

Discussion Request 1167			Facilitate energy efficiencies in Local Authority Public Lighting		
Status	Approved	Priority	High	Status Date	04/11/2015

Date	Version	Reason for Change	Version Status
01/09/2015	1.0	Issued to Market	Final
16/09/2015	1.1	Confirmation that CCMA and TII are in agreement with the proposals in this Discussion Request has been added. 'NRA' text has been replaced with TII - the NRA has recently merged with the Railway Procurement Agency to become "TII" Transport Infrastructure Ireland.	

Part 1 DETAIL OF DISCUSSION REQUEST / MARKET CHANGE REQUEST			
Requesting Organisation(s)	ESB Networks	Originating Jurisdiction	RoI
Request Originator Name	Theresa O'Neill		
Date Raised	01/09/2015		

Classification of Request			
Jurisdictional Applicability	RoI	Jurisdictional Implementation	Both
If jurisdictional implementation is for one jurisdiction only – is the other jurisdiction required to effect any changes?	Yes	Co-Ordinated Baseline Version No.	TBC
Change Type	Schema Impacting		

Detail of Request
Reason for Request
<p>The CCMA and TII have requested changes in the Unmetered Public Lighting sector in the Electricity Retail Market in RoI to facilitate energy efficiencies in Local Authority Public Lighting.</p> <p>This request has been submitted to ESB Networks from the Local Government Sector under the auspices of the CCMA/TII. ESB Networks has received confirmation from the CCMA/TII that they are in agreement with the proposals that have been documented in this Discussion Request.</p> <p>New lamp types are proposed to be installed which will have the ability to be pre-programmed to allow for Dimming at specific proportions and at specific times.</p> <p>The Dusk to Dawn Burn Hour Calendar (D2D) that is currently in use is set at 4,150 hours in a year. 'Trimming' is currently included in this on the basis that lights have a warming up and down time i.e. they don't just turn on and off. As a result 10 minutes 21 secs has been taken off of the dusk and dawn timings since at least 2005 i.e. over 20 minutes a day is being 'Trimmed'.</p> <p>The Local Authorities are looking for a new 'Dusk to Dawn Burn Hour Calendar with Extra Trimming' to be introduced and to be set at 4,095 hours in a year.</p> <p>Similar to the current D2D Calendar, Daylight Saving Times will be incorporated into the new 'Dusk to Dawn Burn Hour Calendar with Extra Trimming'.</p> <p>The CCMA/TII have confirmed that the new 'Dusk to Dawn Burn Hour Calendar with Extra Trimming' will be the basis of the energy efficiencies that the CCMA/TII are looking to implement when they introduce Dimming.</p>

The CCMA/TII has noted that the consultation process undertaken by them across the local government sector indicated that eleven burn profiles for new Trimming / Dimming regimes are a minimum requirement for the public lighting providers over the coming years. This Change Request documents the CCMA's and TII's top four essential priorities. The seven remaining priorities are not being raised at this time and can be raised in separate change requests at a later date.

