Country Report for Niue

Technical Analysis of Appliance Markets to Support the Pacific Appliance Labelling and Standards (PALS) Programme

Prepared for

Renewable Energy and Energy Efficiency Partnership (REEEP)

By

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1 ACKNOWLEDGMENTS

The Technical Analysis of Appliance Markets to Support the Pacific Appliance Labeling and Standards (PALS) Programme covers 17 Pacific Island Countries and Territories (PICTs). The report and research were conducted by Mr. Sommai Phon-Amnuaisuk and Mr. David Morgado from the International Institute for Energy Conservation (IIEC). It was prepared for the Renewable Energy and Energy Efficiency Partnership (REEEP) with overall guidance from Mr. Tom Thorsch Krader.

The IIEC would like to show its appreciation for the kind support and contributions from the Secretariat for the Pacific Community, Mr. Kimray Vaha - Statistics Officer from the Niue Statistics Office and Mr. Paul Johnson, Electrical Engineer from the Niue Power Corporation.
2 INTRODUCTION

2.1 Country Background

Table 2.1 – General Information on Niue

<table>
<thead>
<tr>
<th>Neighbouring Countries</th>
<th>New Zealand, Samoa, Tonga, Fiji, Wallis &amp; Futuna, Cook Islands, French Polynesia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital City</td>
<td>Alofi</td>
</tr>
<tr>
<td>Currency</td>
<td>New Zealand dollar (NZ$)</td>
</tr>
<tr>
<td>Population Size (habitants)</td>
<td>1,625 (2006 Census)</td>
</tr>
<tr>
<td>Number of Households</td>
<td>474 (2006 Census)</td>
</tr>
<tr>
<td>Electrification Rate (%)</td>
<td>99%</td>
</tr>
<tr>
<td>Status of S&amp;L Scheme</td>
<td>No S&amp;L scheme or energy efficiency policy covering electrical appliances</td>
</tr>
</tbody>
</table>

Source: Niue Statistics Office; SPC, 2011

2.2 Objective

The objective of this study is to analyse the characteristics of major appliance and lighting products and markets in Niue, in order to inform and support decision making on the most effective Standards & Labelling (S&L) strategy for Niue.

The study focuses on the following electrical appliances:

- Refrigerators
- Freezers
- Air Conditioners
- Lamps – including incandescent, linear fluorescent and compact fluorescent
- Televisions
- Other relevant products.
3 FINDINGS

3.1 Import Statistics

The electrical appliance information presented in this section is based on data provided by the Niue Statistics Office and covers the most common electrical appliances in the country.

The Figures below show the total number of electrical appliance units imported annually into Niue from 2009 to 2011¹ and the total annual import value (NZ$) of each type of electrical appliance imported into Niue from 2009 to 2011. There is no customs data on the country of origin² of each electrical appliance and no data on fluorescent lamp imports. Figures with no values for a given year imply data was not available.

An on-site survey was conducted to complement the import statistics and enable a better assessment of main country(ies) of origin of electrical appliances in Niue (see section 3.2 and 3.3).

3.1.1 Refrigerators and Freezers

Figure 3.1 shows that the number of refrigerators imported into Niue fell by almost 50% in 2009 compared to 2009 and 2011 values. The number of freezers imported doubled by 21 units in 2011. Note that the difference in annual values could be due to bulk purchase of electrical appliances by local wholesalers, retailers or private companies (e.g. hotel sector) in a given year or interpretation of international harmonized system codes³ used to identify the type of electrical appliances by the national customs department.

![Figure 3.1 – Number of Refrigerators and Freezers Imported per Year (units)](image)

The import value of both refrigerators and freezers closely matches the import unit data trend presented above as shown by Figure 3.2.

¹ Calendar Years
² Country from which the electric appliance was imported. Different from country of manufacture. E.g. Appliance can be manufactured in Thailand but imported through Singapore.
³ See methodology and harmonized system codes section in main report.
3.1.2 Air Conditioners

The number of air conditioners (all sizes) units imported into Niue grew substantially from only one unit in 2009 to 23 units in 2011 (Figure 3.3).

The import value of air-conditioners also increased from NZ$1,275 in 2009 to NZ$26,410 in 2011 (Figure 3.4).
3.1.3 Domestic Dish Washing and Washing Machines

The number of household washing machines imported into Niue follows a similar pattern as the refrigerator imports reaching a low point of 28 units in 2010 compared to annual imports of 40 units in 2009 and 2011. Comparatively, a very small number of dish washing machines were imported into Niue ranging from 1 unit in 2009 and 2010 to 4 units in 2011.

