

Information guide

Profiling v1.1

This guide provides information on profiling as detailed in the Electricity Governance Rules 2003 (Rules).

Profiling allows retailers to estimate how much electricity any consumer has used in each half hour of a period by defining standard consumption patterns that are applied to the total consumption of the consumer in the period.

The general approach set out in this information guide in no way reduces the requirement upon participants to know and comply with their obligations under the Rules. Neither should it be interpreted as reflecting the Commission's view on the Rules.

Abbreviations used in this guide sheet

Rules NSP	Electricity Governance Rules Network Supply Point
----------------------	--

Introduction

- A profile is defined in the Rules as a “fixed or variable electricity consumption pattern assigned to a particular group of meter registers or unmetered loads”. Consumption pattern means the way in which total electricity use for a certain period and group of users would be allocated across half hourly time periods.
- A profile may only be used if it has been certified in accordance with the Rules. Code of practice G2 of schedule G8 of part G of the Rules defines the administration of profiles.
- A profile is used for reconciliation purposes. Electricity use must be allocated to the retailers who sold it in each half hour. In the absence of half-hourly metering, estimates must be made. Profiles make accurate estimation possible.
- Profiling involves estimating consumers' half hourly electricity usage and can use typical consumption 'shapes' built up over time by looking at a representative sample. For example, a retailer who supplies dairy farmers might install electricity meters on a number of farms. Over time a 'profile' will develop of how much electricity an average dairy farmer uses during each half hour of the day. The retailer then uses this information in the reconciliation process.
- Any retailer can introduce new profiles targeting specific groups. However, the majority of retailers use a profile based on the shape of all the electricity consumed at the local grid exit point, minus the electricity consumed by customers with half-hourly meters.
- This document contains a number of terms found in the Rules. These terms are defined in part A of the Rules: Interpretation.

Types of profiles

- There are two types of profiles, network supply point (NSP) derived profiles and statistically sampled or engineered profiles.
- New NSP derived profiles make use of population data, i.e. from a grid exit point or a NSP. The different classes of these profiles are as follows:
 - *Profile class 1.1 Interval time of use meter*
If an external switch is used for register switching then data from the operational log of the equipment will be used to profile the time period. This class is split into four sub-categories:
 - 1.1.1 Day-night two rate meter
 - 1.1.2 Night-only meter
 - 1.1.3 Night only plus afternoon boost meter
 - 1.1.4 Five rate time of use meter
 - *Profile class 1.2 Separately metered controlled load*
Where separate meters are used in installations (e.g. for hot water) then the entire load on this register will be used for profiling.
 - *Profile class 1.3 Non separately metered controlled load*
This classification covers installations where there is a single meter, but ripple control is used for applications such as hot water. The total load is allocated between controlled and uncontrolled.
 - *Profile class 1.4 Uncontrolled load 24-hour meters*
This profile is calculated as the residual energy use at a NSP after all other profiles have been deducted.
 - *Profile class 1.5 Unmetered loads*
This profile covers electricity applications where use is constant across all periods as for, e.g. an electric parking meter.
- New statistically sampled/engineered profiles are developed using sample data for what are termed “similar” customers. There are two such profile classes:
 - *Profile class 2.1 Unmetered loads*
This profile class covers estimated loads where characteristics are reasonably predictable.
 - *Profile class 2.2 Half-hour data, metering installations with interim certification*
This profile may be used for meters that are properly certified for half-hourly measurement.
- A list of approved profiles is available on the Electricity Commission’s website.

Guidelines for profiling a group

- In order to have a profile certified it is necessary to demonstrate that *all* consumers within the profile have similar consumption patterns and/or unit costs; and the classification criteria must be readily verifiable. Precedence is given to consumption patterns over unit costs.

- In addition, the Rules list the following discernible characteristics for profiling:
 - Commercial customers in the same line of business;
 - Hours of operation;
 - Pricing structure;
 - Alternative fuel;
 - Domestic consumers with the same pricing structure;
 - Consumption level; and
 - Metering arrangements.

Classification requirements for statistically sampled profiles

- If using this method, it is necessary to demonstrate that the results lie within reasonable statistical bounds. A minimum sample size, which depends on the population surveyed, and limits to the relative standard error are imposed. Reviews of the profile must take place at six month and twelve month intervals after its introduction or if a significant number of customers are added to the profile.

Additional information

- If you require any additional information on customer profiling please contact the market administrator:

Electricity Commission
P O Box 10041
Wellington
Attention: Market Administrator

Telephone: 04 460 8860
Fax: 04 460 8879
Email: retailoperations@electricitycommission.govt.nz