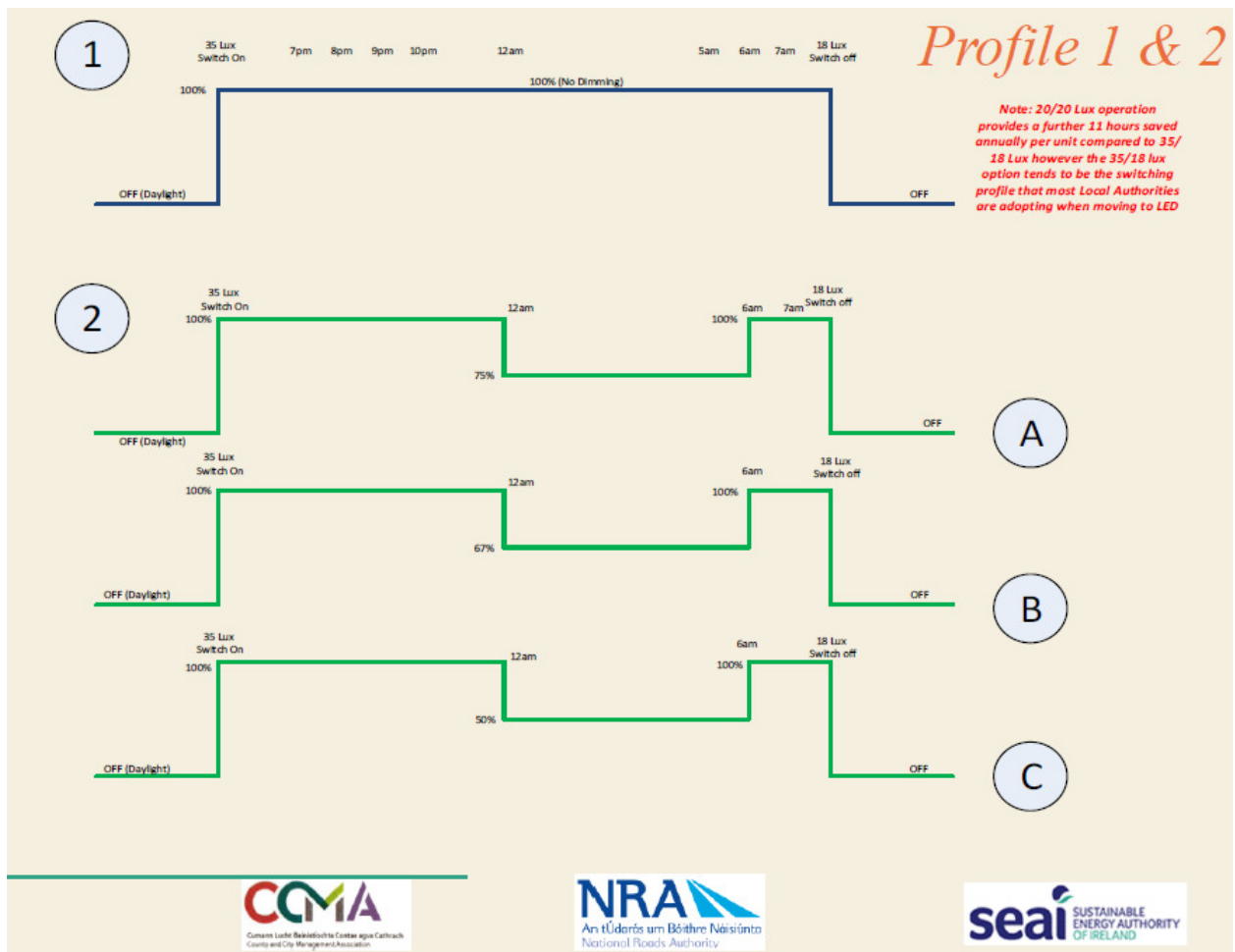
Proposed Solution

Additional Burn Hour Calendars for DUoS billing and additional Load Profiles for Data Aggregation are proposed to be introduced in RoI in the Electricity Retail Market.

These consist of the introduction of 1 step dimming into the new 'Dusk to Dawn Burn Hour Calendar with Extra Trimming' and its corresponding new Standard Profile and where the dimming is any of 75%, 67% or 50% between the hours of midnight and 6am.

The dimming proportions are lighting output percentages. They represent 75%, 67% or 50% of 100%.

The new 'Dusk to Dawn Burn Hour Calendar with Extra Trimming' profile is pictorially represented as Profile 1 and new Dimming regimes are represented as 2A, 2B and 2C in this submission from CCMA/TII/SEAI viz:



The lamp type in use will accurately reflect the actual wattage at a TMRPN. The Local Authorities will, as normal, advise the Unmetered Registrar (UMR) of all TMRPNs where changes in actual wattages are being made.

A separate Code Change Request will be raised as normal where needed to accommodate lamp types for Dimming.

ESB Networks will calculate the effective wattage for every lamp type that will be valid for dimming as part of the work for this Change Request. The output from this will be published.

