^n] | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | |
| Discount factor (safety) | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | |
| =1/[(1+PTPR)^n] | | | | | | | | | | | | | | | | | | | | | | | | | |
| Discounted net benefits | £m | (0.13) | (0.01) | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Cumulative discounted net benefits | £m | (0.13) | (0.14) | (0.07) | (0.07) | (0.06) | (0.06) | (0.06) | (0.05) | (0.05) | (0.05) | (0.04) | (0.04) | (0.03) | (0.03) | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) | (0.00) | 0.00 | 0.01 | 0.01 | |
| Non-DNO (eg societal) benefits | | | | | | | | | | | | | | | | | | | | | | | | | |
| Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced losses | MWh | | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | |
| Reduced emissions associated with losses | tCO2e | | - | 85.56 | 83.02 | 80.48 | 77.94 | 75.40 | 72.86 | 70.32 | 67.78 | 65.24 | 62.70 | 60.16 | 57.62 | 55.08 | 52.54 | 50.00 | 47.47 | 44.93 | 42.39 | 39.85 | 37.31 | 34.77 | |
| Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors
<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
 Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
 All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpccheck.htm>

CBA Option 6.3 - SSES

SSES - Sensitivity check: Option 2 with 15yr refurb life extension

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.14 |
| 24 | -£0.10 |
| 32 | -£0.07 |
| 45 | -£0.03 |

first year of investment out flow |

| | | | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | | |
|--|---|--------|---|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|--------|--------|--------|--------|
| Calculation | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| | | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | |
| Investment | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation (1) = investment + DNO benefits | | | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates (2) | | | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | | |
| Capitalised investment (3)=(1)x(2) | | | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed (4)=(1)-(3) | | | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation (5)=Σ(5) _t | | | £m | | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | |
| Cost of Capital (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | | | £m | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | 0.00 | 0.00 | | |
| Total Net DNO benefits (7)=(4)+(5)+(6) | | | £m | (0.13) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | 0.07 | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | |
| Societal benefits (£m) i.e. costs avoided | Losses | £m | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | | |
| | CO2e associated with losses | £m | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| | Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total societal net benefits | £m | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | | |
| | Net benefits | | | £m | (0.13) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | 0.08 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| Discount factor =1/[(1+SRTP)^n] | | | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | 0.44 |
| Discount factor (safety) =1/[(1+PTPR)^n] | | | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | 0.70 |
| Discounted net benefits | | | £m | (0.13) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | 0.05 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 |
| Cumulative discounted net benefits | | | £m | (0.13) | (0.14) | (0.15) | (0.15) | (0.16) | (0.17) | (0.17) | (0.18) | (0.18) | (0.19) | (0.19) | (0.19) | (0.19) | (0.20) | (0.15) | (0.14) | (0.14) | (0.13) | (0.13) | (0.12) | (0.11) | (0.11) | (0.10) | (0.10) |
| Non-DNO (eg societal) benefits | | | Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal net benefits (impact relative to business as usual scenario) | Reduced losses | MWh | | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | |
| | Reduced emissions associated with losses | tCO2e | | - | 85.56 | 83.02 | 80.48 | 77.94 | 75.40 | 72.86 | 70.32 | 67.78 | 65.24 | 62.70 | 60.16 | 57.62 | 55.08 | 52.54 | 50.00 | 47.47 | 44.93 | 42.39 | 39.85 | 37.31 | 34.77 | 32.23 | 29.69 |
| | Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors <http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpccheck.htm>

CBA Option 7.0 - SSES **SSES - Replacement year 1 with very low loss unit vs baseline**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.32 |
| 24 | -£0.29 |
| 32 | -£0.40 |
| 45 | -£0.52 |

first year of investment out flow |

| Calculation | Units | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | | |
|--|--|----------|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|--------|--------|--------|------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | |
| Investment | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total DNO net benefits before capitalisation | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | (1) = investment + DNO benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Capitalisation rates | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | |
| | Capitalised investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Investment to be expensed | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Depreciation | £m | | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | |
| | Cost of Capital | £m | (0.01) | (0.03) | (0.03) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | |
| | (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total Net DNO benefits | £m | (0.28) | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) | (0.05) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | |
| Societal benefits (£m) i.e. costs avoided | Losses | £m | | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | |
| | CO2e associated with losses | £m | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| | Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total societal net benefits | £m | | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | |
| | Net benefits | £m | (0.28) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) | 0.07 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| | Discount factor | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | 0.44 |
| | Discount factor (safety) | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | 0.70 |
| | Discounted net benefits | £m | (0.27) | (0.02) | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) | (0.01) | (0.01) | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | Cumulative discounted net benefits | £m | (0.27) | (0.29) | (0.31) | (0.32) | (0.34) | (0.35) | (0.37) | (0.38) | (0.39) | (0.34) | (0.33) | (0.33) | (0.33) | (0.33) | (0.32) | (0.32) | (0.31) | (0.31) | (0.31) | (0.30) | (0.30) | (0.30) | (0.29) | |