The import value of both domestic dish washing and washing machines reached its highest point in 2011 with approximately NZ$5,400 and NZ$40,000, respectively.
3.1.4 Electric Water Heaters

The import of electrical water heaters is low in Niue with one to two units imported annually (Figure 3.7). In 2009 no electrical water heaters were imported.

The electric water heater import values followed an opposite trend potentially indicating the 2011 units were cheaper than the 2010 unit, assuming customs data is correct (Figure 3.8).
3.1.5 Electric Fans

A total of 8 electric fans were imported in 2009. Data on unit import of electric fans in 2010 and 2011 was not available (Figure 3.9).

However, the respective import value data for 2010 and 2011 is available, showing a significant increase in import value of electric fans from approximately NZ$2,300 in 2009 to NZ$9,600 in 2011 (Figure 3.10). By using the import value per unit for 2009, the number of units imported into Niue would be an estimated 16 units in 2010 and 32 units in 2011.
3.1.6 Lighting Appliances

The only customs data available covering lighting appliances is for incandescent lamps. Based on 2009 to 2011 data, more than 400 incandescent lamps were imported per year, with exception for 2010, when only 80 units were imported. The difference in annual values could be due to bulk purchase of electrical appliances by local wholesalers, retailers or private companies (e.g. hotel sector) in a given year or interpretation of international harmonized system codes\textsuperscript{4} used to identify the type of electrical appliances by the national customs department.

The import value data for 2011 does not match the high number of incandescent lamp imported in that year which might indicate a data error (Figure 3.18).

\textsuperscript{4} See methodology and harmonized system codes section in main report.
There is no customs data available on linear or compact fluorescent lighting (CFLs). Currently, there is no international harmonized system code for CFLs and therefore it is not possible to determine the market uptake of these energy efficient lighting appliances against i.e. incandescent lamps. It might be advantageous, under the PALS Programme to identify a single harmonized system code for CFLs in the Pacific region for future analysis.

### 3.1.7 Televisions

The number of televisions imported increased slightly from 16 units in 2009 to 24 units in 2011 (Figure 3.13).

The import value followed a similar trend rising from approximately NZ$7,900 in 2009 to NZ$14,700 in 2011.
3.2 Market Characteristics

The data presented in this section is based on an electric appliance survey kindly conducted by Mr. Kimray Vaha (Statistics Officer) in July 2012. The data gathered includes information on appliance brands, country of manufacture and origin, and complements existing customs data presented in Section 3.1. Note that information of electrical appliance brands and country of manufacture is not comprehensive. The country of manufacture of certain appliances is not easily identifiable and in some cases could only be determined through the product’s user manual.

<table>
<thead>
<tr>
<th>Electrical Appliance</th>
<th>Brand</th>
<th>Countries of Origin</th>
<th>Countries of Manufacture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Conditioners (all sizes)</td>
<td>Samsung</td>
<td>New Zealand</td>
<td>South Korea</td>
</tr>
<tr>
<td>Domestic Washing Machines</td>
<td>Simpson, Fisher &amp; Paykel</td>
<td>New Zealand</td>
<td>Australia</td>
</tr>
<tr>
<td>Compact Fluorescent Lamps</td>
<td>Philips, Ecobulb</td>
<td>New Zealand</td>
<td>China</td>
</tr>
<tr>
<td>Linear Fluorescent Lamps</td>
<td>Thorn, Philips</td>
<td>New Zealand</td>
<td>China, New Zealand</td>
</tr>
<tr>
<td>Freezers</td>
<td>Fisher &amp; Paykel</td>
<td>New Zealand</td>
<td>New Zealand</td>
</tr>
<tr>
<td>Incandescent Lamps</td>
<td>Philips</td>
<td>New Zealand</td>
<td>Indonesia</td>
</tr>
<tr>
<td>Refrigerators</td>
<td>Samsung, Fisher &amp; Paykel</td>
<td>New Zealand</td>
<td>New Zealand, South Korea</td>
</tr>
<tr>
<td>Televisions</td>
<td>Panasonic, LG</td>
<td>New Zealand</td>
<td>China, Korea</td>
</tr>
</tbody>
</table>

Table 3.1 clearly indicates that most electrical appliances are sourced from New Zealand, particularly through Auckland. There are only one or two wholesaler/retailers shops selling electrical appliances and most local people hold both Niue and New Zealand citizenship, importing their electrical appliances privately from New Zealand.
3.3 Energy Labels

The data presented in this section is based on an electric appliance survey kindly conducted by Mr. Kimray Vaha (Statistics Officer) in July 2012. The objective of the survey was to compile information on the proportion of energy labels for each type of electrical appliance and the respective country of origin of these labels. Table 3.2 only provides information on the electrical appliances which had affixed any type of energy label.

