Rough Order of Magnitude (ROM) Analysis for:

Modification Proposal 0333 - Update of the default System Marginal Buy Price and System Marginal Sell Price

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ROM Request received:	
ROM provided:	16 December 2010

Change driver / origin

Modification Proposal 0333 describes that In the UNC, the System Marginal Buy and Sell Prices are derived from either the price of National Grid's Market Balancing Actions, or System Average Price(SAP) plus or minus a default value. System Marginal Sell Price is the lesser of the lowest Balancing Action Offer Price on a day or SAP less 0.0324 pence per kWh. System Marginal Buy Price is the higher of the highest Balancing Action Offer Price on a day or SAP plus 0.0287 pence per kWh.

For clarity, this proposal is solely concerned with the 'default' System Marginal Buy and Sell Prices ("default SMPs") of SAP plus 0.0287p/kWh and SAP less 0.0324p/kWh. These default SMPs apply where National Grid has not taken a Market Balancing Action or where one or more Market Balancing Action is taken but the associated Balancing Action Offer Prices have not reached a sufficient level to set the System Marginal Buy or Sell Price.

The current default SMPs were implemented into the UNC on 1st April 2001.

Analysis

'As is' process:

o   Under certain conditions[1] the SMP Buy and SMP Sell rates are calculated automatically within Gemini by applying a defined numeric value to the daily SAP

o   This numeric value is not 'hard-coded' in Gemini but is stored as a parameter

o   Note: The existing parameter has no effective date and requires a data-fix to amend it.

o   Note   Data-fixing is not an acceptable approach for new requirements

Business Rules : controlled update of new dated parameter:

o   Establish a dated parameter (i.e. introduce effective dates for existing parameter or new parameter)

o   Enable authorised NGT users to amend the parameter on a periodic basis (updates possibly constrained to start of the month)

o   Enable audit of parameter changes

o   Ensure the parameter value effective for the relevant gas day is used to calculate SMP rates as per current formula where the defined conditions exist.

ROM Costs & Timescales

Note: ROM information is not based on any formal systems analysis.

Estimated costs:

The Solution will cost at least **£205k**, but probably not more than **£227** to implement

Estimated duration:

The initial analysis phase, will take at least **11 weeks**, but probably not more than **14 weeks**.

Delivery; including detailed analysis, design, development, testing and post implementation support will take at least **10 weeks**, but probably not more than **15 weeks**.

The total of for the project is therefore in the range of 21-29 weeks.

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[1] Refer to Appendix A for UNC TPD Section F1.2.1

Assumptions

- It is assumed that the SMP Buy and SMP Sell price calculations are [to be] contained within the Invoicing component of Gemini, i.e. no other process outside of Invoicing would require the calculation or output of the calculation.
- Performance will still remain within the stated acceptable tolerance levels for Gemini.
- Shippers will not need to verify SMP rate calculation
- The changes to the rules for SMP rates will not impact the scope of invoice back up data provided by xoserve (confirm with Ops)

Concerns

- There is a high level of proposed change on Gemini over the next few years. As a result, the level of resources (including staff, technical resources, desks etc…) and the availability of testing Environments will be constrained.

Impacts

xoserve:
- None identified at present

Networks:
- None identified at present

Shippers
- None identified at present

Ofgem
- None identified at present

Appendix A

UNC Section F 1.2.1 states…

(a) the **"System Marginal Buy Price"** is the greater of:
  (i) the System Average Price plus 0.0287 pence/kWh; and
  (ii) the price in pence/kWh which (subject to Section D4.1.4, 4.1.5(a)) is equal to the highest Balancing Action Offer Price in relation to a Market Balancing Action taken on that Day;

(b) the **"System Marginal Sell Price"** is the lesser of:
  (i) the System Average Price less 0.0324 pence/kWh; and
  (ii) the price in pence/kWh which (subject to Section D4.1.4, 4.1.5(b) and 4.1.7) is equal to the lowest Balancing Action Offer Price in relation to a Market Balancing Action taken on the Day;

(c) the **"System Average Price"** for a Day is (subject to Section D4.1.4 and D4.1.6) the price in pence/kWh calculated as the sum of all Balancing Transaction Charges divided by the sum of the Market Transaction Quantities and Non-Trading System Transaction Quantities for all Balancing Transactions respectively effected in respect of that Day

(and for the avoidance of doubt on a Day on which National Grid NTS takes no Market Balancing Action the System Marginal Buy Price and the System Marginal Sell Price shall be the System Average Price).