

## MOD0517 – Analysis on Review of the Merit Order within the Transportation Model



MOD0517 Workgroup (as part of NTSCMF)  
25 November 2014

# Agenda

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- Background
- Options Considered previously
- MOD Proposed Solution
- Summary
- Appendix – Option Analysis

## Background

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- Proposed MOD to amend the merit order of supply
  - Supplies have changed over the recent years, so merit order needs to be brought up to date
- Proposed to combine MRS and LNG within the Merit Order of supply (Option 3)
- Modification raised to October Panel

## Options Considered previously



## Options for amendment to Merit Order

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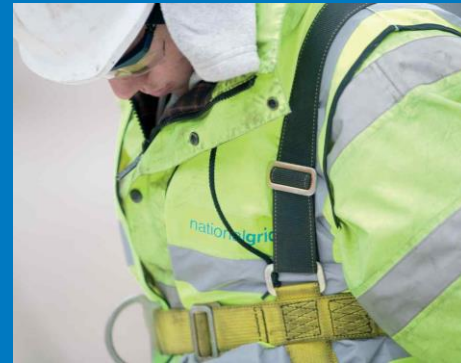
1. To leave merit order as is, with LNG utilised ahead of MRS in supply matching
2. To amend merit order to promote MRS ahead of LNG
3. LNG and MRS grouped together in merit order
4. Use the amount specified against LNG within Winter Outlook Report first, then utilise MRS and then remaining amount to LNG
5. Use Beach and then utilise Interconnectors, LRS, MRS, LNG grouped together and then SRS
6. Use Beach and LRS and then utilise Interconnectors, MRS and LNG and then SRS

## NTSCMF and Transmission Workgroup

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- NTSCMF have discussed Merit Order over summer and on 15 September presented on Option 2 and Option 4 compared to Option 1 to NTSCMF
- On 2 October presented Option 3 and Option 4 analysis and a comparison between the 2 options to Transmission Workgroup
- MOD was raised at October Panel (MOD0517)
  - Option 3 is proposed option
- 31 October presented to workgroup (as part of NTSCMF)
  - Requested analysis on 2 new options – Option 5 and Option 6

## MOD Proposed Solution



# Proposal

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- Change the Merit Order to be more reflective of the current gas supply patterns on the NTS
  - Analysis for the Modification has looked at the LNG and MRS sources of supply
  - Other analysis was completed to look at differences with all options which could be possible
- Proposed Solution within MOD0517 is Option 3
  - LNG and MRS grouped together within the merit order
- No updates have been made to the proposed option within the MOD



## Why Option 3 over the other options?

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- Reflects current reality
- Based on data for previous years, this option reflects the supply patterns
- Smaller changes in price compared to other original option (Option 4)
  - More stability in prices after implemented
- Positive impact on relevant charging objectives (as can be seen in slides below)

## Relevant Objectives within MOD

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- a) Save in so far as paragraphs (aa) or (d) apply, that compliance with the charging methodology results in charges which reflect the costs incurred by the licensee in its transportation business;
- aa) That, in so far as prices in respect of transportation arrangements are established by auction, either:
  - no reserve price is applied, or
  - that reserve price is set at a level -
    - (I) best calculated to promote efficiency and avoid undue preference in the supply of transportation services; and
    - (II) best calculated to promote competition between gas suppliers and between gas shippers

## Relevant Objectives within MOD

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- b) That, so far as is consistent with sub-paragraph (a), the charging methodology properly takes account of developments in the transportation business;
- This modification does not conflict with:
- paragraphs 8, 9, 10 and 11 of Standard Condition 4B of the Transporter's Licence; or
- paragraphs 2, 2A and 3 of Standard Special Condition A4 of the Transporter's Licence;

## Positive impact on Relevant Objectives within MOD

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- The implementation of this modification would align to the current supply source utilisation and ensure that the Entry and Exit reserve prices are reflective and consistent with what happens on the network.
- This modification will take into account developments that have taken place since the current Merit Order was introduced as part of GCM16 in 2009. This modification seeks to update UNC TPD Section Y to amend the Merit Order to reflect the current supply utilisation.

