

Register content codes

2017 operational review Consultation paper

Submissions close: 5pm 29 September 2017

7 August 2017



Executive summary

Register content codes and the associated period of availability values are used in the registry and market participants' systems. These codes identify the type of information being recorded by a channel (previously referred to as a register) on a metering component.

Participants use register content codes for network reporting and billing, customer billing, gaining new customers, the certification of metering installations, and reconciliation submissions. They support standardisation and interoperability while reducing complexity for metering equipment providers (MEPs), distributors and traders.

Any error in entering register content codes or the associated period of availability values (either in the registry metering records, or by a trader in linking the codes to profiles and delivery prices and/or retail prices), is likely to cause errors in network reporting and billing, initial customer quotes and setup, customer billing, and reconciliation submission information and settlements.

Implementing Part 10 of the Electricity Industry Participation Code 2010 (Code) and subsequently populating metering data in the registry has highlighted inconsistencies and confusion within the industry regarding the application of register content codes and period of availability values.

The current list of register content codes are brief and unstructured, therefore leaving room for different interpretation and incorrect application. There is also a mixture of generic and customised codes.

The current residential and small business (mass market) pricing structures and the framework for register content codes and period of availability values were originally developed under different market conditions.

New technologies, mass deployment of advanced meters, and increased competition are encouraging distributors to offer more cost reflective delivery prices, and traders to offer innovative retail pricing plans that provide more choice for customers.

In response to the introduction of new technologies, distributors have considered several types of delivery prices for mass market consumers, which are enabled by advanced metering capability. This includes time of use (TOU), demand and capacity prices.

Over recent years several distributors have offered mass market TOU delivery prices as an option to standard prices. This has led to distributors introducing customised register content codes that identify both the type of information being recorded by the channel and the time blocks for which the channel is active. This approach to register content codes, while supporting this type of delivery price, is likely to lead to a proliferation of customised codes as more distributors implement TOU delivery prices.

With the electricity market changing rapidly, the Authority considers it is appropriate to undertake an operational review of register content codes and period of availability values, to ensure they are fit for purpose for the foreseeable future.

This consultation paper reviews several options and enhanced business requirements, and proposes some changes to improve the use of register content codes and the application of period of availability values.

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1 What you need to know to make a submission

What this consultation paper is about

- 1.1 With the list of register content codes increasing, and inconsistencies within the industry regarding the application of register content codes and period of availability values, the Authority has initiated an operational review of register content codes.
- 1.2 The review considers 6 alternatives to the status quo, and seeks feedback on its preferred option and proposal to:
- (a) establish a set of business requirements to assist participants to correctly apply and interpret register content codes and period of availability values, leaving less room for misinterpretation and potential consequential errors in billing network charges, customer billing, reconciliation, and settlements.
 - (b) implement a solution using more generic codes that should result in substantially less need for new register content codes (reducing approval/consultation overhead and additional registry costs) as an increasing number of distributors implement mass market TOU delivery prices.
 - (c) restructure the list of register content codes to make their application clearer while providing a reference point for time blocks and period of availability.
 - (d) if we decide to adopt one of the options that includes a change to use generic register content codes for mass market TOU prices, consider amending the Code to require that a distributor's pricing information¹ must include certain information with each ICP based volume price, which would support accurate application of register content codes and period of availability values. Distributors could provide this information in a table that includes, for each price component code associated with an ICP based volume price, the appropriate time blocks, register content code and period of availability, and which register content codes need to work together as a group. This would be on the basis that the register content codes in the distributor's pricing information would be applicable if a trader or MEP wished to configure the metering installation to align with the distributor's delivery price time blocks (even though they do not have to be aligned).

If the Authority decides to adopt one of the options, the Authority will separately consult on the Code change. However, your feedback as part of this current consultation will help refine any Code change proposal.

Purpose of this paper

- 1.3 The purpose of this paper is to consult with participants and persons that are likely to be affected by the proposed changes.
- 1.4 We consider the proposed changes are aligned with the overarching element of the Authority's statutory objective, the long-term benefit of consumers, by enabling the faster uptake of innovative delivery and retail prices, and operational efficiencies.
- 1.5 Section 39(1)(c) of the Electricity Industry Act 2010 (Act) requires the Authority to consult on any proposed amendment to the Code and a corresponding regulatory statement. Section 39(2) provides that a regulatory statement must include a statement of the

¹ Delivery price schedule and associated information relevant to application of the delivery prices.

objectives of the proposed amendment, an evaluation of the costs and benefits of the proposed amendment, and an evaluation of alternative means of achieving the objectives of the proposed amendment. Even though the changes presented in this consultation are not a Code amendment, these proposals may result in structural changes to part of the industry operational infrastructure. Therefore we have completed a regulatory statement and it is set out in part 3 of this paper.

- 1.6 The Authority invites you to make a submission on the regulatory statement and proposed changes to the register content codes.

How to make a submission

- 1.7 The Authority's preference is to receive submissions in electronic format (Microsoft Word) in the format shown in Appendix F. Submissions in electronic form should be emailed to submissions@ea.govt.nz with "Consultation Paper—Register content codes operational review" in the subject line.
- 1.8 If you cannot send your submission electronically, post one hard copy to either of the addresses below, or fax it to 04 460 8879.

Submissions
Electricity Authority
PO Box 10041
Wellington 6143

Submissions
Electricity Authority
Level 7, ASB Bank Tower
2 Hunter Street
Wellington

- 1.9 Please note the Authority wants to publish all submissions it receives. If you consider that we should not publish any part of your submission, please:
- (a) indicate which part should not be published
 - (b) explain why you consider we should not publish that part
 - (c) provide a version of your submission that we can publish (if we agree not to publish your full submission).
- 1.10 If you indicate there is part of your submission that should not be published, we will discuss with you before deciding whether to not publish that part of your submission.
- 1.11 However, please note that all submissions we receive, including any parts that we do not publish, can be requested under the Official Information Act 1982. This means we would be required to release material that we did not publish unless good reason existed under the Official Information Act to withhold it. We would normally consult with you before releasing any material that you said should not be published.

When to make a submission

- 1.12 Please deliver your submissions by **5pm on 29 September 2017**.
- 1.13 The Authority will acknowledge receipt of all submissions electronically. Please contact the Submissions' Administrator if you do not receive electronic acknowledgement of your submission within two business days.

2 Issue the Authority would like to address

The existing arrangements

- 2.1 Register content codes and the associated periods of availability values are used in the electricity market and participants' systems, to identify the type of information being recorded by a channel (previously referred to as register) on a metering component.
- 2.2 The codes support standardisation and interoperability, and reduce complexity for MEPS, distributors and traders. They are used for identifying time blocked electricity volumes required for:
- (a) the process of designing, configuring and certifying metering installations
 - (b) submissions to the reconciliation manager
 - (c) customer invoicing, including quoting pricing for potential new customers at the initial stages of the switching process
 - (d) network reporting and invoicing for electricity conveyed.
- 2.3 The current residential and small business (mass market) pricing structures and the framework for register content codes and associated period of availability values were originally developed under different market conditions. Despite that, the current framework is still workable.
- 2.4 With the market changing rapidly, the Authority considers it is appropriate to undertake an operational review of register content codes and the application of the period of availability to ensure they are fit for purpose for the foreseeable future.
- 2.5 New technologies, mass deployment of advanced meters, and increased competition are encouraging distributors to offer new types of delivery prices that are more cost reflective, and traders to offer innovative retail pricing plans that provide more choice for customers. The Authority is also mindful that the use of the half hour data series available from half hour certified metering installations is unlikely to replace register content codes for reporting and pricing purposes within the near future.
- 2.6 The response from distributors has been to consider several types of pricing² for mass market consumers, which are enabled by advanced metering capability:
- (a) TOU consumption - \$/kWh prices that vary with time of day and day of week (time blocks)
 - (b) installed capacity - \$/kVA/day reflecting fuse size
 - (c) booked or nominated capacity - \$/kW/day based on agreed maximum demand
 - (d) customer peak demand (anytime maximum demand or 'AMD') - \$/kW/day based on actual maximum demand over 12 months
 - (e) network peak demand (coincident maximum demand or 'CMD') - \$/kW/day based on actual maximum demand each month during pre-defined peak periods.
- 2.7 For the most part, existing register content codes cover capacity and demand prices, although traders and/or distributors may need to use HHR data from advanced meters to determine the chargeable demand or capacity. The shift to mass market TOU delivery

² 'New Pricing Options for Electricity Distributors', a discussion paper for industry feedback dated November 2016, prepared by the Electricity Networks Association (ENA).

price options by several distributors has led to the addition of new, and the potential proliferation of, customised register content codes.

- 2.8 While this consultation paper is looking at all options for register content codes, the focus is primarily on register content codes and period of availability values for mass market TOU prices which, at least for delivery prices, appear at this point to be preferred over the other pricing types.
- 2.9 An associated attribute, period of availability, is used to describe the minimum number of hours in any day that supply is available (or the controlled part is available for an inclusive channel), and must be ≤ 24 , as set out in the distributor's pricing information.³
- 2.10 MEPs and traders must interpret the distributor's pricing information to determine both the time blocks⁴ and the minimum number of hours in any day that supply is available to the relevant channel.
- 2.11 The MEP for an ICP records the register content codes and period of availability values in the registry against each channel, reflecting the physical/programmed configuration of the meter installation.
- 2.12 The Code requires MEPs to populate the register content codes from a list of approved codes that is contained in the registry functional specification (SD-020).
- 2.13 Historically, register content codes have not necessarily indicated the time blocks for each channel, and participants have had to refer to the distributor's pricing information to determine the time blocks and eligibility for certain delivery prices.
- 2.14 For mass market TOU delivery prices, the trend has been for participants to establish customised register content codes and descriptions that identify both the type of information being recorded by the channel and the active periods for the time blocks.
- 2.15 Register content codes for accumulating channels use uppercase alphabet characters only (up to 6 characters) to prevent possible confusion with the numeric period of availability value. Register content codes for absolute (interval) channels use a four digit code that indicates the length of the interval.
- 2.16 The Authority currently considers that identification of time blocks in register content codes for multi-channel TOU prices is appropriate under the current framework. These ensure that the same code cannot be used for delivery prices within the same network region that apply over different time blocks. It also reflects the importance the Authority places on the register content codes for complex TOU prices. These codes must be unique for the active period and number of channels required, thus assisting with interpretation and minimising the possibility of error.
- 2.17 The different types of meter channels are:
- (a) **Accumulating channel reads non-half hour (NHH).** Traders use a subtractive process of a later read less an earlier read to determine the volume for the period between the reads. The information from these channels records electricity in periods of greater than one trading period, and must operate in New Zealand Daylight Saving Time (NZDT)

³ For the purposes of this consultation paper 'distributor's pricing information' means the delivery price schedule together with any associated information relevant to the application of delivery prices (e.g. pricing policy).

⁴ 'Time blocks' means time periods greater than 1 trading period.

- (b) **Absolute channel reads NHH.** These channels measure and record volumes directly, for example where a channel is programmed to measure in kWh for specific time-blocks greater than one trading period, and must operate in New Zealand Daylight Saving Time (NZDT).
- (c) **Absolute interval channel reads half hour (HHR).** These channels record electricity in periods of up to one trading period (30 minutes). The channels measure and record volumes directly, and may be:
 - (i) summed by the trader into the required time blocks to determine the volumes for network reporting and billing, customer billing and/or reconciliation submissions; or
 - (ii) provided as HHR data for network billing, customer billing and/or reconciliation manager submissions.

These channels may operate in New Zealand Standard Time (NZST) or NZDT. NZDT must be converted to NZST before traders submit them to the reconciliation manager, and should be converted before being exchanged between participants.⁵

2.18 The following outlines more detail, and provides examples of, the two identifiers (register content code and period of availability value) used in registry metering records to describe the function of a channel:

- (a) **Register content code:** An up to six-character code that describes the type of information being recorded by the channel. For example:
 - (i) 7304 for an interval kWh channel with 30 minute intervals
 - (ii) UN indicates no load on the channel is subject to load control via a load control device
 - (iii) CN indicates all load on the channel is subject to control at any time by the distributor via a load control device.
 - (iv) NC indicates all load on the channel is subject to control at a specific time during the night period by a load control device which may be an internal time clock. Electricity supply during the day period is not available.
 - (v) IN indicates load on the channel is a combination of controlled and uncontrolled loads, where the controlled load is subject to control at any time by the distributor via a load control device.
 - (vi) for a two-channel day/night meter, 'D' indicates Day (daytime only) and 'N' indicates Night (night-time only), where the switch between Day and Night is at fixed times.
- (b) **Period of availability:**
 - (i) Period of availability is used to describe the minimum number of hours in any day that supply is available to the consumer (or controlled part is available for an inclusive channel), and must be <= 24, as set out in the distributor's pricing information.
 1. For single channel uncontrolled, the period of availability must be 24.

⁵ Clause 15.36 of Part 15.

2. For single channel controlled or inclusive, the period of availability is the minimum number of hours in any day that supply is available (or controlled part is available for an inclusive channel), and must be <24.
3. For multi-channel uncontrolled TOU delivery prices, the period of availability should describe the actual period for which each channel is active, which must add to 24 in any day for register content codes that need to work together.
4. For multi-channel controlled or inclusive TOU delivery prices, the period of availability should describe the minimum number of hours within a day that supply is available to the controlled load (or to the controlled part of the load for inclusive channels). The period of availability must be < 24, and be identical for each channel unless the distributor's controlled load policy differentiates between time blocks. In that case the period of availability for a channel with controllable load must reflect the minimum number of hours within the active period for the channel that supply is available to the controlled load, and the period of availability for a channel with no controllable load must reflect the active period for the channel.

