



12 December 2011

Energy Savings Scheme Rule Change Consultation
Department of Trade and Investment
GPO Box 3889
Sydney NSW 2001
Sent via email to ess@dwe.nsw.gov.au.

RE: Suggested ESS Rule Change to Schedule A: Table 7: Destruction of refrigerators or freezers

Next Energy operates the NSW Fridge Buyback Program with the support of the NSW Climate Change Fund and 48 local governments. Next Energy is an accredited ESS certificate provider in respect of the Fridge Buyback Program. Prior to its ESS certification, Next Energy was an accredited GGAS certificate provider. While Next Energy regularly created certificates under its GGAS accreditation, it has not done so under the ESS due to a number of unworkable challenges in the relevant definitions, as discussed below.

Currently, Next Energy's Fridge Buyback Program is funded by the Office of Environment and Heritage. Next Energy is making this submission to the Energy Savings Scheme Rule Change Consultation following a request from the Minister for the Environment, the Hon. Robyn Parker, who has asked that the Fridge Buyback Program seeks to transition to the Energy Savings Scheme by June 2012.

To facilitate this, Next Energy is proposing changes to Schedule A: Table 7 covering the destruction of refrigerators and freezers. Next Energy recognises that the Draft Rule Change does not currently propose alterations to Schedule A: Table 7. However, as outlined in this submission, we believe that the straightforward changes proposed are needed, soundly based and would facilitate the creation of more than 50,000 ESCs per year with a total potential pool exceeding 2 million ESCs.

Next Energy proposes consolidating the first four DSFs in Table 7 and the removal of unnecessary and potentially unhelpful references to the number of doors and age of appliance. In summary, the proposal is to replace the first four DSFs in Table 7 with a single listing as follows:

Activity	Type of Appliance Removed	DSF (MWh)	Sales Discount Factor
Permanent removal (for disposal and destruction, with appropriate disposal of refrigerant) of a spare refrigerator or freezer, 200 litres or greater in gross volume, in working order and in regular use but not providing the primary refrigeration or freezing service of a household.	Refrigerator (Group 1, 2, 3, 4, 5T, 5B or 5S) or Freezer (Group 6C, 6U or 7) according to AS/NZS4474.1:2007	5.X	1.0

The key benefits of these suggested changes would be to:

- simplify documentation for householders and hence reduce unnecessary confusion;
- substantially reduce administrative and ESS compliance costs while not diminishing the delivered benefits and auditability of fridge removals and disposal; and
- avoid inadvertently and inappropriately excluding a large number of energy inefficient second fridges due to an inappropriate age requirement.

Fridge Buyback Overview

Australians are amongst the biggest owners of second fridges of in the world, with 40% of detached homes having a second fridge. Second fridges are typically old and poorly performing, using up to three times the energy of an efficient modern fridge. As a consequence, getting rid of an old second fridge is about the easiest single step that NSW households can take to dramatically cut their power bills.

The Fridge Buyback Program targets these inefficient second fridges in households, paying residents a \$35 rebate and offering them free in-home collection by experienced removalists and environmentally responsible disposal. The NSW Office of Environment & Heritage currently funds the program via the Climate Change Fund and estimates that the typical participating household saves \$265/year on their power bills (about 1 MWh/yr in energy savings).

An additional benefit of the Program is that it degasses all fridges collected under Australian Refrigeration Council guidelines. Most of the fridges collected contain the now-banned CFC R-12 which in addition to being a potent ozone depleting substance also has a Greenhouse Warming Potential 10,500 times that of CO₂. As a result, each fridge that the Program degasses results in an additional GHG benefit of approximately 1 tonne of CO₂-e.

Fridge Buyback also plays a significant educational role, raising community awareness about the real costs and impacts of owning a second fridge, and about the ability of households to reduce their energy use and costs. As a result of Fridge Buyback efforts, there have been more than 300 pieces of print, television and radio coverage about the benefits of getting rid of a second fridge since 2008.

Fridge Buyback has collected over 32,000 fridges to date and has progressively expanded to encompass metro Sydney, the Illawarra, the Shoalhaven, the Blue Mountains, the Central Coast and the Hunter. The Program now covers approximately 73% of the NSW population and is supported by 48 local governments who promote the Program to their residents.

While the number of fridges collected is large at 32,000+, the total pool of second fridges in the areas currently served exceeds 400,000 (and exceeds 550,000 in NSW as a whole) based on ABS figures. In short, Fridge Buyback has only collected 7.6% of the 2nd fridges in the state, with many poorly performing second fridges still operating. The experience in the US and Canada is that similar programs can continue educating the public and facilitating household efforts in energy savings for many years.

