



Recycling Service Accessibility

About this report

This report analyses existing data from the RecyclingNearYou database to provide an indication of the current ‘access to recycling services’ thresholds across the country, for a range of material types. Recommendations have been provided on how recycling thresholds should be determined, and ‘working’ thresholds are proposed to assist in the development and design of a ‘Labeling for Recycling’ program in Australia.

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Introduction

Labeling for Recycling

Many products currently carry labels encouraging consumers to recycle packaging at the point of disposal. However, since these are generally developed by the individual manufacturers there is no consistent or uniform approach in terms of language, graphics or branding nor is there any reference to the types of recycling services provided locally. This creates consumer confusion.

UK research had shown that consumers had found it difficult to determine which packaging components could be recycled, and desired simple instructions to improve their understanding. To address this confusion and to increase correct sorting and recycling a simple and effective on-pack label for recycling / recovery was introduced in the UK in 2009 with considerable success, with more than 60,000 products now carrying the label. This label standardised the recycling instructions provided on packaging, and provided clear disposal instructions to consumers. A similar pilot scheme was introduced in the USA in mid 2011 to address the same issues.

Australian research identifies considerable confusion among consumers relating to the meaning behind various recycling / environmental labels, and the recyclability of different packaging components. In addition, brand owners and retailers have reservations about making claims of recyclability on their packaging, as there is not currently a framework in place to protect these claims from being contested legally.

The introduction of an on-pack label for recycling / recovery in Australia would help to reduce consumer confusion about packaging recyclability, and provide brand owners with the certainty required to make claims of recyclability on their packaging. In turn, these factors are likely to increase the quantity of used packaging that is recycled and decrease the contamination of kerbside recycling. Eventually, such a label may also help to drive the increased use of recyclable materials in packaging design, and provide an incentive for investment in recycling programs, facilities and infrastructure that will increase the recovery of materials that are currently harder for consumers to recycle.

RecyclingNearYou

Since 2003, Planet Ark has hosted the RecyclingNearYou.com.au site: the only national database of current recycling information for every Local Government Area (LGA). Planet Ark works closely with councils throughout the year to update and maintain the local kerbside service information hosted on RecyclingNearYou. In some cases, individual councils provide multiple kerbside recycling services to subsets within their LGA, and the details of each service is listed separately within the relevant council 'online page'.

When updating online service listings, councils have the option of selecting accepted material types from a list of options, or to enter specific service information as 'free text'. These features enable councils to fully customise how their service is reflected on RecyclingNearYou.

Site users can search for recycling information based on the council area they live in, or based on one of 36 separate material categories. Where council-provided service

information is listed, these material categories are significantly expanded to reflect local services as accurately as possible. For example, when site users search under 'food scraps', results appear for up to 4 specific subsets of this category (food, food – all, fruit, vegetables).

This report provides an overview of the level of access Australians have to kerbside recycling services, for specific packaging material types.

Recycling Accessibility Thresholds

In the 'Labeling for Recycling' schemes implemented in the UK and USA, the level of access to the kerbside recycling services at a local level has been used as a proxy for the relative recyclability of various packaging material components. From recycling service accessibility information, recycling thresholds have been adopted across material types, to indicate the likelihood of materials being locally accepted for recycling in any one local area. These defined thresholds provide guidance to consumers and brand owners on the best method of disposal for each packaging material type, and direction on where to find service information specific to the local area they are within.

Under the existing schemes in the UK and USA, packaging material types are further categorised for recyclability based on specific packaging components. For example, plastics are not only broken down according to plastic type, but also the format of that plastic within a product package e.g. a bottle, a tray, a sachet, a flexible film etc. These discrete packaging components are combined with the defined thresholds around the relative accessibility of local recycling services to form a detailed matrix, which supports the labelling scheme as a whole. Figure 1 shows the detailed matrix of recyclability adopted in the UK scheme. An Australian 'Labeling for Recycling' scheme would also require a similarly detailed matrix.

Data on the availability of kerbside recycling services for highly specific packaging material components is not currently available in Australia. However, the existing information contained in RecyclingNearYou provides an indication of the level of access Australians have to local recycling services under broader material categories types.

Based on the availability of recycling services for various material types, this report also recommends working 'recycling acceptability thresholds', similar to those of existing schemes. These proposed thresholds, will assist in the development of a comprehensive 'Labeling for Recycling' scheme in Australia.

used for all population-related information in this analysis. Information on the number of LGAs in each state was sourced from RecyclingNearYou (Table 1).

Kerbside service information for each material type was consolidated to provide indications of the population serviced, compared to total population, nationally and for each state. Information about kerbside services for each material type was consolidated to provide indications of the proportion of councils providing services, compared to the total number of councils, nationally and by state. Finally, the proportion of councils providing services was compared to the proportion of the population serviced for each material type, nationally and by state. This measure provides an indication of whether the proportion of councils providing services is an adequate indicator of service availability across the country.

Table 1: Council and population figures, by state, used in this analysis.

State	Councils	Population
ACT	1	365621
NSW	152	7302174
NT	16	230369
QLD	74	4580282
SA	70	1656299
TAS	29	510519
VIC	79	5621210
WA	139	2349325
TOTAL	560	22618294

Results

Analysis of councils

Of the 560 local councils in Australia, 368 (66%) provide kerbside recycling services that reach a collective total of 21,147,004 people (93% of the population). A total of 192 councils provide no kerbside recycling services, limiting the recycling ability of 1,471,290 Australians (7% of the population).

In terms of the population residing in each LGA, there are a total of 186 councils with less than 5,000 residents, making up 33% of the local councils in Australia. Local councils with populations greater than 10,000 make up 54% of councils in Australia (Figure 2).

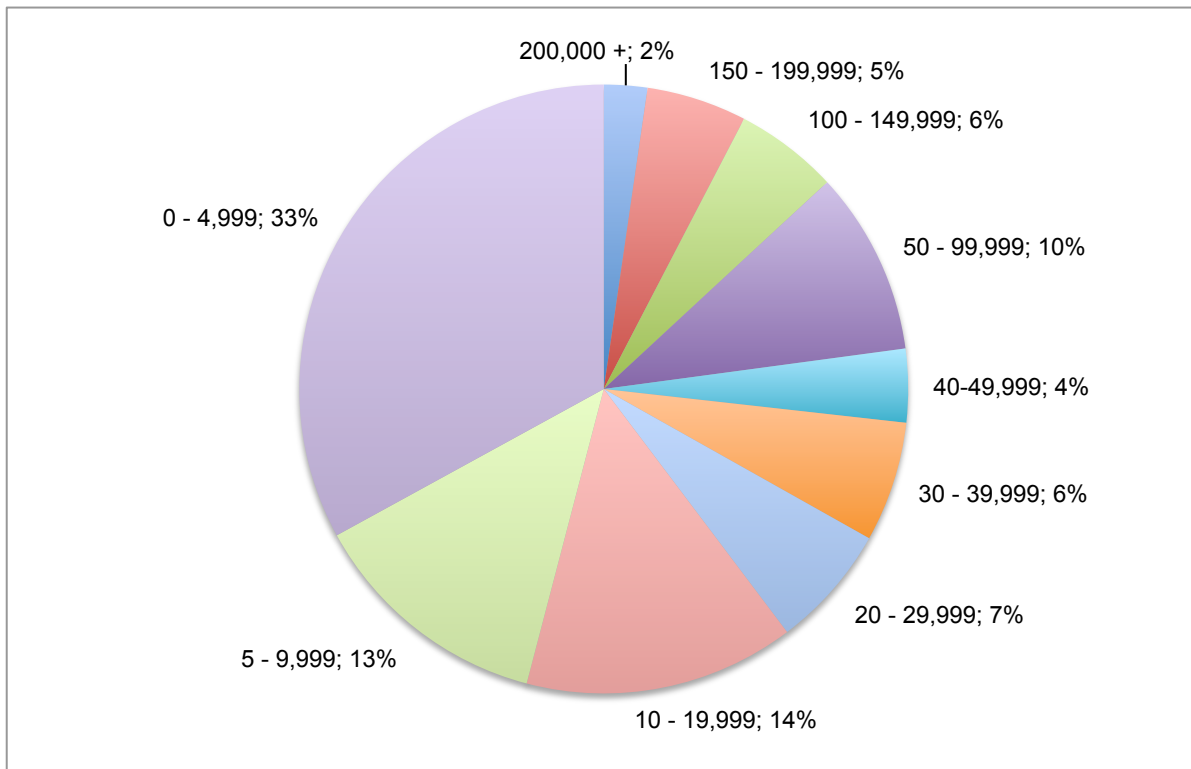


Figure 2: Proportion of local councils according to population size categories.

The largest 129 councils – each over 50,000 residents - service 77% of the population. These 129 councils make up just 23% of the total number of Australian councils. The 33% of councils with populations under 5,000 service just 2% of the population (Figure 3).

Council populations across the country range from 1,079,392 (Brisbane City Council, QLD) to 115 (Murchison Shire Council, WA). It is clear that these councils should not automatically receive equal weighting when it comes to estimating thresholds for the availability of recycling services.

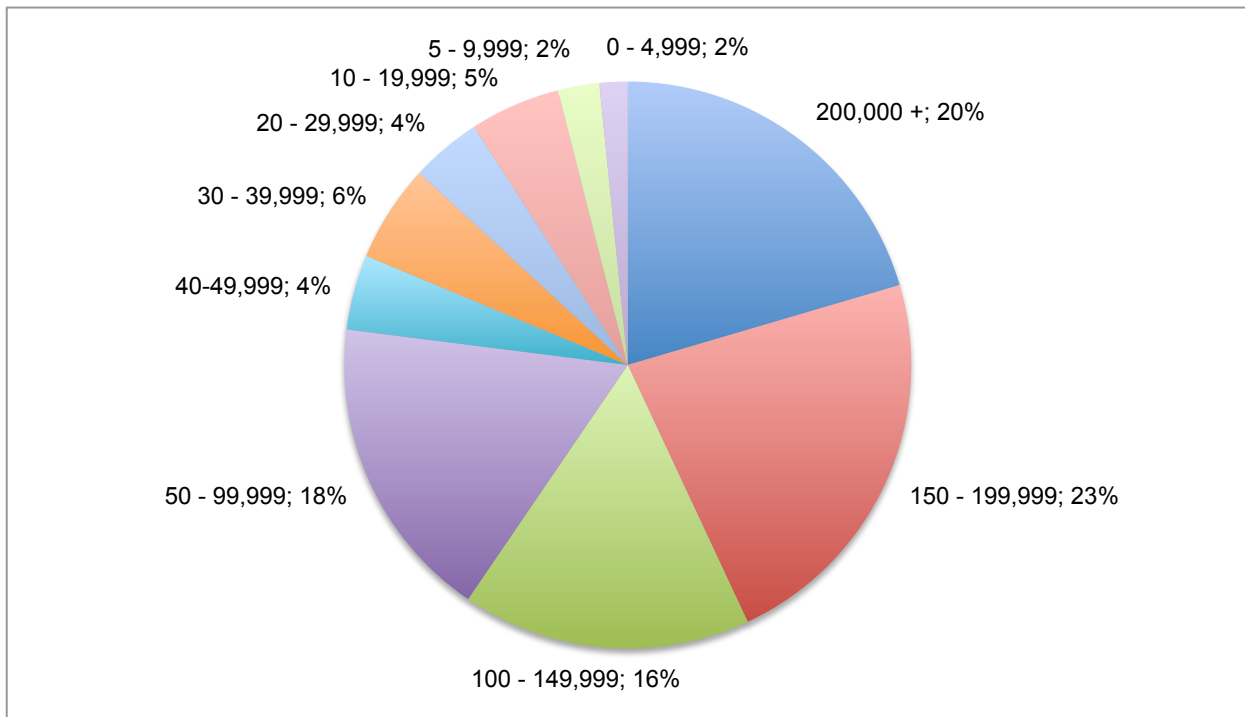


Figure 2: Proportion of the population serviced according to local council size categories.

Analysis of materials

Information on the kerbside recycling services provided by every council listed in RecyclingNearYou was retrieved for a total of 28 discrete material types.

For the purposes of this report, the material types have been grouped into material categories of: glass; metals; liquidpaperboard; paper and cardboard; plastic containers; and food scraps. Food scraps were included in this analysis to provide an indication of the availability of commercial composting facilities for biodegradable materials. At this stage, food scraps is the best indication of the service availability for compostable plastic packaging materials.

In some cases there is significant overlap in the descriptions of the discrete material types. For example there is a single category of 'paper and cardboard', and there are separate categories for various paper types (e.g. office paper, newspaper, magazines) and for 'cardboard'. These material category overlaps have been built into the council services component of RecyclingNearYou to allow councils the greatest level of flexibility in how their local services are represented on the site. Councils have the option of selecting as many or as few options as they like; none of the options are mutually exclusive from a site technical perspective.

There is a very small proportion of kerbside recycling services that accept the 'grouped' material categories of 'paper and cardboard' and 'plastic containers (all types)' (see Table 2). It appears that there is a preference among council officers to be as specific as possible in communicating the accepted material types. Whether this is the same when considering future labelling is a point that needs to be further investigated.

To assist in making recommendations on appropriate thresholds for the availability of recycling services, each material type has been analysed in terms of the proportion of councils accepting it in a kerbside service, as well as the proportion of the population with access to a kerbside service that accepts it.

Overview of material analysis

Table 2 provides a national summary of the availability of kerbside recycling services for each material type, in terms of councils providing services and the population with access to those services.

Table 2: Proportion of councils providing, and population with access to, kerbside recycling services for various material types.

MATERIAL	Councils with service (%)	Population with access to kerbside service (%)
Glass	62.7	92.9
Aluminium cans	62.5	92.8
Aluminium foil	39.6	64.0
Steel cans (food)	60.4	92.0
Steel cans (aerosol)	42.5	75.5
Cartons (juice)	58.4	89.6
Cartons (milk)	58.6	89.7
Paper and cardboard	3.2	5.2
Cardboard	62.0	90.5
Egg cartons	55.9	88.5
Magazines	59.6	91.9
Office paper	59.5	91.1
Newspaper	62.0	92.3
Pizza boxes	50.2	79.1
Envelopes (no window)	53.2	85.3
Envelopes (window)	46.1	79.4
Plastic containers (all)	14.1	27.1
Plastic #1 (PET)	57.9	85.7
Plastic #2 (HDPE)	58.0	85.7
Plastic #3 (PVC)	54.1	83.6
Plastic #4 (LDPE)	40.5	74.4
Plastic #5 (PP)	48.6	80.2
Plastic #6 (PS)	36.1	68.6
Plastic #7 (other)	30.7	51.9
Food (all)	4.5	6.3
Food (not annotated)	6.8	10.3
Fruit	6.1	9.3
Vegetables	5.9	9.3

Glass is the material with the greatest service availability both in terms of councils providing services and the population with access to those services. The material with the most limited service availability is the 'paper and cardboard' category. However, as noted above, this may be a function of council officers preferring to nominate specific materials.

Food scraps is the material type with the most limited service availability. It has the lowest number of councils providing services and the lowest percentage of the population with access. Food, as a category, provides an indication of the availability of kerbside recycling services that may be suitable for accepting compostable plastic packaging materials.

Figure 3 provides an indication of the relationship between the proportion of councils providing kerbside recycling services and the proportion of the population serviced, for each material type analysed. As the population serviced increases for each material type, the proportion of councils providing services gives a less accurate indication of the accessibility of recycling services around the country for that material type.

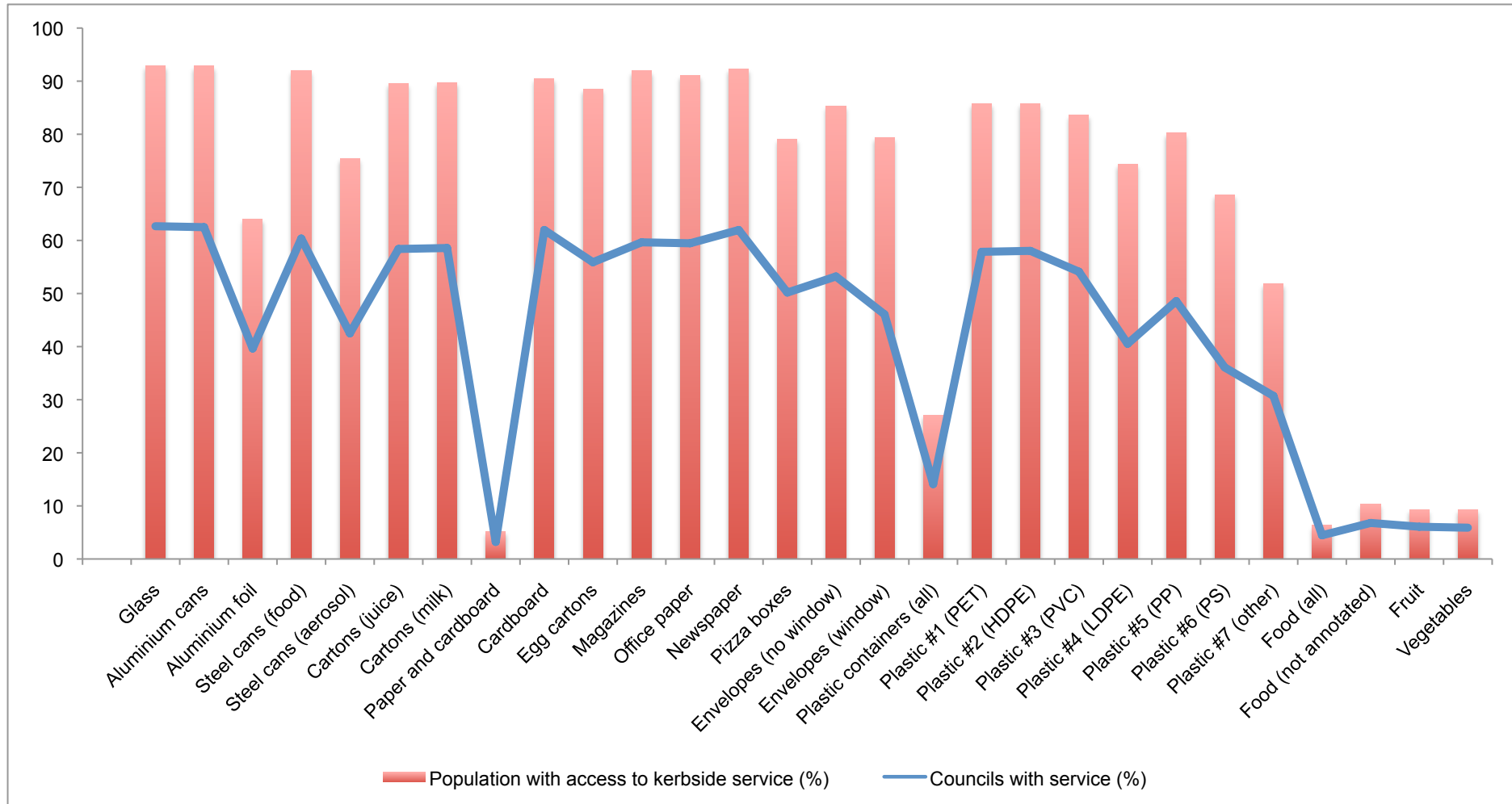


Figure 3: Councils providing (line), and population with access to (column), kerbside recycling services for each material type.