| Non-DNO (eg societal) benefits | | Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| Societal net benefits (impact relative to business as usual scenario) | Reduced losses | MWh | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | |
| | Reduced emissions associated with losses | tCO2e | - | 171.12 | 166.04 | 160.96 | 155.88 | 150.80 | 145.72 | 140.64 | 135.56 | 130.48 | 125.41 | 120.33 | 115.25 | 110.17 | 105.09 | 100.01 | 94.93 | 89.85 | 84.77 | 79.69 | 74.61 | 69.53 | 64.45 | 59.38 |
| | Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors
<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
 Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
 All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpcheck.htm>

CBA Option 7.1 - SSES **SSES - Sensitivity check: Option 3 with 5yr refurb life extension**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.27 |
| 24 | -£0.24 |
| 32 | -£0.35 |
| 45 | -£0.48 |

first year of investment out flow |

| Calculation | Units | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | |
|--|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 |
| Investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) = investment + DNO benefits | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% |
| Capitalised investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (3)=(1)x(2) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (4)=(1)-(3) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | £m | | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| (5)=Σ(5) _t | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cost of Capital | £m | (0.01) | (0.03) | (0.03) | (0.02) | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Net DNO benefits | £m | (0.28) | (0.04) | (0.04) | (0.04) | 0.05 | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) |
| (7)=(4)+(5)+(6) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal benefits (£m) i.e. costs avoided | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Losses | £m | | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| CO2e associated with losses | £m | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total societal net benefits | £m | | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| Net benefits | £m | (0.28) | (0.02) | (0.02) | (0.02) | 0.07 | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |
| Discount factor | | | | | | | | | | | | | | | | | | | | | | | | | |
| =1/[(1+SRTP)^n] | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | 0.44 |
| Discount factor (safety) | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | 0.70 |
| Discounted net benefits | £m | (0.27) | (0.02) | (0.02) | (0.02) | 0.06 | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |
| Cumulative discounted net benefits | £m | (0.27) | (0.29) | (0.31) | (0.32) | (0.27) | (0.27) | (0.28) | (0.28) | (0.28) | (0.28) | (0.28) | (0.28) | (0.28) | (0.27) | (0.27) | (0.27) | (0.27) | (0.26) | (0.26) | (0.26) | (0.25) | (0.25) | (0.25) | (0.24) |

| Non-DNO (eg societal) benefits | | Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| Societal net benefits (impact relative to business as usual scenario) | Reduced losses | MWh | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | |
| | Reduced emissions associated with losses | tCO2e | - | 171.12 | 166.04 | 160.96 | 155.88 | 150.80 | 145.72 | 140.64 | 135.56 | 130.48 | 125.41 | 120.33 | 115.25 | 110.17 | 105.09 | 100.01 | 94.93 | 89.85 | 84.77 | 79.69 | 74.61 | 69.53 | 64.45 | 59.38 |
| | Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors
<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
 Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
 All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarmpcheck.htm>

CBA Option 7.2 - SSES

SSES - Sensitivity check: Option 3 with 3yr refurb life extension

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.25 |
| 24 | -£0.22 |
| 32 | -£0.33 |
| 45 | -£0.46 |