Fridge Buyback is based on solid international precedent with more than 90 similar programs operating in North America and a review of these programs was conducted to support this submission.

The Fridge Buyback Program has won two prominent environmental awards including a United Nations Association World Environment Day Award in 2011 and an Australian Business Award in 2010. More information on Fridge Buyback can be found here: www.fridgebuyback.com.au and a short video about the program can be found here: <http://www.youtube.com/watch?v=cuIMqjbdR40>

Fridge Buyback Involvement with GGAS & ESS

Fridge Buyback was first piloted with 20 councils in 2006-07 under GGAS. It was launched in full mode in 2008 with funding support from the NSW Climate Change Fund and created GGAS credits until June 2009 when the GGAS rules changed and no longer recognised the activity.

The Fridge Buyback Program currently holds an ESS accreditation but has not created any ESCs under the Program because of the substantial unworkable changes made to the GGAS methodology during the development of the ESS. The program continues to operate to the GGAS methodology.

Research Overview

To assist with this submission and to facilitate discussions with the Minerals & Energy Division, OEH and IPART about a Fridge Buyback transition to the Energy Savings Scheme, Next Energy has in recent months collected additional detailed fridge information as follows:

- **ADDITIONAL DATA FROM CUSTOMERS** - In early June 2011, Next Energy began collecting more detailed information on fridge age and size from all participating customers at the time of booking. A total of 1151 booking records from June - July 2011 have been considered in making this submission.
- **ADDITIONAL DATA FROM FRIDGES** - A detailed field survey involving more than 200 fridges passing through the Fridge Buyback logistics site in Taren Point was undertaken in July 2011 to look at the availability and quality of fridge labelling information. This was conducted over 5 randomly selected days.
- **ANALYSIS OF FBB DATABASE** – Some additional information has been collected from participants since July 2009 when the ESS was introduced. Analysis of 9000 recent records was conducted.
- **INTERNATIONAL REVIEW** - Fridge Buyback conducted a detailed survey of 93 comparable North American fridge and freezer buyback programs in November 2011.

Next Energy would be pleased to provide further information about this research as needed.

Case for Removal of References to Fridge Doors

Next Energy suggests removing the current distinction between 1-door and 2-door fridges in Table 7. This proposal is based on the following:

- **Incorrect identification of number of doors by participants** – 11% of residents incorrectly identified the number of doors on their fridge when booking with Fridge Buyback based on a detailed comparison of booking details against the actual fridges passing through the Fridge Buyback depot in a July 2011 survey of over 200 fridges. A similar survey in 2009 produced an even higher rate of mis-identification.

The appreciable rate of confusion about fridge doors appears to be because of the historic meaning of a “two-door” or “double-door” fridge which often referred to a fridge in a side-by-side configuration. Further, residents appeared to be confused as to whether to count the freezer door as a separate door, particularly when it was internal to the main fridge door. Importantly, consistent with North American experience, almost two thirds of Fridge Buyback participants are estimated to be 65+, and are familiar with the former common usage of the term “two-door” or “double-door” in respect of a fridge.

A key resulting problem of distinguishing between 1-door and 2-door fridges is that as a consequence of this common confusion, many participants will not correctly complete the Terms Forms, which is the primary ESS document. This will create a costly post-collection

administrative burden of getting forms re-completed and re-signed by the householder and re-verified by the removalist. Up to one third of Fridge Buyback collections occur in the absence of the resident, where they have left the fridge outside for collection, and hence there is no opportunity to correct many forms on-site.

- **Differential offers to households based on doors is unduly burdensome** – Treating 1-door and 2-door fridges differently under the Rule in terms of the DSFs assigned will necessitate differential offers to households. Fridge Buyback's experience is that this type of distinction will be very challenging to explain to households (eg why their fridge receives a lesser rebate, no rebate or is excluded compared to others in the community) and will result in considerable number of complaints.
- **Only 14% of fridge collected by Fridge Buyback are 1-door fridges** – Fridge Buyback data indicates that 1-door fridges constitute about 14% of fridges collected by the Program. This is based both on a detailed survey of over 200 fridges passing through the Fridge Buyback depot in a July 2011 and analysis of booking information for almost 9,000 recent Fridge Buyback records. A blended DSF would therefore be strongly weighted to the DSF for a 2-door fridge.
- **Addresses 3-door fridges** - Approximately 1% of fridges collected by the Fridge Buyback program are 3-door fridges which are not covered by the current ESS definitions. While a small category, removal of references to doors addresses this issue.
- **Precedent strongly supports treating all fridges on same basis** – Fridge Buyback conducted a detailed survey of 93 comparable international programs in November 2011. ALL 93 similar fridge and freezer buyback programs identified in North America treated 1-door and 2-door fridges on the same basis.