For example:

- (ii) For a UN register content code, the period of availability value is 24.
 - (iii) For a CN register content code, if the distributor's pricing information indicates that supply may be controlled for up to 5 hours in any 24-hour period, then the period of availability value is 19.
 - (iv) For D and N register content codes associated with a 2-channel day/night meter, if the metering configuration sets the Day period as 0700-2300 and Night period as 2300-0700, then the period of availability value is 16 for the D register content code and 8 for the N register content code.
 - (v) for DIN and NIN⁶ register content codes that include a combination of controlled and uncontrolled load on the day/night channels, if the distributor's pricing information indicates that supply may be controlled for up to 5 hours in any 24-hour period, the period of availability value would be 19 for both register content codes.
 - (vi) For DIN and NIN register content codes that include a combination of controlled and uncontrolled load on the day/night channels, the distributor's pricing information may indicate that supply may only be controlled for up to 5 hours in any 24-hour period during the Day period, and not be controlled at all during the Night period. If the Day period is 0700-2300 and Night period is 2300-0700, then the period of availability value would be 11 (16 less 5) for the DIN register content code and 8 for the NIN register content code.
- (c) **Register content code + period of availability:** While register content codes and period of availability values are two separate attributes, they are typically combined when referring to a channel. For example:

⁶ New register content codes recommended by the SDFG and being consulted on in June and July 2017.

- (i) CN19 indicates a channel with controlled load only, with supply available for a minimum 19 hours on any day.
- (ii) IN17 indicates load on the channel is a combination of controlled and uncontrolled loads, with supply to the controlled load available for a minimum 17 hours in any day and to the uncontrolled load 24 hours in any day.
- (iii) D16 combined with N8 indicates a two-channel day/night meter with the Day channel active for 16 hours and Night channel active for 8 hours in any day.
- (iv) DIN19 combined with NIN19 would indicate a two-channel day/night meter with a combination of controlled and uncontrolled loads, with supply available to the controlled load part for a minimum 19 hours in any day and to the uncontrolled load 24 hours in any day. MEPs and traders must interpret the distributor's pricing information to determine the time blocks for the day and night channels, and it indicates in this example that the distributor's load control policy for this delivery price does not differentiate between the Day and Night periods.
- (v) DIN11 combined with NIN8 would indicate a two-channel day/night meter with a combination of controlled and uncontrolled loads, with supply available to the Day channel for a minimum of 11 hours, and Night channel a minimum of 8 hours, in any 24-hour period. If the distributor's pricing information indicates that the Day period is 0700-2300 and Night period is 2300-0700, the distributor's load control policy must, in this scenario, be indicating it will only control load during the Day period for up to 5 hours in any 16-hour period, and not control load during the Night period.

2.19 Any error or inaccuracy in populating register content codes or period of availability values in the registry metering records, or by the trader in linking them to profiles and delivery and/or retail prices, may cause errors in:

- (a) network reporting and/or billing of network charges
- (b) customer billing
- (c) certification of metering installations
- (d) reconciliation submissions.

2.20 Managing meter-based changes to the configuration of an accumulating channel of an advanced meter is complex and requires significant investment by MEPs and traders (i.e. those traders wishing to access the NHH data). This may include changes to configurations, back office systems, and work order interfaces.

2.21 Configuring network specific delivery price time blocks in advanced meters is not necessary where a MEP or trader derives the data required for network reporting, customer billing, and/or reconciliation submission information, from HHR absolute channel reads. We can consider several options for configuring data, for example:

- (a) Advanced metering services provider "framing" the HHR interval data to generate cumulative usage information that can be used for customer billing, network reporting and/or reconciliation submissions. The framing process could create "virtual" channel reads that match the time blocks that a direct meter-based configuration would achieve, which would enable the trader to use the NHH system(s) for billing, network reporting and/or reconciliation submissions.

- (b) Traders directly uses HHR data in the HHR system(s) for billing, network reporting and/or reconciliation submissions.
 - (c) A combination of the above options, such as aggregating the HHR data for billing and network reporting, while submitting HHR data to the reconciliation manager.
- 2.22 Using HHR data to create “virtual” channels would have the disadvantage that the physical display on the meter would not match any of the virtual registers used for customer billing. However, there are other solutions to enable a customer to verify their bill, such as an app or other web-based interface or in-home display connected to the meter.
- 2.23 By way of example, for an any day peak (configured as a time block of 8 hours) and off peak (configured as a time block of 16 hours) delivery price option, and spot price retail pricing plan, interval data framing to create virtual register reads would mean:
- (a) Register content codes and period of availability values in the registry would reflect the physical metering configuration - UN combined with 24 for the accumulating channel, and 7304 combined with 24 for the uncontrolled or total interval channel.
 - (b) Network reporting EIEP1 file would report aggregated consumption volumes for each of the peak and off-peak price component codes using the appropriate register content codes in accordance with the distributors’ delivery price option. Note however that the register content codes and period of availability values shown in EIEP1 would be different from those contained in the registry metering records.
 - (c) Customer billing would reflect the terms of the retail pricing plan, which may pass through the distributor’s peak/off peak delivery price signal or repackage the price signal into a combined charge.
 - (d) Reconciliation submission information may be either NHH (based on UN channel reads), NHH (separate volumes for peak and off-peak time blocks based on aggregated HHR data), or HHR data.
- 2.24 Even though the future will almost certainly see more direct use of HHR data from advanced meters, it is expected that participants will continue to use NHH data obtained from metering installations for network reporting/billing, customer billing, and/or some participants for reconciliation submissions.
- 2.25 If a distributor introduces a mass market TOU delivery price option that matches an existing delivery price option offered by another distributor (for which approved codes already exist), the existing approved register content codes could be applied without having to create new codes.
- 2.26 As it currently stands, if a distributor introduced a new delivery price option where one or more of the time blocks do not match the time blocks of an existing customised register content code, the distributor (or the trader or MEP) must apply to the Authority for a new code.
- 2.27 A distributor or trader can already apply for a new register content code, but only a trader can ask an MEP to configure a metering installation to reflect the channel on/off times required for the trader’s purposes. For example, a trader may request that the MEP configure a metering installation to reflect:

- (a) the distributor's price option and use the NHH channel reads for network reporting, customer billing (time blocks would have to be aligned), and reconciliation submissions;
 - (b) the distributor's price option and use the NHH channel reads for network reporting, but use the HHR data for customer billing and reconciliation submissions; or
 - (c) the trader's retail pricing plan and use the NHH data for customer billing, but use the HHR data (aggregated as required) for network reporting and reconciliation submissions.
- 2.28 While additions to the list of register content codes do not require a Code amendment, the consultation, submissions and decision process to approve new register content codes takes time and comes at a cost to participants and the Authority.
- 2.29 Each additional (or change to a) register content code imposes costs on:
- (a) the Authority:
 - (i) to draft consultation papers, analyse submissions, draft decision papers
 - (ii) approximately \$5,000 for each registry update
 - (b) traders and MEPs:
 - (i) to make changes to their systems to ensure that both the price and functionality are mapped accurately.
- 2.30 The alternative to including the time blocks in customised register content codes and descriptions is to provide more generic codes and descriptions, and require MEPs and traders to interpret the time blocks correctly from the distributor's pricing information. This is currently the case with day/night (D/N) register content codes.

Issues with the existing arrangements

- 2.31 The current process for approving new register content codes is not fast, and takes at least three months at the quickest, although usually takes longer than this. This does not allow traders to quickly introduce time-based prices in response to the introduction of TOU delivery prices or consumer demand.
- 2.32 Implementing Part 10 of the Code, and the subsequent population of metering data on the registry, has highlighted inconsistencies and confusion within the industry regarding the application of register content codes and period of availability values.
- 2.33 The current list of register content code descriptions is brief and unstructured, therefore leaving room for different interpretation and incorrect application. The list is also a mixture of generic and customised codes.
- 2.34 The current definition of period of availability does not make it clear that it should be for multi-channel TOU prices where the channel includes a combination of controlled and uncontrolled loads (e.g. DIN/NIN).
- 2.35 It is not clear which period of availability value to use if the distributor does not specify a minimum period of supply.
- 2.36 While the period of availability values for the register content codes ending in 'OOA' – 'OOE' are specified in SD-020,⁷ they do not follow the standard definition where the time

⁷ SD-020 is in the registry functional specification.

blocks for weekends are different to those for the weekdays (i.e. the specified periods of availability are not appropriate to the active periods during the weekends). For example, SPKOOA states the period of availability must be 12 hours which reflects the active periods for weekdays, however the weekend active period for SPKOOA is 16 hours.

- 2.37 It is not clear what the period of availability values should be for register content codes that have a single customised code that applies to weekday time blocks and different weekend time blocks (e.g. SENW, which is used for weekday night 2100-0700 and weekend 0000-2400), where the period of availability is not specified in SD-020.
- 2.38 It is not clear what the period of availability should be for time blocks that are not a whole number, for example SEPK has an active period of 6.5 hours.
- 2.39 The need for clear descriptions, accuracy and guidance in the application of register content codes and period of availability values has become increasingly important as the current trend towards more complex pricing results in additional register content codes and increased potential for MEPs and traders to make data entry errors.
- 2.40 The following provides examples of inconsistencies that we have observed regarding the application of register content codes, period of availability values, and associated channel component attributes.
- (a) Use of CN8 as a dedicated night only rate with fixed on/off times (usually 2300 to 0700), when it should be NC8 to comply with the registry functional specification.
 - (b) Use of IN24 for a channel that has a combination of controlled and uncontrolled load with supply available for a minimum number of hours per day (usually 19 or 17), when it should be IN19 or IN17 (or other period of availability value as appropriate to the minimum period of supply).
 - (c) Use of the maximum period of control instead of the minimum period of supply as the period of availability value, for example IN5 should be IN19.
 - (d) Some distributors do not specify the minimum number of hours in any day that supply is available for their delivery prices that include controllable load. In these instances, MEPs and traders have been making their own assumptions as to what the period of availability value should be. As an example, for the same ICP and channel, the trader assessed the minimum period of availability as 17 hours, while the MEP assessed the minimum period of availability as 19 hours, when we could assume the actual minimum period of supply was zero.
 - (e) There are around 8,000 ICPs in the registry with unusual set-ups. These include potentially invalid combinations of energy flow direction (I = injection from ICP into network, X = extraction from network to ICP), register content code and period of availability values. Examples include, but are not limited to:

I-EG-24 I-EG-24 X-EG-24 X-EG-24
X-CN-24
X-UN-24 X-WD-8 X-WD-16 X-WE-8 X-WE-16
X-CN-15 X-NC-24
X-N-24
X-D-4 X-N-20
X-N-6 X-SEOP-18 X-SEPK-6

X-N-6 X-SEOP-24 X-SEPK-24
X-DC-20 X-NC-20
X-D-22 X-N-22
X-7304-24 X-7304-24 X-IN-20 X-WD-14 X-WE-10
X-7304-24 X-SEOW-10 X-SEOP-8 X-SEPK-6
X-7304-24 X-WD-10 X-WD-14 X-WE-10 X-WE-14
X-UN-12
X-CN-17 X-DC-17 X-NC-17 X-UN-24
X-DC-19 X-DC-19 X-NC-19 X-NC-19
X-D-8 X-N-16 X-UN-24 X-UN-24
I-EG-8 X-UN-16

For the first example which is for a 4-channel meter, I-EG-24 and I-EG-24 are potentially acceptable while X-EG-24 and X-EG-24 are invalid (EG is generation only) with either the energy flow direction or register content code (and potentially periods of availability) incorrect.

Principles and business requirements

2.41 , The Authority considers the following principles and business requirements, if implemented as a package, could form the basis for the change proposal:

- (a) register content codes should be generic and not specify time blocks unless considered essential
- (b) improve the format and descriptions of the list of register content codes to make their application clearer
- (c) an option that would result in substantially less need for new register content codes (reducing approval/consultation time and costs, and additional registry costs) as an increasing number of distributors implement mass market TOU delivery prices
- (d) clarify period of availability values for multi-channel prices:
 - (i) For multi-channel uncontrolled TOU delivery prices, this means the period of availability value should describe the actual period each channel is active for, which must add to 24 in any day for register content codes that need to work together.
 - (ii) For multi-channel controlled or inclusive TOU delivery prices, the period of availability should describe the minimum number of hours that supply is available to the controlled load (or to the controlled part of the load for inclusive channels).
 - 1. If the minimum number of hours applies to the entire day regardless of the number of time blocks, the period of availability value must be < 24 and be identical for each channel (eg DIN19/NIN19 would mean the controlled load is available for 19 hours but the control could be any time during the day or night time blocks). The actual active periods for each register content code/channel combination must be determined from the distributor's pricing information.