first year of investment out flow |

| | | | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | |
|--|---|-----------------|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|------|
| Calculation | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| | | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 |
| Investment | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation (1) = investment + DNO benefits | | | £m | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | (2) | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | | |
| Capitalised investment | (3)=(1)x(2) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | (4)=(1)-(3) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | (5)=Σ(5) _t | £m | | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | | |
| Cost of Capital | (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | £m | (0.01) | (0.03) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | | |
| Total Net DNO benefits | (7)=(4)+(5)+(6) | £m | (0.28) | (0.04) | 0.05 | (0.03) | (0.03) | (0.03) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | | |
| Societal benefits (£m) i.e. costs avoided | Losses | £m | | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | | |
| | CO2e associated with losses | £m | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | | |
| | Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total societal net benefits | | £m | - | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | |
| | Net benefits | | £m | (0.28) | (0.02) | 0.06 | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | |
| | Discount factor | =1/[(1+SRTP)^n] | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | |
| Discount factor (safety) | =1/[(1+PTPR)^n] | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | | |
| Discounted net benefits | | £m | (0.27) | (0.02) | 0.06 | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | |
| Cumulative discounted net benefits | | £m | (0.27) | (0.29) | (0.23) | (0.24) | (0.24) | (0.25) | (0.25) | (0.25) | (0.25) | (0.26) | (0.26) | (0.25) | (0.25) | (0.25) | (0.25) | (0.24) | (0.24) | (0.24) | (0.23) | (0.23) | (0.23) | (0.22) | | |
| Non-DNO (eg societal) benefits | | | Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | |
| Societal net benefits (impact relative to business as usual scenario) | Reduced losses | MWh | | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | | |
| | Reduced emissions associated with losses | tCO2e | | - | 171.12 | 166.04 | 160.96 | 155.88 | 150.80 | 145.72 | 140.64 | 135.56 | 130.48 | 125.41 | 120.33 | 115.25 | 110.17 | 105.09 | 100.01 | 94.93 | 89.85 | 84.77 | 79.69 | 74.61 | | |
| | Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors <http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpcheck.htm>

CBA Option 7.3 - SSES **SSES - Sensitivity check: Option 3 with 15yr refurb life extension**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.37 |
| 24 | -£0.33 |
| 32 | -£0.44 |
| 45 | -£0.56 |

first year of investment out flow |

| Calculation | Units | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | |
|--|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 |
| Investment | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) = investment + DNO benefits | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% |
| Capitalised investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (3)=(1)x(2) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (4)=(1)-(3) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | £m | | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| (5)=Σ(5) _t | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cost of Capital | £m | (0.01) | (0.03) | (0.03) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Net DNO benefits | £m | (0.28) | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) | 0.05 | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) |
| (7)=(4)+(5)+(6) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal benefits (£m) i.e. costs avoided | | | | | | | | | | | | | | | | | | | | | | | | | |
| Losses | £m | | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| CO2e associated with losses | £m | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total societal net benefits | £m | | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| Net benefits | £m | (0.28) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.08 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Discount factor | | | | | | | | | | | | | | | | | | | | | | | | | |
| =1/[(1+SRTP)^n] | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | 0.44 |
| Discount factor (safety) | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | 0.70 |
| =1/[(1+PTPR)^n] | | | | | | | | | | | | | | | | | | | | | | | | | |
| Discounted net benefits | £m | (0.27) | (0.02) | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cumulative discounted net benefits | £m | (0.27) | (0.29) | (0.31) | (0.32) | (0.34) | (0.35) | (0.37) | (0.38) | (0.39) | (0.40) | (0.40) | (0.41) | (0.41) | (0.42) | (0.37) | (0.37) | (0.36) | (0.36) | (0.36) | (0.35) | (0.35) | (0.34) | (0.34) | (0.33) |

Non-DNO (eg societal) benefits

Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers.

| Societal net benefits (impact relative to business as usual scenario) | Units | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 |
|---|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Reduced losses | MWh | | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 |
| Reduced emissions associated with losses | tCO2e | | 171.12 | 166.04 | 160.96 | 155.88 | 150.80 | 145.72 | 140.64 | 135.56 | 130.48 | 125.41 | 120.33 | 115.25 | 110.17 | 105.09 | 100.01 | 94.93 | 89.85 | 84.77 | 79.69 | 74.61 | 69.53 | 64.45 | 59.38 |
| Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors

<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>

Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.

All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpcheck.htm>

CBA Option 8.0 - SSES **SSES - Refurbishment year 1 giving 10 year life extension, followed by replacement with capitalised loss unit**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.03 |
| 24 | -£0.00 |
| 32 | £0.01 |
| 45 | £0.03 |

first year of investment out flow |

| | | | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | |
|---|---|-----------|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|------|
| Calculation | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| | | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 |
| Investment | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | (1) = investment + DNO benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | (2) | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | | |
| Capitalised investment | (3)=(1)x(2) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | (4)=(1)-(3) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | (5)=Σ(5) _t | £m | | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | |
| Cost of Capital | (6)=avg[(6) ^{cl} , (6) ^{op}]]xWACC | £m | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | |
| Total Net DNO benefits | (7)=(4)+(5)+(6) | £m | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.06) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | | |
| Societal benefits (£m) i.e. costs avoided | Losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | CO2e associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total societal net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| | Net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Discount factor | =1/[(1+SRTP)^n] | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | 0.44 |
| Discount factor (safety) | =1/[(1+PTPR)^n] | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | 0.70 |
| Discounted net benefits | £m | | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.04) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Cumulative discounted net benefits | £m | | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.04) | (0.04) | (0.04) | (0.04) | (0.03) | (0.03) | (0.03) | (0.02) | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) | (0.01) | (0.00) | |
| Non-DNO (eg societal) benefits | | | Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | |
| Societal net benefits (impact relative to business as usual scenario) | Reduced losses | MWh | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions associated with losses | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors
<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
 Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
 All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpccheck.htm>