## Proposed Amendments

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- It is proposed to amend UNC TPD Section Y – Section 2.5.1 (c) to ensure that the Merit Order specified in the UNC is more reflective of current utilisation of supplies.
  - Beach Terminals
  - Pipeline Interconnectors
  - Long Range Storage Facilities
  - LNG (Liquefied Natural Gas) Importation Facilities **and Mid Range Storage (MRS) Facilities**
  - ~~■ Mid Range Storage (MRS) Facilities~~
  - Short Range Storage Facilities

# Analysis

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- There are differences between the original Transportation Model charges and the Option 3 charges
  - Appendix of these slides
  - Full data in detail available on JO website

## Price Changes

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- Some of the charges have larger percentage change than others
  - Small changes to the supply data within the Transportation Model have the potential to change the direction of the flow of gas and this is likely to noticeably impact prices
  - When price starts at minimum price, the p/kWh value change can be small but the percentage change can look large
- Entry prices look to all have increased or not changed
  - Negative LRMC and minimum price will still stay at minimum price

## Interaction with other developments

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- This Modification can be done separate to the GTCR and Tariff Code as the underlying model and principles of LRMC remain the same



## Summary



## Summary

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- Option 3 proposed in the Modification raised
  - Amend the Merit Order to combine MRS and LNG into one group within the Merit Order and prorate the supplies
- It is proposed to amend UNC TPD Section Y – Section 2.5.1 (c) to ensure that the Merit Order specified in the UNC is more reflective of current supplies utilised.

## Appendix – Option Analysis



# Analysis

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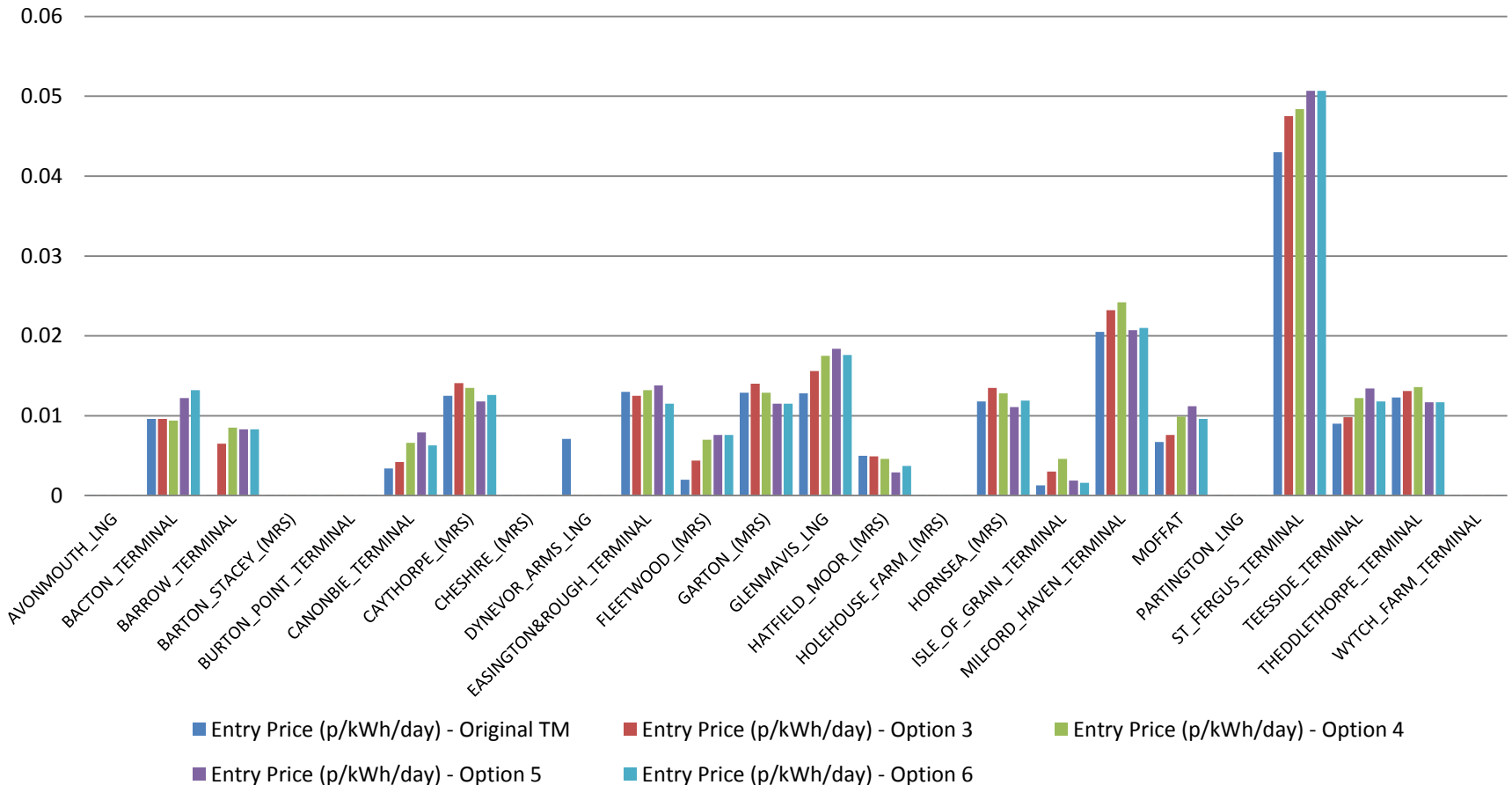
- Slides in this Appendix show some of the differences in prices between the options
  - Based on the following models
    - QSEC 2014
    - QSEC 2013
- The data behind these slides is available on JO website