Material-specific analysis

Glass

In Australia 62.7% of local councils provide a kerbside recycling service for glass, and a total of 92.9% of the population has access to these services.

The relationship between total population by state and the proportion of the population with access to kerbside glass recycling services is shown in Figure 4. The relationship between the proportion of local councils in each state providing kerbside recycling services for glass, and the proportion of the population with access to these services, is shown in Figure 5.

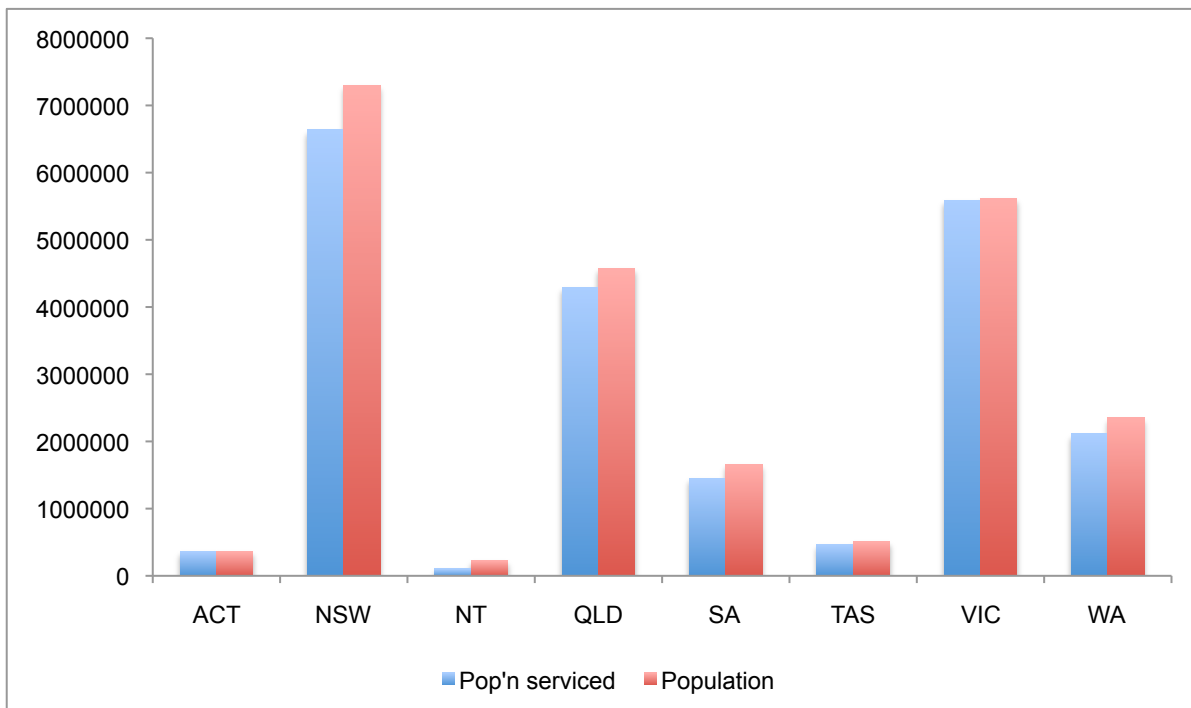


Figure 4: State-by-state population with access to kerbside glass recycling services (blue) compared to total population (red).

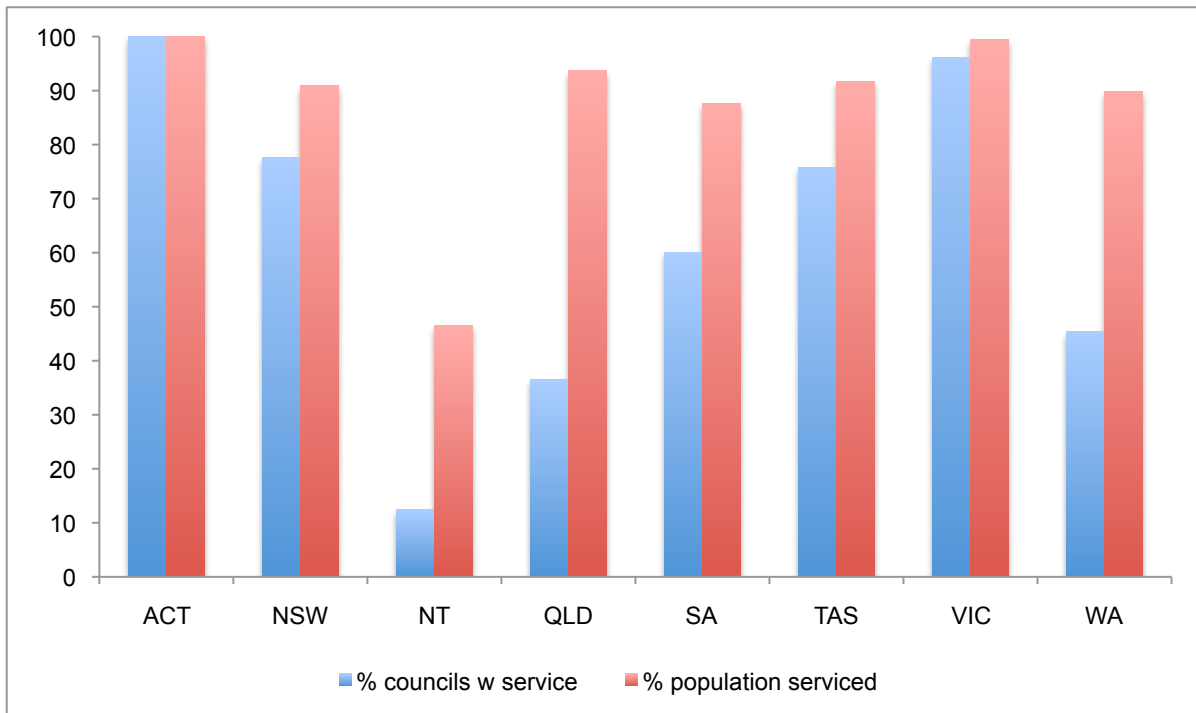


Figure 5: State-by-state percentage of councils providing kerbside glass recycling services (blue) compared to the percentage of population with access to these services (red).

Metals - aluminium cans

In Australia 62.5% of local councils provide a kerbside recycling service for aluminium cans, and a total of 92.8% of the population has access to these services.

The relationship between total population by state and the proportion of the population with access to kerbside aluminium can recycling services is shown in Figure 6. The relationship between the proportion of local councils in each state providing kerbside recycling services for aluminium cans, and the proportion of the population with access to these services, is shown in Figure 7.

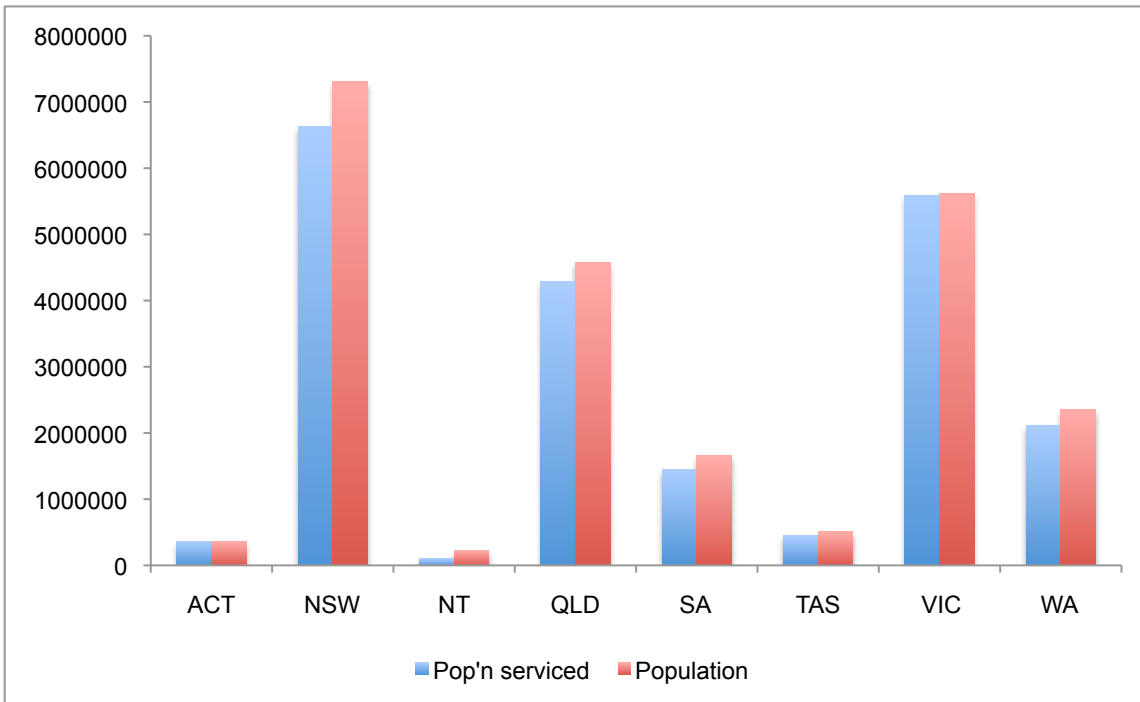


Figure 6: State-by-state population with access to kerbside aluminium can recycling services (blue) compared to total population (red).

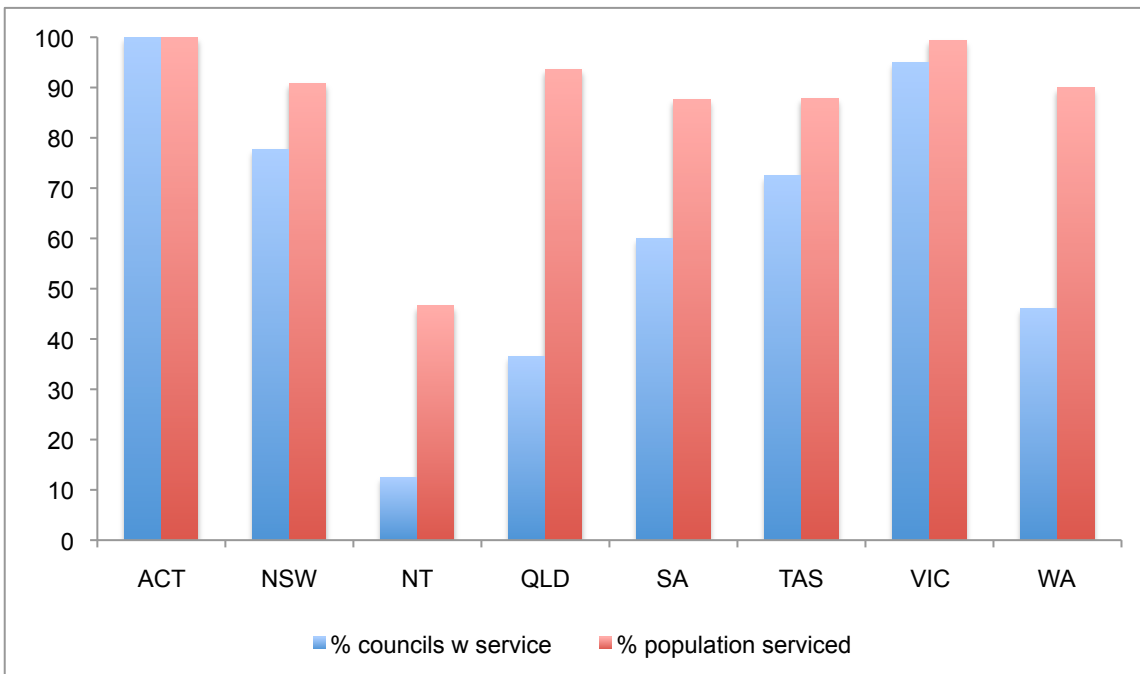


Figure 7: State-by-state percentage of councils providing kerbside aluminium can recycling services (blue) compared to the percentage of population with access to these services (red).

Metals - aluminium foil

In Australia 39.6% of local councils provide a kerbside recycling service for aluminium foil, and a total of 64.0% of the population has access to these services.

The relationship between total population by state and the proportion of the population with access to kerbside aluminium foil recycling services is shown in Figure 8. The relationship between the proportion of local councils in each state providing kerbside recycling services for aluminium foil, and the proportion of the population with access to these services, is shown in Figure 9.

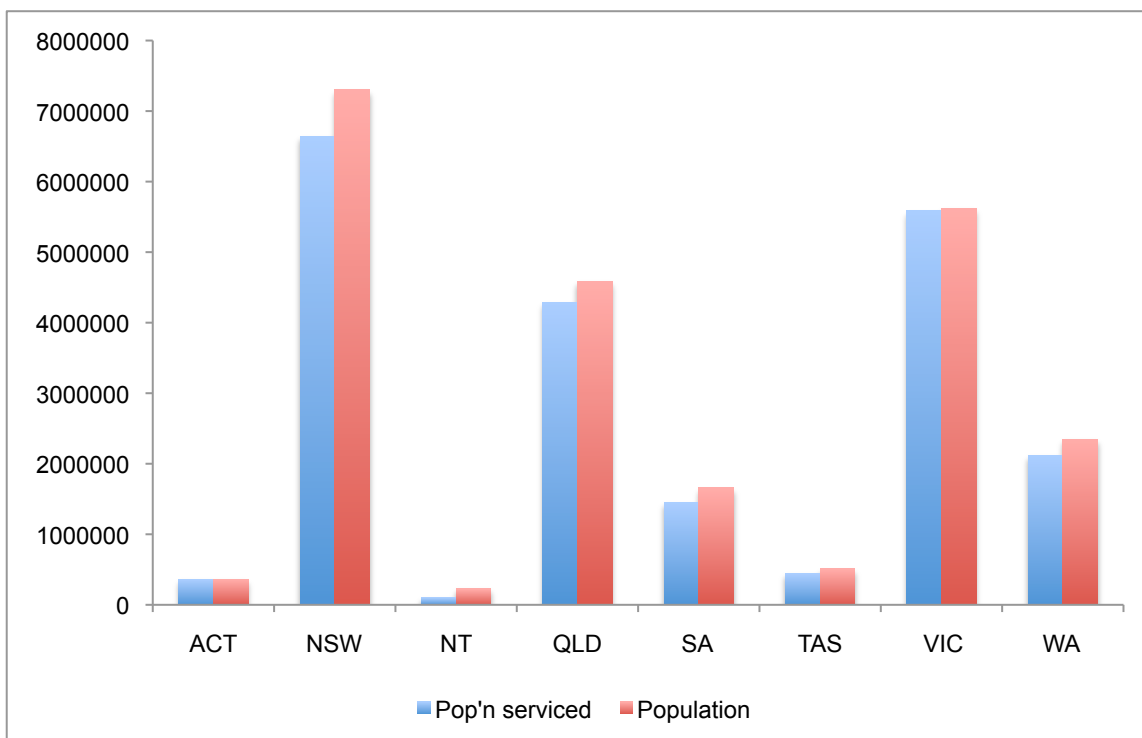


Figure 8: State-by-state population with access to kerbside aluminium foil recycling services (blue) compared to total population (red).

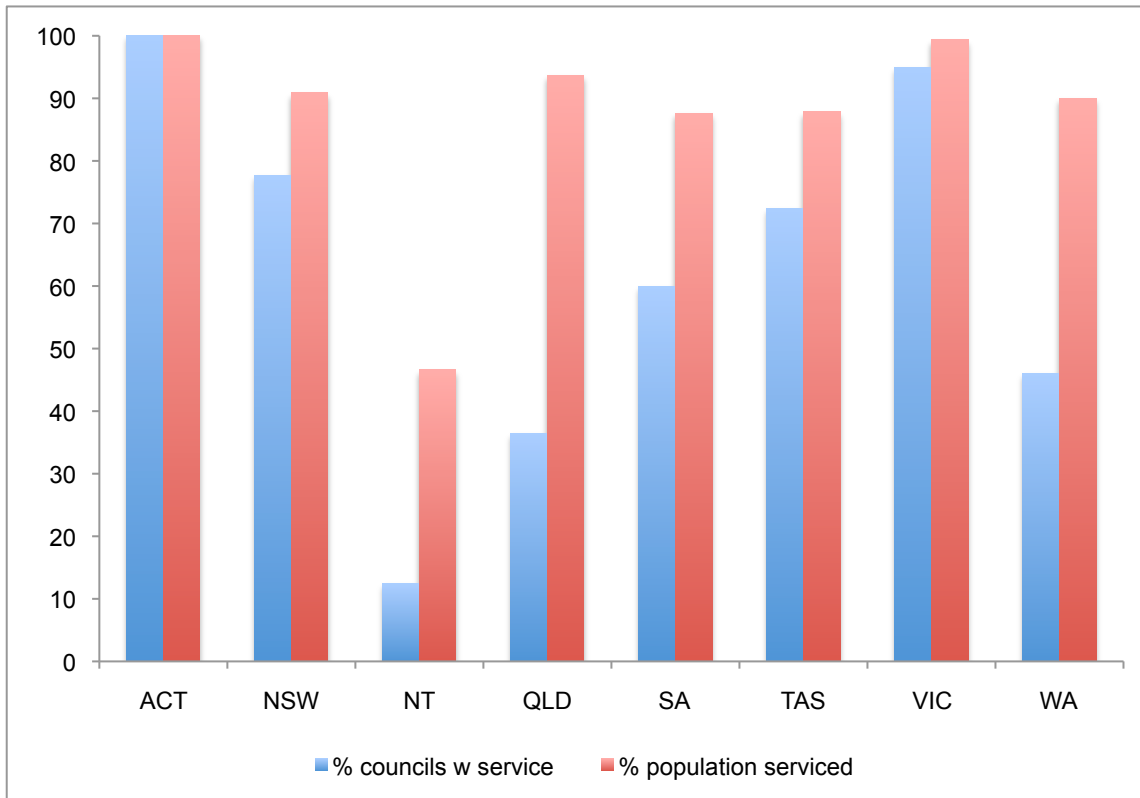


Figure 9: State-by-state percentage of councils providing kerbside aluminium foil recycling services (blue) compared to the percentage of population with access to these services (red).