CBA Option 8.1 - SSES **SSES - Sensitivity check: Option 4 with 5yr refurb life extension**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.08 |
| 24 | -£0.05 |
| 32 | -£0.03 |
| 45 | -£0.00 |

first year of investment out flow |

| Calculation | Units | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | |
|---|--------|----------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|-------|-------|------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 |
| Investment | | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) = investment + DNO benefits | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | |
| Capitalised investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (5)=Σ(5 _t) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cost of Capital | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (6)=avg[(6 ^{cl}),(6 ^{op})]xWACC | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Net DNO benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (7)=(4)+(5)+(6) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal benefits (£m) i.e. costs avoided | | | | | | | | | | | | | | | | | | | | | | | | | |
| Losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| CO2e associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total societal net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Discount factor | | | | | | | | | | | | | | | | | | | | | | | | | |
| =1/[(1+SRTP)^n] | | | | | | | | | | | | | | | | | | | | | | | | | |
| Discount factor (safety) | | | | | | | | | | | | | | | | | | | | | | | | | |
| =1/[(1+PTPR)^n] | | | | | | | | | | | | | | | | | | | | | | | | | |
| Discounted net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Cumulative discounted net benefits | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Non-DNO (eg societal) benefits | | | | | | | | | | | | | | | | | | | | | | | | | |
| Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced losses | MWh | | | | | | | | | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | |
| Reduced emissions associated with losses | tCO2e | | | | | | | | | 75.40 | 72.86 | 70.32 | 67.78 | 65.24 | 62.70 | 60.16 | 57.62 | 55.08 | 52.54 | 50.00 | 47.47 | 44.93 | 42.39 | 39.85 | |
| Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors
<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
 Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
 All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpccheck.htm>

CBA Option 8.2 - SSES **SSES - Sensitivity check: Option 4 with 3yr refurb life extension**

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | -£0.10 |
| 24 | -£0.07 |
| 32 | -£0.05 |
| 45 | -£0.02 |

first year of investment out flow |

| | | | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | | |
|--|---|-----------|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--|
| Calculation | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| | | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | |
| Investment | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation (1) = investment + DNO benefits | | | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | (2) | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | | |
| Capitalised investment | (3)=(1)x(2) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | (4)=(1)-(3) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | (5)=Σ(5) _t | £m | | (0.00) | (0.00) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | |
| Cost of Capital | (6)=avg[(6) ^{cl} , (6) ^{op}]]xWACC | £m | (0.00) | (0.00) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | | |
| Total Net DNO benefits | (7)=(4)+(5)+(6) | £m | (0.00) | (0.00) | (0.14) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.02) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.00) | (0.00) | | |
| Societal benefits (£m) i.e. costs avoided | Losses | £m | | | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | | |
| | CO2e associated with losses | £m | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| | Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Total societal net benefits | £m | | | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| | Net benefits | £m | | (0.00) | (0.00) | (0.14) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.08 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| Discount factor | =1/[(1+S RTP)^n] | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | 0.44 | |
| Discount factor (safety) | =1/[(1+PTPR)^n] | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | 0.70 | |
| Discounted net benefits | £m | | (0.00) | (0.00) | (0.13) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| Cumulative discounted net benefits | £m | | (0.00) | (0.00) | (0.13) | (0.14) | (0.15) | (0.16) | (0.17) | (0.17) | (0.18) | (0.12) | (0.12) | (0.12) | (0.11) | (0.11) | (0.10) | (0.10) | (0.10) | (0.09) | (0.09) | (0.08) | (0.08) | (0.08) | (0.07) | (0.07) | |
| Non-DNO (eg societal) benefits | | | Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers. | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal net benefits (impact relative to business as usual scenario) | Reduced losses | MWh | | | | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | | |
| | Reduced emissions associated with losses | tCO2e | | | | 80.48 | 77.94 | 75.40 | 72.86 | 70.32 | 67.78 | 65.24 | 62.70 | 60.16 | 57.62 | 55.08 | 52.54 | 50.00 | 47.47 | 44.93 | 42.39 | 39.85 | 37.31 | 34.77 | 32.23 | 29.69 | |
| | Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors
<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>
 Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.
 All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpcheck.htm>