While including 1-door fridges in a combined DSF may lower the average DSF slightly, the much greater ease of communications with households and the reduced administrative/compliance burden afforded by a combined DSF will greatly reduce cost and increase feasibility of offering a service under ESS, benefitting all parties.

Case for Combining Fridge & Freezer DSF

As with a distinction between one and two door fridges, the case for removing the DSF distinction between Upright and Chest freezers and combining the fridge and freezer DSFs is one of simplicity for households, facilitating easier communication with households and reducing the administration/compliance burden.

There is again the potential for resident confusion about freezer configuration and the likely need for differential offers (eg Fridge Buyback can only collect it if it is an upright freezer) without this change.

Second freezers do not form a large portion of the expected pool of eligible appliances. For example, Fridge Buyback currently rejects approximately 1000 freezers a year vs 10,000+ collections of second fridges.

Further, Next Energy notes that with lighter duty cycles and longer expected lives as second freezers, there is a good case to assume a slightly higher remaining life for second freezers in DSF calculations.

Precedent again supports this proposed change. Fridge Buyback conducted a detailed survey of 93 comparable international programs in November 2011. 88 of 93 (eg 95%) of similar fridge and freezer buyback programs identified in North America treated fridges and freezers on the same basis.

Case for Removing Age Restriction

The Rule currently sets an age cut-off as, "...built before 1996". There are serious and unworkable problems with this, as follows:

- **Absence of age information on fridge labels** - Of 204 fridges sampled in a detailed review at the Fridge Buyback logistics depot in July 2011, **NONE** had a clear indication of the fridge age on labels. This is consistent with a previous survey in 2009.
- **Significant participant uncertainty about a precise age** – Of 1151 participants questioned in detail about fridge age when booking in Jun-Jul 2011, there was significant uncertainty regarding the precise age of fridges (compounded by the frequency with which 2nd fridges are passed around families and friends). After first trying to collect a specific year, Next Energy was compelled to introduce age ranges to enable data collection. 77% were only able to estimate a fridge age that was within a range of 5 years (eg 10-15, 15-20, 20-25, 25-30) and only 23% were able to give a specific age in years.
- **Lack of model vintage information online** - Online search undertaken for a sample of 30 fridges using manufacturer and model numbers found in the July 2011 detailed depot survey were used in an attempt to verify fridge age. However, NO age data was readily found online. This is largely explainable by the fact that most second fridges pre-date the internet and there is little incentive for manufacturers to document past models in this way.
- **Age is not objectively provable** – Next Energy's conclusion from the above three points is that fridge age is not objectively provable as it was not required on fridge labels and therefore:
 - Cannot be confirmed by the householder
 - Cannot be readily verified by Next Energy (or other program operators)
 - Cannot be readily audited by IPART

Next Energy therefore recommends that an implicit age assumption be used in DSF calculations with an assumed cut-off at around the 10 year mark. The key reasons for adopting this age assumption are that:

- An explicit age assumption is not objectively provable (as outlined above) and therefore a reasonable age assumption is required.
- There is little incentive to turn in fridges younger than about 10 years to a program such as Fridge Buyback because of the low \$35 rebate. Further, there is a healthy second-hand market in fridges less than 10 years old at multiples of the Fridge Buyback rebate (or any likely rebate from comparable programs) and above any likely ESC value.
- The basis of the current ESS age cut-off of, "...built before 1996" is unclear as Mandatory Energy Performance Standards for fridges in Australia were only introduced in 1999 and not tightened to world's best practice until 2005. A large pool of inefficient 1996-1999 fridges is therefore missed with the current Rule.
- Eliminating 1996-1999 fridges from Fridge Buyback eligibility would reduce program volume by ~40%. This is likely to make the Fridge Buyback Program unviable overall and would at the very least greatly reduce coverage outside of metro Sydney where collections could not be offered on a regular enough basis to be viable.

Based on the above, if the view is that an explicit age cut-off is needed, Next Energy suggests that is be, "...built before 2000".

Next Energy would be pleased to provide further information about its experience in operating the Fridge Buyback Program, research underlying this submission and in addition, would be happy facilitate site visits to our call centre in Manly, on Fridge Buyback collection runs or to our logistics depot in Taren Point as needed.

Yours sincerely,



Graham Mawer
Director, Next Energy

Cc: *Mark Dodds, Climate Change Funds Manager, OEH*
Margaret Sniffin, General Manager, ESS/GGAS