2. If the minimum number of hours is different between time blocks, the period of availability value for a channel with controllable load must reflect the minimum number of hours that supply is available to the controlled load within the active period for the channel. The period of availability for a channel with no controllable load must reflect the active period for the channel (eg DIN14/NIN8 means the controlled load is available for 14 hours during the day time block and at all times during the night time block). Again the actual active periods for each register content code/channel combination must be determined from the distributor's pricing information
- (e) if a distributor's pricing information does not specify the minimum number of hours in any day that supply is available for a controlled or exclusive delivery price, the period of availability will be 0 hours
 - (f) change the format for period of availability values to Num 2.1 in the registry and all relevant EIEPs and registry reports to allow for active periods that are for an odd number of trading periods. To make data entry easier, the registry should not require MEPs to enter a decimal place, and should default to zero when not entered
 - (g) a distributor's pricing information should include a table showing, for each price component code associated with an ICP based volume price, the time blocks, register content code and period of availability value for that price component. It should also identify which register content codes need to work together as a group. The table specifies which codes would be applicable if a trader or MEP wished to configure the metering installation to align with the distributor's delivery price time blocks and should be used in EIEP reporting (even though meter configuration does not have to be aligned⁸). If necessary, a Code change could be made that would require distributors to include this information in their pricing information
 - (h) EIEP12 files should require that the register content code and period of availability value be mandatory for each price component code associated with an ICP based volume price. This would improve application accuracy if a trader or MEP wished to configure the metering installation to align with the distributor's delivery price time blocks and should be used in EIEP reporting (even though the meter configuration does not have to be aligned⁹). Note the Authority has also proposed this in the separate EIEP operational review consultation document.

2.42 These principles should:

- (a) improve the accuracy of register content codes and period of availability values
- (b) significantly reduce the need for new register content codes
- (c) leave less room for misinterpretation and potential consequential errors in network reporting and billing of network charges, customer billing, reconciliation submissions, and settlements.

⁸ If a trader uses HHR data to determine the electricity volume in each register content code period, the meter NHH register content codes do not need to be aligned.

⁹ If a trader uses half hour data to determine the electricity volume in each register content code period, the meter NHH register content codes do not need to be aligned.

Alternatives considered

- 2.43 We have included seven options in this consultation paper. The status quo is option A and we have explored six alternatives with the aim of achieving a more future-proofed solution that will assist participants to correctly apply register content codes and period of availability values, and substantially reduce the need for new register content codes.
- 2.44 We note that 'existing' in the summary description of Options A-E below includes the proposed amendments to register content codes in progress at the time of drafting this consultation paper (the proposals to amend the seasonal codes from S to SR and W to WR, and to add DIN/NIN and INEM) as if they are status quo. If the proposal to amend the seasonal codes and add DIN/NIN and INEM do not proceed, the options below will be adjusted accordingly.
- 2.45 The options we have considered are:
- (a) **Option A:** Status quo, existing codes and format (refer Appendix A)
 - (b) **Option B:** Existing codes, but reformatted by number of channels (refer Appendix B)
 - (c) **Option C:** As for Option B, but adding potential future generic codes (capital letters up to 6 characters) for new mass market TOU prices (refer Appendix C)
 - (d) **Option D:** As for Option C, but deleting existing customised codes (refer Appendix D)
 - (e) **Option E:** Existing codes, but adding a library of potential future codes (numeric 4 characters) (refer Appendix E)
 - (f) **Option F:** As for Option E, but replacing existing codes with numeric codes (refer Appendix E)
 - (g) **Option G:** As for Option D, but excluding period of availability as an attribute, adding a suffix to register content codes where necessary to differentiate register content codes within a network where the same type of channel information applies but with different period of availability.
- 2.46 All proposed new register content codes would use the standard convention, in the following order:
- (a) season - e.g. SR (summer), WR (winter)
 - (b) day of week – e.g. WD (weekday), WE (weekend)
 - (c) time of day – e.g. PK (peak), (OP) off peak, SP (shoulder peak)
 - (d) type of load – e.g. CN (controlled), IN (inclusive, combination of controlled and uncontrolled load), UN (uncontrolled).
- 2.47 It is noted that for all alternatives except Option G, changes required to the registry would be small because only the content of the static data table would need to change. There would be no format or validation changes required.
- 2.48 For Options C-F, accuracy would be enhanced if a Code is amended to require that the distributor's pricing information must include a table, as proposed in paragraph 2.41(g).
- 2.49 Option G would require Code changes, registry changes, participant system changes, and a requirement that the distributor's pricing information must include the table as proposed in paragraph 2.41(g).

- 2.50 Option G would be enhanced by having a static data table available in the registry that held similar information as proposed in paragraph 2.41(g) covering all distributors, in addition to the distributors adding the table to their pricing information.
- 2.51 The following sections set out the key features of the options considered, advantages and disadvantages.

Option A: Status quo, existing codes and format (refer Appendix A)

2.52 Key features would be:

- (a) retaining the existing list of approved register content codes
- (b) including the amendments in progress at the time of drafting this consultation paper as if they are status quo (shown in red and underlined in Appendices A-D)
- (c) retaining the current process which requires the distributor or trader to apply for new register content codes for mass market TOU [delivery] prices whenever one or more of the proposed time blocks for a new [delivery] price option do not align with the time blocks associated with an existing [delivery] price option
- (d) retaining the current approach to customised register content codes and descriptions for mass market TOU prices that identify both the type of information being recorded by the channel and the time blocks for which the channel is active.

2.53 Advantages of Option A would be:

- (a) the register content codes are a single source of both the type of information being recorded by the channel and the time blocks the channel is active for (and must specify the periods of availability). It may be less likely errors will occur than if the information had to be sourced from the distributor's pricing information by traders and MEPs
- (b) the existing generic codes are well understood by participants and easy to recall
- (c) using capital letters only for the NHH register content codes prevents any confusion with period of availability values
- (d) the process required to obtain approval for new codes may incentivise alignment with existing time blocks and codes, which would make it easier for MEPs and traders
- (e) the status quo would require no change to participants' systems.

2.54 Disadvantages of Option A would be:

- (a) the process required to obtain approval for new codes incentivises alignment with existing time blocks and codes, and therefore may impede innovation
- (b) apart from the customised register content codes ending in 'OOA' - 'OOE', which support mass market TOU delivery price options introduced over recent years, the list of approved codes lacks structure to assist accurate application. Additionally, some of the codes still combine weekdays and weekends with different periods of availability
- (c) every time a distributor wants to introduce a new or amended mass market TOU delivery price option with proposed time blocks that do not align with an existing delivery price option (for which approved register content codes already exist), the distributor requires one or more additional register content codes

- (d) while additions to the list of register content codes do not require a Code change, additions take time and come at a cost. The Authority must prepare and issue a consultation document seeking comments from affected participants before considering the feedback, preparing a decisions paper, and adding the new code(s) to the registry functional specification (SD-020) at a cost of ~ \$5,000
- (e) there is a recent trend for distributors to establish new TOU pricing plans. These pricing plans may require customised register content codes that identify both the type of information being recorded by the channel as well as the time blocks for which the channel is active. This is likely to lead to a proliferation of customised register content codes if distributors implement mass market TOU delivery prices with different active periods.

Option B: Existing codes, but reformatted by number of channels (refer Appendix B)

2.55 Key features would be:

- (a) retaining the existing list of approved register content codes, but the format would be changed to assist application, with register content codes grouped by number of channels showing which codes need to work together as a group
- (b) including the amendments in progress at the time of drafting this consultation paper as if they are status quo (shown in red and underlined in Appendices A-D)
- (c) adding 'Period channel is active for' to provide a reference point for identifying the on/off times
- (d) amending descriptions for consistency, e.g. 'register' replaced by 'channel'.

2.56 Advantages of Option B would be:

- (a) providing guidance and a reference point for the period for which the channel is active
- (b) adding clarity where register content codes need to work together as a group
- (c) as for Option A:
 - (i) the customised register content code descriptions currently used for mass market TOU delivery prices identify both the type of information being recorded by the channel and the time blocks for which the channel is active
 - (ii) the existing generic codes are well understood by participants and are easy to recall
 - (iii) using capital letters only for NHH register content codes prevents any confusion with period of availability
 - (iv) the process required to obtain approval for new codes may incentivise alignment with existing codes which would make it easier for MEPs and traders
 - (v) it would require no change to participants' systems.

2.57 Disadvantages of Option B would be:

- (a) while the format change should assist more accurate application, it would not reduce the need for additional customised register content codes every time a distributor implemented new/different mass market TOU delivery prices

- (b) the process required to obtain approval for new codes would incentivise alignment with existing time blocks and codes, and therefore may impede innovation
- (c) while additions to the list of register content codes do not require a Code change, additions take time and come at a cost. The Authority must prepare and issue a consultation document seeking comments from affected participants before considering the feedback, preparing a decisions paper, and adding the new code(s) to the registry functional specification (SD-020) at a cost of ~ \$5,000
- (d) there is a recent trend for distributors to establish new TOU pricing plans. These pricing plans may require customised register content codes that identify both the type of information being recorded by the channel as well as the time blocks for which the channel is active. This is likely to lead to a proliferation of customised register content codes if distributors implement mass market TOU delivery prices with different active periods.

Option C: As for Option B, but potential future generic codes (capital letters up to 6 characters) added for new mass market TOU prices (refer Appendix C)

2.58 Key features would be:

- (a) retaining all existing register content codes, including customised register content codes
- (b) including the amendments in progress at the time of drafting this consultation paper as if they are status quo (shown in red and underlined in Appendices A-D)
- (c) introducing new generic register content codes for all new mass market TOU delivery prices with different time blocks. The codes would identify the type of information being recorded by the channel, but not the time blocks for which the channel is active. The new codes could be mixed with existing customised codes, if time blocks align

for transparency, the proposed new generic register content codes are shown in red (not underlined)
- (d) if MEPs and traders use new generic codes are used, they would have to interpret the time blocks and period of availability values from the distributor's pricing information
- (e) in Appendix C, following the table of proposed register content codes, inserting an additional table to map existing customised register content codes (and associated periods of availability) to the new generic register content codes (and associated periods of availability). This table would be required for both Options C and D
- (f) proposing a Code change to mandate that a distributor's pricing information must include a table showing certain information,¹⁰ for each price component code associated with an ICP based volume delivery price. This would support participant's accurately applying and interpreting register content codes and period of availability values.

2.59 Advantages of Option C would be:

¹⁰ Refer section 2.48.

- (a) significantly reducing the likelihood additional register content codes would be required for mass market TOU delivery prices
- (b) not needing to change existing register content codes
- (c) significantly reducing the time, effort and costs incurred by all participants and the Authority to introduce new register content codes.
- (d) requiring that distributors include certain information in their pricing information, would support correctly applying register content codes and period of availability values.
- (e) as for Option B:
 - (i) providing guidance and a reference point for the time blocks for which the channel is active
 - (ii) adding clarity where register content codes need to work together
- (f) as for Options A and B:
 - (i) the existing register content codes and descriptions for mass market TOU prices identifying both the type of information the channel is recording and the time blocks for which the channel is active.
 - (ii) the existing approved codes are well understood by participants and easy to recall
 - (iii) using capital letters only for NHH register content codes prevents any confusion with period of availability
 - (iv) it would require no change to participants' systems.

2.60 Disadvantages of Option C would be:

- (a) creating inconsistencies by retaining the existing customised register content codes as well as introducing new generic codes for mass market TOU prices
- (b) participants would need to source channel on/off times from distributor pricing information. Participants would need to be careful to ensure that meter configurations and pricing are correct as the time mappings may be different between adjacent distributors' networks
- (c) we would need to amend the Code to mandate that certain information must be included in the distributor's pricing information to support participants correctly applying register content codes and periods of availability.

Option D: As for Option C, but existing customised codes deleted (refer Appendix D)

2.61 Key features would be:

- (a) deleting all existing customised register content codes used for mass market TOU prices in favour of new generic register content codes
- (b) introducing new generic register content codes as in Option C
- (c) all register content codes identifying the type of information being recorded by the channel, but not the time blocks for which the channel is active
- (d) MEPs and traders having to interpret the time blocks and period of availability from the distributor's pricing information

- (e) proposing a Code change to mandate that a distributor's pricing information must include a table showing certain information¹¹ for each price component code associated with an ICP based volume delivery price. This would support participants accurately applying register content codes and period of availability values
 - (f) requiring all participants using the existing customised register content codes to convert (or map) to the new generic register content codes in their back-office systems.
- 2.62 The amendments in progress at the time of drafting this consultation paper have been included as if they are status quo (shown in red and underlined in Appendices A-D).
- 2.63 For transparency, the proposed new generic register content codes are shown in red (not underlined), and the existing customised register content codes that are proposed for deletion are shown as marked-up deletions.
- 2.64 Advantages of Option D would be:
- (a) a consistent and more flexible approach to register content codes and period of availability values for mass market TOU prices
 - (b) given the customised register content codes ending in 'OOA' – 'OOE' are either not used at all, or not widely used, the timing is right to delete them sooner rather than later
 - (c) as for Option C:
 - (i) significantly reducing the likelihood additional register content codes will be required for mass market TOU delivery prices
 - (ii) significantly reducing the time, effort, and costs incurred by all participants and the Authority to introduce new [customised] register content codes
 - (iii) requiring that distributors include certain information in their pricing information, would support correctly applying register content codes and period of availability values.
 - (d) as for Option B:
 - (i) providing guidance and a reference point for the period for which the channel is active.
 - (ii) adding clarity where register content codes need to work together.
 - (e) as for Options A, B and C:
 - (i) the existing approved codes using capital letters are well understood by participants and easy to recall
 - (ii) using capital letters only for NHH register content codes prevents any confusion with period of availability values.
- 2.65 Disadvantages of Option D would be:
- (a) participants using the current customised register content codes having to convert (or map) to the new replacement register content codes and associated attributes in their back-office systems. This may require changes to participants' back-office

¹¹ Refer section 2.48.

systems, although it is believed the customised register content codes ending in 'OOA' – 'OOE' are either not used at all or not widely used

- (b) as for Option C:
 - (i) we would need to amend the Code to mandate that certain information must be included in the distributor's pricing information to support participants correctly applying register content codes and periods of availability
 - (ii) participants would need to source channel on/off times from distributor pricing information. Participants would need to be careful to ensure that meter configurations and pricing are correct as the time mappings may be different between adjacent distributors' networks.