CBA Option 8.3 - SSES

SSES - Sensitivity check: Option 4 with 15yr refurb life extension

| Term (years from first out flow) | NPV (£m) |
|----------------------------------|----------|
| 16 | £0.01 |
| 24 | £0.03 |
| 32 | £0.04 |
| 45 | £0.05 |

first year of investment out flow |

| Calculation | Units | RIIO-ED1 | | | | | | | | RIIO-ED2 | | | | | | | | RIIO-ED3 | | | | | | | |
|--|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 |
| Investment | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Avoided DNO costs | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspections & Maintenance | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Asset Replacement | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Refurbishment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Please specify | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total avoided DNO costs | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total DNO net benefits before capitalisation | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) = investment + DNO benefits | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capitalisation rates | % | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% | 70.0% |
| Capitalised investment | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Investment to be expensed | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Depreciation | £m | | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | |
| Cost of Capital | £m | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | |
| (6)=avg[(6 ¹), (6 ²)]xWACC | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Net DNO benefits | £m | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | 0.08 | 0.01 | 0.01 | 0.01 | 0.01 | (0.13) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) | |
| (7)=(4)+(5)+(6) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Societal benefits (£m) i.e. costs avoided | | | | | | | | | | | | | | | | | | | | | | | | | |
| Losses | £m | | | | | | | | | | | | | | | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| CO2e associated with losses | £m | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Customer interruptions (CI) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer minutes lost (CML) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other GHG emissions (CO2e) i.e. not associated with losses | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatality | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Major injury | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil leakage | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 1 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 2 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Other 3 (specify) | £m | | | | | | | | | | | | | | | | | | | | | | | | |
| Total societal net benefits | £m | | | | | | | | | | | | | | | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| Net benefits | £m | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | 0.08 | 0.01 | 0.01 | 0.01 | 0.01 | (0.13) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Discount factor | | 0.97 | 0.93 | 0.90 | 0.87 | 0.84 | 0.81 | 0.79 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.60 | 0.58 | 0.56 | 0.54 | 0.52 | 0.50 | 0.49 | 0.47 | 0.45 | |
| Discount factor (safety) | | 0.99 | 0.97 | 0.96 | 0.94 | 0.93 | 0.91 | 0.90 | 0.89 | 0.87 | 0.86 | 0.85 | 0.84 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.76 | 0.75 | 0.74 | 0.73 | 0.72 | 0.71 | |
| Discounted net benefits | £m | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | 0.06 | 0.01 | 0.01 | 0.01 | 0.01 | (0.08) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Cumulative discounted net benefits | £m | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | 0.06 | 0.07 | 0.08 | 0.08 | 0.09 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | |

Non-DNO (eg societal) benefits

Enter values as increments (delta) relative to your reference scenario. If this is your reference scenario enter 0. Reductions are entered as positive numbers and increases as negative numbers.

| Societal net benefits (impact relative to business as usual scenario) | Units | 1 2016 | 2 2017 | 3 2018 | 4 2019 | 5 2020 | 6 2021 | 7 2022 | 8 2023 | 9 2024 | 10 2025 | 11 2026 | 12 2027 | 13 2028 | 14 2029 | 15 2030 | 16 2031 | 17 2032 | 18 2033 | 19 2034 | 20 2035 | 21 2036 | 22 2037 | 23 2038 | 24 2039 |
|---|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Reduced losses | MWh | | | | | | | | | | | | | | | | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 |
| Reduced emissions associated with losses | tCO2e | | | | | | | | | | | | | | | | 50.00 | 47.47 | 44.93 | 42.39 | 39.85 | 37.31 | 34.77 | 32.23 | 29.69 |
| Reduced number of customers interrupted | no. | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced customer minutes lost | Mins | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced emissions (not associated with losses) ¹ | tCO2e | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of fatality ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced probability of major injury ² | % | | | | | | | | | | | | | | | | | | | | | | | | |
| Reduced oil leakage | Litres | | | | | | | | | | | | | | | | | | | | | | | | |

¹ Includes all GHG not associated with losses e.g. SF6 converted to tCO2e using Defra conversion factors

<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>

Where losses are entered in terms of MWh, the CO2e associated with those losses will be calculated based on an assumed GHG conversion factor. The tCO2e are monetised using DECC traded carbon values.

All other GHG emissions not associated with losses should be entered in row 90 to avoid double counting.

² <http://www.hse.gov.uk/risk/theory/alarpccheck.htm>