Metals - steel cans (food)

In Australia 60.4% of local councils provide a kerbside recycling service for steel food cans, and a total of 91.7% of the population has access to these services.

The relationship between total population by state and the proportion of the population with access to kerbside steel food can recycling services is shown in Figure 10. The relationship between the proportion of local councils in each state providing kerbside recycling services for steel food cans, and the proportion of the population with access to these services, is shown in Figure 11.

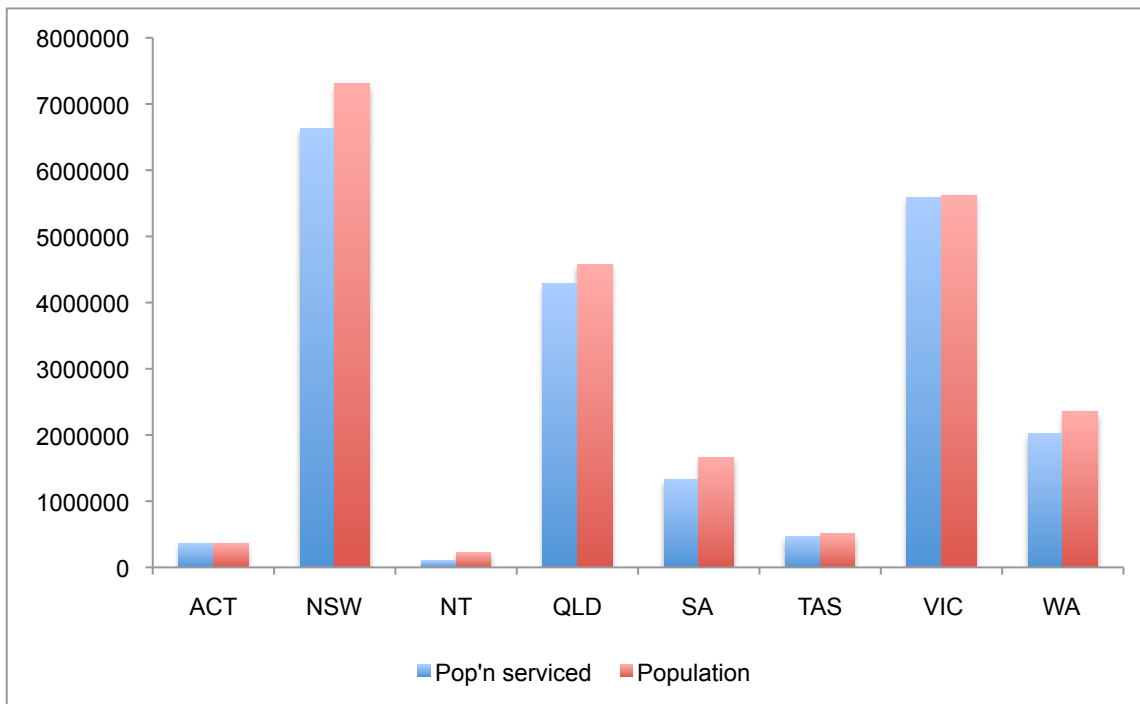


Figure 10: State-by-state population with access to kerbside steel food can recycling services (blue) compared to total population (red).

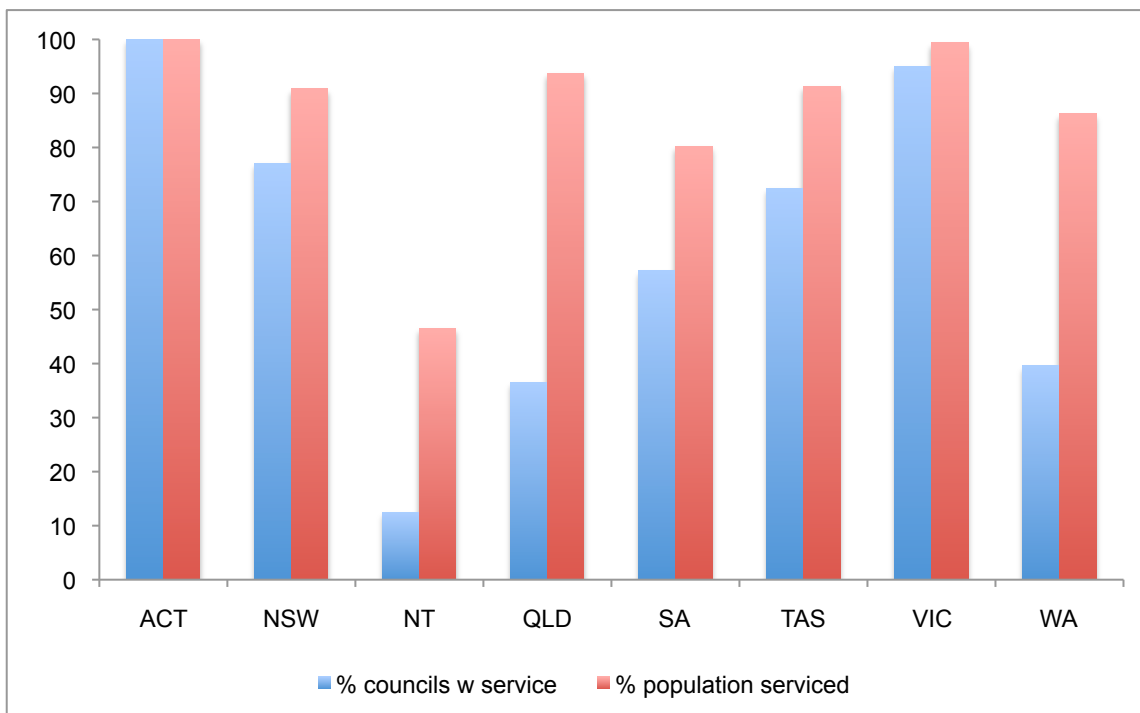


Figure 11: State-by-state percentage of councils providing kerbside steel food can recycling services (blue) compared to the percentage of population with access to these services (red).

Metals - steel cans (aerosol)

In Australia 42.5% of local councils provide a kerbside recycling service for steel aerosol cans, and a total of 75.5% of the population has access to these services.

The relationship between total population by state and the proportion of the population with access to kerbside steel aerosol can recycling services is shown in Figure 12. The relationship between the proportion of local councils in each state providing kerbside recycling services for steel aerosol cans, and the proportion of the population with access to these services, is shown in Figure 13.

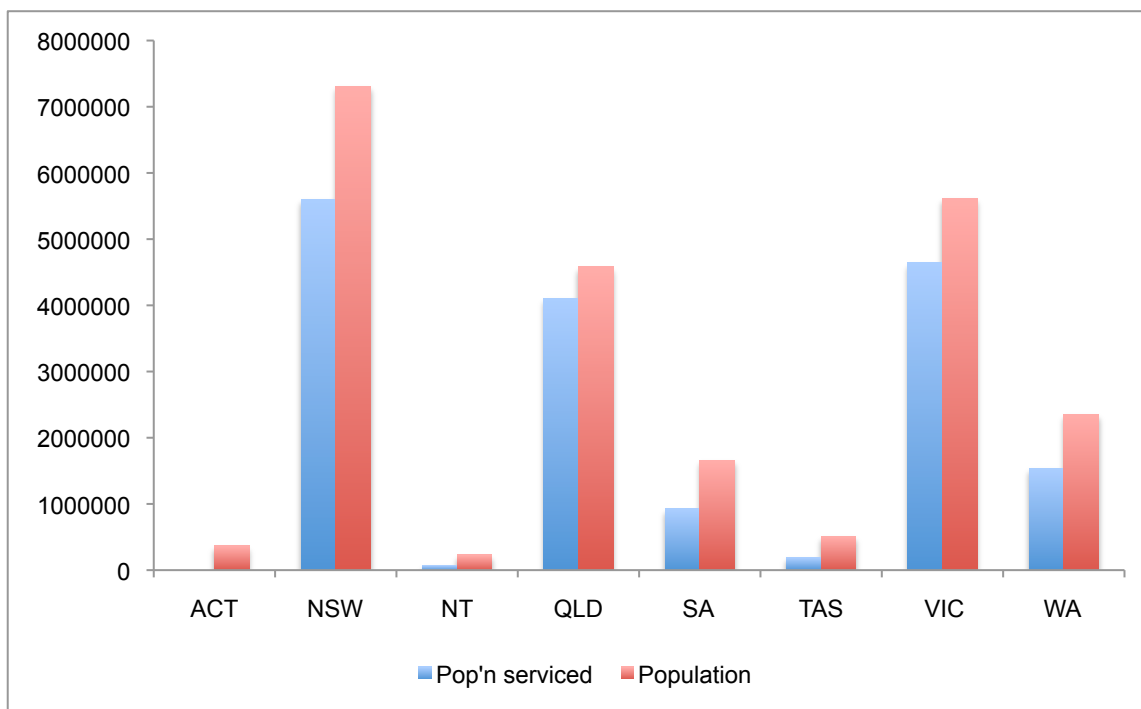


Figure 12: State-by-state population with access to kerbside steel aerosol can recycling services (blue) compared to total population (red).

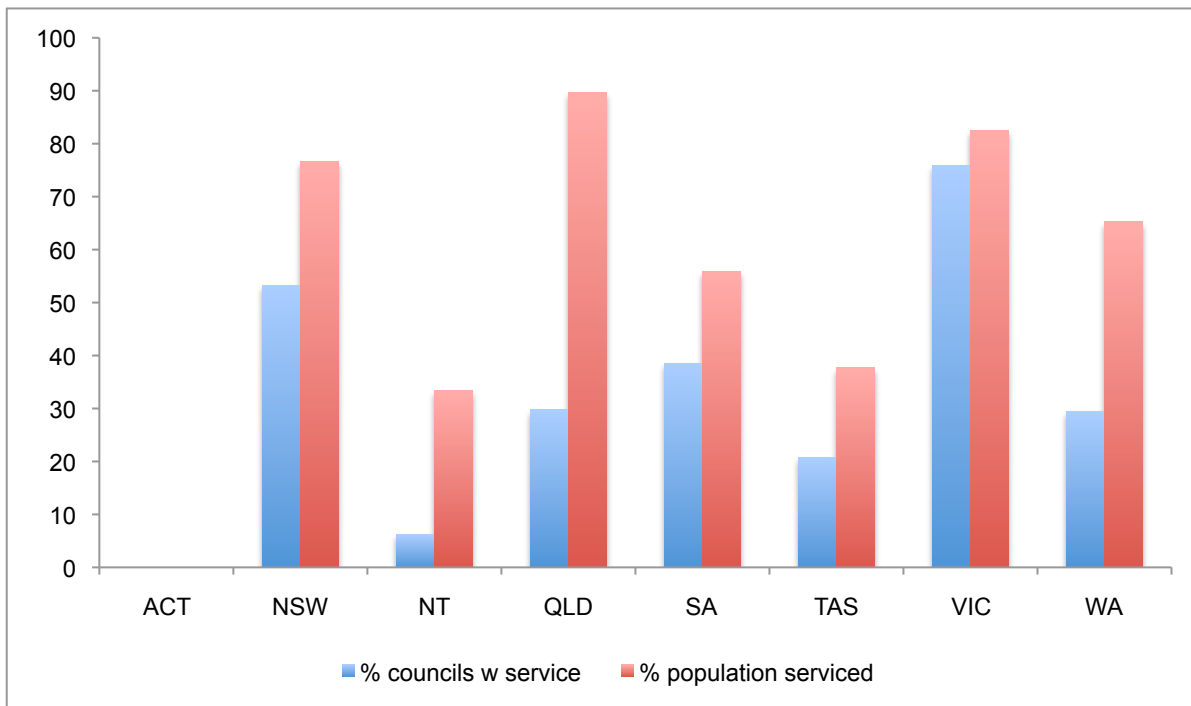


Figure 13: State-by-state percentage of councils providing kerbside steel aerosol can recycling services (blue) compared to the percentage of population with access to these services (red).

Liquidpaperboard – juice cartons

In Australia 58.4% of local councils provide a kerbside recycling service for juice cartons, and a total of 89.6% of the population has access to these services.

The relationship between total population by state and the proportion of the population with access to kerbside juice carton recycling services is shown in Figure 14. The relationship between the proportion of local councils in each state providing kerbside recycling services for juice cartons, and the proportion of the population with access to these services, is shown in Figure 15.

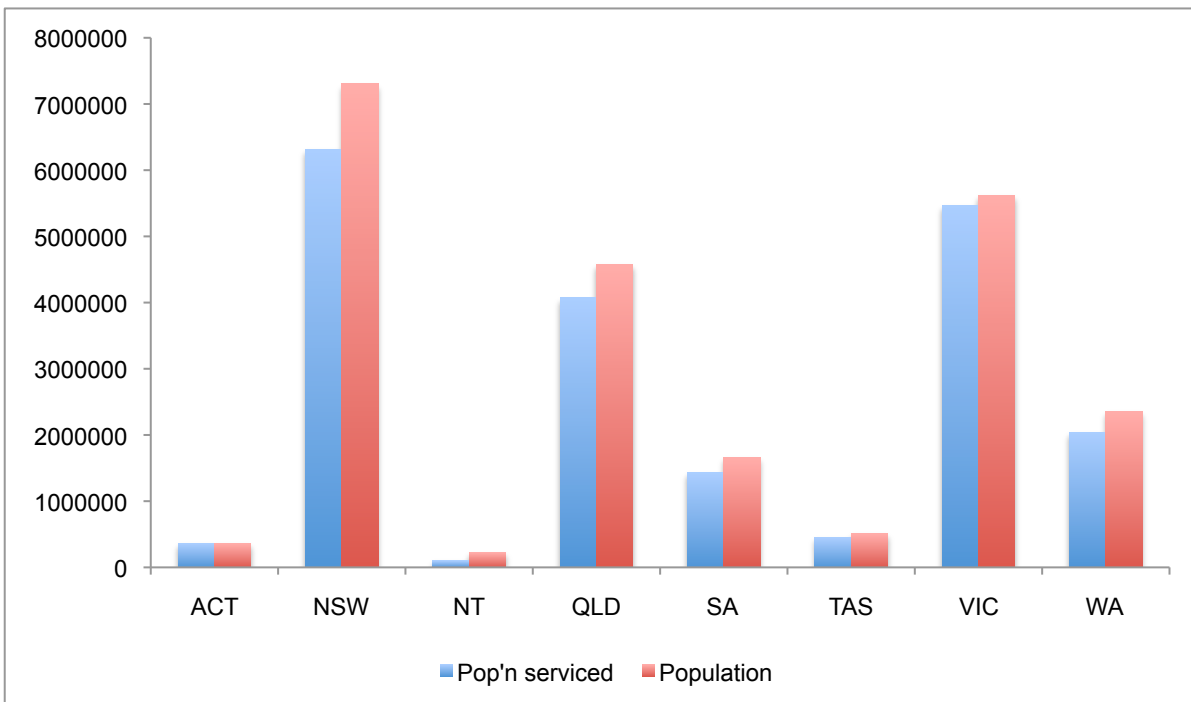


Figure 14: State-by-state population with access to kerbside juice carton recycling services (blue) compared to total population (red).

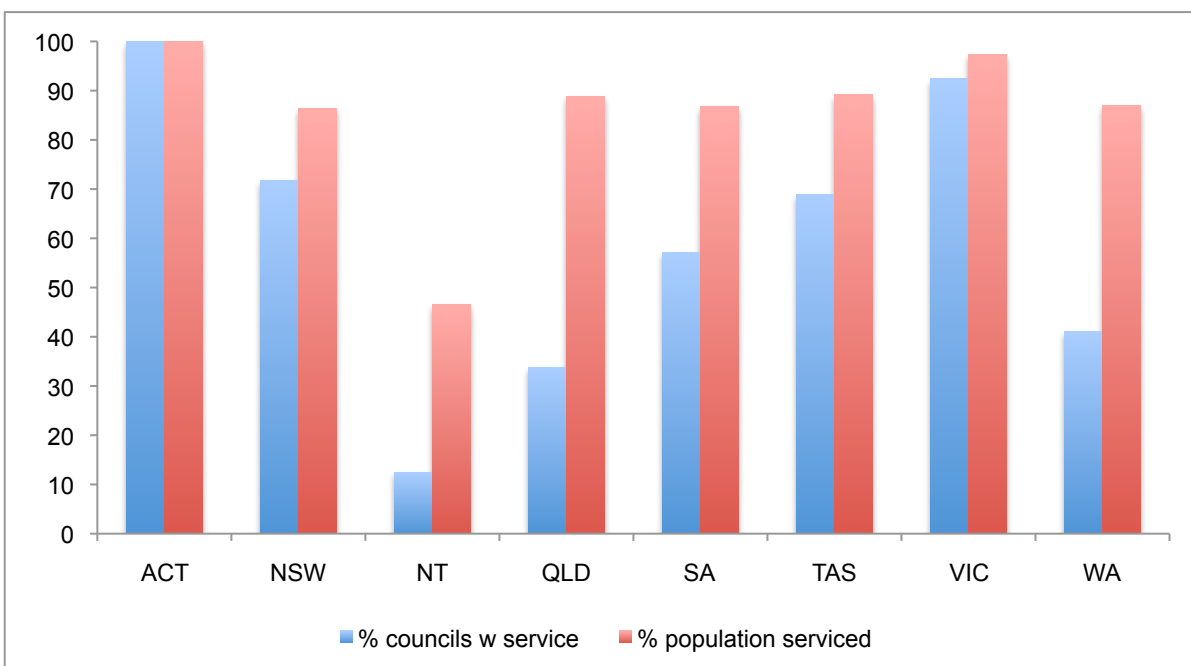


Figure 15: State-by-state percentage of councils providing kerbside juice carton recycling services (blue) compared to the percentage of population with access to these services (red).

Liquidpaperboard – milk cartons

In Australia 58.6% of local councils provide a kerbside recycling service for milk cartons, and a total of 89.7% of the population has access to these services.

The relationship between total population by state and the proportion of the population with access to kerbside milk carton recycling services is shown in Figure 16. The relationship between the proportion of local councils in each state providing kerbside recycling services for milk cartons, and the proportion of the population with access to these services, is shown in Figure 17.

