

UNC0498/0502

Feedback on the carbon assessment

Action 1104: DRe to review the carbon assessment presentation and feedback whether the approach is appropriate in particular with regard to capital costs

ofgem

Capital Costs

- There is a difference between the scope of costs included in a Cost Benefit Analysis, which may form part of the modification report, and the scope of a carbon cost assessment
- We do not consider that the carbon cost assessment should include the capital cost (and non-carbon operating costs) of CO₂ removal equipment in any scenarios
- The capital and operating costs of CO₂ removal equipment may be relevant to a Cost Benefit Analysis

General Approach

There are several issues that we think that the proposer /workgroup should consider in its carbon cost assessment:

- Scenarios where the modification proposal is not approved
- Scenario selection and range
- Consistent Units
- Discount Rates for NPVs

- Scenarios 1 and 2 appear to have the implicit assumption that the modification proposals are not approved but that the fields are developed and CO₂ removal equipment is installed upstream of the NTS entry
- We suggest that the proposer considers the adoption of an additional scenario where the modification proposals are not approved
 - The field(s) in question proceed with development as planned
 - The fields are curtailed/ shippers issued with Terminal Flow Advice (TFA) if CO₂ level exceeds 2.9%
- Alternatively, the proposer should provide reasons for not considering a scenario with this TFA risk
- The workgroup has indicated that not developing any new gas fields with 'high' CO₂, the best option for delivering the very lowest emissions, may not be realistic, but we would also expect the proposer to provide reasons for not considering this option

- The current approach presents analysis of three scenarios, each representing potential options. The carbon emissions from each of these three scenarios appear to represent a “worst” or conservative case scenario :
 - of either all of the new production requiring treatment to reduce the CO₂ level from 4% to 2.9% at removal plant (Scenarios 1 and 2),
 - or all of the production resulting in the gas entering the NTS at 4% CO₂ (Scenario 3)
- We suggest that the range of scenarios be expanded to include additional “realistic” scenarios

- More realistic scenarios could include the following:
 - where CO₂ removal plant is installed, the plant should only operate to remove CO₂ when the level at the NTS entry points would otherwise exceed 2.9mol%
 - where it is assumed that the proposed modifications are approved, only the incremental emissions (and resultant carbon costs) of the blended gas at the NTS entry above 2.9% should be measured
- The range of scenarios should take into account the frequency of NTS Teesside Average Daily CO₂ content >2.9 mol%

Consistent Units

- Relevant costs and benefits, those that may be affected by the decision, should extend over the period of the useful lifetime of the assets encompassed by the options
- The current carbon cost assessment presents the carbon costs in the form of either total costs or in terms of “average” annual costs over 21 years of the field’s lifetime
- These approaches are valid when considering carbon costs in isolation of other relevant costs and benefits but are less valid for a CBA approach
- We suggest that the proposer give consideration to adopting a net present value approach that would allow comparison with other costs and benefits

Discount Rates for NPVs

- Different cash flows may have different systematic risks* and this should be reflected in the CBA. One way of doing this is to adjust the discount rate.
- If the underlying systematic risk is considered negligible, then it is generally reasonable to use the social time preference rate (STPR) of 3.5%, as recommended by the HM Treasury Green Book (See HM Treasury Green Book, Chapter 5, http://www.hmtreasury.gov.uk/d/green_book_complete.pdf)
- Alternatively, if the systematic risk is considered to be significant then using the STPR only, which ignores systematic risk, is unlikely to be appropriate in the absence of any other adjustments; instead the relevant weighted average cost of capital (WACC), which does reflect some systematic risk may be the correct discount rate to use.
- In this instance, we suggest that application of the STPR may be more appropriate

* systematic risk is the fluctuation of returns intrinsic to the market segment caused by the macroeconomic factors that affect all risky assets, whereas unsystematic risk is the risk that something will go wrong on the company or industry level, such as mismanagement, labour strikes, production of undesirable products, etc.

Ofgem is the Office of Gas and Electricity Markets.

Our priority is to protect and to make a positive difference for all energy consumers. We work to promote value for money, security of supply and sustainability for present and future generations. We do this through the supervision and development of markets, regulation and the delivery of government schemes.

We work effectively with, but independently of, government, the energy industry and other stakeholders. We do so within a legal framework determined by the UK government and the European Union.