Option E: Existing codes, but library of potential future codes (numeric 4 characters) added (refer Appendix E)

2.66 Key features would be:

- (a) retaining existing register content codes (up to 6 characters using capital letters), but adding a library of potential future register content codes (4 character numeric codes) with the associated period of availability
- (b) new numeric codes using a standardised format to create the library
- (c) MEPs and traders having to interpret the time blocks and period of availability values from the distributor's pricing information
- (d) amending the Code to mandate that a distributor's pricing information must include a table showing certain information,¹² for each price component code associated with an ICP based volume delivery price, to support accurate application of register content codes and period of availability values

2.67 The amendments in progress at the time of drafting this consultation paper have been included as if they are status quo (shown in red and underlined in Appendices A-D).

2.68 The existing and proposed new register content codes are provided in the spreadsheet contained in Appendix E. The draft new library is 'very draft' and is intended to present the concept rather than a final draft set of codes. Further work would be required if participants indicated a strong preference for Option E.

2.69 Advantages of Option E would be:

- (a) participants could select a register content code that matches the attributes to which the meter channel was configured, without waiting for the Authority to approve or decline a new register content code, or enact a change to the registry
- (b) participants could implement functionality within their systems to alert where a register content code on an ICP or network does not meet their own pricing requirements
- (c) the attributes of a metering installation would be clearly available to all distributors, MEPs, and traders
- (d) requiring minimal, if any, changes to participants' systems

¹² Refer section 2.48.

- (e) the 4 character code would include the period of availability value. In using 4 character codes, a distributor would convey all of the time and control information necessary to describe the eligibility criteria for a delivery price. This means MEPs and traders would not need to refer to, or interpret, additional distributor information. To assist standardisation, groupings of functionality are proposed that would form the first 2 numbers of the sequence
- (f) as for Options C and D:
 - (i) significantly reducing the likelihood that MEPs and traders would require additional register content codes for new mass market TOU prices, once the Authority completes a comprehensive list (the current draft list is incomplete as noted above)
 - (ii) eliminating the time, effort and costs incurred by all participants and the Authority to introduce new register content codes
 - (iii) by requiring distributors to include certain information in their pricing information, it would support participants accurately applying register content codes and period of availability values, and configuring metering installations if they align with delivery price time blocks.
- (g) as for Options A, B and C:
 - (i) the register content code descriptions for mass market TOU prices identifying both the type of information the channel is recording and the time blocks for which the channel is active, and specifying the periods of availability. This would make it less likely that errors will occur than if the information were to be sourced from the distributor's pricing information.

2.70 Disadvantages of Option E would be:

- (a) numeric register content codes being less memorable than the existing approved non-numeric NHH register content codes, which are well understood by participants and easy to recall, although groupings are proposed that form the first 2 numbers of the sequence.
- (b) numeric register content codes creating confusion with period of availability values if the two attributes are joined together.
- (c) the draft library requiring significant work to complete to a workable library, because it is 'very draft' and was initially created in 2012 as part of a draft consultation paper "Part 10 – Register content codes" (it did not proceed as the Standing Data Formats Group (SDFG) recommended, and Authority agreed, it not proceed)
- (d) as for Options C and D:
 - (i) requiring a Code amendment to mandate that distributors must include certain information in their pricing information to support participants correctly applying register content codes and periods of availability.

Option F: As for Option E, but with existing codes replaced by numeric codes (refer Appendix E)

2.71 Key features:

- (a) replacing existing register content codes (up to 6 characters using capital letters) with a library of numeric register content codes (4 character numeric codes) with the associated period of availability
- (b) new numeric codes using a standardised format to create the library
- (c) each new code including within its description the time blocks of the operation of the channel. The period of availability value would remain associated with each register content code
- (d) requiring all participants to convert or map existing register content codes within their back-office systems to the new format
- (e) MEPs and traders having to interpret the time blocks and period of availability values from the distributor's pricing information
- (f) amending the Code change mandate that a distributor's pricing information must include a table showing certain information¹³, for each price component code associated with an ICP based volume delivery price, to support participants accurately applying register content codes and period of availability values.
- (g) providing the proposed new register content codes in the spreadsheet contained in Appendix E

2.72 The draft library is 'very draft' and intended to present the concept rather presenting a final draft set of codes for consideration.

- (a) The initial attempt at mapping several of the existing customised register content codes to the draft set of numeric codes identified a need for additional numeric codes and the difficulty of specifying numeric codes with the variations in time blocks.
- (b) Further work would be required if participants indicated a strong preference for Option F.

2.73 Advantages of Option F would be:

- (a) participants being able to select a register content code that matches the attributes to which the meter channel was configured, without waiting for the Authority to approve or decline a new register content code, or enact a change to the registry
- (b) participants being able to implement functionality within their systems to alert where a register content code on an ICP or network does not meet their own pricing requirements
- (c) a metering installation's attributes being clearly available to all distributors, MEPs and traders
- (d) the 4 character code including the period of availability value. In using 4 character codes, a distributor could convey all of the time and control information necessary to describe the eligibility criteria for a delivery price. This means that MEPs and traders would not need to refer to, or interpret, additional distributor information. To assist standardisation, we propose that groupings of functionality would form the first 2 numbers of the sequence
- (e) as for Options C, D and E:

¹³ Refer section 2.48.

- (i) significantly reducing the likelihood that participants would require additional register content codes for new mass market TOU prices once the Authority completes a comprehensive list. The current draft list is incomplete (which is demonstrated by some initial mapping from existing customised codes)
- (ii) significantly reducing the time, effort and costs incurred by all participants and the Authority to introduce new register content codes
- (iii) requiring a Code amendment to mandate that certain information must be included in the distributor's pricing information to support correct application of register content codes and periods of availability
- (f) as for Options A and B:
 - (i) the register content code descriptions for mass market TOU prices identifying both the type of information the channel is recording as well as the time blocks for which the channel is active, and specifying the periods of availability, making it less likely errors will occur than if the information had to be sourced from the distributor's pricing information.

2.74 Disadvantages of Option F would be:

- (a) numeric codes being less memorable than existing approved non-numeric codes which are well understood by participants and easy to recall, although groupings are proposed that form the first 2 numbers of the sequence
- (b) numeric register content codes creating confusion with period of availability values where the two attributes are joined together
- (c) requiring participants to convert existing register content codes within their back-office systems to the new format. This may require changes to participants' back-office systems
- (d) as for Option E:
 - (i) the draft library requiring significant work to complete to a workable library, because it is 'very draft' and was initially created in 2012 as part of a draft consultation paper "Part 10 – Register content codes" (it did not proceed as the SDFG recommended, and the Authority agreed, it not proceed)
- (e) as for Options C, D and E:
 - (i) requiring a Code amendment to mandate that distributors must include certain information in their pricing information to support participants accurately applying register content codes and periods of availability.

Option G: As for Option D, but excluding period of availability as an attribute

2.75 Key features:

- (a) discontinuing the separate period of availability value, and relying on the uniqueness of register content codes used for each network and the distributor's pricing information to signal period of availability
- (b) alternatively, including period of availability as an optional field in the registry

- (c) to achieve uniqueness where different periods of availability apply for what would normally be the same register content code used within a network, adding a suffix to the applicable register content codes. For example:
 - (i) a distributor may have two controlled delivery price options on the same network, one with a minimum period of supply of 22 hours, the other 18 hours. This would normally be differentiated using the period of availability value, instead it would be differentiated through adding a suffix to the register content code CN – CNA/CNB or CN1/CN2 etc.
 - (ii) a distributor may have two inclusive delivery price options on the same network, one with a minimum period of supply of 16 hours, the other 8 hours. This would normally be differentiated using the period of availability, instead it would be differentiated through adding a suffix to the register content code IN – INA/INB or IN1/IN2 etc.
 - (iii) a distributor may have two peak/off peak/shoulder peak delivery price options with different time blocks on the same network. This would normally be differentiated using the period of availability, instead it would be differentiated through adding a suffix to the register content code PK/OP/SP – PKA/OPA/SPA and PKB/OPB/SPB or PK1/OP1/SP1 and PK2/OP2/SP2 etc.
- (d) amending the Code to mandate that a distributor’s pricing information must include a table showing certain information,¹⁴ for each price component code associated with an ICP based volume delivery price. This would support participants accurately applying register content codes and period of availability values
- (e) potentially adding a static data table of register content codes and their meaning for each network to the registry, intended to improve transparency and support accurate application of register content codes

2.76 Option G would require:

- (a) a Code change
- (b) changes to the registry functional specification and design
- (c) participants to convert or map existing register content codes within their back-office systems to the new codes, and to modify functionality in systems that uses register content code and period of availability.

2.77 MEPs and traders having to interpret the time blocks and period of availability values from the distributor’s pricing information.

2.78 As Option G is only at concept stage, a list of proposed register content codes has not been developed. However, the codes would naturally be an extension of Option D with new codes with a suffix required to the extent current or likely delivery price structures may require additional codes. This would require a scan of all distributors’ pricing information, discussion with distributors, and allowance for the foreseeable future state of delivery price structures.

2.79 Advantages of Option G would be:

¹⁴ Refer section 2.51.

- (a) much the same as for Option D, as it would use the same base set of register content codes but with a suffix added to some as required
- (b) by requiring that distributors must include certain information in their pricing information, supporting participants to correctly apply register content codes
- (c) by potentially adding a static data set of register content codes and their meaning for each network to the registry, improving transparency and supporting participants to correctly apply register content codes by having a single source of all descriptions.

2.80 Disadvantages of Option G would be:

- (a) significant changes to:
 - (i) the Code, to move away from period of availability, and to mandate that distributors must include certain information in their pricing information to support participants correct application of register content codes
 - (ii) registry functional specification and design
 - (iii) participant (MEP, trader, distributor) back office systems and processes
 - (iv) field services provider (MEP, FSP) interfaces
- (b) participants needing to source channel on/off times from distributor pricing information. Participants would need to take care to ensure that meter configurations and pricing are correct as the time mappings may be different between adjacent distributors' networks.

3 The Authority's proposal

3.1 Option D is the Authority's preferred option Because:

- (a) Options A and B largely maintain the status quo, do not address the potential proliferation of customised codes and inefficient processes to add new codes, and would do little to improve the accurate application of register content codes and period of availability values
- (b) Option C would be an improvement over Options A and B, and while it would avoid the inefficient processes associated with adding new codes, it would create an inconsistent approach to register content codes for TOU delivery prices by mixing customised and generic codes. However, it would include steps to support the correct application of register content codes and period of availability values
- (c) Option D offers an improvement over Option C, because it would provide a more efficient approach to register content codes for TOU delivery prices going forward, remove inconsistencies by deleting existing customised codes, and include steps to support the correct application of register content codes and period of availability values
- (d) Options E and F have merit, but changing to numeric register content codes and developing a usable library of codes may require significant mapping changes in traders' and MEPs' systems
- (e) Option G has merit, but would require significant Code changes, registry functional specification changes, and changes to service provider and participant systems and processes.

- 3.2 Option D retains the current format for register content codes (a maximum 6 characters using capital letters) for all codes. However, it may need to be increased to 8 characters in future if new delivery prices include a combination of seasonal, day of week, time of day, and controlled load attributes. As delivery prices become more complex it may be more likely that participants will aggregate HHR data in the future into pricing periods. However, register content codes would still be necessary in network billing and customer pricing processes.
- 3.3 In the interests of consistency, and given what is believed to be the relatively low adoption of the customised register content codes that specify time blocks in the descriptions, under Option D the existing customised codes would be deleted, with a reasonable notice period, say 6 months. This would require participants already using these codes to convert to new register content codes within their back-office systems.
- 3.4 Option D would:
- (a) provide operational efficiencies and reduce costs as participants may innovate without the restriction of waiting for the Authority to consult on, and approve, new register content codes to be consulted on and approved
 - (b) support increased competition by enabling the more timely introduction of complex and differentiated TOU prices without requiring additional register content codes
 - (c) where alignment with delivery price time blocks is proposed, require MEPs and traders to interpret the time blocks and period of availability values from the distributor's pricing information
 - (d) require a Code change to mandate that a distributor's pricing information must include a table showing certain information¹⁵, for each price component code associated with an ICP based volume delivery price, to support accurate application of register content codes and period of availability values
 - (e) improve the format and descriptions of the list of register content codes to support accurate application
 - (f) require participants to source channel on and off times (time blocks) from distributor pricing information. Participants would need to take care to ensure that meter configurations and pricing are correct as the time mappings may be different between adjacent distributors' networks.
- 3.5 The cost for this change should be minimal if we implement it before the next round of delivery price changes, when more distributors are likely to implement TOU delivery prices.
- 3.6 The Authority is also proposing to implement the following business requirements:
- (a) clarify the period of availability for multi-channel prices so that period of availability is used to describe the minimum number of hours in any day that supply is available (or controlled part is available for an inclusive channel), and must be ≤ 24 :
 - (i) for multi-channel uncontrolled TOU delivery prices, this means the period of availability should describe the actual period for which each channel is

¹⁵ Refer section 2.48.

active, which must add to 24 in any day for register content codes that need to work together

(ii) for multi-channel controlled or inclusive TOU delivery prices, the period of availability should describe the minimum number of hours within a day that supply is available to the controlled load (or to the controlled part of the load for inclusive channels)

1. If the minimum number of hours applies to the entire day regardless of the number of time blocks, the period of availability must be < 24 and be identical for each channel (eg DIN19/NIN19 would mean the controlled load is available for 19 hours but the control could be anytime during the day or night time blocks)

2. If the minimum number of hours is different between time blocks, the period of availability for a channel with controllable load must reflect the minimum number of hours that supply is available to the controlled load within the active period for the channel. The period of availability for a channel with no controllable load must reflect the active period for the channel (eg DIN14/NIN8 would mean the controlled load is available for 14 hours during the day time block and at all times during the night time block)

(b) if a distributor's pricing information does not specify the minimum number of hours in any day that supply is available for a controlled or exclusive delivery price, MEPs and traders would need to default the period of availability to '0' hours

(c) change the format for period of availability to Num 2.1 to allow for active periods that are for an odd number of trading periods, which would be required for any option which retains period of availability values. The registry should not require a decimal place to be entered, and default to zero when not entered.