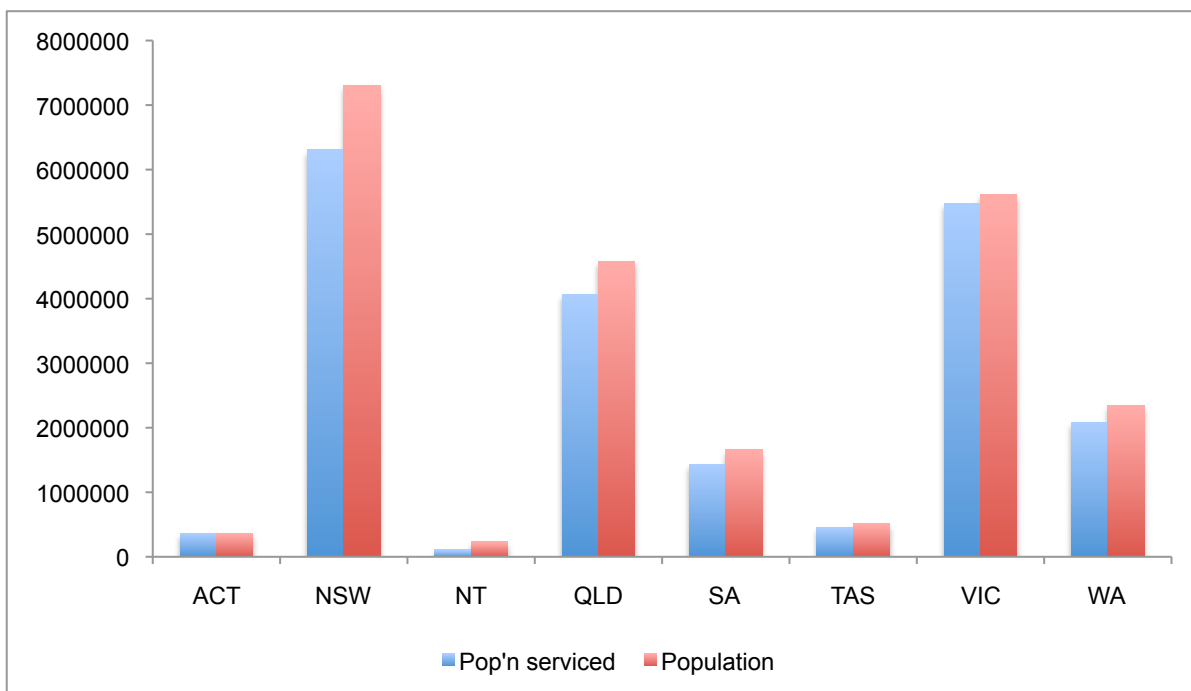


Figure 16: State-by-state population with access to kerbside milk carton recycling services (blue) compared to total population (red).

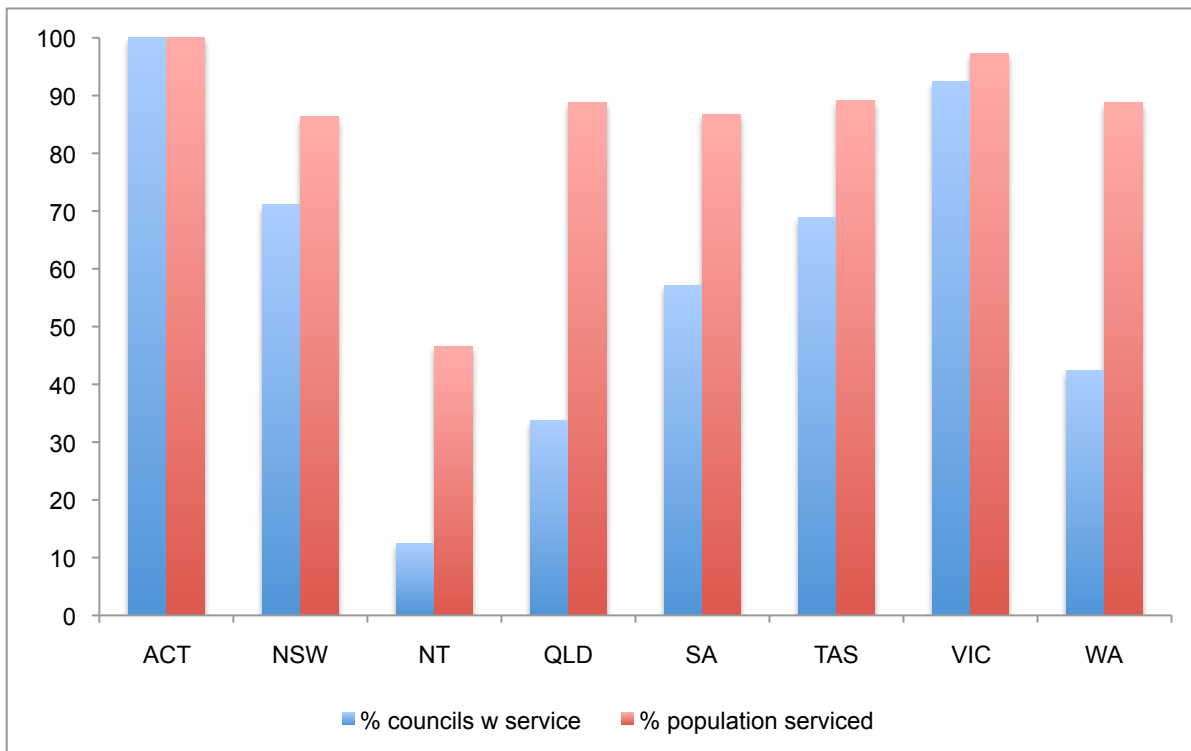


Figure 17: State-by-state percentage of councils providing kerbside milk carton recycling services (blue) compared to the percentage of population with access to these services (red).

Paper and cardboard – paper and cardboard

In Australia 3.2% of local councils provide a kerbside recycling service for paper and cardboard (or more correctly they checked the group category), and a total of 5.2% of the population has access to these services.

The relationship between total population by state and the proportion of the population with access to kerbside paper and cardboard recycling services is shown in Figure 18. The relationship between the proportion of local councils in each state providing kerbside recycling services for paper and cardboard, and the proportion of the population with access to these services, is shown in Figure 19.

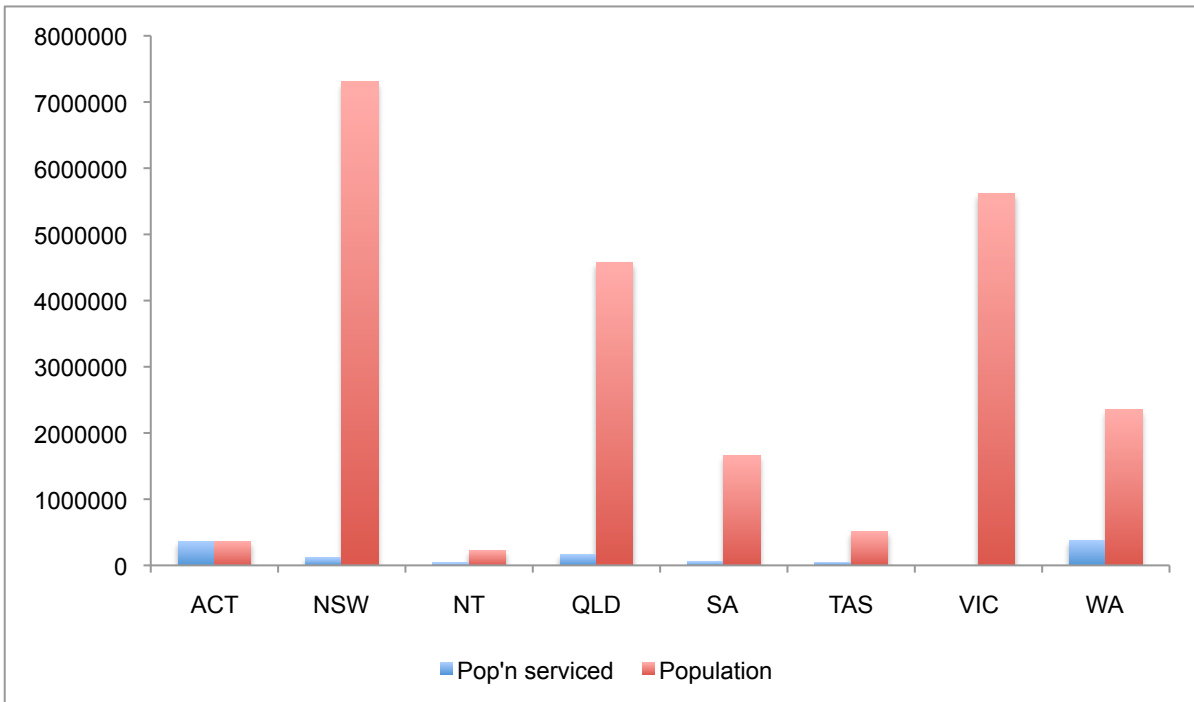


Figure 18: State-by-state population with access to kerbside paper and cardboard recycling services (blue) compared to total population (red).

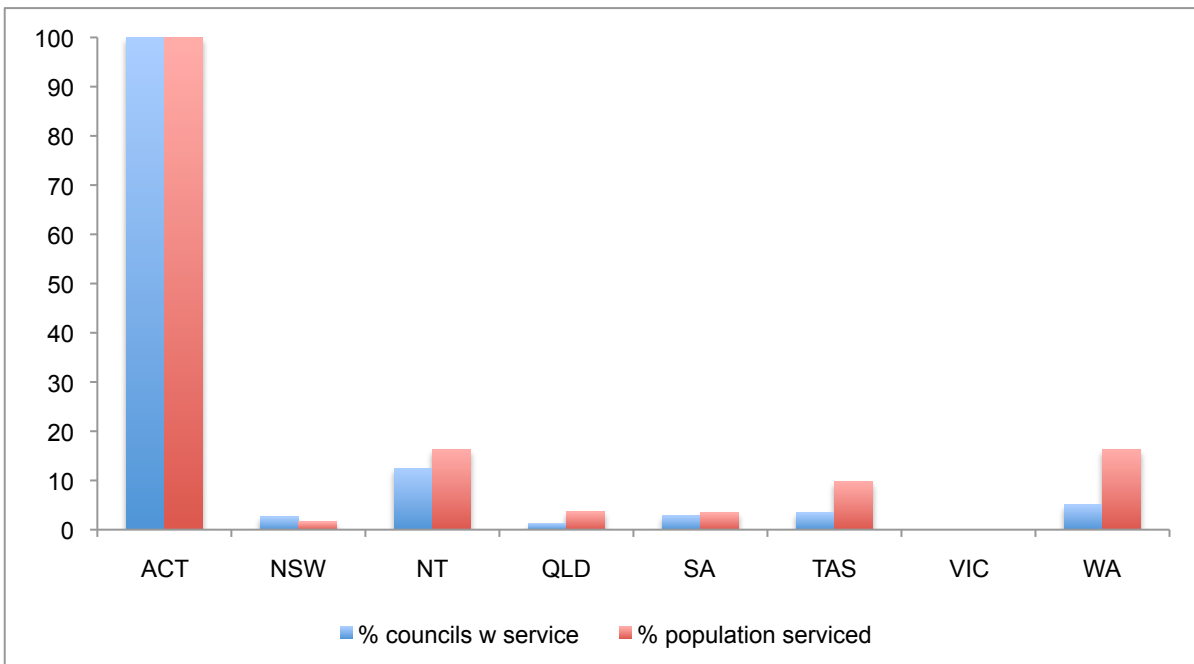


Figure 19: State-by-state percentage of councils providing kerbside paper and cardboard recycling services (blue) compared to the percentage of population with access to these services (red).

Paper and cardboard - cardboard

In Australia 62.0% of local councils provide a kerbside recycling service for cardboard, and a total of 90.5% of the population has access to these services. Where councils had selected only the 'Paper and Cardboard' category in RecyclingNearYou, the relevant population and service information has been incorporated into these figures.

The relationship between total population by state and the proportion of the population with access to kerbside cardboard recycling services is shown in Figure 20. The relationship between the proportion of local councils in each state providing kerbside recycling services for cardboard, and the proportion of the population with access to these services, is shown in Figure 21.

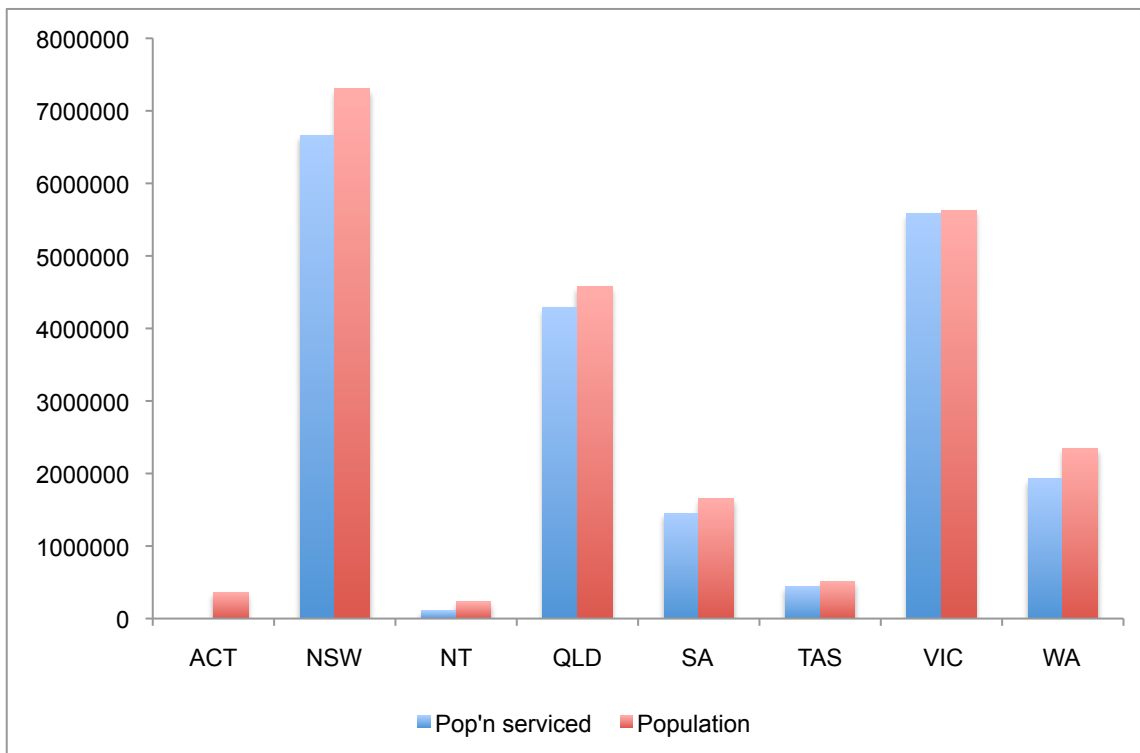


Figure 20: State-by-state population with access to kerbside cardboard recycling services (blue) compared to total population (red).

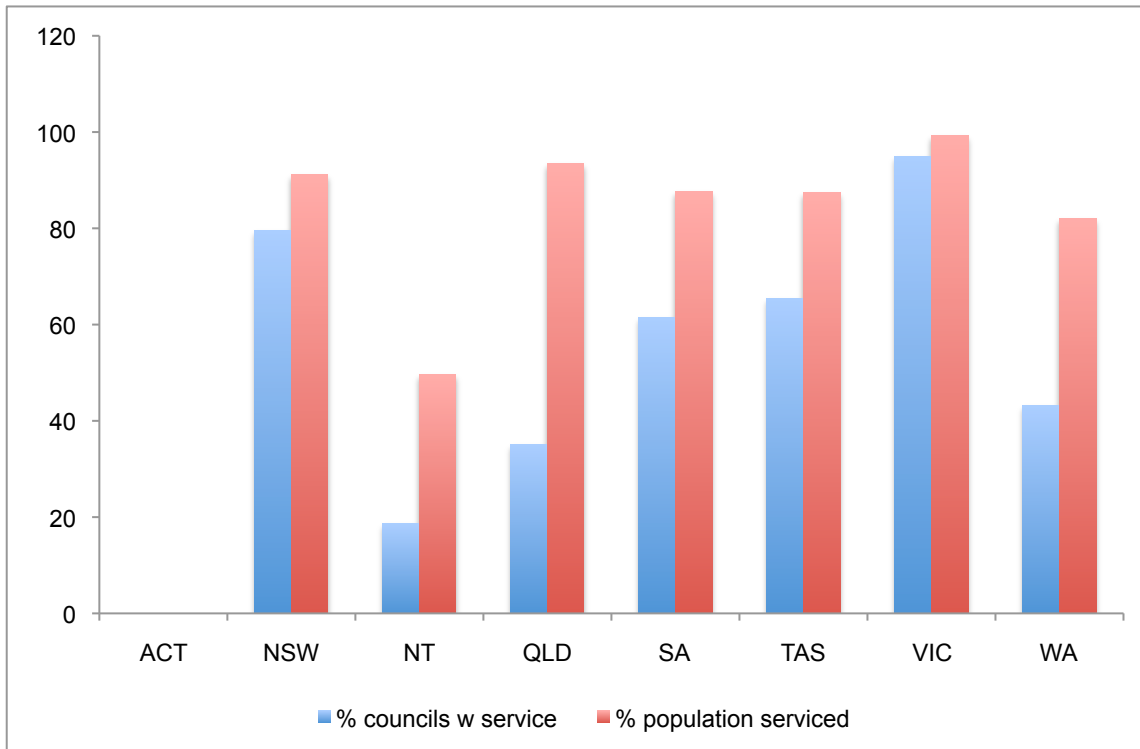


Figure 21: State-by-state percentage of councils providing kerbside cardboard recycling services (blue) compared to the percentage of population with access to these services (red).

Paper and cardboard - egg cartons

In Australia 55.9% of local councils provide a kerbside recycling service for egg cartons, and a total of 88.5% of the population has access to these services.

The relationship between total population by state and the proportion of the population with access to kerbside egg carton recycling services is shown in Figure 22. The relationship between the proportion of local councils in each state providing kerbside recycling services for egg cartons, and the proportion of the population with access to these services, is shown in Figure 23.

