

# Guidelines for Profile Audits

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Version 4.3

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## Version control

Version	Date amended	Comments
1.0	22 July 2005	
2.0	10 March 2006	Updated with recommendations for the audit project team.
3.0	7 June 2006	Electricity Commission Board approved version.
4.0	16 March 2010	Rule references and content updated.
4.1	1 November 2010	Updated for transition to Electricity Authority and recent amendments to part J of the rules.
4.2	5 February 2014	Updated for changes to Part 10
4.3	5 October 2017	Updated for changes to the Code made under the Code Review Programme 2017

## Glossary of abbreviations and terms

<b>Authority</b>	Electricity Authority
<b>Code</b>	Electricity Industry Participation Code 2010
<b>kWh</b>	Kilowatt hour
<b>ICP</b>	Installation control point
<b>NSP</b>	Network supply point
<b>SCADA</b>	Supervisory control and data acquisition

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# 1 Introduction

- 1.1 Consumption profiling was introduced to the New Zealand electricity market as a method of allocating electricity consumption to retailers, determined by incrementing kWh register meters to half-hour periods. This allowed for the identification of individual retailer energy purchases in each half hour at each network supply point (NSP). The ability of competing retailers to develop and maintain their own profiles was a key component of contestability in the retail electricity market.
- 1.2 The Authority must either approve or reject new profiles in accordance with the process set out in clauses 19 and 20 of Schedule 15.5 of the Code for new NSP derived profiles, and clauses 26 and 27 of Schedule 15.5 of the Code for new statistically sampled/engineered profiles.
- 1.3 A profile owner must maintain a current profile population list and this list is subject to random audit by the Authority or its appointed audit agent.<sup>1</sup>
- 1.4 A participant may request the selective audit of any participant's compliance with Schedule 15.5 or the participant's application and use of any profile.<sup>2</sup>
- 1.5 The Authority or its agent must audit the application of all profiles in a random order at least once every 2 years by applying a selection process that the Authority determines.<sup>3</sup> As a minimum, this profile audit must cover:<sup>4</sup>
  - (a) the documents detailing the methodology of the profile
  - (b) the application of dynamic and estimated elements of the profile
  - (c) the profile population list.
- 1.6 The Authority is also required to review the structure of every approved profile at least every three years.<sup>5</sup> Each review must determine whether:<sup>6</sup>
  - (a) the criteria for profile definition are still appropriate
  - (b) if applicable, the existing sample needs to be redrawn.
- 1.7 These Guidelines describe the audit requirements for profile audits and specify the items and information the auditor must examine and the format in which the audit report must be presented.
- 1.8 The Authority will brief the auditor<sup>7</sup> before any audit takes place. At this briefing, the Authority will identify the scope of the audit and any contentious clauses of the Code. The Authority will also set out its expectations of the auditor.
- 1.9 The audit methodology contained in these Guidelines is recommended for use when auditing profiles under Part 15 of the Code.

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<sup>1</sup> Clause 33(2) of Schedule 15.5 of the Code.

<sup>2</sup> Clause 35(1) of Schedule 15.5 of the Code.

<sup>3</sup> Clause 35(2) of Schedule 15.5 of the Code.

<sup>4</sup> Clause 35(3) of Schedule 15.5 of the Code.

<sup>5</sup> Clause 36(1) of Schedule 15.5 of the Code.

<sup>6</sup> Clause 36(2) of Schedule 15.5 of the Code.

<sup>7</sup> The briefing will occur when the Authority contracts with the auditor for the provision of the profile audit.

## 2 Audit methodology

### Application and use of profiles

- 2.1 The following items should be determined by the auditor performing an audit of any profile, unless an exemption has been granted by the Authority.

#### Current population list

- 2.2 Each reconciliation participant who uses a profile must keep a current profile population list for each month that the profile is in use,<sup>8</sup> and, in the case of statistically sampled profiles, should maintain a list that uniquely identifies each member of the profile.<sup>9</sup>

#### Details of approved profiles

- 2.3 Each profile owner must keep a full copy of all the details of each approved profile.<sup>10</sup> This includes the information submitted with the application, which includes.<sup>11</sup>

- (a) the profile description
- (b) the suggested profile code
- (c) the profile class
- (d) the eligibility criteria applied by the profile applicant to allocate ICP identifiers in the profile<sup>12</sup>
- (e) a description of the methodology for compiling submission information and profile shapes
- (f) details of the dynamics derived from sources external to the metering installation (including, without limitation, SCADA and ripple control) if appropriate
- (g) in the case of statistically-sampled profiles:
  - (i) the size of the profile population and a list that uniquely identifies each member of the profile population
  - (ii) details of any half-hour metering as a control or source of input data to the profile
  - (iii) statistical or engineering data that supports the proposed profile shape.

#### Use of profiles

- 2.4 The auditor must verify that profiles used for reconciliation purposes have been approved by the Authority, and in the case of a reconciliation participant who is the profile user, but is not the profile owner, the profile owner has given approval to that reconciliation participant to use the profile.<sup>13</sup>

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<sup>8</sup> Clause 5 of Schedule 15.5 of the Code.

<sup>9</sup> Clause 26(1)(d) of Schedule 15.5 of the Code.

<sup>10</sup> Clause 6 of Schedule 15.5 of the Code.