3.7 Where all or some of the load on the channel is subject to control at any time via a load control device, the MEP must select an appropriate register content code to indicate the presence of controlled load on the channel. MEPs and traders must interpret the distributor's pricing information to determine both the time blocks and the minimum number of hours in any day for which supply is available.

3.8 The Authority also proposes that (in addition to the proposed Code change to mandate that a distributor's pricing information must contain certain information) EIEP12 (Delivery price change notification) be amended to make it mandatory to include register content code and period of availability for each price component code associated with an ICP based volume price (currently optional). The current operational review of the EIEPs consultation paper includes this proposed amendment.

3.9 Changes required to the registry would be small because only the content of the static data table would need to change. Option D requires no functionality, format or validation changes.

Q1. Do you agree the issues identified by the Authority require attention? If not, please explain why.

- Q2. Do you agree that the proposed business requirements around period of availability and distributor's pricing information would support the accurate application of register content codes and periods of availability for ICP based volume prices? If not, please explain.**
- Q3. Do you agree with the Authority's preferred Option D, which introduces generic register content codes for mass market TOU prices, and for consistency deletes existing customised codes that specify time blocks in the descriptions? If not, which option do you prefer and why?**
- Q4. If the Authority implements Option D, we propose to allow participants 6 months to convert from using the customised register content codes to the corresponding generic register content codes (mapping demonstrated in Appendix C). Would this be sufficient time? If not, please advise how much time would be reasonable.**
- Q5. Do you agree that the Authority should progress a Code change to mandate that a distributor's pricing information must contain certain information to assist MEPs and traders to consistently and accurately apply register content codes and periods of availability for ICP based volume prices? If not, please explain why.**

4 Assessing costs and benefits

Costs

- 4.1 The Authority recognises that existing participants already have processes and systems that use the existing register content codes and periods of availability, and that the costs of replacing existing codes with a new set of codes may be substantial and require significant coordination.
- 4.2 To assist with assessing costs against benefits, this paper seeks information from participants in relation to the nature and likely level of change-related costs to comply with the proposed changes. We have provided suitable questions to encourage relevant feedback.
- 4.3 For the most part, the errors and inconsistencies that we have observed are due to non-compliance with the registry functional specification. The cost of addressing these errors and inconsistencies should therefore not be considered a cost of this review. These include, for example, CN8 when it should be NC8, IN24 where it should be IN17, and invalid combinations in the registry.
- 4.4 If submitters wish their feedback on estimated system change costs to be treated as confidential information, they should identify this and the Authority will redact the information before publishing submissions. The Authority will ensure any summary of submissions and decisions paper does not compromise confidentiality. However, as discussed in paragraph 1.11, the Authority is covered by the Official Information Act and may be required to release all submissions.

Benefits

- 4.5 We expect that Option D would provide a range of benefits, including:
 - (a) less room for misinterpretation and potential consequential errors in network reporting and billing of network charges, engagement with potential customers, customer billing, reconciliation submissions and settlements, reducing costs for traders and distributors
 - (b) enhanced retail competition, by enabling more rapid implementation of new TOU prices with different active periods
 - (c) lower costs by avoiding the need for the consultation/approval process and registry functional specification changes every time TOU prices are introduced with different active periods
 - (d) less room for misinterpretation and potential consequential errors for participants when applying register content codes and period of availability values, meaning improved accuracy and reduced costs for investigations and rework when potential errors are discovered
 - (e) reducing the need for inefficient workarounds and mapping of invalid to valid codes.

Summary costs & benefits arising from the proposed substantive changes

Proposal reference	Costs	Benefits
Option D (preferred option)	<p>Minor cost for MEPs, distributors and traders using existing customised register content codes to convert (or map) to new generic codes.</p> <p>Minor cost to distributors to provide additional information with their delivery price schedules and associated information regarding the application of the delivery prices.</p> <p>Minor cost to change the registry functional specification to initially add the new generic register content codes, and subsequently delete the existing customised register content codes once participants have been given time to transition to the new codes.</p>	<p>Improved efficiency by significantly reducing participants' time, effort and costs incurred to introduce new customised codes.</p> <p>Requiring certain information be included in the distributor's pricing information will support the correct application of register content codes and period of availability values, and compliance with the Code.</p> <p>Reduced related errors in network billing, engagement with potential customers, customer billing, and reconciliation submissions.</p> <p>Adds clarity where register content codes need to work together.</p> <p>Supports increased competition by enabling more timely introduction of complex and differentiated TOU prices without requiring additional register content codes.</p> <p>Avoids future costs associated with consulting on new codes and changes to registry functional specification.</p>
Code change proposal to mandate that distributor's pricing information must include certain information for each price component code associated with an ICP based volume delivery price.	<p>Cost to prepare and consult on Code change proposal.</p> <p>Minor cost to distributors to provide additional information with their delivery price schedules and associated information regarding the application of the delivery prices.</p>	<p>Supports the correct application of register content codes and period of availability values, and compliance with the Code .</p> <p>Reduces related errors in network billing, customer billing, and reconciliation submissions.</p> <p>Adds clarity where register content codes need to work together.</p>
Change the format for period of availability to Num 2.1 to allow for active periods that are for an odd number of trading periods	Minor cost to change the registry functional specification and participants' systems.	Necessary to enable active periods (time blocks) that are for an odd number of trading periods. These already exist, but cannot be entered into the registry.

Proposal reference	Costs	Benefits
EIEP12 proposal to mandate population of register content code and period of availability values for ICP based volume delivery prices. Also included in EIEPs operational review consultation paper.	Minor cost (if any) for distributors	Similar benefits as for Code change proposal to require distributor's pricing information to include certain information for each price component code associated with an ICP based volume delivery price.

5 Regulatory Statement for the proposed amendments

Objectives of the proposed amendments

- 5.1 The proposed amendments to register content codes and related business requirements are intended to:
- (a) implement a solution that addresses, as much as possible, the issues identified by participants and the Authority with existing arrangements
 - (b) move to generic register content codes that significantly reduce the likelihood of a need for new register content codes, while deleting existing customised register content codes to achieve consistency
 - (c) provide guidance for the correct application of period of availability values for multi-channel TOU prices
 - (d) provide a default for the period of availability values where a distributor does not specify the minimum number of hours in any day that supply is available for a controlled or exclusive delivery price in its pricing information
 - (e) support the correct application of register content codes and period of availability values
 - (f) provide operational efficiencies and reduce costs as participants may innovate without the restriction of waiting for the Authority to consult on, and approve, new register content codes
 - (g) support increased competition by enabling the more timely introduction of complex and differentiated TOU prices without requiring additional register content codes.

Q6. Do you agree with the objectives of the proposed amendments? If not, why not?

The proposed amendments

- 5.2 The proposed amendments are outlined in section 4 and Appendix D.

The proposed amendments' benefits are expected to outweigh the costs

- 5.3 The costs and benefits of the proposed amendments are outlined in section 4.

- 5.4 Feedback to some questions will enable the Authority to evaluate if there are any cost impediments to proceeding with the proposed amendments.

Q7. Do you agree the benefits of the proposed amendments outweigh the costs? If not, please explain your reasons.

Other means for addressing the objectives

- 5.5 The Authority has identified 6 alternatives to the status quo for addressing the objectives, and has assessed them all. Option D is preferred.
- 5.6 Feedback to some questions will enable the Authority to evaluate if there are any reasons for not proceeding with the preferred option or proceeding with one of the alternatives.

The proposed amendments are preferred to other options

- 5.7 In the absence of any feedback regarding why we should not proceed with the proposed amendments, the Authority prefers Option D.

Q8. Do you agree the proposed amendments are preferable to other options? If you disagree, please give reasons.

Appendix A Option A – Status quo, existing codes and format

Option A reflects the status quo (existing approved register content codes contained in SD-020), but with some amendments in red (and underlined) to existing seasonal codes (insertion of R for summer (S changes to SR) and winter (W changes to WR) codes, and three new codes (DIN, NIN, INEM) which were already addressed in a separate consultation at the time of drafting this paper. No other amendments would be made.

Current register content code	Proposed amendment	Description
AD	No change	kVA demand - KVA MDI
AH	No change	kVAh - cumulative KVA register
CN	No change	Controlled - all load on the register is subject to control via LineCo
D	No change	Day - daytime only
DC	No change	Day register for a fully controlled meter
<u>DIN</u>	<u>New</u>	<u>Day of a day/night meter where the load on the channel is a combination of controlled and uncontrolled loads</u>
DOP	No change	Triple Saver Off Peak (1100-1700 2100-2300)
DPK	No change	Triple Saver Peak (0700-1100 1700-2100)
DWD	No change	Day of Week Days (7:00am - 9:00pm)
EG	No change	Embedded Generation
IN	No change	Inclusive - load on the register is a combination of controlled and uncontrolled loads
<u>INEM</u>	<u>New</u>	<u>Emergency — load on the register is a combination of load controlled in an emergency and uncontrolled load</u>
KD	No change	kW demand - KW MDI
N	No change	Night - night-time only
NC	No change	Night register for a fully controlled meter
<u>NIN</u>	<u>New</u>	<u>Night of a day/night meter where the load on the channel is a combination of controlled and uncontrolled loads</u>
NWD	No change	Night of week days (9:00pm - 7:00am)
RH	No change	kVArh - reactive meter register
<u>SR</u>	Changed	Summer - records consumption during summer

Current register content code	Proposed amendment	Description
SENW	No change	Weekday night (9:00pm - 7:00am Monday - Friday); and all weekend (Friday 9:00pm - Monday 7:00 am)
SEOP	No change	Offpeak (Monday - Friday 11:00am - 5:00pm; and 7:30pm - 9:00pm)
SEPK	No change	Peak (Monday - Friday 7:00am - 11:00am; and 5:00pm - 7:30pm)
SRD	No change	Summer Day – Records day consumption during summer. Period of availability to match register changeover times
SRN	No change	Summer Night – Records night consumption during summer. Period of availability to match register changeover times
SRWD	Changed	Summer weekday - records consumption during summer weekdays
SRWDD	Changed	Summer weekday day - records day consumption during summer weekdays
SWDN	Changed	Summer weekday night - records night consumption during summer weekdays
SRWDPK	Changed	Standard 3 Rate Weekday Peak Summer (0700-11001700-2100) 3 step rate
SRWE	Changed	Summer weekend - records consumption during summer weekends
SRWED	Changed	Summer weekend day - records day consumption during summer weekends
SRWEN	Changed	Summer weekend night - records night consumption during summer weekends
UN	No change	Uncontrolled - no load on the register is subject to control via the load control device
WR	Changed	Winter - records consumption during winter
WD	No change	Weekday - records consumption during weekdays
WDD	No change	Weekday day (Mon-Fri). Records day consumption during weekdays. Non seasonal equivalents of SWDD and WWDD (Summer and Winter weekday daytime). <ul style="list-style-type: none"> • Must be used with WED and may be used with other registers for the night period. • Period of availability to match register changeover times but WDD and all night registers must add up to 24.
WDOP	No change	Standard 3 Rate Weekday Off Peak (1100-1700 2100-2300) & Weekend Off Peak (0700-2300)