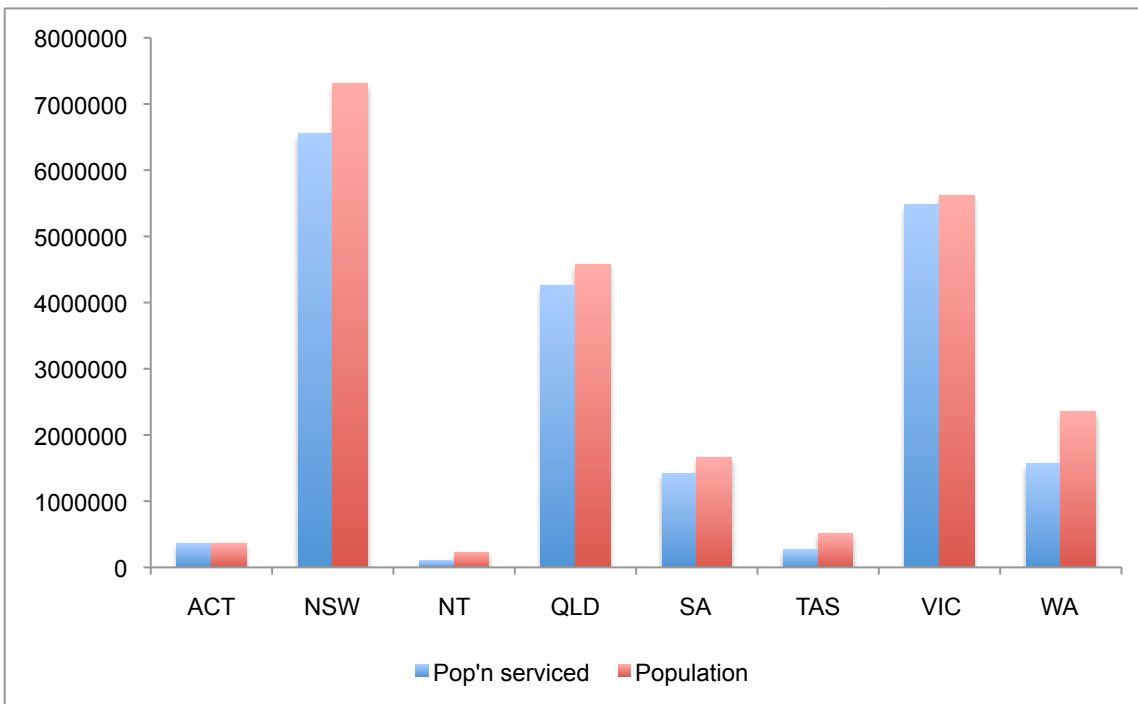


Figure 22: State-by-state population with access to kerbside egg carton recycling services (blue) compared to total population (red).

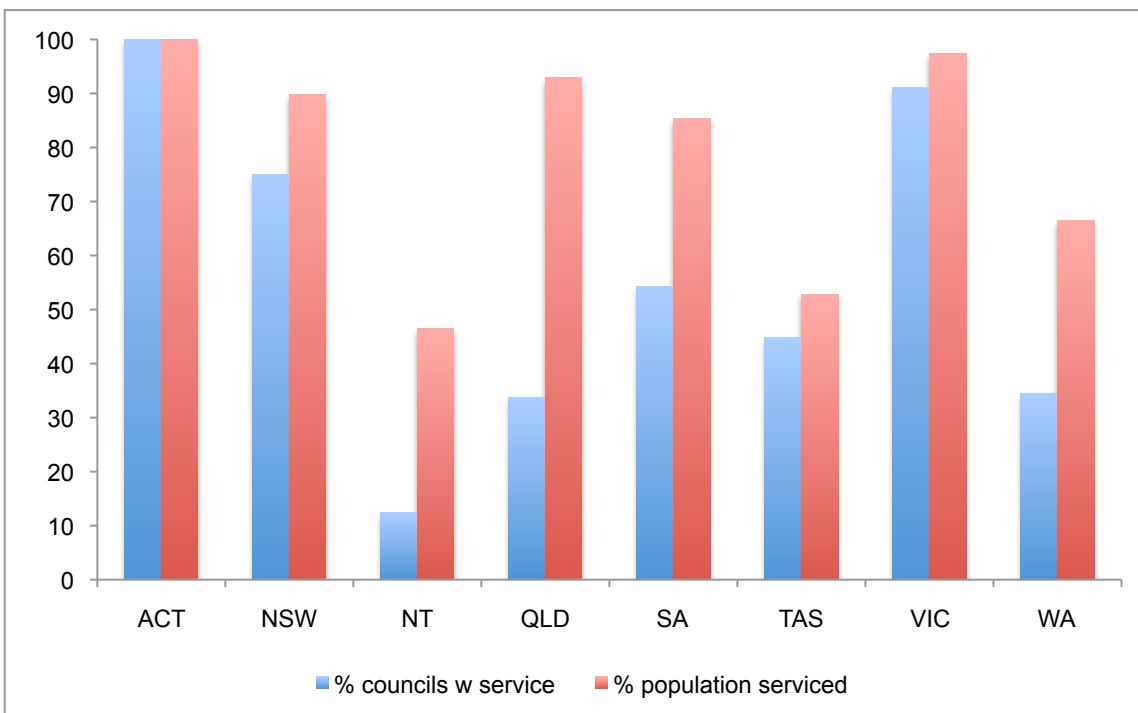


Figure 23: State-by-state percentage of councils providing kerbside egg carton recycling services (blue) compared to the percentage of population with access to these services (red).

Paper and cardboard - magazines

In Australia 59.6% of local councils provide a kerbside recycling service for magazines, and a total of 91.9% of the population has access to these services. Where councils had selected only the 'Paper and Cardboard' category in RecyclingNearYou, the relevant population and service information has been incorporated into these figures.

The relationship between total population by state and the proportion of the population with access to kerbside magazine recycling services is shown in Figure 24. The relationship between the proportion of local councils in each state providing kerbside recycling services for magazines, and the proportion of the population with access to these services, is shown in Figure 25.

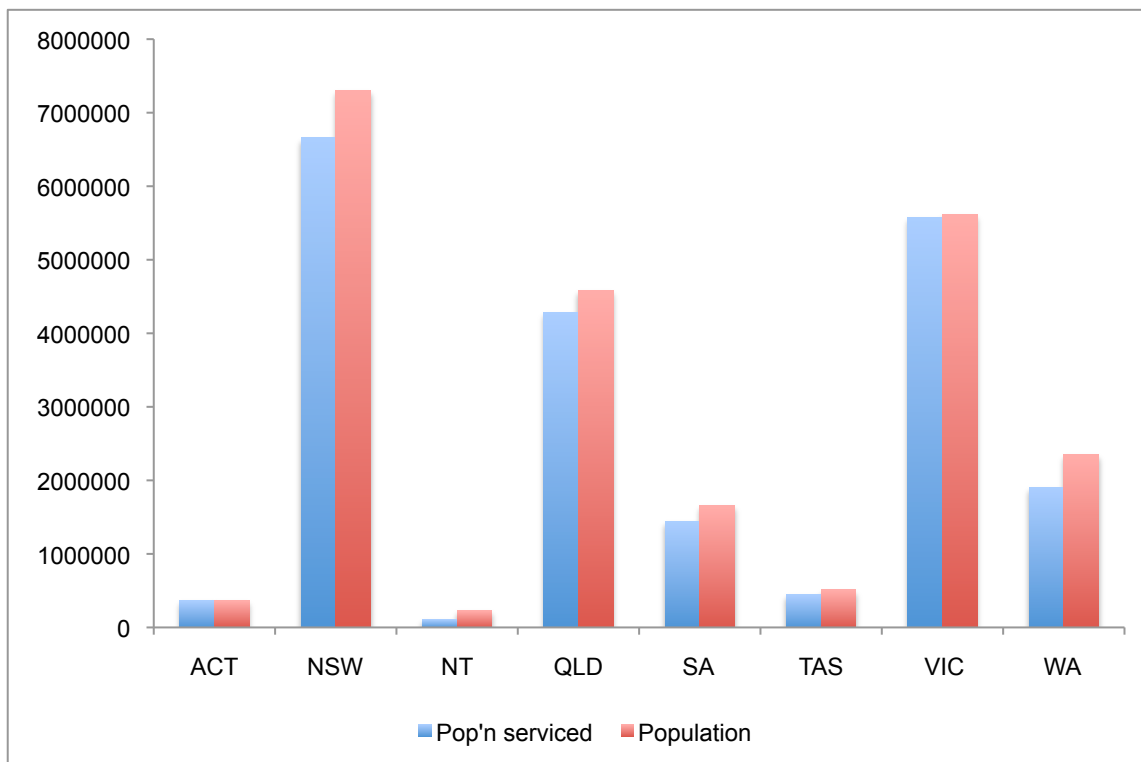


Figure 24: State-by-state population with access to kerbside magazine recycling services (blue) compared to total population (red).

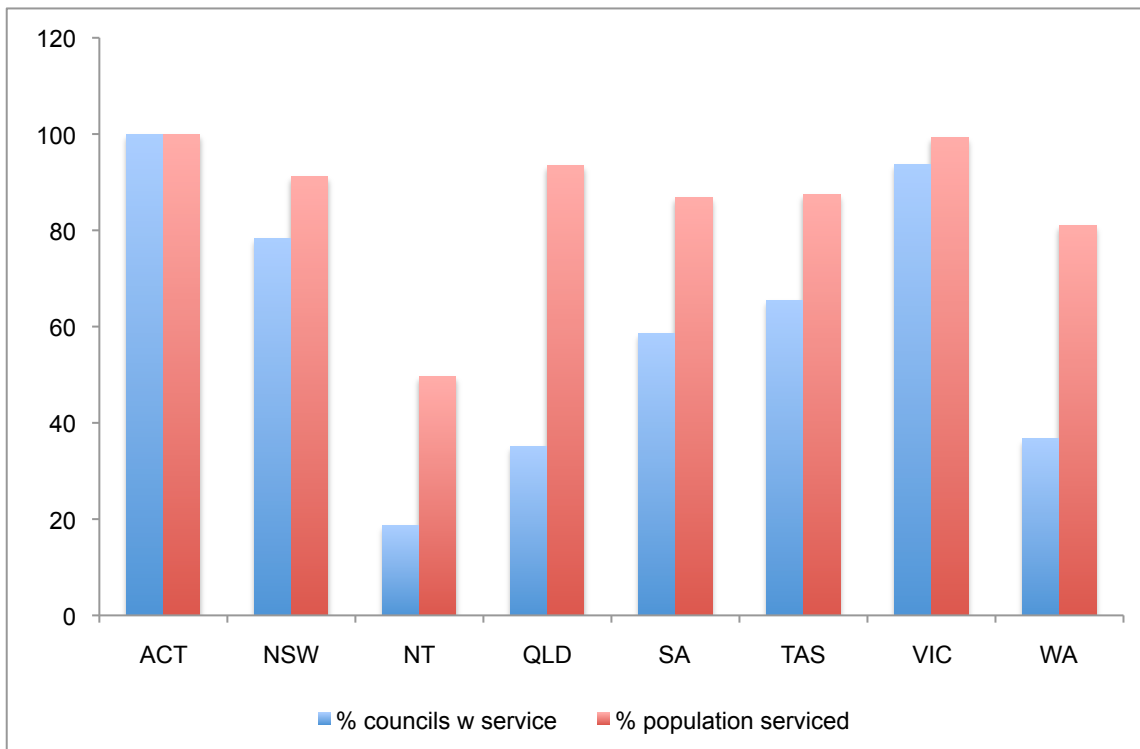


Figure 25: State-by-state percentage of councils providing kerbside magazine recycling services (blue) compared to the percentage of population with access to these services (red).

Paper and cardboard - office paper

In Australia 59.5% of local councils provide a kerbside recycling service for office paper, and a total of 91.1% of the population has access to these services. Where councils had selected only the 'Paper and Cardboard' category in RecyclingNearYou, the relevant population and service information has been incorporated into these figures.

The relationship between total population by state and the proportion of the population with access to kerbside office paper recycling services is shown in Figure 26. The relationship between the proportion of local councils in each state providing kerbside recycling services for office paper, and the proportion of the population with access to these services, is shown in Figure 27.

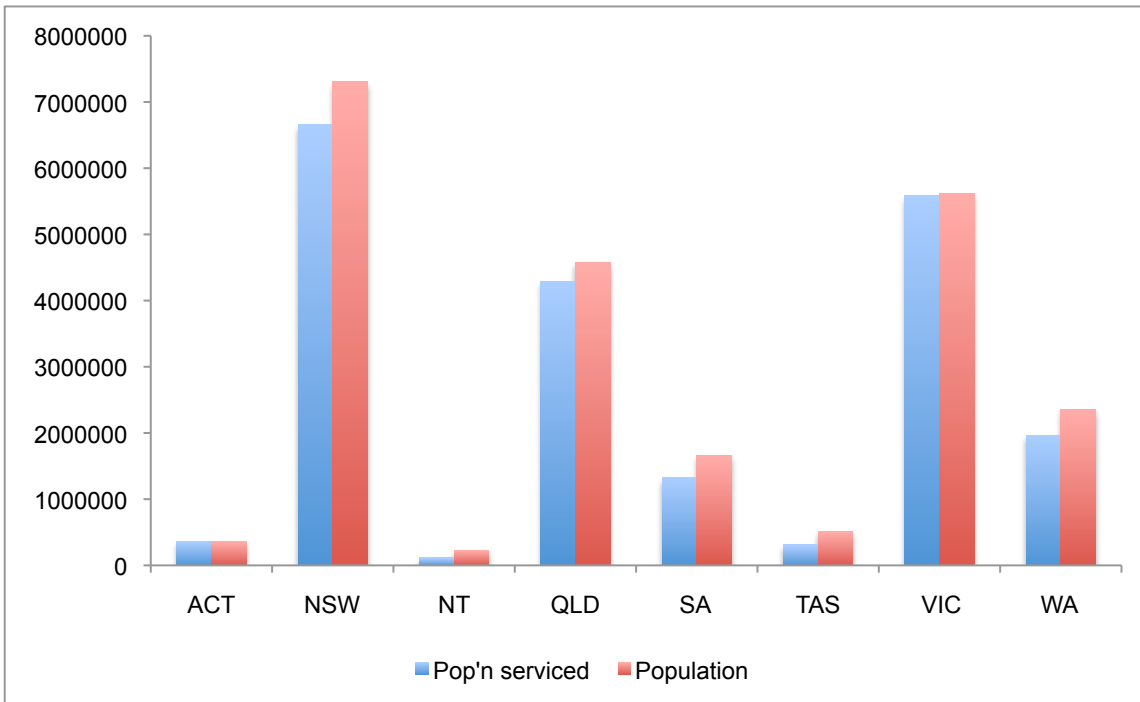


Figure 26: State-by-state population with access to kerbside office paper recycling services (blue) compared to total population (red).

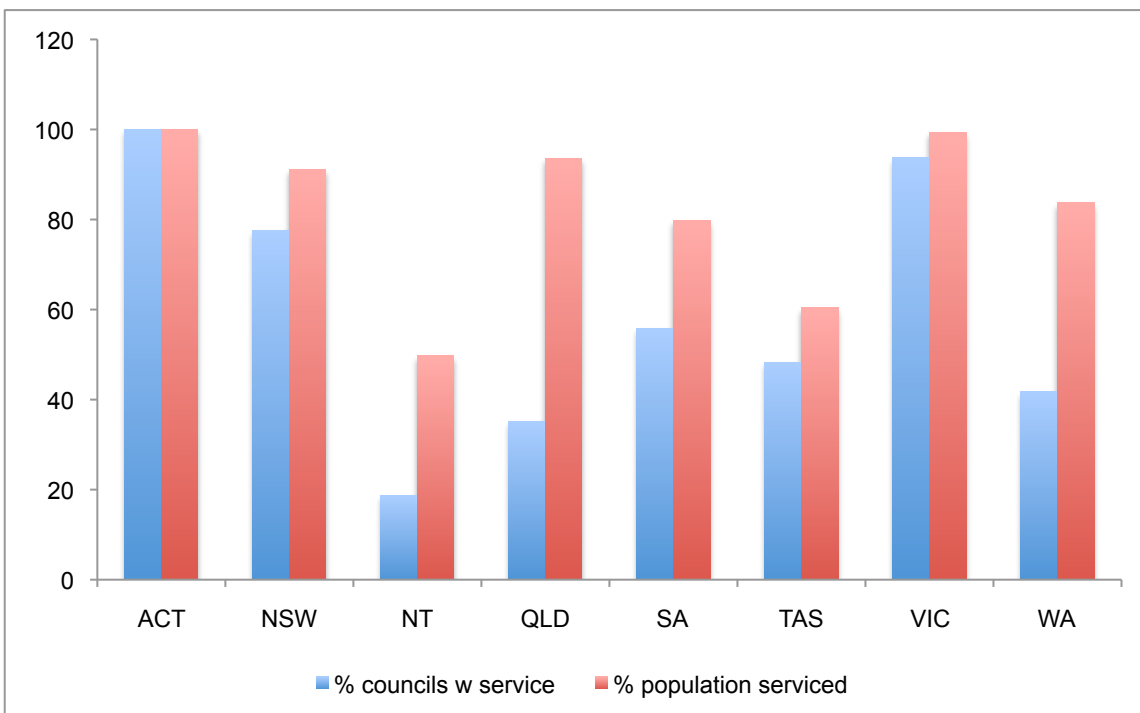


Figure 27: State-by-state percentage of councils providing kerbside office paper recycling services (blue) compared to the percentage of population with access to these services (red).

Paper and cardboard - newspaper

In Australia 62.0% of local councils provide a kerbside recycling service for newspaper, and a total of 92.3% of the population has access to these services. Where councils had selected only the 'Paper and Cardboard' category in RecyclingNearYou, the relevant population and service information has been incorporated into these figures.

The relationship between total population by state and the proportion of the population with access to kerbside newspaper recycling services is shown in Figure 28. The relationship between the proportion of local councils in each state providing kerbside recycling services for newspaper, and the proportion of the population with access to these services, is shown in Figure 29.