The effective wattage will be billed in DUoS based on the dimming proportion (in conjunction with the power factor correction, as normal). Where there is dimming, the 'effective' wattage that will be billed will reflect the dimming regime in place at that lamp e.g.

- if a 100W lamp was operated at 100% for 5 hours and 50% for 5 hours , the effective wattage would be $((100 \times 5) + (50 \times 5))/10 = 75 \text{ W}$ lamp;

The Local Authorities will advise the UMR of the specific change that is needed for every TMPRN so that the Trimming/ Dimming regime can be reflected in the Burn Hours and Standard Load Profile in the inventory of that TMPRN.

NB: The status quo is that there is no mix of profiles at a single TMPRN, and this is not changing.

Scope of Change

Jurisdiction	Design Documentation	Business Process	DSO Backend System Change	MP Backend System Change	Tibco	Supplier EMMA	Schema	Webforms	Extranet/NI Market Website
ROI	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

Co-Ordinated Baseline Market Design Documents Impacted by Request

Market Messages

Message No.	Message Name	CoBL	ROI	NI
591	Non Interval Aggregation	see below	see below	
700	Unmetered Characteristics	see below	see below	
700W	Unmetered Characteristics Withdrawal	see below	see below	
701	Unmetered Consumption	see below	see below	
701W	Unmetered Consumption Withdrawal	see below	see below	

Market Messages

There is no change to the structure of any Market Message.

Five Market Messages currently contain, as a required item, the field LoadProfileCode viz **591, 700, 700W, 701, 701W**. In addition to any of the current LoadProfileCode values that are valid for RoI , this Change Request will allow for the population of any of the **four new LoadProfileCode values** , viz **13,14,15,16** in these specific Market Messages.

Note that there are 20 further Market Messages that are outbound from ESB Networks and which currently allow for the population of a LoadProfileCode field viz. 101, 101P, 102, 102P, 114, 300, 300S, 300W, 301, 301N, 306, 306W, 307, 307W, 310, 310W, 320, 320W, 332, 332W . As none of these 20 messages are used for the population of LoadProfileCode values for Unmetered Public Lighting sites, none of the four new LoadProfileCode values will be populated on them.

Data Definitions

No Impact

Data Codes

Four new Code Value and Code Value Descriptions for the data item Load Profile

The existing Data Item called Load Profile has the schema name LoadProfileCode. The list of Load Profile code values that are valid in RoI will be changed in the schema so that four new codes viz 13, 14, 15, 16 will be added for LoadProfileCode.

The COBL will be changed so that the four new code values and their corresponding Code Value Description will be added to it.

These four new Data Code values will be valid for use only in RoI.

Table 1 displays the list of current existing Load Profile codes that are valid in RoI as well as the four new code values and their corresponding code value descriptions.

Note	Data Item	Code Value	Code Value Description	Valid in ROI?	Valid in NI?
Existing	Load Profile	01	Urban Domestic Unrestricted	Yes	No
Existing	Load Profile	02	Urban Domestic Day/Night	Yes	No
Existing	Load Profile	03	Rural Domestic Unrestricted	Yes	No
Existing	Load Profile	04	Rural Domestic Day/Night	Yes	No
Existing	Load Profile	05	Non Domestic Unrestricted	Yes	No
Existing	Load Profile	06	Non Domestic Day/Night	Yes	No
Existing	Load Profile	07	MD with LF up to (but not including) 30%	Yes	No
Existing	Load Profile	08	MD with LF greater than or equal to 30% but less than 50%	Yes	No
Existing	Load Profile	09	MD with LF greater than or equal to 50%	Yes	No
Existing	Load Profile	10	Unmetered - Flat	Yes	No
Existing	Load Profile	11	Public Lighting - Dusk/Dawn	Yes	No
Existing	Load Profile	12	Public Lighting - Dusk/Midnight	Yes	No
New	Load Profile	13	Public Lighting - Dusk/Dawn with Extra Trimming	Yes	No
New	Load Profile	14	Public Lighting - Dusk/Dawn with Extra Trimming and 75% dimming between midnight and 06.00 hrs	Yes	No
New	Load Profile	15	Public Lighting - Dusk/Dawn with Extra Trimming and 67% dimming between midnight and 06.00 hrs	Yes	No
New	Load Profile	16	Public Lighting - Dusk/Dawn with Extra Trimming and 50% dimming between midnight and 06.00 hrs	Yes	No

