

## Form A – IGG Design Discussion Request

Discussion Request Number	Title	Priority
DR 0156	Recalculation of Consumption Estimates	<b>High</b>

<b>Name of Requesting Organisation</b>	Commission for Energy Regulation
<b>Contact Name</b>	
<b>Date Request sent to RMDS</b>	6 <sup>th</sup> May 2008

Date	Version	Reason for Change
6 <sup>th</sup> May 2008	1.0	<i>To bill customers equitably over a time period in which there has been a series of estimate readings and a tariff change.</i>
15 <sup>th</sup> July, 2008	1.1	<i>Modification to logic for triggering recalculation</i>
22 <sup>nd</sup> July, 2008	1.2	<i>Updated following internal review - Use EUF instead of AUF and add 'Do not recalculate' for Scenario 3 on Re-calculation of Estimates scenario table.</i>
7 <sup>th</sup> August 2008	2.0	<i>Re-released to the market as version 2.0. A major version number has been reused at this DR was previously been approved to go to MCR at the June 26<sup>th</sup> 2008 IGG.</i>

Detail of Discussion Request
<p><b><u>Background</u></b></p> <p>ESB Networks provides meter readings to electricity suppliers for the RoI retail electricity market. For non-quarter hourly non-maximum demand meter points, actual or estimated readings are provided 6 times a year for each meter point. In cases where access is not possible an estimated meter reading is provided.</p> <p>The estimate is produced using an industry standard estimated algorithm provided in the SAP ISU software. The estimation algorithm uses the consumption history for the meter point, and the profile for the meter point to produce the estimate. The production of estimates is governed by 'Estimation of Non-Quarter Hourly Meter Readings' a briefing document within the approved retail market design.</p> <p>When an actual reading is received that indicates the previous estimate was too high, the central market system withdraws and replaces the estimate with a recalculated figure. If there has been a series of estimates, this will be done for each estimate as far back as required to ensure that no estimated reading is greater than the new, actual reading.</p> <p>This recalculation, withdrawal and replacement process generates two new market messages per estimate replaced (i.e. one withdrawal and one replacement message) and leads to extra processing by the supplier. By agreement, replacement had been limited to cases of over-estimation.</p> <p>The following proposal sets out an approach that would involve the extension of the recalculation of estimates to cases where an underestimate is indicated. It is proposed to provide a set of parameters that would suppress the process where the discrepancy is below a set level of consumption. A recalculation will occur where the consumption level is above a certain level and also meets other specific criteria (see Detailed Solution section).</p> <p><b><u>Updated Background</u></b></p> <p>Due to the impending freeze on the CMS to facilitate the upgrade and the priority placed on this change by the Regulator, this change was put live on 30<sup>th</sup> June 2008. It is proposed to modify the change by removing the link to a DUoS price change. This will allow the change to work for a price change by any supplier or DSO. Note there is a defect with the live version and this will be the subject of a separate document.</p>

## Detail of Discussion Request

### Proposed Solution<sup>1</sup>

The principles of the proposal are:

- Recalculate estimates **WHERE**:
  - An actual reading is received immediately after a reading history of 3 or more consecutive estimates on any one register.
  - **AND** the consumption at that meter point is greater than  $\frac{1}{4}$  of the Estimated Usage Factor
  - **AND** there is no change of supplier during this period of estimates.

### Assumptions:

- An estimate reading on a Change of Legal Entity (CoLE) will be treated as a normal estimate.

### Detailed Solution

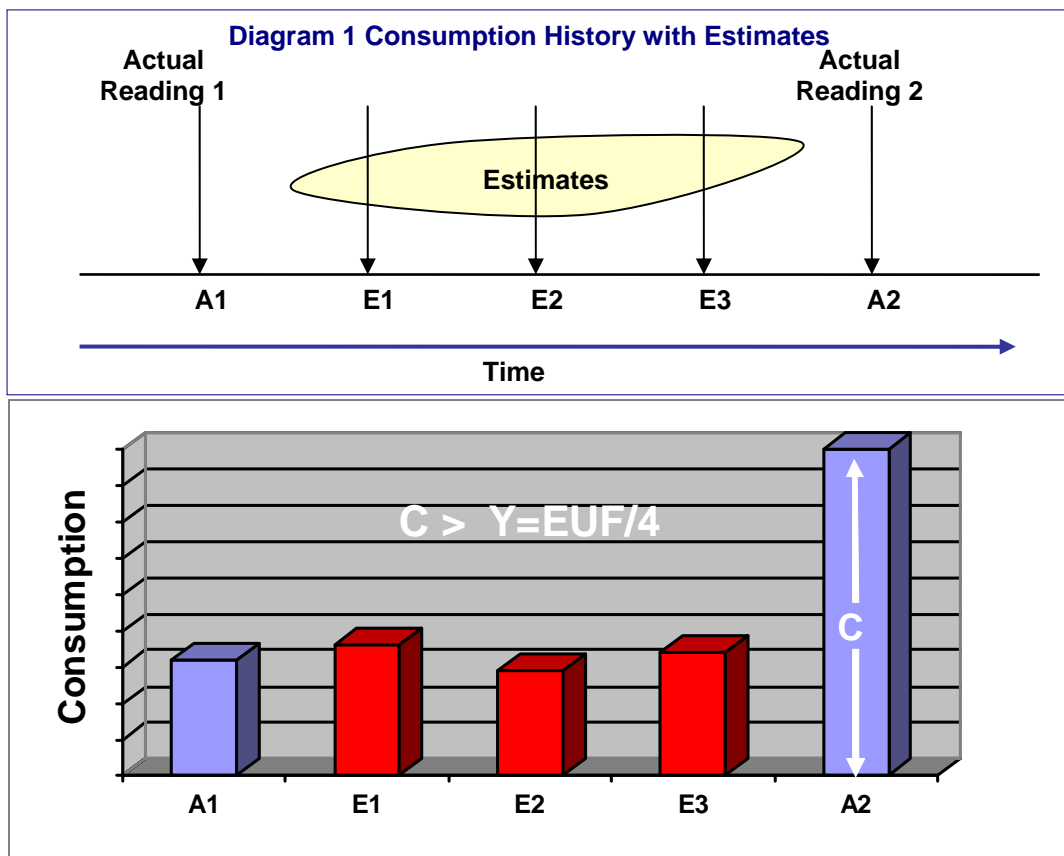
**IF Consumption  $C > Y = EUF/4$  and three or more estimate reads THEN recalculate the estimates.**