# Supply values in QSEC 2014

|                        | QSEC 2014 |          |          |          |          |
|------------------------|-----------|----------|----------|----------|----------|
|                        | Original  | Option 3 | Option 4 | Option 5 | Option 6 |
| AVONMOUTH LNG          | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |
| BACTON_TERMINAL        | 384.81    | 384.81   | 384.81   | 384.81   | 384.81   |
| BBL                    | 587.67    | 587.67   | 587.67   | 375.63   | 353.00   |
| IUK                    | 807.50    | 807.50   | 807.50   | 516.14   | 485.04   |
| BARROW_TERMINAL        | 77.21     | 77.21    | 77.21    | 77.21    | 77.21    |
| BURTON_POINT_TERMINAL  | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |
| CAYTHORPE_(MRS)        | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |
| CHESHIRE_(MRS)         | 0.00      | 219.05   | 261.40   | 330.40   | 310.49   |
| EASINGTON              | 833.89    | 833.89   | 833.89   | 833.89   | 833.89   |
| ROUGH                  | 485.00    | 485.00   | 485.00   | 310.00   | 485.00   |
| FLEETWOOD_(MRS)        | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |
| GARTON_(MRS)           | 0.00      | 187.76   | 224.05   | 283.20   | 266.14   |
| GLENMAVIS LNG          | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |
| HATFIELD_MOOR_(MRS)    | 0.00      | 8.88     | 10.60    | 13.39    | 12.59    |
| HOLEHOUSE_FARM_(MRS)   | 0.00      | 125.09   | 149.27   | 188.67   | 177.31   |
| HORNSEA_(MRS)          | 0.00      | 82.46    | 98.40    | 124.38   | 116.88   |
| BARTON_STACEY_(MRS)    | 0.00      | 33.41    | 39.87    | 50.39    | 47.35    |
| ISLE_OF_GRAIN_TERMINAL | 542.23    | 275.46   | 223.89   | 415.47   | 390.44   |
| MILFORD_HAVEN_TERMINAL | 792.46    | 402.57   | 327.21   | 607.19   | 570.62   |
| PARTINGTON LNG         | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |
| ST_FERGUS_TERMINAL     | 1107.86   | 1107.86  | 1107.86  | 1107.86  | 1107.86  |
| TEESSIDE_TERMINAL      | 445.09    | 445.09   | 445.09   | 445.09   | 445.09   |
| THEDDLETHORPE_TERMINAL | 71.34     | 71.34    | 71.34    | 71.34    | 71.34    |
| WYTCH_FARM_TERMINAL    | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |
| PORTLAND_(MRS)         | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |
| ALBURY_(MRS)           | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |
| SALTFLEETBY_(MRS)      | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |
| BARROW_BAINS_(MRS)     | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |

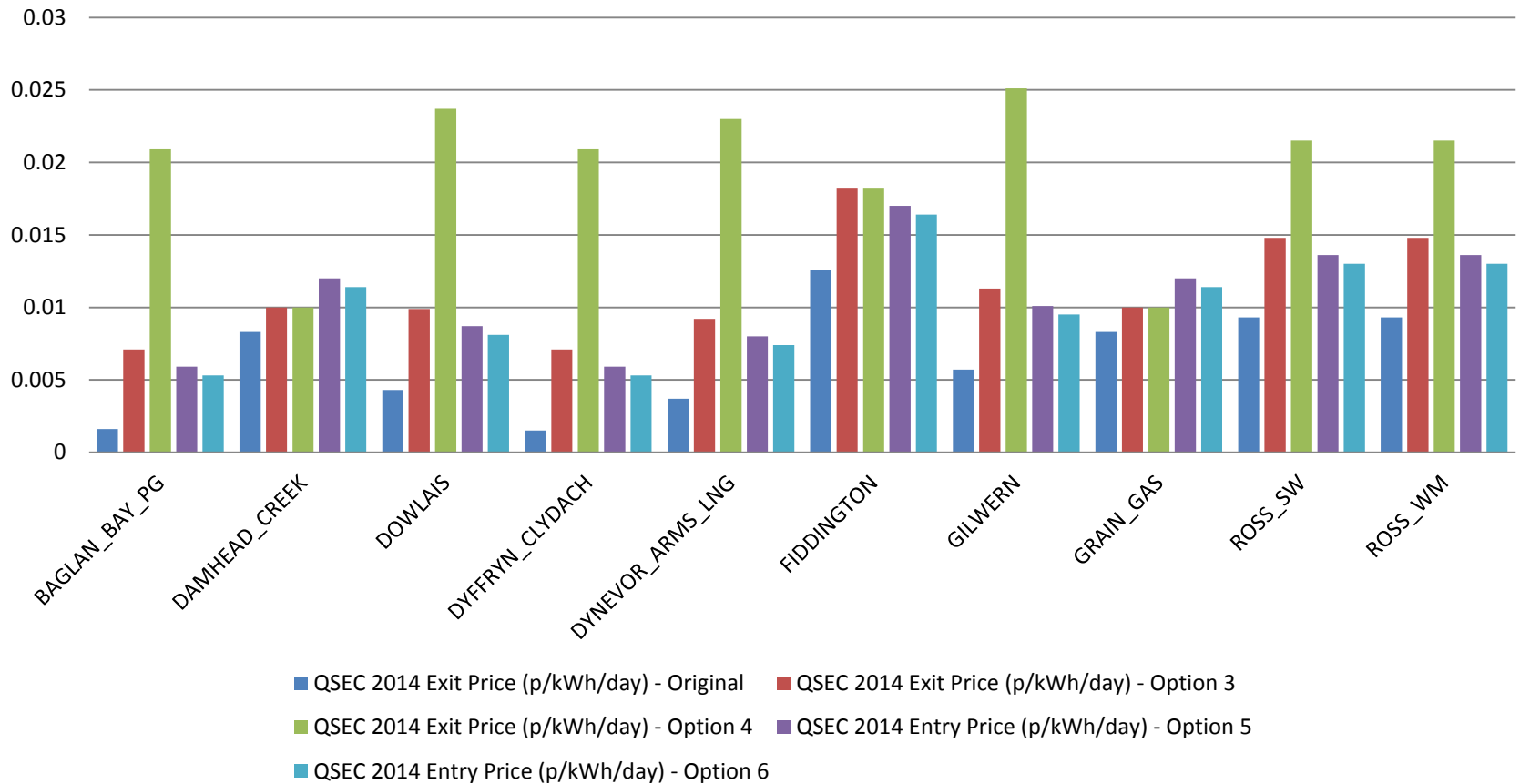
# Comparison of all Options – Entry – QSEC 2014