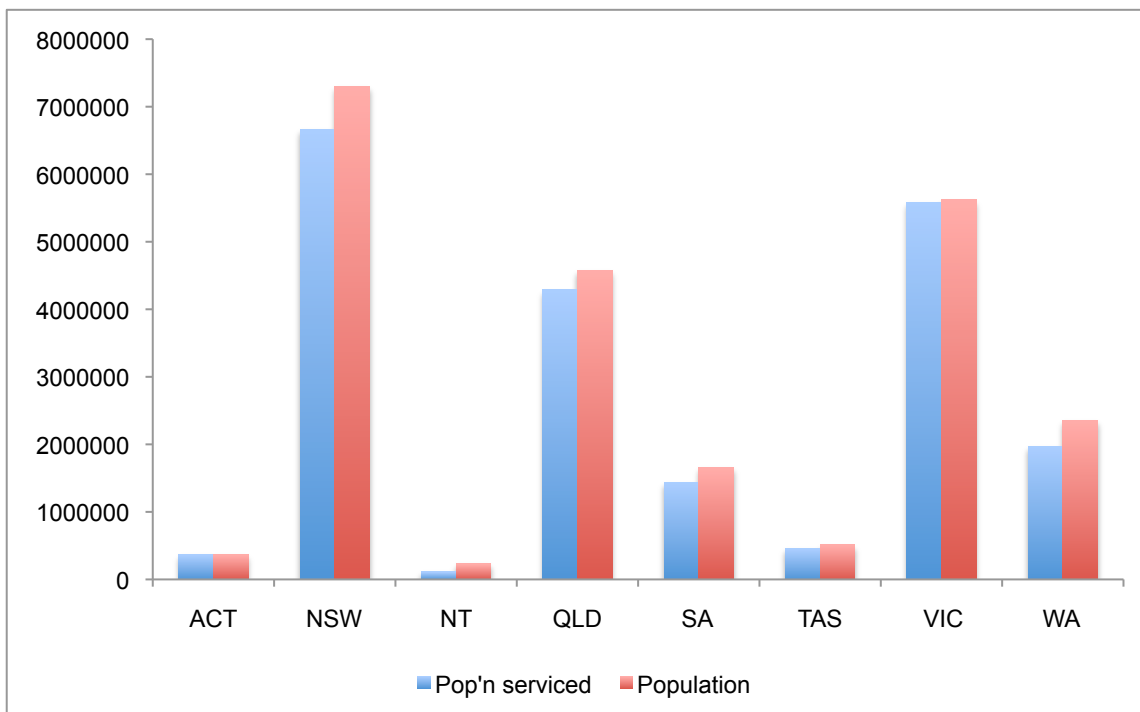


Figure 28: State-by-state population with access to kerbside newspaper recycling services (blue) compared to total population (red).

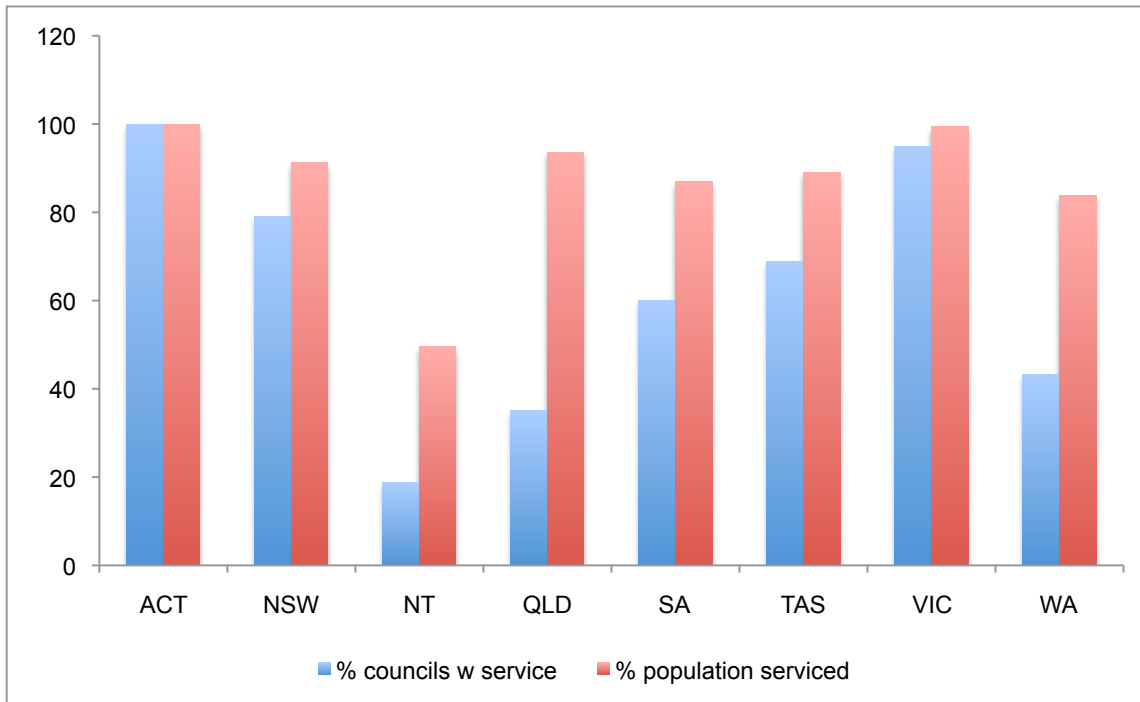


Figure 29: State-by-state percentage of councils providing kerbside newspaper recycling services (blue) compared to the percentage of population with access to these services (red).

Paper and cardboard - pizza boxes

In Australia 50.2% of local councils provide a kerbside recycling service for pizza boxes, and a total of 79.1% of the population has access to these services.

The relationship between total population by state and the proportion of the population with access to kerbside pizza box recycling services is shown in Figure 30. The relationship between the proportion of local councils in each state providing kerbside recycling services for pizza boxes, and the proportion of the population with access to these services, is shown in Figure 31.

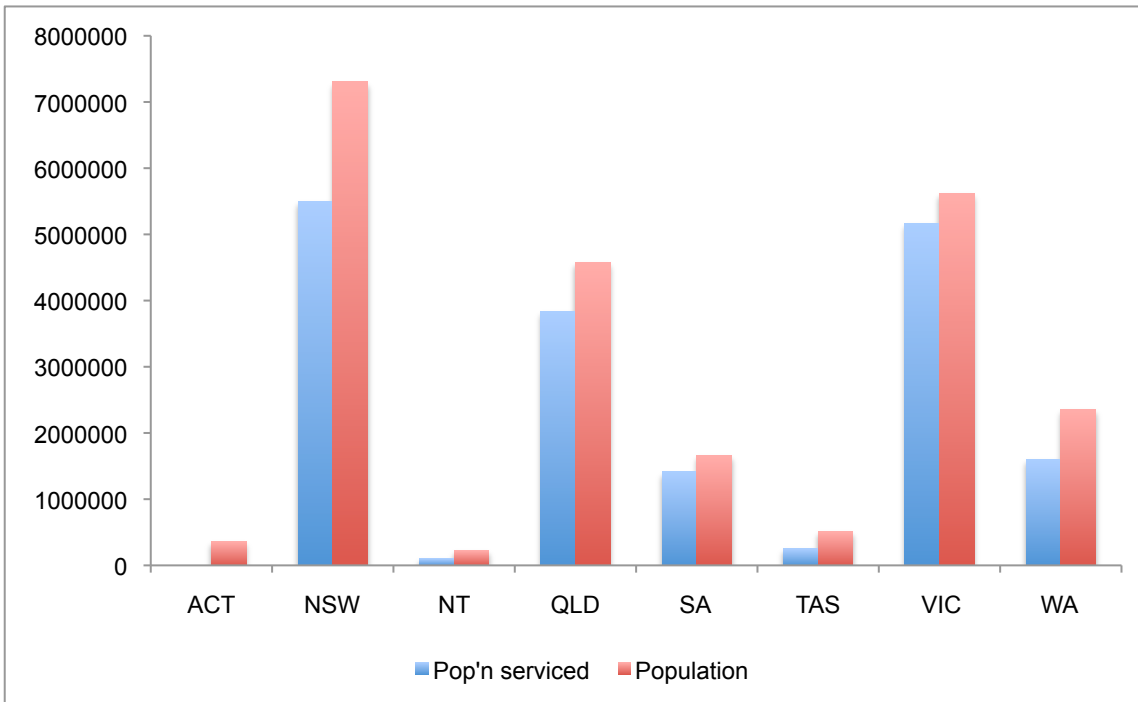


Figure 30: State-by-state population with access to kerbside pizza box recycling services (blue) compared to total population (red).

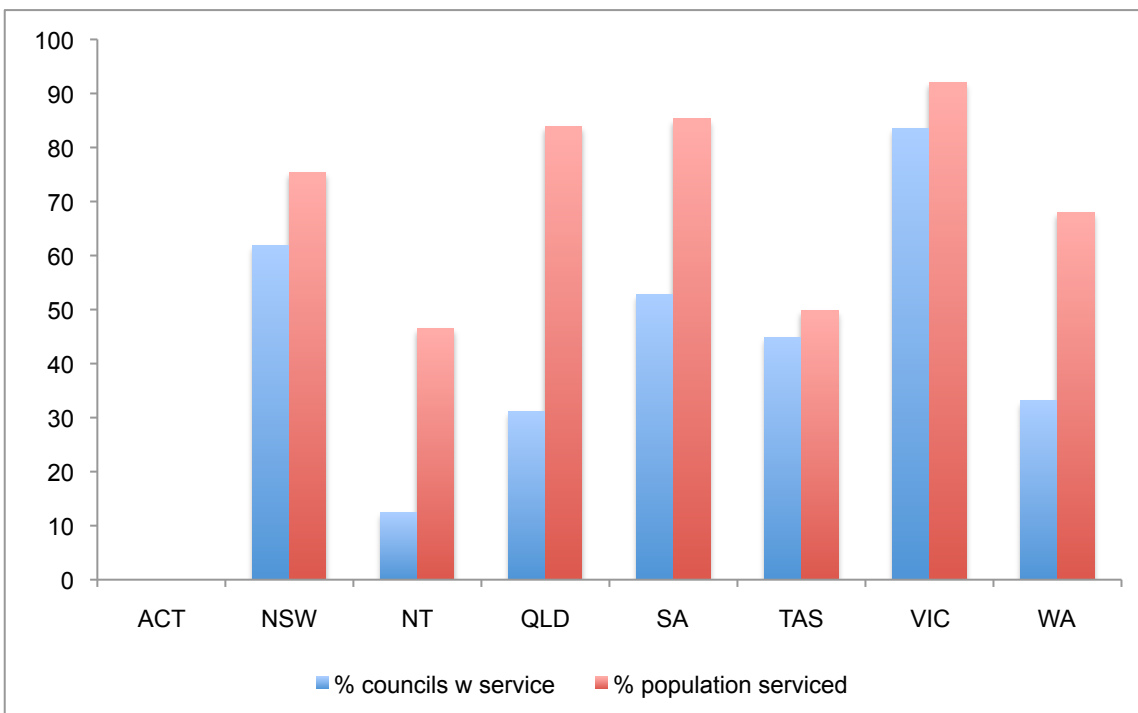


Figure 31: State-by-state percentage of councils providing kerbside pizza box recycling services (blue) compared to the percentage of population with access to these services (red).

Paper and cardboard - envelopes (no window)

In Australia 53.2% of local councils provide a kerbside recycling service for plain envelopes, and a total of 85.3% of the population has access to these services.

The relationship between total population by state and the proportion of the population with access to kerbside plain envelope recycling services is shown in Figure 32. The relationship between the proportion of local councils in each state providing kerbside recycling services for plain envelopes, and the proportion of the population with access to these services, is shown in Figure 33.

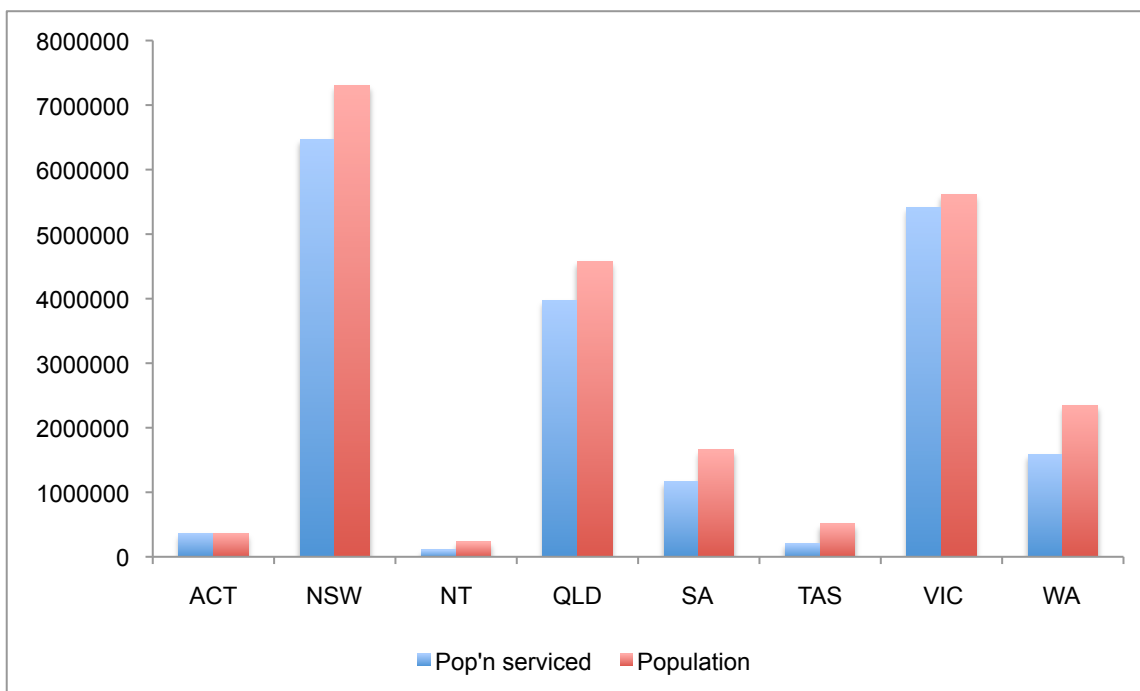


Figure 32: State-by-state population with access to kerbside plain envelope recycling services (blue) compared to total population (red).

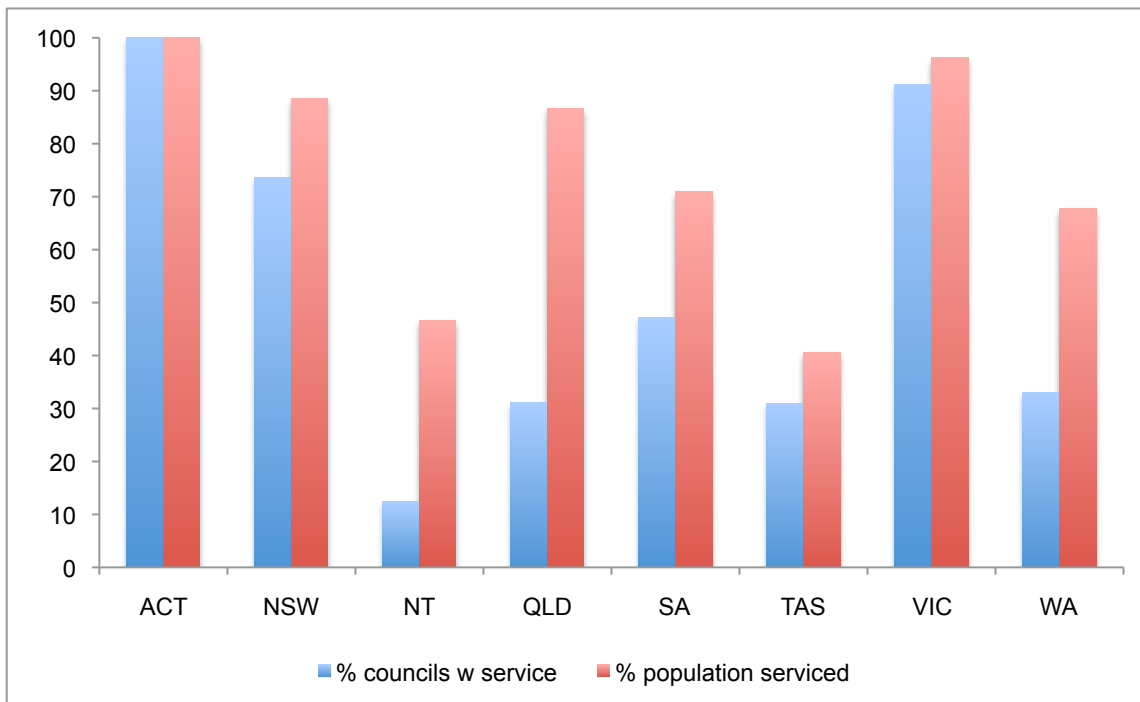


Figure 33: State-by-state percentage of councils providing kerbside plain envelope recycling services (blue) compared to the percentage of population with access to these services (red).

Paper and cardboard - envelopes (with window)

In Australia 46.1% of local councils provide a kerbside recycling service for window envelopes, and a total of 79.4% of the population has access to these services.

The relationship between total population by state and the proportion of the population with access to kerbside window envelope recycling services is shown in Figure 34. The relationship between the proportion of local councils in each state providing kerbside recycling services for window envelopes, and the proportion of the population with access to these services, is shown in Figure 35.

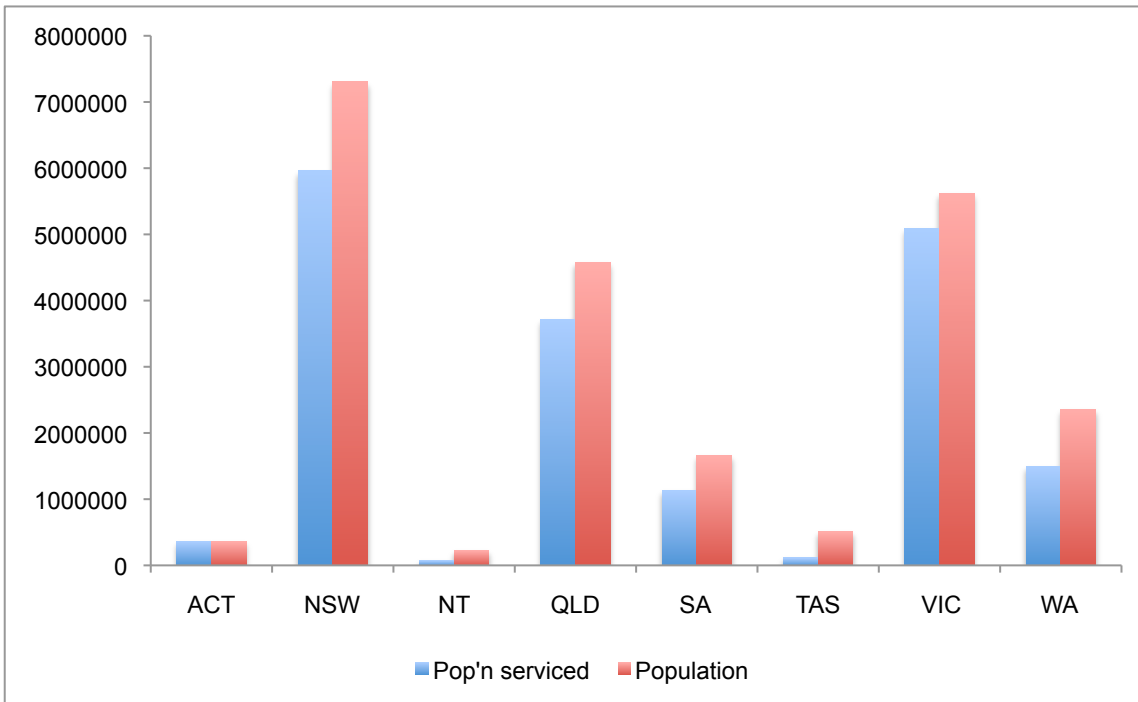


Figure 34: State-by-state population with access to kerbside window envelope recycling services (blue) compared to total population (red).

