

## Customer Briefing Note 002

### Average Daily Consumption (ADC) Volumetric Charging

#### Edge Background

Edge is our flag-ship web-based software solution for retail water and waste services suppliers in the UK.

Edge has been designed and built from first principles to provide a complete “Business in a Box” for both established and new entrant Licensed Providers.

The Edge system allows seamless operations across the UK – in both the Scottish and English markets.

Edge runs on the Microsoft “Azure” cloud platform, and provides unrivalled flexibility, security and availability.

Deployment of Edge is quick and easy, whether you are a new start or the largest water company in the country.

#### Edge ADC Concept

The Edge billing module provides truly innovative functionality, designed to meet the customer needs for accurate and timely consolidated bills, using a range of different billing media.

Most metered utility variable charges are calculated in arrears and are based on either “actual” or “estimated” meter reads. This is a very easy way to calculate bills, but it relies upon a direct association between metering frequency and billing frequency. This has two major disadvantages:

- Bills can only be created “in arrears”. This causes corporate cashflow issues in competitive markets where settlement charges are incurred “in advance”
- It is difficult to create truly consolidated customer bills, since it is nearly impossible to align the meter readings for different premises within a consolidated account.

The Edge billing module overcomes these limitations by removing the relationship between metering and billing. The Edge billing algorithm calculates an Average Daily Consumption (ADC), in the same way as the Central Market Operators do when calculating Settlement charges.

The ADC is then used to calculate the daily charges for each of the services associated with each SPID. Daily charges are then summed together to give the customer a charge for the billing period. The ADC is adjusted at next billing to take account of any new meter reads.

ADC bill calculation requires significantly more system processing power, but the advantages far outweigh the drawbacks. This methodology brings with it many benefits including:

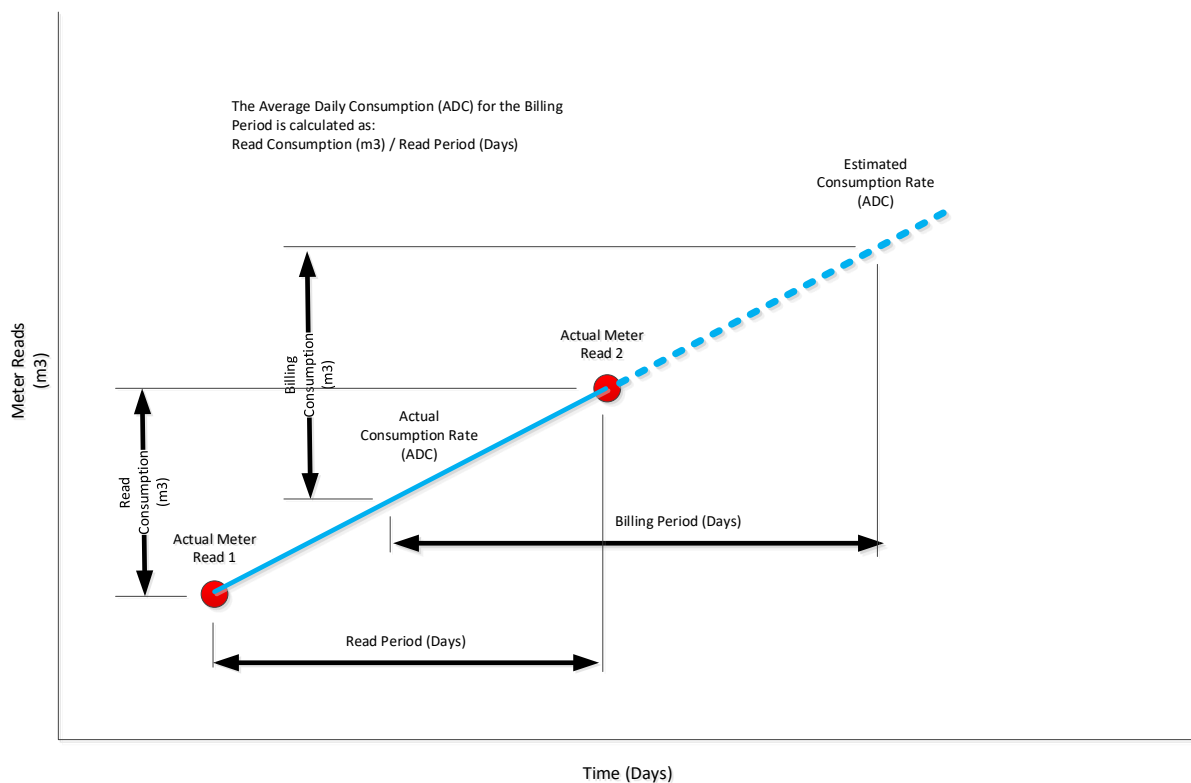
- No need to input estimated reads;
- Ability to bill in advance;
- Ability to provide customers with fixed billing periods independent of meter readings e.g. 28 days, Monthly, Quarterly, Annually;
- True consolidated billing (see CBN006);