Entry Price comparison between original Transportation Model prices and Option 3, 4, 5 and 6



# 2014 (QSEC) – Exit Results (Top 10 increases\*)

**QSEC 2014 Comparison of Original, against Option 3, 4, 5 and 6**



\*Top 10 based on the price change between Original and Option 3

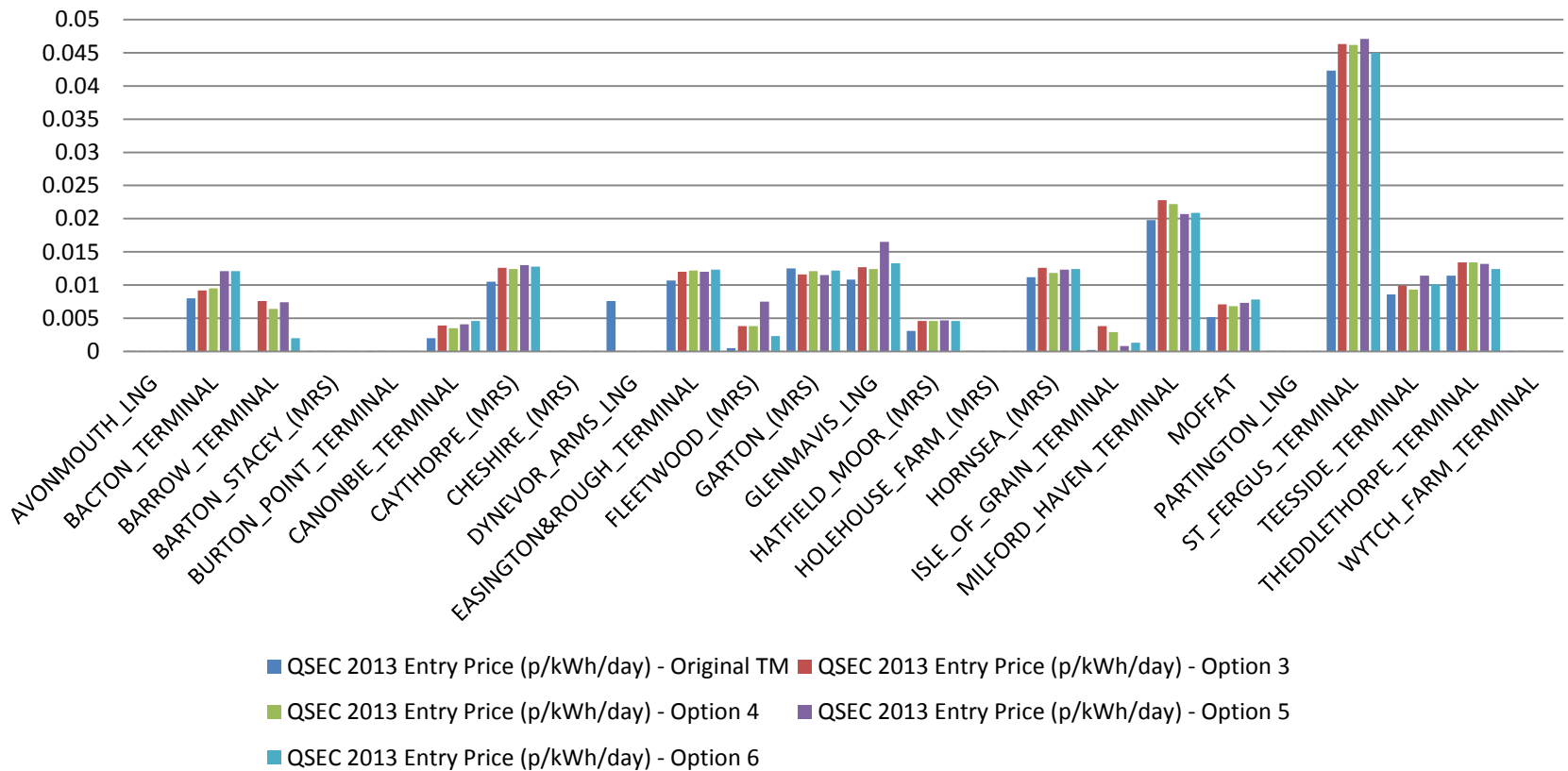
# Supply values in QSEC 2013

|                        | QSEC 2013 |          |          |          |          |
|------------------------|-----------|----------|----------|----------|----------|
|                        | Original  | Option 3 | Option 4 | Option 5 | Option 6 |
| AVONMOUTH LNG          | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |
| BACTON TERMINAL        | 388.23    | 388.23   | 388.23   | 388.23   | 388.23   |
| BBL                    | 587.67    | 587.67   | 587.67   | 408.73   | 389.03   |
| IUK                    | 807.50    | 807.50   | 807.50   | 561.63   | 534.55   |
| BARROW TERMINAL        | 64.00     | 64.00    | 64.00    | 64.00    | 64.00    |
| BURTON POINT TERMINAL  | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |
| CAYTHORPE (MRS)        | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |
| CHESHIRE (MRS)         | 0.00      | 204.10   | 183.08   | 280.99   | 267.44   |
| EASINGTON              | 893.00    | 893.00   | 893.00   | 893.00   | 893.00   |
| ROUGH                  | 485.00    | 485.00   | 485.00   | 337.33   | 485.00   |