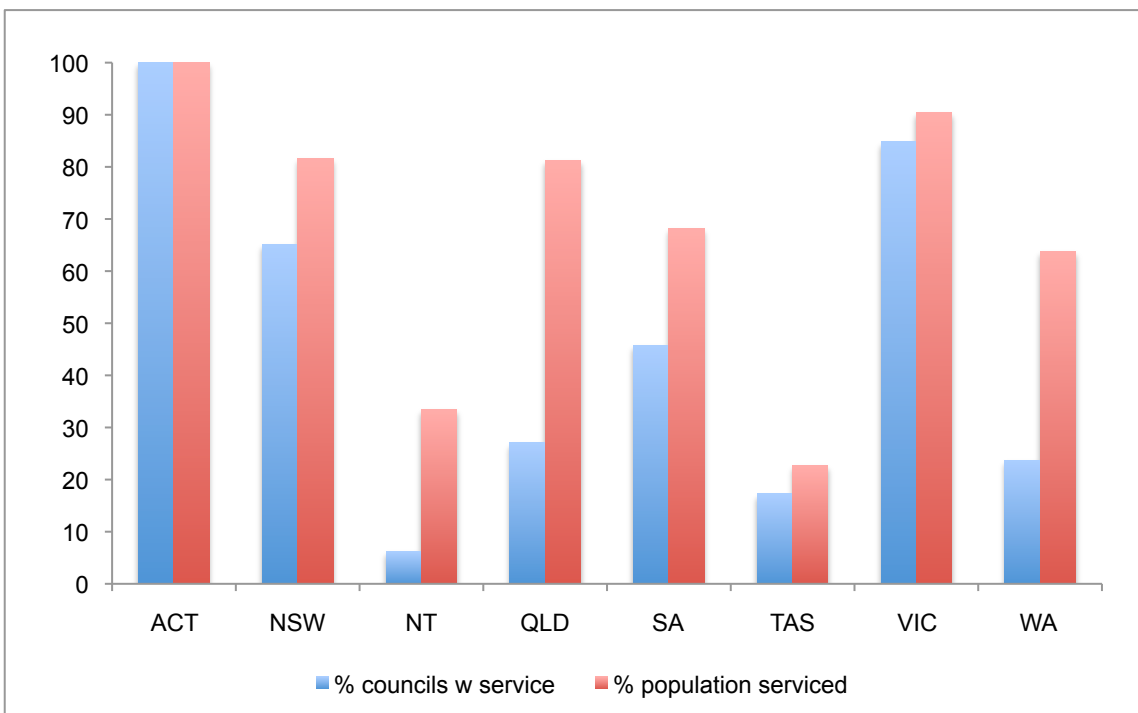


Figure 35: State-by-state percentage of councils providing kerbside window envelope recycling services (blue) compared to the percentage of population with access to these services (red).

Plastic containers - all

In Australia 14.1% of local councils provide a kerbside recycling service all plastic containers (or more correctly they checked the group category), and a total of 27.1% of the population has access to these services.

The relationship between total population by state and the proportion of the population with access to kerbside recycling services for all plastic containers is shown in Figure 36. The relationship between the proportion of local councils in each state providing kerbside recycling services for all plastic containers, and the proportion of the population with access to these services, is shown in Figure 37.

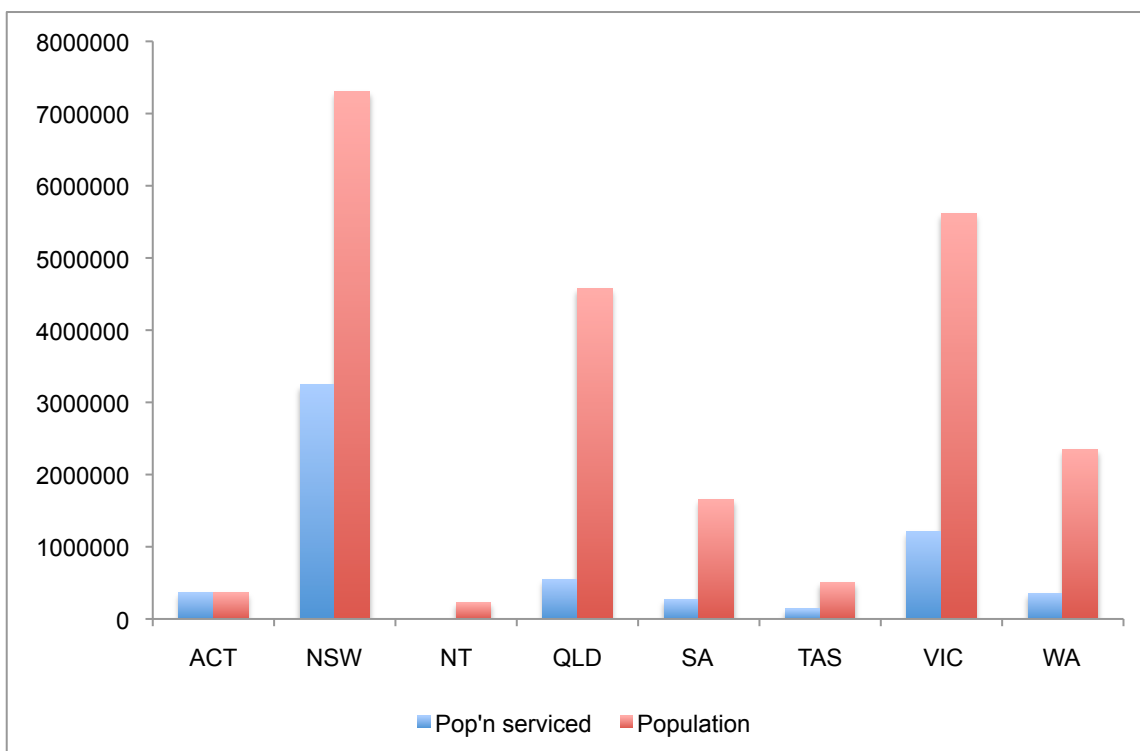


Figure 36: State-by-state population with access to kerbside recycling services for all plastic containers (blue) compared to total population (red).

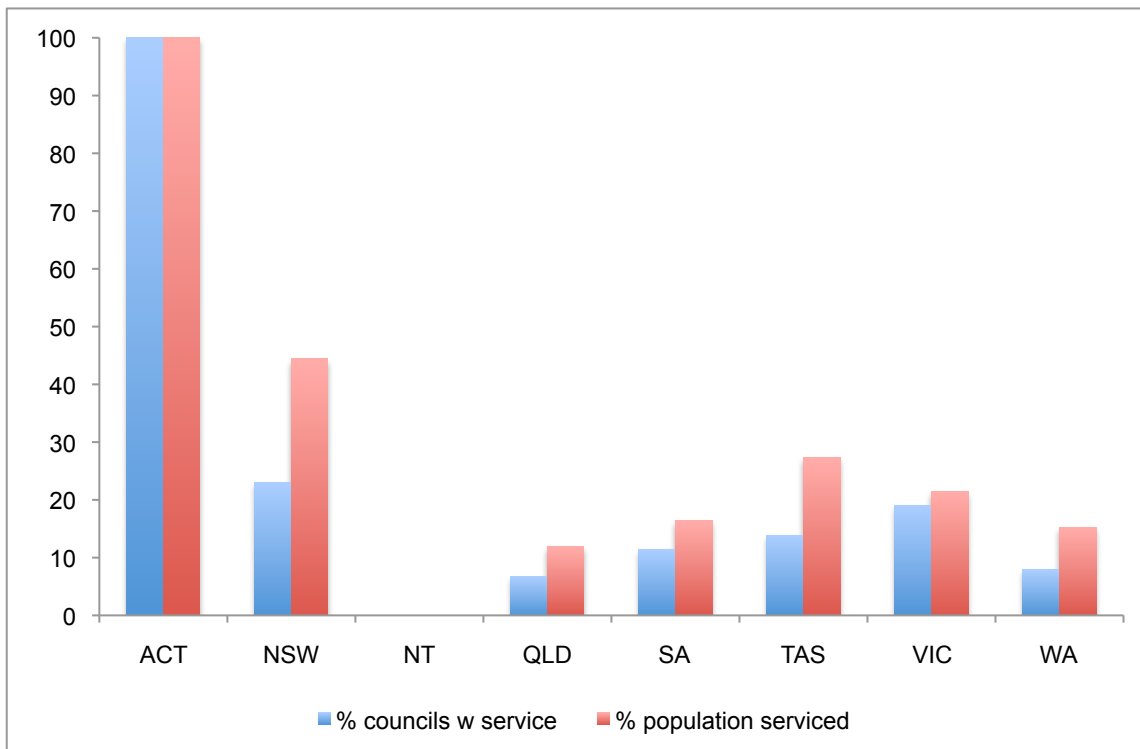


Figure 37: State-by-state percentage of councils providing kerbside recycling services for all plastic containers (blue) compared to the percentage of population with access to these services (red).

Plastic containers – PET (#1)

In Australia 57.9% of local councils provide a kerbside recycling service for PET containers, and a total of 85.7% of the population has access to these services. Where councils had selected only the 'Plastic containers - all' category in RecyclingNearYou, the relevant population and service information has been incorporated into these figures.

The relationship between total population by state and the proportion of the population with access to kerbside PET container recycling services is shown in Figure 38. The relationship between the proportion of local councils in each state providing kerbside recycling services for PET containers, and the proportion of the population with access to these services, is shown in Figure 39.

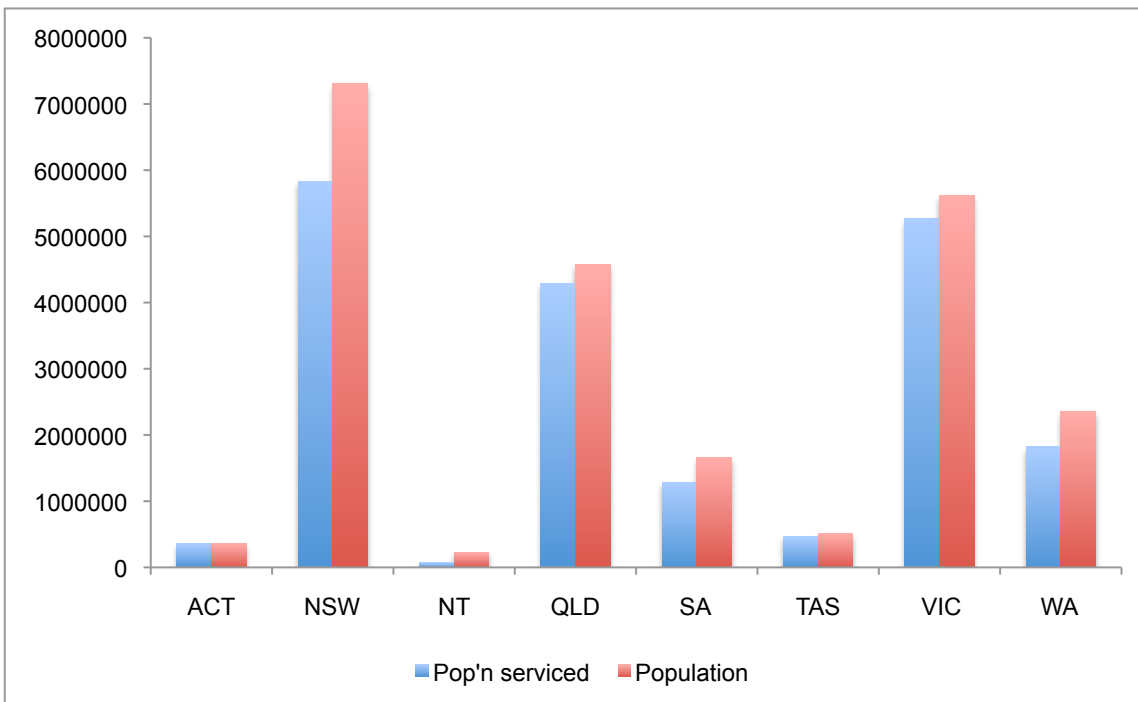


Figure 38: State-by-state population with access to kerbside PET container recycling services (blue) compared to total population (red).

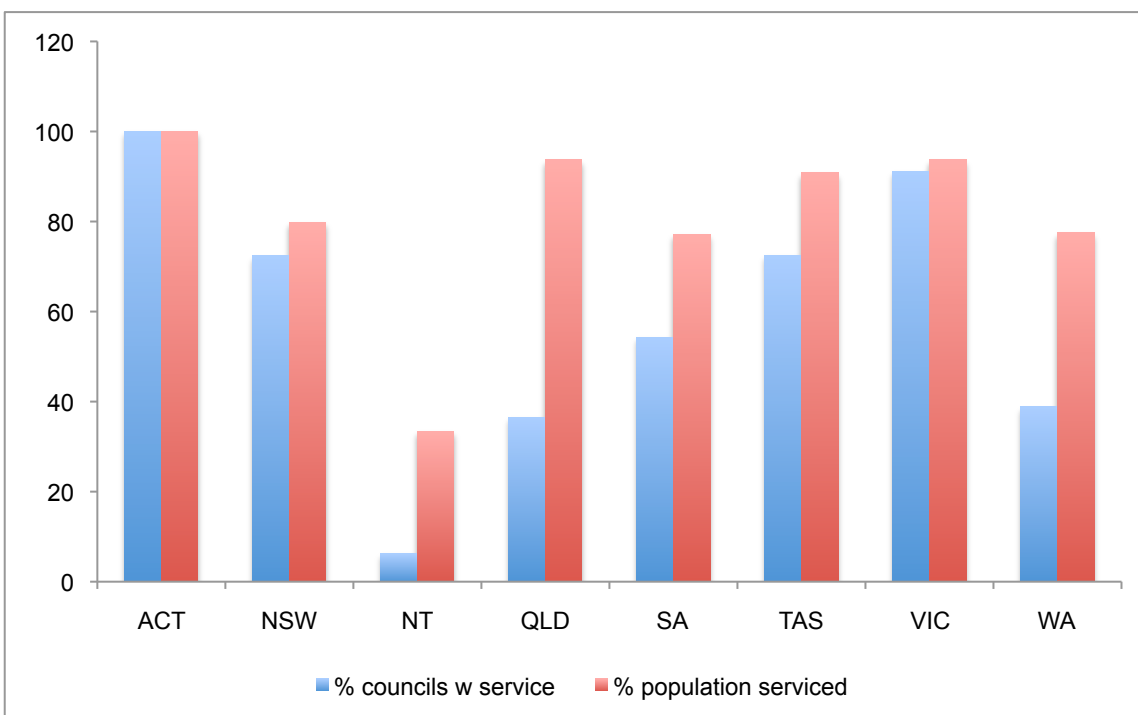


Figure 39: State-by-state percentage of councils providing kerbside PET container recycling services (blue) compared to the percentage of population with access to these services (red).

Plastic containers – HDPE (#2)

In Australia 58.0% of local councils provide a kerbside recycling service for HDPE containers, and a total of 85.7% of the population has access to these services. Where councils had selected only the 'Plastic containers - all' category in RecyclingNearYou, the relevant population and service information has been incorporated into these figures.

The relationship between total population by state and the proportion of the population with access to kerbside HDPE container recycling services is shown in Figure 40. The relationship between the proportion of local councils in each state providing kerbside recycling services for HDPE containers, and the proportion of the population with access to these services, is shown in Figure 41.

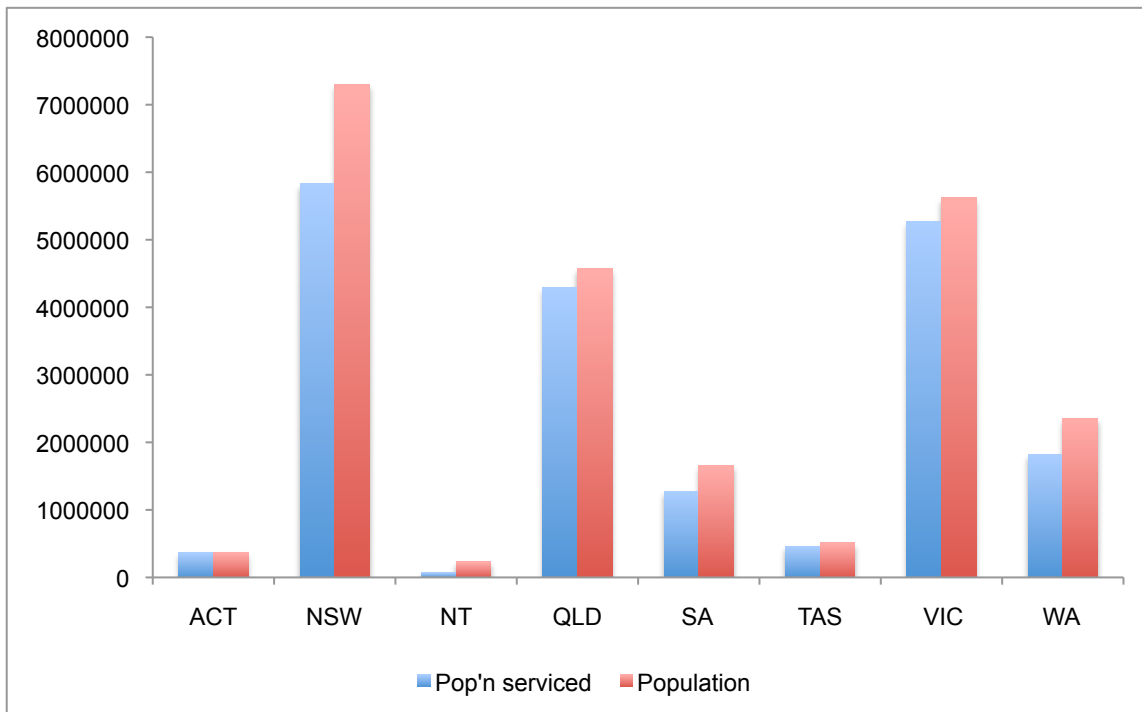


Figure 40: State-by-state population with access to kerbside HDPE container recycling services (blue) compared to total population (red).