## ADC Billing Calculations

The calculation of water bills using the ADC concept is actually very simple and is not unique to Edge.

In fact, we copied the concept from the Water System Operator's (CMA and MOSL), so that the Edge billing engine emulates how water settlement charges are calculated.

The ADC concept is best described with the help of a diagram, as shown below:



The ADC is the gradient of the consumption line (m<sup>3</sup>/day), which is always considered to be a straight line.

We calculate this between the last two “actual reads”.

For example, if Actual Read 1 taken on 1<sup>st</sup> January is 10m<sup>3</sup> and Actual Read 2 taken on 21<sup>st</sup> January is 40m<sup>3</sup>, then the Read Consumption is 40 – 10 = 30m<sup>3</sup>.

And the Read Period is 21<sup>st</sup> January – 1<sup>st</sup> January = 20 days

Therefore, the ADC is calculated as 30m<sup>3</sup> / 20 days = 1.5 m<sup>3</sup>/day.

## Edge ADC Billing Advantages and Disadvantages

We have already touched on the advantages of the ADC approach for water billing. These are:

- No need to input estimated reads;
- Ability to bill in advance or arrears;
- Ability to provide customers with fixed billing periods independent of meter readings e.g. 28 days, Monthly, Quarterly, Annually;
- Ability to offer true consolidated billing (see CBN006);

However, the ADC billing approach also comes with some disadvantages, summarised as follows:

- Additional computations are required to work out the daily charge for each service being billed;
- The need to flag ADC as being “Actual” or “Non-Actual” for each billing day;
- The need to “adjust” future bills for periods that have been billed with “Non-Actual” ADC. This is called “Volumetric Adjustment”.

Note that the concept of “Volumetric Adjustment” is covered in a separate Customer Briefing Note (CBN003)

## Related Customer Briefing Notes (CBN’s)

You may also be interested in these related CBN’s

- CBN001: “Edge Overview”
- CBN002: “ADC Billing”
- CBN003: “Volumetric Adjustment”
- CBN004: “Metered Billing”
- CBN005: “Block Tariffs”
- CBN006: “Consolidated Billing”
- CBN007: “Published Tariffs”
- CBN008: “Manual and Automated Billing”
- CBN009: “Bill Output Formats”
- CBN010: “Market Transactions and Data Items”
- CBN011: “Integrated Transaction Management”
- CBN012: “Bitemporal Updates”
- CBN013: “Market Data Set”
- CBN014: “Market Pricing”

- CBN015: "SPID Transfers"
- CBN016: "CRM Module"
- CBN017: "Data Quality"
- CBN018: "Meter Reading Management"
- CBN019: "Sub Meters and Complex Metering"
- CBN020: "Meter Exchange Management"
- CBN021: "Trade Effluent"

### Further Information

If you require further information on any aspect of the Edge solution, please contact us at:

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