| FLEETWOOD (MRS)        | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |
| GARTON (MRS)           | 0.00      | 224.31   | 201.21   | 308.81   | 293.92   |
| GLENMAVIS LNG          | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |
| HATFIELD MOOR (MRS)    | 0.00      | 10.61    | 9.52     | 14.61    | 13.90    |
| HOLEHOUSE FARM (MRS)   | 0.00      | 133.93   | 120.13   | 184.38   | 175.49   |
| HORNSEA (MRS)          | 0.00      | 98.51    | 88.37    | 135.63   | 129.09   |
| BARTON STACEY (MRS)    | 0.00      | 39.91    | 35.80    | 54.95    | 52.30    |
| ISLE OF GRAIN TERMINAL | 617.38    | 328.38   | 358.15   | 452.09   | 430.29   |
| MILFORD HAVEN TERMINAL | 902.32    | 479.94   | 523.45   | 660.74   | 628.88   |
| PARTINGTON LNG         | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |
| ST FERGUS TERMINAL     | 1077.00   | 1077.00  | 1077.00  | 1077.00  | 1077.00  |
| TEESSIDE TERMINAL      | 321.00    | 321.00   | 321.00   | 321.00   | 321.00   |
| THEDDLETHORPE TERMINAL | 66.00     | 66.00    | 66.00    | 66.00    | 66.00    |
| WYTCH FARM TERMINAL    | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |
| PORTLAND (MRS)         | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |
| ALBURY (MRS)           | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |
| SALTFLEETBY (MRS)      | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |
| BARROW BAINS (MRS)     | 0.00      | 0.00     | 0.00     | 0.00     | 0.00     |