<sup>11</sup> Clauses 19 and 26(1) of Schedule 15.5 of the Code.

<sup>12</sup> A clear audit trail must exist to demonstrate the eligibility criteria of consumers.

<sup>13</sup> Clauses 24 and 32 of Schedule 15.5 of the Code.

## **Use of control devices**

- 2.5 The auditor must verify that where an installation uses a profile that is dependent on a control device.<sup>14</sup>
- (a) the certification of the control device is recorded in the registry, or
  - (b) the control device is located in an interim certified metering installation.
- 2.6 The auditor should verify that where an installation uses a profile that is dependent on a control device, the reconciliation participant who uses such a profile has a process in place to ensure that if a control device required by the profile has its certification cancelled, the installation is updated to use an appropriate profile that does not rely on the certification of the load control device

## **Population list for statistically sampled profiles**

- 2.7 The following items should be determined by the auditor performing an audit of a statistically sampled profile, unless an exemption has been granted by the Authority.

### **Profile population representation**

- 2.8 The profile sample must be representative of the profile population. It is the responsibility of the profile owner to maintain a valid statistical sample that takes account of profile population changes.<sup>15</sup>

### **Changes to profile population**

- 2.9 The auditor should check that any changes to the profile population have been appropriately communicated to the Authority.<sup>16</sup> These should be communicated when:
- (a) the membership of the population has changed by more than 20% since the sample date; or
  - (b) if more than 5% of the profile sample has been lost or removed.
- 2.10 The auditor should check that the methodology outlined in Appendix 2 of Schedule 15.5 has been correctly applied.

## **Audit report**

### **Content and format of audit report**

- 2.11 The auditor must produce an audit report addressing all of the matters identified in these Guidelines. The auditor may use his/her preferred format as long as it includes the information described in paragraphs 25 and 26 of these Guidelines.

### **Profile owner input to audit report**

- 2.12 Before submitting an audit report to the Authority, the auditor should report any non-conformance with the Code to the profile owner.
- 2.13 The profile owner should then have an opportunity to inform the auditor of any actions taken by the profile owner to correct the non-conformance, and the auditor must include these details in its report to the Authority.

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<sup>14</sup> Clause 2(2) of Schedule 15.3 of the Code.

<sup>15</sup> Clause 33 and Appendix 2 of Schedule 15.5 denote the requirements for statistically sampled profiles.

<sup>16</sup> Clause 33(3) to (6) of Schedule 15.5.

### Requirements of an auditor

- 2.14 When approving auditors, consideration should be given to a prospective auditor's knowledge of the Code and experience with profiling.
- 2.15 Auditors should be clearly briefed<sup>17</sup> by the Authority and, if necessary, receive shared training to ensure consistency across audits.

### Information tabulation

- 2.16 The profile audit report should contain details on all matters raised in these Guidelines and, in addition, comment on:
- (a) the extent to which the profile owner has made available the information required by the auditor
  - (b) the extent to which the profile owner complies with Schedule 15.5, including clear identification of any Code breaches
  - (c) any other matters the auditor considers relevant.
- 2.17 The auditor's comments should be arranged in a logical order and should include the information in tables 1 and 2 below. The auditor may use the tables in the audit report.

### Persons involved in audit

- 2.18 Auditors must identify the following:
- (a) the profile owner being audited
  - (b) the auditor responsible for the audit
  - (c) all persons used to perform the audit.

**Table 1: Population list audit**

Population list audit	
Type and name of audited party	[Profile owner]
Name of profile	[Profile name]
When audited	[Date of audit]
Name of auditor	[Name of auditor]
Other persons involved in audit	[Identify all persons involved in audit]
Availability of information	[Comment on whether the profile owner has made available the appropriate information]
Compliance with Code	[Comment on whether the profile owner has complied with the Code. Identify any breaches]
Outcome of audit	
Section	Comment

<sup>17</sup> The briefing will occur when the Authority contracts with the auditor for the provision of the profile audit.



<b>Population list audit</b>	
Population representation	
Changes to population	
<b>Overall comments</b>	
[Provide justification for decision]	

Source: Electricity Authority

**Table 2: Application and use of profiles audit**

<b>Application and use of profiles audit</b>	
Type and name of audited party	[Profile owner]
Name of profile	[Profile name]
When audited	[Date of audit]
Name of auditor	[Name of auditor]
Persons involved in audit	[Identify all persons involved in audit]
Availability of information	[Comment on whether the profile owner has made available the appropriate information]
Compliance with Code	[Comment on whether the profile owner has complied with the Code. Identify any breaches]
<b>Outcome of audit</b>	
Section	Comment
Current population list	
Details of profiles	
Eligibility criteria	
Use of profiles	
<b>Overall comments</b>	
[Provide justification for decision]	

Source: Electricity Authority

### 3 Sources of information

3.1 The Code can be found on the Authority's website at:

<http://www.ea.govt.nz/code-and-compliance/the-code/>

3.2 If you require further assistance, please contact the Market Operations Team:

Electricity Authority

PO Box 10041

Wellington

Attention: Market Operations Team

Telephone: 04 460 8860

Fax: 04 460 8879

Email: [marketoperations@ea.govt.nz](mailto:marketoperations@ea.govt.nz)