Table 1

Market Message Implementation Guides

ROI	Yes/No	NI	Yes/No
Rol Co-Ordinated Retail Market Message Guide – Data Aggregation	Yes		
Rol Co-Ordinated Retail Market Message Guide – Unmetered	Yes		

A. Rol Co-Ordinated Retail Market Message Guide – Data Aggregation

MM 591 – current text:

the count of MPRNs , Load profile and DLF will always be included for each of the Load Profiles **01-12** in the segment Additional Aggregation Information

will be replaced with

the count of MPRNs , Load Profile and DLF will always be included for each of the Load Profiles **01-16** in the segment Additional Aggregation Information

B. Rol Co-Ordinated Retail Market Message Guide – Unmetered

MM700, MM700W, MM701, MM701W – current text:

Profile is a code that determines, when coupled with Timeslot, the standard profile to be applied to the consumption for settlement. The following are valid values for load profile on this message:

- 10 Un-Metered – Flat
- 11 Public Lighting – Dusk/Dawn
- 12 Public Lighting – Dusk/Midnight

Each of these four Rol Retail Market Message guide entries will have the following text added

- 13 Public Lighting - Dusk/Dawn with Extra Trimming
- 14 Public Lighting - Dusk/Dawn with Extra Trimming and 75% dimming between midnight and 06.00 hrs
- 15 Public Lighting - Dusk/Dawn with Extra Trimming and 67% dimming between midnight and 06.00 hrs
- 16 Public Lighting - Dusk/Dawn with Extra Trimming and 50% dimming between midnight and 06.00 hrs

Comments

Only one profile on any given TMRPN

Under no circumstances will there be mixed profiles on a single TMRPN. This is the status-quo and for the avoidance of doubt there is no change to this requirement.

Burn Hours for the new Burn Hour Calendars for DUoS Billing

Four new Burn Hour Calendars will be introduced as part of this Change Request viz **U13, U14, U15, U16**. This is to keep the one-to-one alignment of the DUoS Billing Burn Hour Calendar and its corresponding Standard Profile for Data Aggregation. The daily coefficients will be determined as part of the work to introduce this change request. The daily coefficients will be the same across all of the four new Burn Hour Calendars. Burn Hour Calendars do not appear on any Market Messages and this will not be changing. One of the five Downloadable Meter Points Details contain the Burn Hour Calendars viz UNMT_CUST file, and the impact on this file is considered further on under the heading **Downloadable Meter Point Details Files**. The four new Burn Hour Calendars will be revised and published annually.

Profile Coefficients for four new Standard Load Profiles for Data Aggregation

Four new Standard Load Profiles for Data Aggregation will be introduced as part of this Change Request viz **13, 14, 15, 16**. The profile coefficients for the four new Standard Load Profiles will be calculated as part of the work to introduce this Change Request. The four new Standard Load Profiles for Data Aggregation will be revised and published annually.

DUoS Group

The DG4 Use of System tariff will continue to apply to all unmetered public lighting and other unmetered load types where the registered customer is a local authority. This means that no new DUoS Group is being introduced in this Change Request.

New Connections

There will be a change for Unmetered Public Lighting New Connections so that the 700MM will issue with DUoS_Group of DG4 when the MeterPointStatusCode is 'A' Assigned, instead of currently where the 700MM issues with DUoS_Group of DG3 when the MeterPointStatusCode is 'A' Assigned.

Retail Market Participant Extranet

There is no change to the Retail Market Participant Extranet; this will display the new Load Profile Code values viz **13, 14, 15, 16** in the Standard Profile Code field on the MPRN Enquiry Tab and the New Connections tab.

