

€ millions	1	2	3	4	5	6
Initial Capital Costs (CAPEX)*	-647	-544	-518	-353	-727	-601
Initial Capital Costs (CAPEX)* - Present Values	-431	-346	-354	-238	-519	-329
Operating & Maintenance Cost - Present Values	-6	-6	-6	-5	-5	-4
Production Cost (Savings) - Present Values	365	299	364	265	279	329
Net Present Value	-72	-54	4	21	-244	-4

Table 1 Net Present Values of solution options in € millions

Sensitivity analyses were carried out on all options to validate the robustness of the result from the NPV calculation. The sensitivity analysis involved varying certain input parameters to the NPV calculation which could potentially vary based on factors unknown at this point in time. The following parameters were varied:

- WACC $\pm 1\%$
- Growth in constraint savings $\pm 1\%$ per annum
- Capital cost $\pm 10\%$

The results from the three most economic options across the range of sensitivities (i.e. option 3, 4 and 6) are presented in Table 2.

* Capital Cost includes the cost of line upgrades & Lisheen-Ballyragget line (i.e. € 40.96 million) which are common to all scheme options and which contribute to the production cost savings

- 400 kV. Economically, the option performs moderately with an improved NPV when compared with Option 1, but is still significantly less than that achieved by the best performing options.
- Option 3
 - Option 3 performs very well technically, meeting all of the identified needs. It provides good possibilities for future extensibility and would maximise the capacity and efficiency of the power corridors between Cork, south east and Dublin as a result of using 400 kV. Economically, this option performs amongst the best (i.e. second only to Option 4), with both Options 3 and 4 breaking even. It achieves the highest savings in constraints and losses costs (along with Option 1) but its NPV is impacted by the level of capital costs required to achieve this, i.e. its capital cost is estimated to be € 518 million (including the cost of common reinforcements), which is € 165 million more expensive than the best performing option (i.e. Option 4) economically.
- Option 4
 - Option 4 performs adequately from a technical perspective, meeting all of the identified needs within the period of analysis (i.e. 2025), but is seen to be at its practical limit. Given that it is a 220 kV solution, it could be readily integrated into the existing network, but would lack the same level of long-term capacity than a similar 400 kV solution would offer. This is further reflected in the poor alignment of this option with the principles of EirGrid's Grid25 strategy which seeks to promote new infrastructure at 400 kV. Economically, this option performs the best and breaks even (along with Option 3). Its savings in constraints costs are the lowest of all the options considered, but achieves the best NPV by incurring the lowest overall capital cost (i.e. € 353 million, including the costs of common reinforcements).
- Option 5
 - Option 5 performs adequately from a technical perspective, meeting the majority of the identified needs within the period of analysis (i.e. 2025). It performs less adequately in respect of providing local support to the south east and south midlands regions and the network would be seen to be at its practical limit in those areas. Given that it is a HVDC solution, it is not readily integrated into the existing network which is exclusively AC throughout the region. Given the high capital costs associated with the HVDC option (i.e. € 727 million, including common reinforcements); it delivers the poorest Net Present Value (i.e. - € 244 million).
- Options 6
 - Option 6 seeks to defer the construction of large-scale reinforcement and rather incrementally patch the south east network. Therefore, it performs adequately from a technical perspective as long as the reinforcements are correctly timed to meet the needs as they arise. Given that the option ultimately becomes a 400 kV solution, it maximises future extensibility, but there is a risk that the construction of new infrastructure at lower voltages may compromise the ability to secure the necessary routes in restrictive areas in future. Regarding the compliance of the option to the principles of Grid25, there is a possibility that components associated with deferring the long-term 400 kV reinforcements may become redundant, which would be against the