<table>
<thead>
<tr>
<th>Electrical Appliance</th>
<th>% with Energy Labels</th>
<th>Types of Energy Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compact Fluorescent Lighting</td>
<td>51% - 75%</td>
<td>Majority had Aus/New Zealand Energy Label</td>
</tr>
<tr>
<td>Freezers</td>
<td>-</td>
<td>Majority had Aus/NZ Energy Label</td>
</tr>
<tr>
<td>Refrigerators</td>
<td>-</td>
<td>Majority had Aus/NZ Energy Label</td>
</tr>
</tbody>
</table>

As shown above, majority of the electrical appliances will have Aus/NZ Energy Label or no energy label.

3.4 Information Gaps

This section summarizes the identified information gaps on electrical appliances in Niue. The data presented in this report is based on one on-site survey of major wholesalers and retailers shops as well as available customs data in Niue. This report does not cover electrical appliances imported privately.

As highlighted in Section 3.1, there is no data on the country of origin of the electrical appliances imported into Niue. The customs data gathered by the National Statistics Office should be further improved to enable data compilation on the electrical appliances mentioned above.

In addition, there is no data available to import of fluorescent lamps. Overall, there is a need for improvement in customs data compilation across the Pacific region, to differentiate between linear and compact fluorescent lamps. This would enable a better evaluation of the market uptake of CFLs in Niue and comparison incandescent lamps imports.
4 CONCLUSION

Based on findings presented above, the large majority of the electrical appliances in Niue originate from New Zealand. This recommendation would benefit from additional validation through compilation of country of origin of electrical appliances by the Customs Department in Niue.

Note that the development of a S&L programme for Niue needs to take into account market demand and supply trends, as well as a range of other factors bearing on the design and effectiveness of S&L programmes. Furthermore, it should allow for the energy efficient appliances to enter the market at an affordable price, irrespective of origin or manufacture.

Finally, in order to further improve customs data compilation and analysis of market penetration of CFLs, in Niue and the Pacific Region, a single harmonized system code for the Pacific region should be discussed and established to enable a clear evaluation of the market uptake of CFLs in the future.
## 5 ANNEX – COUNTRY DATA SHEETS

### Table 5.1 – Physical Units Imported per Year

<table>
<thead>
<tr>
<th>Electrical Appliance</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Conditioners (all sizes)</td>
<td>1</td>
<td>8</td>
<td>23</td>
</tr>
<tr>
<td>Domestic Dish Washers</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Domestic Washing Machines</td>
<td>47</td>
<td>28</td>
<td>43</td>
</tr>
<tr>
<td>Electric Fans</td>
<td>8</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Freezers</td>
<td>9</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>Incandescent Lighting</td>
<td>479</td>
<td>80</td>
<td>516</td>
</tr>
<tr>
<td>Refrigerators</td>
<td>60</td>
<td>34</td>
<td>58</td>
</tr>
<tr>
<td>Televisions</td>
<td>17</td>
<td>18</td>
<td>24</td>
</tr>
</tbody>
</table>

Note – Large difference between annual values might indicate bulk purchase of appliances by wholesalers, retailers or private companies, assuming no change in customs department interpretation of harmonized system codes. The (-) sign indicated information was not available.
Table 5.2 – Import Value (NZ$) Per Year

<table>
<thead>
<tr>
<th>Electrical Appliance</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Conditioners (all sizes)</td>
<td>1,275</td>
<td>9,355</td>
<td>26,410</td>
</tr>
<tr>
<td>Domestic Dish Washers</td>
<td>1,014</td>
<td>800</td>
<td>5,374</td>
</tr>
<tr>
<td>Domestic Washing Machines</td>
<td>30,757</td>
<td>19,165</td>
<td>40,031</td>
</tr>
<tr>
<td>Electric Water Heaters</td>
<td>-</td>
<td>3,608</td>
<td>1,566</td>
</tr>
<tr>
<td>Electric Fans</td>
<td>2,349</td>
<td>4,745</td>
<td>9,583</td>
</tr>
<tr>
<td>Freezers</td>
<td>5,335</td>
<td>7,936</td>
<td>24,934</td>
</tr>
<tr>
<td>Incandescent Lighting</td>
<td>5,862</td>
<td>803</td>
<td>886</td>
</tr>
<tr>
<td>Refrigerators</td>
<td>37,051</td>
<td>27,596</td>
<td>42,669</td>
</tr>
<tr>
<td>Televisions</td>
<td>7,874</td>
<td>10,815</td>
<td>14,661</td>
</tr>
</tbody>
</table>

Note – Large difference between annual values might indicate bulk purchase of appliances by wholesalers, retailers or private companies, assuming no change in customs department interpretation of harmonized system codes. The (-) sign indicated information was not available.
6 REFERENCES