Current register content code	Proposed amendment	Description
WE	No change	Weekend - records consumption during weekends
WED	No change	Weekend day. Records day consumption during weekends. Non seasonal equivalents of SWED and WWED (Summer and Winter weekend daytime). <ul style="list-style-type: none"> • Must be used with WDD and may be used with other registers for the night period. • Period of availability to match register changeover times but WED and all night registers must add up to 24.
WRD	No change	Winter Day – Records day consumption during winter. Period of availability to match register changeover times
WRN	No change	Winter Night – Records night consumption during winter. Period of availability to match register changeover times
WRWD	Changed	Winter weekday - records consumption during winter weekdays
WRWDD	Changed	Winter weekday day - records day consumption during winter weekdays
WRWDN	Changed	Winter weekday night - records night consumption during winter weekdays
WRWDPK	Changed	Standard 3 Rate Weekday Peak Winter (0700-1100, 1700-2100) 3 step rate
WRWE	Changed	Winter weekend - records consumption during winter weekends
WRWED	Changed	Winter weekend day - records day consumption during winter weekends
WRWEN	Changed	Winter weekend night - records night consumption during winter weekends
7302	No change	30 minute recorded channel kVAh
7304	No change	30 minute recorded channel kWh
7306	No change	30 minute recorded channel kVArh
7052	No change	5 minute recorded channel kVAh
7054	No change	5 minute recorded channel kWh
7056	No change	5 minute recorded channel kVArh
		Groupings
OPKOOA	No change	Any Day 22:00 - 06:00, part of a three register tariff. Must be used with PKOOA and SPKOOA. Period of availability must be 8 hours

Current register content code	Proposed amendment	Description
PKOOA	No change	Weekdays 07:30 - 09:30 & 17:30 - 19:30, part of a three register tariff. Must be used with OPKOOA and SPKOOA. Period of availability must be 4 hours
SPKOOA	No change	Weekdays 06:00 - 07:30, 09:30 - 17:30, 19:30 - 22:00 & Weekend 06:00 - 22:00, part of a three register tariff. Must be used with OPKOOA and PKOOA. Period of availability must be 12 hours
OPKOOB	No change	Weekdays 11:00 - 17:00, 21:00 - 7:00 & Weekend 24 Hours, part of a two register tariff. Must be used with PKOOB. Period of availability must be 16 hours
PKOOB	No change	Weekdays 07:00 - 11:00 & 17:00 - 21:00, part of a two register tariff. Must be used with OPKOOB. Period of availability must be 8 hours
OPKOOB	No change	Any Day 22:00 - 07:00, part of a three register tariff. Must be used with PKOOB and SPKOOB. Period of availability must be 9 hours
PKOOB	No change	Weekdays 07:00 - 09:30 & 17:30 - 20:00, part of a three register tariff. Must be used with OPKOOB and SPKOOB. Period of availability must be 5 hours
SPKOOB	No change	Weekdays 09:30 - 17:30, 20:00 - 22:00 & Weekend 07:00 - 22:00, part of a three register tariff. Must be used with OPKOOB and PKOOB. Period of availability must be 10 hours
OPKOOB	No change	Any Day 23:00 - 07:00, part of a three register tariff: <ul style="list-style-type: none"> • must be used with either: <ul style="list-style-type: none"> – PKOOB and SPKOOB; or – PKOOE and SPKOOE • period of availability must be 8 hours.
PKOOB	No change	Any day 07:00 - 09:30 & 17:30 - 20:00, part of a three register tariff: <ul style="list-style-type: none"> • must be used with OPKOOB and SPKOOB • period of availability must be 5 hours.
SPKOOB	No change	Any day 09:30 - 17:30, 20:00 - 23:00, part of a three register tariff: <ul style="list-style-type: none"> • must be used with OPKOOB and PKOOB • period of availability must be 11 hours.

Current register content code	Proposed amendment	Description
PKOOE	No change	Any day 07:00 - 10:00 & 16:00 - 21:00, part of a three register tariff: <ul style="list-style-type: none"> • must be used with OPKOOD and SPKOOE • period of availability must be 8 hours.
SPKOOE	No change	Any day 10:00 - 16:00, 21:00 - 23:00, part of a three register tariff: <ul style="list-style-type: none"> • must be used with OPKOOD and PKOOE • period of availability must be 8 hours.

Appendix B Option B - Existing codes, but reformatted by number of channels

Option B reflects the existing register content codes but with a modified format of SD-020 together with some amendments to descriptions to align with terminology preferences, and addition of a column regarding the reference point for where to find the period for which the channel is active.

As for Option A, the table also shows some amendments in red (underlined) to existing seasonal codes (insertion of R for summer (S > SR) and winter (W > WR) codes, and three new codes (DIN, NIN, INEM) which were already included in a separate consultation at the time of drafting this paper.

Code	Description	Period channel is active for
Single channel prices		
AD	kVA demand - KVA MDI	24 hours
AH	kVAh - cumulative KVA channel	24 hours
CN	Controlled - all load on the channel is subject to control at any time via a load control device	Refer to distributor's pricing information for the minimum number of hours in any day that supply is available to the controlled load
DC	Day channel for a fully controlled single channel meter	Refer to distributor's pricing information for time blocks
EG	Embedded Generation	24 hours
IN	Inclusive - load on the channel is a combination of controlled and uncontrolled loads	Refer to distributor's pricing information for the minimum number of hours in any day that supply is available to the controlled load
<u>INEM</u>	<u>Emergency – load on the channel is a combination of load controlled in an emergency and uncontrolled load</u>	<u>24 hours</u>
KD	kW demand - KW MDI	24 hours
RH	kVAh - reactive energy channel	24 hours
NC	Night channel for a fully controlled single channel meter	Refer to distributor's pricing information for time blocks
UN	Uncontrolled - no load on the channel is subject to control via a load control device	24 hours
2-channel prices		
D	Day - daytime only for a 2-channel day/night meter	Refer to distributor's pricing information for time blocks for each channel
N	Night - night-time only for a 2-channel day/night meter	

Code	Description	Period channel is active for
<u>DIN</u>	<u>Day of a day/night meter where the load on the channel is a combination of controlled and uncontrolled loads</u>	<u>Refer to distributor's pricing information for time blocks for each channel</u>
<u>NIN</u>	<u>Night of a day/night meter where the load on the channel is a combination of controlled and uncontrolled loads</u>	
<u>SR</u>	Summer - records consumption only during summer	Refer to distributor's pricing information for time blocks for each channel
<u>WR</u>	Winter - records consumption only during winter	
OPKOOB	Off peak Weekdays 1100 - 1700, 2100 – 0700 Weekend 0000 – 2400 Period of availability must be 16 hours	Refer to distributor's pricing information
PKOOB	Peak Weekdays 0700 – 1100, 1700 – 2100 Period of availability must be 8 hours	
WD	Weekday - records all consumption only during weekdays	Refer to distributor's pricing information
WE	Weekend - records all consumption only during weekends	
3-channel prices		
DOP	Triple Saver Off Peak 1100-1700, 2100-2300	Refer to distributor's pricing information
DPK	Triple Saver Peak 0700-1100, 1700-2100	
N	Night 2300-0700	
DWD	Day of weekdays 0700-2100	Refer to distributor's pricing information
NWD	Night of weekdays 2100-0700	
WE	Weekend - records consumption only during weekends	
SEPK	Peak Monday - Friday 0700 - 1100 and 1700 – 1930	Refer to distributor's pricing information
SEOP	Off peak Monday - Friday 1100 - 1700 and 1930 – 2100	
SENW	Weekday night Monday 2100 - Friday 0700 Friday 2100 - Monday 0700	
OPKOOA	Off peak Any day 2200 – 0600 Period of availability must be 8 hours	Refer to distributor's pricing information

Code	Description	Period channel is active for
PKOOA	Peak Weekdays 0730 – 0930, 1730 – 1930 Period of availability must be 4 hours	
SPKOOA	Shoulder peak. Weekdays 0600 - 0730, 0930 - 1730, 1930 - 2200 & Weekend 0600 – 2200 Period of availability must be 12 hours	
OPKOOA	Off peak Any day 2200 – 0700 Period of availability must be 9 hours	Refer to distributor's pricing information
PKOOA	Peak Weekdays 0700 - 0930 & 1730 – 2000 Period of availability must be 5 hours	
SPKOOA	Shoulder Peak Weekdays 0930 - 1730, 2000 – 2200 Weekend 0700 – 2200 Period of availability must be 10 hours	
OPKOOB	Off peak Any day 2300 – 0700 Period of availability must be 8 hours	Refer to distributor's pricing information
PKOOB	Peak Any day 0700 - 0930 & 1730 – 2000 Period of availability must be 5 hours	
SPKOOB	Shoulder peak Any day 0930 - 1730, 2000 – 2300 Period of availability must be 11 hours	
OPKOOB	Off peak Any day 2300 – 0700 Period of availability must be 8 hours	Refer to distributor's pricing information
PKOOE	Peak Any day 0700 – 1000, 1600 - 2100 Period of availability must be 8 hours	
SPKOOE	Shoulder peak Any day 1000 - 1600, 2100 – 2300 Period of availability must be 8 hours	
WDD	Weekday day (Mon-Fri). Records day consumption during weekdays.	Refer to distributor's pricing information for time blocks for each channel
WED	Weekend day. Records day consumption during weekends	
N	Night	
4-channel prices		
SRWD	Summer weekday - records consumption during summer weekdays	Refer to distributor's pricing information for time blocks for each channel
SRWE	Summer weekend - records consumption during summer weekends	

Code	Description	Period channel is active for
WRWD	Winter weekday - records consumption during winter weekdays	
WRWE	Winter weekend - records consumption during winter weekends	
SRWD	Summer weekday - records consumption during summer weekdays	Refer to distributor's pricing information for time blocks for each channel
SRWE	Summer weekend - records consumption during summer weekends	
WRWD	Winter weekday - records consumption during winter weekdays	
WRWE	Winter weekend - records consumption during winter weekends	
SRWDPK	Standard 3 Rate Weekday Peak Summer 0700 – 1100; and 1700 – 2100	Refer to distributor's pricing information for time blocks for each channel
WRWDPK	Standard 3 Rate Weekday Peak Winter 0700 – 1100 and 1700 - 2100	
WRDOP	Standard 3 Rate Weekday and weekend Off Peak Weekday 1100 – 1700, 2100 - 2300 Weekend 0700-2300	
N	Night	
8-channel prices		
SRWDD	Summer weekday day - records day consumption during summer weekdays	Refer to distributor's pricing information for time blocks for each channel
SRWDN	Summer weekday night - records night consumption during summer weekdays	
SRWED	Summer weekend day - records day consumption during summer weekends	
SRWEN	Summer weekend night - records night consumption during summer weekends	
WRWDD	Winter weekday day - records day consumption during winter weekdays	
WRWDN	Winter weekday night - records night consumption during winter weekdays	
WRWED	Winter weekend day - records day consumption during winter weekends	
WRWEN	Winter weekend night - records night consumption during winter weekends	
Interval meters		
7302	30 minute recorded channel kVAh	Meter records in trading periods
7304	30 minute recorded channel kWh	
7306	30 minute recorded channel kVArh	

Code	Description	Period channel is active for
7052	5 minute recorded channel kVAh	Meter records in subset of trading period
7054	5 minute recorded channel kWh	
7056	5 minute recorded channel kVArh	

Appendix C Option C - As for Option B, but potential future generic codes (capital letters up to 6 characters) added for new mass market TOU prices

Option C reflects Option B (existing register content codes with a modified format of SD-020) plus new generic codes for new mass market TOU prices (shown in red as well).

As for Option A, the table also shows some amendments in red (underlined) to existing seasonal codes (insertion of R for summer (S > SR) and winter (W > WR) codes, and three new codes (DIN, NIN, INEM) which were already included in a separate consultation at the time of drafting this paper.

Code	Description	Period channel is active for
Single channel prices		
AD	kVA demand - KVA MDI	24 hours
AH	kVAh - cumulative KVA channel	24 hours
CN	Controlled - all load on the channel is subject to control at any time via a load control device	Refer to distributor's pricing information for the minimum number of hours in any day that supply is available to the controlled load
DC	Day for a fully controlled single channel meter	Refer to distributor's pricing information for time blocks and minimum number of hours in any day that supply is available to the controlled load
EG	Embedded Generation	24 hours
IN	Inclusive - load on the channel is a combination of controlled and uncontrolled loads	Refer to distributor's pricing information for the minimum number of hours in any day that supply is available to the controlled load
<u>INEM</u>	<u>Emergency – load on the channel is a combination of load controlled in an emergency and uncontrolled load</u>	<u>24 hours</u>
KD	kW demand - KW MDI	24 hours
RH	kVAh - reactive energy channel	24 hours
NC	Night for a fully controlled single channel meter, may also include daytime boost	Refer to distributor's pricing information for time blocks and minimum number of hours in any day that supply is available to the controlled load
UN	Uncontrolled - no load on the channel is subject to control via a load control device	24 hours