### Definitions

**C** = Consumption at the meter point

**EUF** = Estimated Usage Factor is a statement in kWh of the estimated consumption for a given Timeslot at a Meter Point since the previous read-date, extrapolated to an annual consumption based on the applicable derived profile.

**Y** = is equal to one quarter of the estimated usage factor (EUF/4) i.e. expected consumption for 3 months at that meter point.



**Diagram 1** above indicates actual readings A1 and A2 and estimate readings E1, E2, and E3 over a

<sup>1</sup> The initial design allowed for a flag to the NQH scheduled reading (300) message. This flag would indicate that recharging may be required and that a tariff change is likely to have occurred. Due to the fact that there was a schema change freeze in 2008 this flag was excluded.

## Detail of Discussion Request

period of time.

The bar graph (diagram 2) indicates the actual (blue) and estimated (red) consumptions over the same period of time. A2 - the second actual - is considerably higher than the estimates. If the consumption C for reading A2 is > than one quarter of the Estimated Usage Factor (EUF) and there is no change of supplier then the estimates are recalculated. The various recalculation scenarios are indicated in the table below.

### Recalculation of Estimates Scenarios

Scenario	Description	Action
1.	<b>IF</b> Consumption $C > Y = EUF/4$ <b>AND</b> an actual reading is received immediately after a reading history of 3 or more consecutive estimates on any one register without an actual, customer or special reading. <b>AND</b> there is <b>No</b> Change of Supplier <b>THEN</b> Re-estimate	<b>Recalculate</b> Re-estimation is triggered for E1, E2, E3 and read withdrawal (300W) market messages are issued to Supplier.
2.	<b>IF</b> Consumption $C < Y = EUF/4$ <b>THEN</b> do not recalculate	<b>Do not recalculate</b> No re-estimation is performed. The actual reading A2 is sent to the Supplier on the 300 market message
3	<b>IF</b> Consumption $C > Y = EUF/4$ <b>AND</b> 3 or more estimates <b>AND</b> Change of Supplier <b>THEN</b> No re-estimation is performed.	<b>Do not recalculate</b>

### Responses to Supplier Queries

**Question:** Which Usage Factor do you use to calculate EUF/4, the Usage Factor before the new read or the one you calculate in the light of the new read?

**Answer:** You use the Estimated Usage Factor preceding the actual read.

**Question:** What happens if the period of estimates is broken by non scheduled reads (Special, Customer etc)?

**Answer:** Non-scheduled readings are regarded as actual reads and you wouldn't recalculate in this case.

**Question:** Will a customer, special or meter works read trigger a recalculation of estimates in the same way as a scheduled actual read?

**Answer:** Yes.

### Phase 2 of Recalculation of Consumption Estimates

This DR will require a second MCR to support a Schema change. The Schema needs to be amended to include a flag which indicates to a supplier that recharging may be required and that a tariff change is likely to have occurred. The flag is to be added to the NQH scheduled reading (300) message.

## Reason for Discussion Request

To bill customers equitably over a time period in which there has been a series of estimate readings and a tariff change.

## Market Design Documents impacted by Request

Detail of Discussion Request	
Date of IGG where discussed	18 <sup>th</sup> October 2007, 29 <sup>th</sup> November 2007, 10 <sup>th</sup> January 2008, 29 <sup>th</sup> February 2008, 11 <sup>th</sup> April 2008, 15 <sup>th</sup> May 2008, 26 <sup>th</sup> June 2008
Change Request xref (if applicable)	

PART 2 MARKET ASSURANCE:							
Applicability							
ESB Networks	Suppliers	TSO	SSA	Generators			
X							
Scope of Test							
Connectivity	DTT	MSA	IPT	Other			
			No. Of Scenarios				
Scope of Discussion Request							
Correction to Documentation	Business Process	Market & MP Systems	MPCC	Readings Processor	Market Gateway	Schema	Web Forms