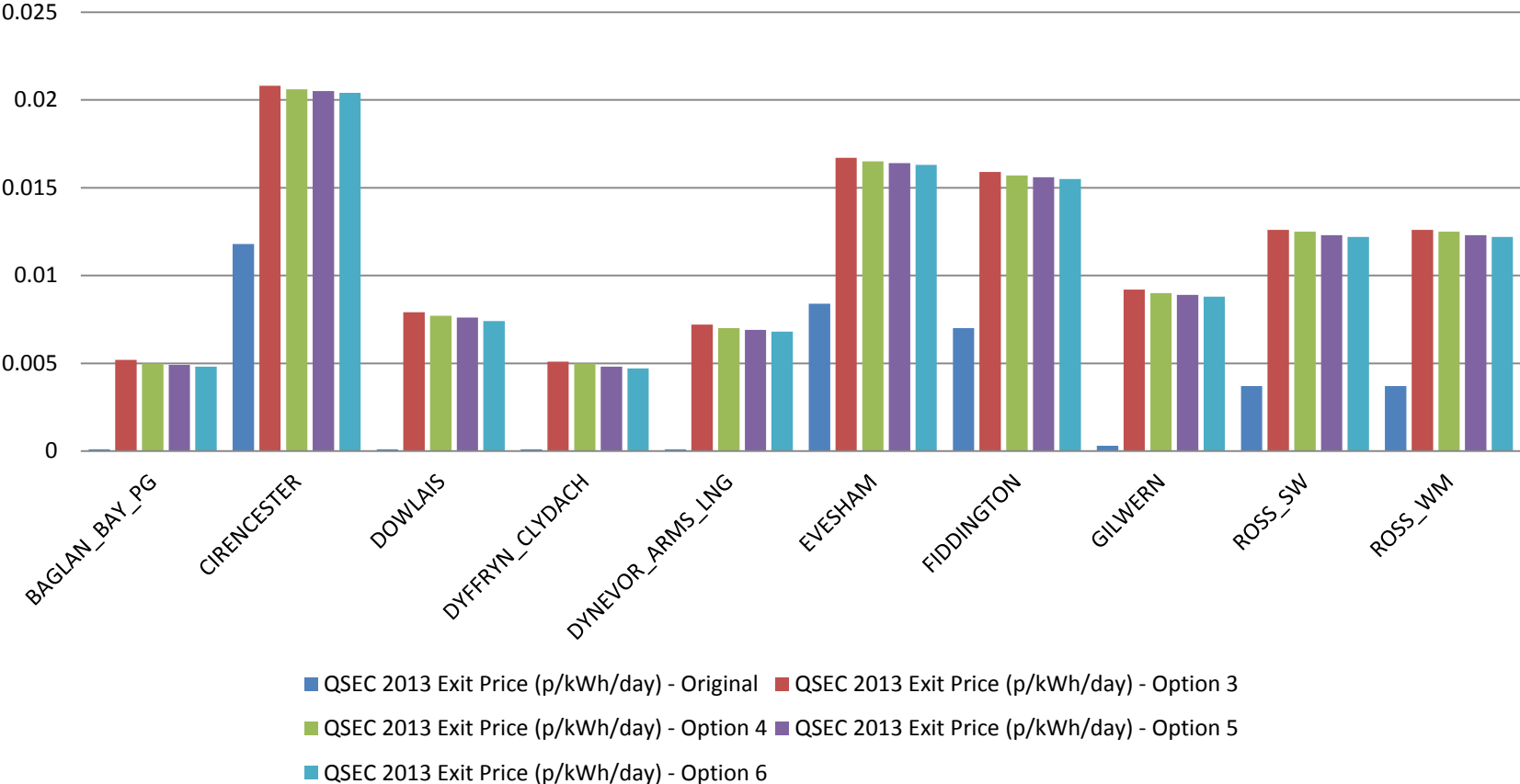
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QSEC 2013 Comparison of Original, against Option 3, 4, 5 and 6



\*Top 10 based on the price change between Original and Option 3