Code	Description	Period channel is active for
2-channel prices		
D	Day of day/night meter	Refer to distributor's pricing information for time blocks for each channel
N	Night of day/night meter	
<u>DIN</u>	<u>Day of a day/night meter where the load on the channel is a combination of controlled and uncontrolled loads</u>	<u>Refer to distributor's pricing information for time blocks for each channel and minimum number of hours in any day that supply is available to the controlled load.</u>
<u>NIN</u>	<u>Night of a day/night meter where the load on the channel is a combination of controlled and uncontrolled loads</u>	
DCN	Day of a day/night meter where the load on the channel is fully controlled	Refer to distributor's pricing information for time blocks for each channel and minimum number of hours in any day that supply is available to the controlled load.
NCN	Night of a day/night meter where the load on the channel is fully controlled	
<u>SR</u>	Summer - records consumption only during summer	Refer to distributor's pricing information for time blocks for each channel
<u>WR</u>	Winter - records consumption only during winter	
OPKOOB	Off peak Weekdays 1100 - 1700, 2100 – 0700 Weekend 0000 – 2400 Period of availability must be 16 hours	Refer to distributor's pricing information
PKOOB	Peak Weekdays 0700 – 1100, 1700 – 2100 Period of availability must be 8 hours	
OP	Off peak of peak/off peak. Any day.	Refer to distributor's pricing information for time blocks for each channel. Generic codes for: OPKOOB/PKOOB
PK	Peak of peak/off peak. Any day	
WD	Weekday of weekday/weekend. Records all consumption during weekdays.	Refer to distributor's pricing information
WE	Weekend of weekday/weekend. Records all consumption during weekends.	
OPIN	Off peak of peak/off peak where the load on the channel is a combination of controlled and uncontrolled loads. Any day.	Refer to distributor's pricing information for time blocks for each channel and minimum number of hours in any day that supply is available to the controlled load.
PKIN	Peak of peak/off peak where the load on the channel is a combination of controlled and uncontrolled loads. Any day.	
3-channel prices		
DOP	Triple Saver Off Peak 1100-1700, 2100-2300	Refer to distributor's pricing information

Code	Description	Period channel is active for
DPK	Triple Saver Peak 0700-1100, 1700-2100	
N	Night 2300-0700	
DWD	Day of weekdays 0700-2100	Refer to distributor's pricing information
NWD	Night of weekdays 2100-0700	
WE	Weekend - records consumption only during weekends	
WDD	Weekday Day	Refer to distributor's pricing information for time blocks for each channel. Generic codes for: DWD/NWD/WE
WDN	Weekday Night	
WE	Weekend	
SEPK	Peak Monday - Friday 0700 - 1100 and 1700 - 1930	Refer to distributor's pricing information
SEOP	Off peak Monday - Friday 1100 - 1700 and 1930 - 2100	
SENW	Weekday night Monday 2100 - Friday 0700 Friday 2100 - Monday 0700	
OPKOOA	Off peak Any day 2200 - 0600 Period of availability must be 8 hours	Refer to distributor's pricing information
PKOOA	Peak Weekdays 0730 - 0930, 1730 - 1930 Period of availability must be 4 hours	
SPKOOA	Shoulder peak. Weekdays 0600 - 0730, 0930 - 1730, 1930 - 2200 & Weekend 0600 - 2200 Period of availability must be 12 hours	
OPKOOB	Off peak Any day 2200 - 0700 Period of availability must be 9 hours	Refer to distributor's pricing information
PKOOB	Peak Weekdays 0700 - 0930 & 1730 - 2000 Period of availability must be 5 hours	
SPKOOB	Shoulder Peak Weekdays 0930 - 1730, 2000 - 2200 Weekend 0700 - 2200 Period of availability must be 10 hours	
OPKOOD	Off peak Any day 2300 - 0700 Period of availability must be 8 hours	Refer to distributor's pricing information

Code	Description	Period channel is active for
PKOOD	Peak Any day 0700 - 0930 & 1730 – 2000 Period of availability must be 5 hours	
SPKOOD	Shoulder peak Any day 0930 - 1730, 2000 – 2300 Period of availability must be 11 hours	
OPKOOD	Off peak Any day 2300 – 0700 Period of availability must be 8 hours	Refer to distributor's pricing information
PKOOE	Peak Any day 0700 – 1000, 1600 - 2100 Period of availability must be 8 hours	
SPKOOE	Shoulder peak Any day 1000 - 1600, 2100 – 2300 Period of availability must be 8 hours	
OP	Off peak of peak/off peak/shoulder peak. Any day.	Refer to distributor's pricing information for time blocks for each channel. Generic codes for: DOP/DPK/N OPKOOD/OKOOD/SPKOOD OPKOOD/OKOOE/SPKOOE
PK	Peak of peak/off peak/shoulder peak. Any day.	
SP	Shoulder peak of peak/off peak/shoulder peak. Any day.	
WDD	Weekday day (Mon-Fri). Records day consumption during weekdays.	Refer to distributor's pricing information for time blocks for each channel
WED	Weekend day. Records day consumption during weekends	
N	Night	
4-channel prices		
WDPK	Weekday peak	Refer to distributor's pricing information for time blocks for each channel. Generic codes for: SEPK/SEOP/SENW
WDSP	Weekday shoulder peak	
WDOP	Weekday off peak	
WE	All weekend	
OP	Off peak. Any day	Refer to distributor's pricing information for time blocks for each channel. Generic codes for: OPKOOA/PKOOA/SPKOOA OPKOOA/PKOOA/SPKOOA OPKOOA/PKOOA/SPKOOA
WDPK	Weekday peak	
WDSP	Weekday shoulder peak	
WEPK	Weekend peak	
WDOP	Weekday off peak	Refer to distributor's pricing information for time blocks for each channel.
WDPK	Weekday peak	
WEOP	Weekend off peak	
WEPK	Weekend peak	

Code	Description	Period channel is active for
WDOPIN	Weekday off peak where the load on the channel is a combination of controlled and uncontrolled loads	Refer to distributor's pricing information for time blocks for each channel and minimum number of hours in any day that supply is available to the controlled load.
WDPKIN	Weekday peak where the load on the channel is a combination of controlled and uncontrolled loads	
WEOPIN	Weekend off peak where the load on the channel is a combination of controlled and uncontrolled loads	
WEPKIN	Weekend peak where the load on the channel is a combination of controlled and uncontrolled loads	
SRWD	Summer weekday - records consumption during summer weekdays	Refer to distributor's pricing information for time blocks for each channel
SRWE	Summer weekend - records consumption during summer weekends	
WRWD	Winter weekday - records consumption during winter weekdays	
WRWE	Winter weekend - records consumption during winter weekends	
SRRD	Summer day - records day consumption during summer.	Refer to distributor's pricing information for time blocks for each channel
SRRN	Summer night - records night consumption during summer.	
WRRD	Winter day - records day consumption during winter.	
WRRN	Winter night – records night consumption during winter.	
SRWDPK	Standard 3 Rate Weekday Peak Summer 0700 – 1100; and 1700 – 2100	Refer to distributor's pricing information for time blocks for each channel
WRWDPK	Standard 3 Rate Weekday Peak Winter 0700 – 1100 and 1700 - 2100	
WRDOP	Standard 3 Rate Weekday and weekend Off Peak Weekday 1100 – 1700, 2100 - 2300 Weekend 0700-2300	
N	Night	
5 channel prices		
SRWDPK	Summer weekday peak	Refer to distributor's pricing information for time blocks for each channel. Generic codes for: SWDPK/WWDPK/WDOP/N (Standard 3 Rate)
WRWDPK	Winter weekday peak	
WDSP	Weekday shoulder peak	
OP	Off peak. Any day	
WEPK	Weekend peak	
WDOP	Weekday off peak	Refer to distributor's pricing information for time blocks for
WDPK	Weekday peak	

Code	Description	Period channel is active for
WDSP	Weekday shoulder peak	each channel.
WEOP	Weekend off peak	
WEPK	Weekend peak	
WDOPIN	Summer weekday peak where the load on the channel is a combination of controlled and uncontrolled loads	Refer to distributor's pricing information for time blocks for each channel and minimum number of hours in any day that supply is available to the controlled load
WDPKIN	Winter weekday peak where the load on the channel is a combination of controlled and uncontrolled loads	
WDSPIN	Weekday shoulder peak where the load on the channel is a combination of controlled and uncontrolled loads	
WEOPIN	Weekend off peak where the load on the channel is a combination of controlled and uncontrolled loads	
WEPKIN	Weekend peak where the load on the channel is a combination of controlled and uncontrolled loads	
8-channel prices		
SRWDD	Summer weekday day - records day consumption during summer weekdays	Refer to distributor's pricing information for time blocks for each channel
SRWDN	Summer weekday night - records night consumption during summer weekdays	
SRWED	Summer weekend day - records day consumption during summer weekends	
SRWEN	Summer weekend night - records night consumption during summer weekends	
WRWDD	Winter weekday day - records day consumption during winter weekdays	
WRWDN	Winter weekday night - records night consumption during winter weekdays	
WRWED	Winter weekend day - records day consumption during winter weekends	
WRWEN	Winter weekend night - records night consumption during winter weekends	
Interval meters		
7302	30 minute recorded channel kVAh	Meter records in trading periods
7304	30 minute recorded channel kWh	
7306	30 minute recorded channel kVArh	
7052	5 minute recorded channel kVAh	Meter records in subset of trading period
7054	5 minute recorded channel kWh	
7056	5 minute recorded channel kVArh	

Examples of existing customised codes vs proposed new generic codes

Existing description	Existing customised register content code	Existing period of availability	Proposed new generic register content code	Proposed new period of availability
<p>Off peak Any day 2200 – 0600 Period of availability must be 8 hours</p> <p>Peak (Weekday peak) Weekdays 0730 – 0930, 1730 – 1930 Period of availability must be 4 hours</p> <p>Shoulder peak (Weekday shoulder peak for weekday component, and Weekend peak for weekend component) Weekdays 0600 - 0730, 0930 - 1730, 1930 - 2200 & Weekend 0600 – 2200 Period of availability must be 12 hours</p>	<p><u>Any day</u> OPKOOA</p> <p>PKOOA</p> <p>SPKOOA</p>	<p>8</p> <p>4</p> <p>12</p>	<p><u>Any day</u> OP</p> <p>WDPK</p> <p><u>Weekday</u> WDSP</p> <p><u>Weekend</u> WEPK</p>	<p>8</p> <p>4</p> <p>12</p> <p>16</p>
<p>Off peak Weekdays 1100 - 1700, 2100 – 0700 Weekend 0000 – 2400 Period of availability must be 16 hours</p> <p>Peak Weekdays 0700 – 1100, 1700 – 2100 Period of availability must be 8 hours</p>	<p>OPKOOB</p> <p>PKOOB</p>	<p>16</p> <p>8</p>	<p>OP</p> <p>PK</p>	<p>16</p> <p>8</p>
<p>Off peak (Off peak, any day) Any day 2200 – 0700 Period of availability must be 9 hours</p> <p>Peak (Weekday peak) Weekdays 0700 - 0930 & 1730 – 2000 Period of availability must be 5 hours</p> <p>Shoulder Peak (Weekday shoulder peak for weekday component, and Weekend peak for weekend component) Weekdays 0930 - 1730, 2000 – 2200 Weekend 0700 – 2200 Period of availability must be 10 hours</p>	<p><u>Any day</u> OPKOOB</p> <p><u>Weekday</u> PKOOC</p> <p>SPKOOB</p>	<p>9</p> <p>5</p> <p>10</p>	<p><u>Any day</u> OP</p> <p><u>Weekday</u> WDPK</p> <p><u>Weekday</u> WDSP</p> <p><u>Weekend</u> WEPK</p>	<p>9</p> <p>5</p> <p>10</p> <p>15</p>
<p>Off peak Any day 2300 – 0700 Period of availability must be 8 hours</p> <p>Peak Any day 0700 - 0930 & 1730 – 2000 Period of availability must be 5 hours</p> <p>Shoulder peak Any day 0930 - 1730, 2000 – 2300 Period of availability must be 11 hours</p>	<p>OPKOOD</p> <p>PKOOD</p> <p>SPKOOD</p>	<p>8</p> <p>5</p> <p>11</p>	<p>OP</p> <p>PK</p> <p>SP</p>	<p>8</p> <p>5</p> <p>11</p>
<p>Off peak Any day 2300 – 0700</p>	<p>OPKOOD</p>	<p>8</p>	<p>OP</p>	<p>8</p>

Existing description	Existing customised register content code	Existing period of availability	Proposed new generic register content code	Proposed new period of availability
Period of availability must be 8 hours Peak Any day 0700 – 1000, 1600 – 2100 Period of availability must be 5 hours Shoulder peak Any day 1000 – 1600, 2100 – 2300 Period of availability must be 11 hours	PKOOE SPKOOE	8 8	PK SP	8 8
Triple Saver off peak (Shoulder peak of peak/off peak/shoulder peak) Any day 1100 – 1700, 2100 - 2300 Triple Saver peak (Peak of peak/off peak/shoulder peak) Any day 0700 – 1100, 1700 - 2100 Night (Off peak of peak/off peak/shoulder peak) Any day 2300 - 0700	DOP DPK N	8 8 8	SP PK OP	8 8 8
Day of weekday (Weekday day) 0700 - 2100 Night of weekday (Weekday night) 2100 – 0700 Weekend (Weekend)	DWD NWD N	14 10 10	WDD WDN <u>Weekend</u> WE	14 10 24
Peak (Weekday peak) Monday - Friday 0700 - 1100 and 1700 – 1930 Off peak (Weekday shoulder peak) Monday - Friday 1100 - 1700 and 1930 – 2100 Weekday night (Weekday off peak for weekday component, and Weekend for weekend component) Monday 2100 - Friday 0700 Friday 2100 - Monday 0700	SEPK SEOP SENW	6.5 7.5 10	WDPK WDSP <u>Weekday</u> WDOP <u>Weekend</u> WE	6.5 7.5 10 24
Standard 3 Rate Weekday Summer Peak (Summer weekday peak) Monday - Friday 0700 - 1100 and 1700 – 2100 Standard 3 Rate Weekday Winter Peak (Winter weekday peak) Monday - Friday 0700 - 1100 and 1700 - 2100 Standard 3 Rate Weekday and Weekend Off Peak (Weekday shoulder peak for weekday component, and Weekend peak for weekend component) Weekday 1100 – 1700, 2100 - 2300	SRWDPK WRWDPK WRDOP	8 8 8	SRWDPK WRWDSP <u>Weekday</u> WDSP <u>Weekend</u>	8 8 8

Existing description	Existing customised register content code	Existing period of availability	Proposed new generic register content code	Proposed new period of availability
Weekend 0700 - 2300 Night (Off peak, any day) 2300 - 0700	<u>Any day</u> N	8	WEPK <u>Any day</u> OP	16 8

Appendix D Option D and G - As for Option C, but existing customised codes deleted

Option D reflects Option C except that customised register content codes with built in time blocks are deleted (deletions marked up).