Downloadable Meter Point Details Files

There is no change to the structure of any of the five RoI Downloadable Meter Point Details Files.

The **UNMT_CUST** file currently displays existing Burn Hour Calendar values in the existing Burn Hour Calendar column as described in Table 2. In addition to any of the three Burn Hour Calendar values that are currently valid for RoI, this Change Request will allow for the population of the **four new Burn Hour Calendar values**, viz **U13, U14, U15, U16** in the Burn Hour Calendar field in the UNMT_CUST file.

Table 2 displays the list of the three existing Burn Hour Calendar field values that are currently valid in RoI as well as the four additional field values that will become valid in the UNMT_CUST file.

For the avoidance of doubt, two columns are shown in Table 2 for information purposes only; they are not currently displayed in the UNMT_CUST file, and will not be added to it by this change request, viz Burn Hour Calendar Description and the Corresponding Load Profile Code Value.

Note	Burn Hour Calendar column		Burn Hour Calendar Description	Corresponding Load Profile Code Value
	UNMT_CUST file		<i>NB this column is for reference only : these values will <u>not</u> appear in the UNMT_CUST file</i>	<i>NB this column is for reference only: these values will <u>not</u> appear in the UNMT_CUST file</i>
	Field Value			
Existing	24H		Unmetered - Flat	10
Existing	D2D		Public Lighting - Dusk/Dawn	11
Existing	D2M		Public Lighting - Dusk/Midnight	12
New	U13		Public Lighting - Dusk/Dawn with Extra Trimming	13
New	U14		Public Lighting - Dusk/Dawn with Extra Trimming and 75% dimming between midnight and 06.00 hrs	14
New	U15		Public Lighting - Dusk/Dawn with Extra Trimming and 67% dimming between midnight and 06.00 hrs	15
New	U16		Public Lighting - Dusk/Dawn with Extra Trimming and 50% dimming between midnight and 06.00 hrs	16

Table 2

ROI - Market Process Diagrams – MPDs

No Impact No Impact No Impact

NI - Market Procedures

Market Process Number	Market Procedure	Affected
No Impact	No Impact	No Impact

ROI Guidance Documentation

ROI Briefing Documents		
Document/Paper	Version	Affected
Aggregation Briefing Document	tbc	yes
<p>Current text will be removed :</p> <p>10.2 Use of Load Profiles</p> <p>Unmetered Load Profiles are explicitly driven by the predefined duty cycle for the site and as a result are standardised into three Load Profiles:</p> <ol style="list-style-type: none"> 1. Unmetered Dusk to Dawn 2. Unmetered Dusk to Midnight 3. Unmetered 24 Hours <p>And will be replaced by</p> <p>10.2 Use of Load Profiles</p> <p>Unmetered Load Profiles are explicitly driven by the predefined duty cycle for the site and as a result are standardised into seven Load Profiles which are listed here with their corresponding Load Profile Code values:</p> <ol style="list-style-type: none"> 10. Unmetered - Flat 11. Public lighting - Dusk/Dawn 12. Public Lighting - Dusk/Midnight <p>And the following text will be added</p> <ol style="list-style-type: none"> 13. Public Lighting - Dusk/Dawn with Extra Trimming 14. Public Lighting - Dusk/Dawn with Extra Trimming and 75% dimming between midnight and 06.00 hrs 15. Public Lighting - Dusk/Dawn with Extra Trimming and 67% dimming between midnight and 06.00 hrs 16. Public Lighting - Dusk/Dawn with Extra Trimming and 50% dimming between midnight and 06.00 hrs 		

User and Technical Documents			
Reference	Name	Version	Affected
No impact			No Impact

Part 2 - Performance and Data Changes	
Market Messages volume, processing etc.	
Data	
Details of Data changes e.g. cleansing	

Part 3 - ReMCoSG / CER Approval		
Approved by	ReMCoSG	CER

Comments		