As for Option A, the table also shows some amendments in red (underlined) to existing seasonal codes (insertion of R for summer (S > SR) and winter (W > WR) codes, and three new codes (DIN, NIN, INEM) which were already included in a separate consultation at the time of drafting this paper.

Option G is the same as Option D, but excludes period of availability.

Code	Description	Period channel is active for
Single channel prices		
AD	kVA demand - KVA MDI	24 hours
AH	kVAh - cumulative KVA channel	24 hours
CN	Controlled - all load on the channel is subject to control at any time via a load control device	Refer to distributor's pricing information for the minimum number of hours in any day that supply is available to the controlled load
DC	Day channel for a fully controlled single channel meter	Refer to distributor's pricing information for time blocks and minimum number of hours in any day that supply is available to the controlled load
EG	Embedded Generation	24 hours
IN	Inclusive - load on the channel is a combination of controlled and uncontrolled loads	Refer to distributor's pricing information for the minimum number of hours in any day that supply is available to the controlled load
<u>INEM</u>	<u>Emergency – load on the channel is a combination of load controlled in an emergency and uncontrolled load</u>	<u>24 hours</u>
KD	kW demand - KW MDI	24 hours
RH	kVAh - reactive energy channel	24 hours
NC	Night for a fully controlled single channel meter, may also include daytime boost	Refer to distributor's pricing information for time blocks and minimum number of hours in any day that supply is available to the controlled load
UN	Uncontrolled - no load on the channel is subject to control via a load control device	24 hours
2-channel prices		

Code	Description	Period channel is active for
D	Day of day/night meter	Refer to distributor's pricing information for time blocks for each channel
N	Night of day/night 2-channel meter	
<u>DIN</u>	<u>Day of a day/night meter where the load on the channel is a combination of controlled and uncontrolled loads.</u>	<u>Refer to distributor's pricing information for time blocks for each channel and minimum number of hours in any day that supply is available to the controlled load.</u>
<u>NIN</u>	<u>Night of a day/night meter where the load on the channel is a combination of controlled and uncontrolled loads.</u>	
DCN	Day of a day/night meter where the load on the channel is fully controlled	Refer to distributor's pricing information for time blocks for each channel and minimum number of hours in any day that supply is available to the controlled load.
NCN	Night of a day/night meter where the load on the channel is fully controlled	
<u>SR</u>	Summer - records consumption only during summer	Refer to distributor's pricing information for time blocks for each channel
<u>WR</u>	Winter - records consumption only during winter	
	Off peak Weekdays 1100 – 1700, 2100 – 0700 Weekend 0000 – 2400 Period of availability must be 16 hours	Refer to distributor's pricing information
PKOOB	Peak Weekdays 0700 – 1100, 1700 – 2100 Period of availability must be 8 hours	
OP	Off peak of peak/off peak. Any day.	Refer to distributor's pricing information for time blocks for each channel
PK	Peak of peak/off peak. Any day	
WD	Weekday of weekday/weekend. Records all consumption during weekdays.	Refer to distributor's pricing information
WE	Weekend of weekday/weekend. Records all consumption during weekends.	
OPIN	Off peak of peak/off peak where the load on the channel is a combination of controlled and uncontrolled loads. Any day.	Refer to distributor's pricing information for time blocks for each channel and minimum number of hours in any day that supply is available to the controlled load.
PKIN	Peak of peak/off peak where the load on the channel is a combination of controlled and uncontrolled loads. Any day.	
3-channel prices		
DOP	Triple Saver Off Peak 1100-1700, 2100-2300	Refer to distributor's pricing information
DPK	Triple Saver Peak 0700-1100, 1700-2100	

Code	Description	Period channel is active for
N	Night 2300-0700	
DWD	Day of weekdays 0700-2100	Refer to distributor's pricing information
NWD	Night of weekdays 2100-0700	
WE	Weekend - records consumption only during weekends	
WDD	Weekday Day	Refer to distributor's pricing information for time blocks for each channel. Generic codes for: DWD/NWD/WE
WDN	Weekday Night	
WE	Weekend	
SEPK	Peak Monday - Friday 0700 - 1100 and 1700 - 1930	Refer to distributor's pricing information
SEOP	Off peak Monday - Friday 1100 - 1700 and 1930 - 2100	
SENW	Weekday night Monday 2100 - Friday 0700 Friday 2100 - Monday 0700	
OPKOOA	Off peak Any day 2200 - 0600 Period of availability must be 8 hours	Refer to distributor's pricing information
PKOOA	Peak Weekdays 0730 - 0930, 1730 - 1930 Period of availability must be 4 hours	
SPKOOA	Shoulder peak. Weekdays 0600 - 0730, 0930 - 1730, 1930 - 2200 & Weekend 0600 - 2200 Period of availability must be 12 hours	
OPKOOB	Off peak Any day 2200 - 0700 Period of availability must be 9 hours	Refer to distributor's pricing information
PKOOB	Peak Weekdays 0700 - 0930 & 1730 - 2000 Period of availability must be 5 hours	
SPKOOB	Shoulder Peak Weekdays 0930 - 1730, 2000 - 2200 Weekend 0700 - 2200 Period of availability must be 10 hours	
OPKOOB	Off peak Any day 2300 - 0700 Period of availability must be 8 hours	Refer to distributor's pricing information

Code	Description	Period channel is active for
PKOOD	Peak Any day 0700 – 0930 & 1730 – 2000 Period of availability must be 5 hours	
SPKOOD	Shoulder peak Any day 0930 – 1730, 2000 – 2300 Period of availability must be 11 hours	
OPKOOD	Off peak Any day 2300 – 0700 Period of availability must be 8 hours	Refer to distributor's pricing information
PKOOE	Peak Any day 0700 – 1000, 1600 – 2100 Period of availability must be 8 hours	
SPKOOE	Shoulder peak Any day 1000 – 1600, 2100 – 2300 Period of availability must be 8 hours	
OP	Off peak of peak/off peak/shoulder peak. Any day.	Refer to distributor's pricing information for time blocks for each channel. Generic codes for: DOP/DPK/N OPKOOD/OKOOD/SPKOOD OPKOOD/OKOOE/SPKOOE
PK	Peak of peak/off peak/shoulder peak. Any day.	
SP	Shoulder peak of peak/off peak/shoulder peak. Any day.	
WDD	Weekday day (Mon-Fri). Records day consumption during weekdays.	Refer to distributor's pricing information for time blocks for each channel
WED	Weekend day. Records day consumption during weekends	
N	Night	
4-channel prices		
WDPK	Weekday peak	Refer to distributor's pricing information for time blocks for each channel. Generic codes for: SEPK/SEOP/SENW
WDSP	Weekday shoulder peak	
WDOP	Weekday off peak	
WE	All weekend	
OP	Off peak. Any day	Refer to distributor's pricing information for time blocks for each channel. Generic codes for: OPKOOA/PKOOA/SPKOOA OPKOOA/PKOOA/SPKOOA OPKOOA/PKOOA/SPKOOA
WDPK	Weekday peak	
WDSP	Weekday shoulder peak	
WEPK	Weekend peak	
WDOP	Weekday off peak	Refer to distributor's pricing information for time blocks for each channel.
WDPK	Weekday peak	
WEOP	Weekend off peak	
WEPK	Weekend peak	

Code	Description	Period channel is active for
WDOPIN	Weekday off peak where the load on the channel is a combination of controlled and uncontrolled loads	Refer to distributor's pricing information for time blocks for each channel and minimum number of hours in any day that supply is available to the controlled load.
WDPKIN	Weekday peak where the load on the channel is a combination of controlled and uncontrolled loads	
WEOPIN	Weekend off peak where the load on the channel is a combination of controlled and uncontrolled loads	
WEPKIN	Weekend peak where the load on the channel is a combination of controlled and uncontrolled loads	
SRWD	Summer weekday - records consumption during summer weekdays	Refer to distributor's pricing information for time blocks for each channel
SRWE	Summer weekend - records consumption during summer weekends	
WRWD	Winter weekday - records consumption during winter weekdays	
WRWE	Winter weekend - records consumption during winter weekends	
SRRD	Summer day - records day consumption during summer.	Refer to distributor's pricing information for time blocks for each channel
SRRN	Summer night - records night consumption during summer.	
WRRD	Winter day - records day consumption during winter.	
WRRN	Winter night – records night consumption during winter.	
SRWDPK	Standard 3 Rate Weekday Peak Summer 0700 – 1100; and 1700 – 2100	Refer to distributor's pricing information for time blocks for each channel
WRWDPK	Standard 3 Rate Weekday Peak Winter 0700 – 1100 and 1700 - 2100	
WRDOP	Standard 3 Rate Weekday and weekend Off Peak Weekday 1100 – 1700, 2100 – 2300 Weekend 0700-2300	
N	Night	
5 channel prices		
SRWDPK	Summer weekday peak	Refer to distributor's pricing information for time blocks for each channel. Generic codes for: SWDPK/WWDPK/WDOP/N (Standard 3 Rate)
WRWDPK	Winter weekday peak	
WDSP	Weekday shoulder peak	
OP	Off peak. Any day	
WEPK	Weekend peak	
WDOP	Weekday off peak	Refer to distributor's pricing information for time blocks for
WDPK	Weekday peak	

Code	Description	Period channel is active for
WDSP	Weekday shoulder peak	each channel.
WEOP	Weekend off peak	
WEPK	Weekend peak	
WDOPIN	Summer weekday peak where the load on the channel is a combination of controlled and uncontrolled loads	Refer to distributor's pricing information for time blocks for each channel and minimum number of hours in any day that supply is available to the controlled load
WDPKIN	Winter weekday peak where the load on the channel is a combination of controlled and uncontrolled loads	
WDSPIN	Weekday shoulder peak where the load on the channel is a combination of controlled and uncontrolled loads	
WEOPIN	Weekend off peak where the load on the channel is a combination of controlled and uncontrolled loads	
WEPKIN	Weekend peak where the load on the channel is a combination of controlled and uncontrolled loads	
8-channel prices		
SRWDD	Summer weekday day - records day consumption during summer weekdays	Refer to distributor's pricing information for time blocks for each channel
SRWDN	Summer weekday night - records night consumption during summer weekdays	
SRWED	Summer weekend day - records day consumption during summer weekends	
SRWEN	Summer weekend night - records night consumption during summer weekends	
WRWDD	Winter weekday day - records day consumption during winter weekdays	
WRWDN	Winter weekday night - records night consumption during winter weekdays	
WRWED	Winter weekend day - records day consumption during winter weekends	
WRWEN	Winter weekend night - records night consumption during winter weekends	
Interval meters		
7302	30 minute recorded channel kVAh	Meter records in trading periods
7304	30 minute recorded channel kWh	
7306	30 minute recorded channel kVArh	
7052	5 minute recorded channel kVAh	Meter records in subset of trading period
7054	5 minute recorded channel kWh	
7056	5 minute recorded channel kVArh	

Appendix E Options E and F

- E.1 Refer separate spreadsheet for Options E and F – Option E (Existing codes, but library of potential future codes (numeric 4 characters) added) and Option F (As for Option E, but with existing codes replaced by numeric codes)

Appendix F Format for submissions

Register content codes - 2017 operational review consultation paper
Submitter (contact name, position, email address):

Question	Comment
<p>Q1. Do you agree the issues identified by the Authority are worthy of attention?</p> <p>If not, please explain why.</p>	
<p>Q2. Do you agree that the proposed business requirements around period of availability and distributor's pricing information will support accurate application of register content codes and periods of availability for ICP based volume prices?</p> <p>If not, please explain.</p>	
<p>Q3. Do you agree with the Authority's preferred Option D which introduces generic register content codes for mass market TOU prices, and for consistency deletes existing customised codes that specify time blocks in the descriptions?</p> <p>If not, which option do you prefer and why?</p>	
<p>Q4. If the Authority implements Option D, we propose to allow participants 6 months to convert from using the customised register content codes to the corresponding generic register content codes (mapping demonstrated in Appendix C).</p> <p>Would this be sufficient time?</p> <p>If not, please advise how much time would be reasonable.</p>	

Question	Comment
<p>Q5. Do you agree that the Authority should progress a Code change to mandate that a distributor's pricing information must contain certain information to assist consistent and correct application of register content codes and periods of availability for ICP based volume prices?</p> <p>If not, please explain why.</p>	
<p>Q6. Do you agree with the objectives of the proposed amendments?</p> <p>If not, why not?</p>	
<p>Q7. Do you agree the benefits of the proposed amendments outweigh the costs?</p> <p>If not, please explain your reasons.</p>	
<p>Q8. Do you agree the proposed amendments are preferable to other options? If you disagree, please give reasons.</p>	