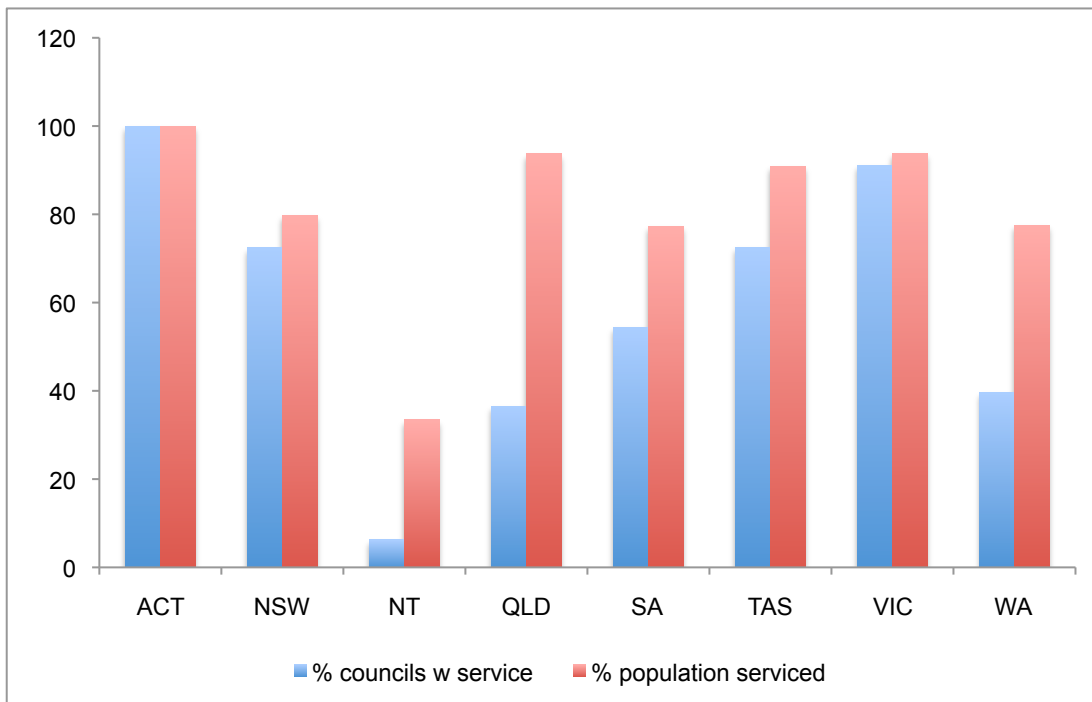


Figure 41: State-by-state percentage of councils providing kerbside HDPE container recycling services (blue) compared to the percentage of population with access to these services (red).

Plastic containers – PVC (#3)

In Australia 54.1% of local councils provide a kerbside recycling service for PVC containers, and a total of 83.6% of the population has access to these services. Where councils had selected only the 'Plastic containers - all' category in RecyclingNearYou, the relevant population and service information has been incorporated into these figures.

The relationship between total population by state and the proportion of the population with access to kerbside PVC container recycling services is shown in Figure 42. The relationship between the proportion of local councils in each state providing kerbside recycling services for PVC containers, and the proportion of the population with access to these services, is shown in Figure 43.

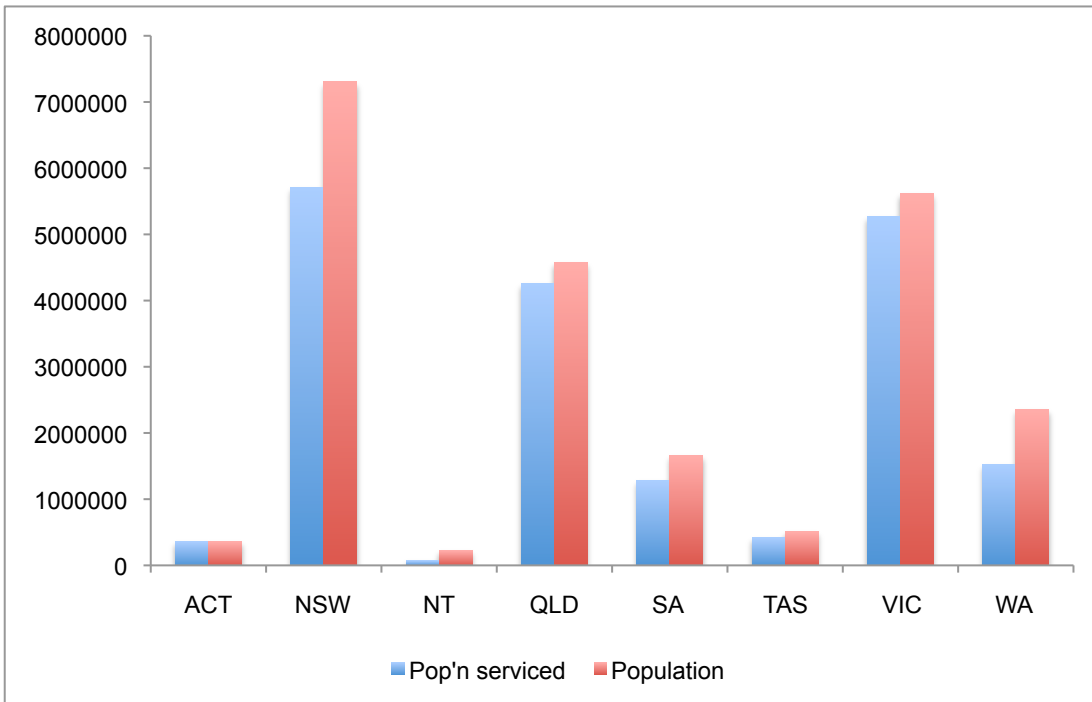


Figure 42: State-by-state population with access to kerbside PVC container recycling services (blue) compared to total population (red).

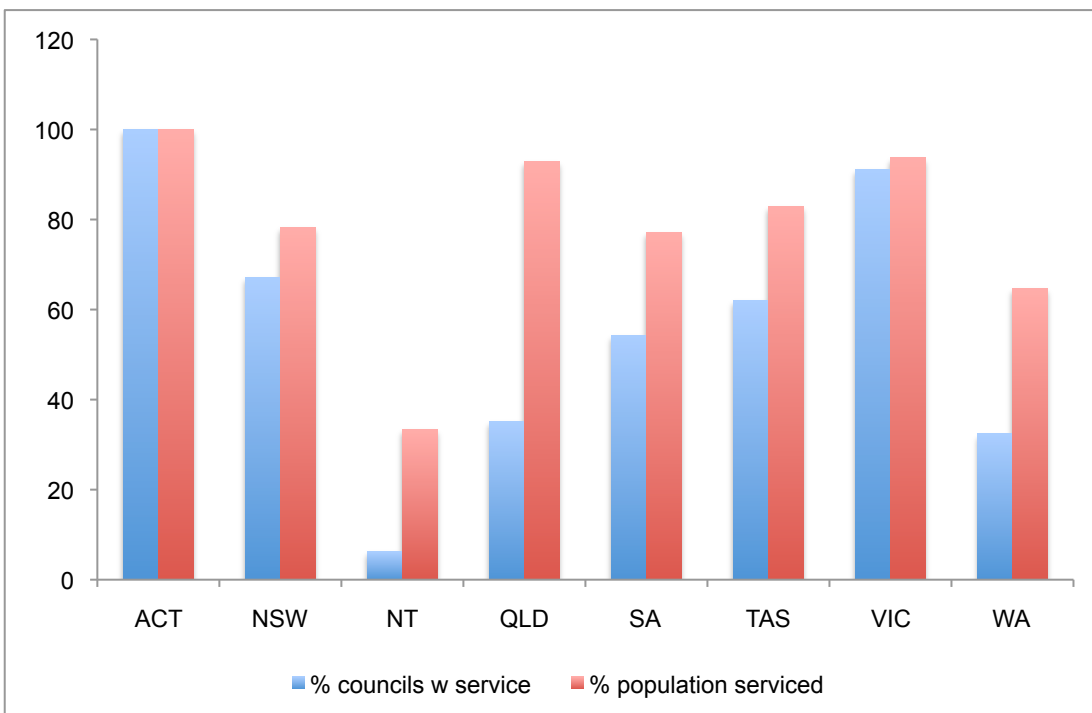


Figure 43: State-by-state percentage of councils providing kerbside HDPE container recycling services (blue) compared to the percentage of population with access to these services (red).

Plastic containers – LDPE (#4)

In Australia 40.5% of local councils provide a kerbside recycling service for LDPE containers, and a total of 74.4% of the population has access to these services. Where councils had selected only the 'Plastic containers - all' category in RecyclingNearYou, the relevant population and service information has been incorporated into these figures.

The relationship between total population by state and the proportion of the population with access to kerbside LDPE container recycling services is shown in Figure 44. The relationship between the proportion of local councils in each state providing kerbside recycling services for LDPE containers, and the proportion of the population with access to these services, is shown in Figure 45.

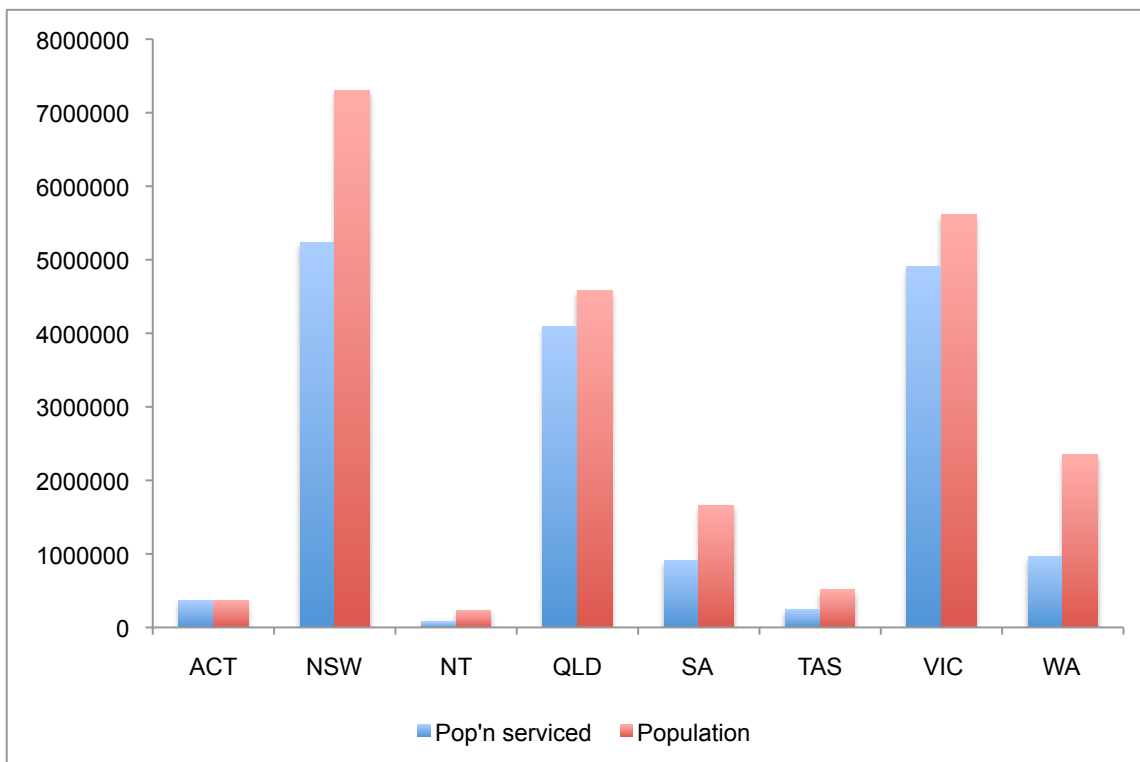


Figure 44: State-by-state population with access to kerbside LDPE container recycling services (blue) compared to total population (red).

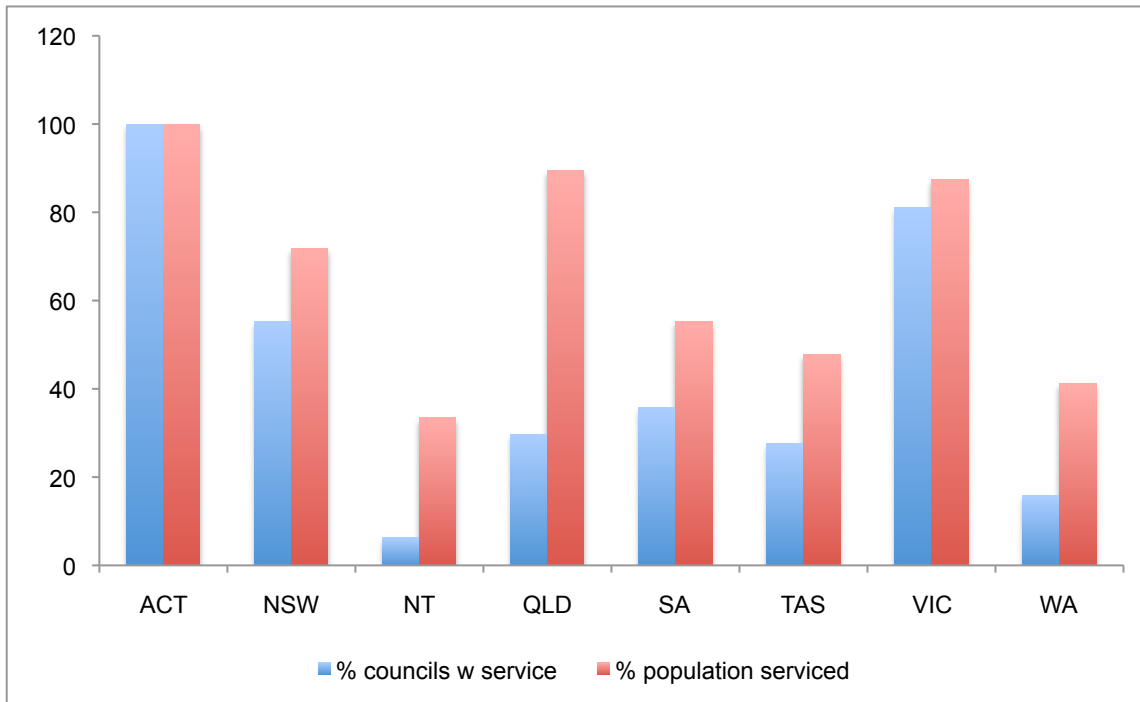


Figure 45: State-by-state percentage of councils providing kerbside LDPE container recycling services (blue) compared to the percentage of population with access to these services (red).

Plastic containers – PP (#5)

In Australia 48.6% of local councils provide a kerbside recycling service for PP containers, and a total of 80.2% of the population has access to these services. Where councils had selected only the 'Plastic containers - all' category in RecyclingNearYou, the relevant population and service information has been incorporated into these figures.

The relationship between total population by state and the proportion of the population with access to kerbside PP container recycling services is shown in Figure 46. The relationship between the proportion of local councils in each state providing kerbside recycling services for PP containers, and the proportion of the population with access to these services, is shown in Figure 47.



Figure 46: State-by-state population with access to kerbside PP container recycling services (blue) compared to total population (red).

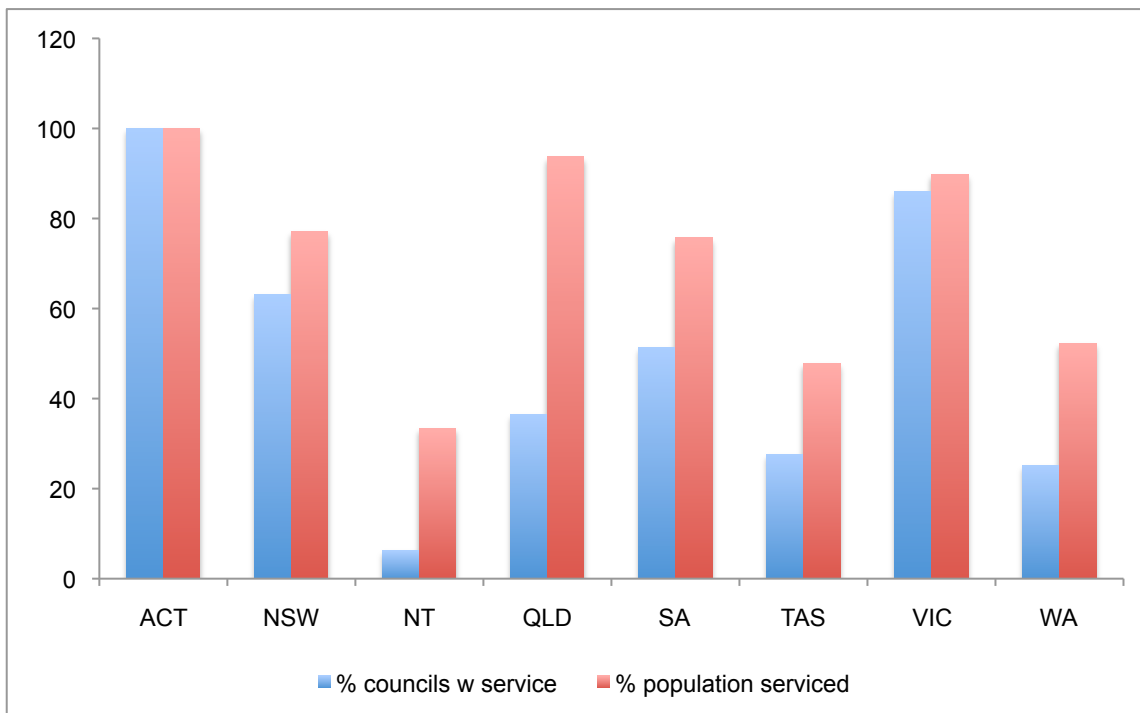


Figure 47: State-by-state percentage of councils providing kerbside PP container recycling services (blue) compared to the percentage of population with access to these services (red).

Plastic containers – PS (#6)

In Australia 36.1% of local councils provide a kerbside recycling service for PS containers*, and a total of 68.6% of the population has access to these services. Where councils had selected only the 'Plastic containers - all' category in RecyclingNearYou, the relevant population and service information has been incorporated into these figures.

The relationship between total population by state and the proportion of the population with access to kerbside PS container recycling services is shown in Figure 48. The relationship between the proportion of local councils in each state providing kerbside recycling services for PS containers, and the proportion of the population with access to these services, is shown in Figure 49.

* The 'PS containers category' does not include expanded polystyrene packaging foam.

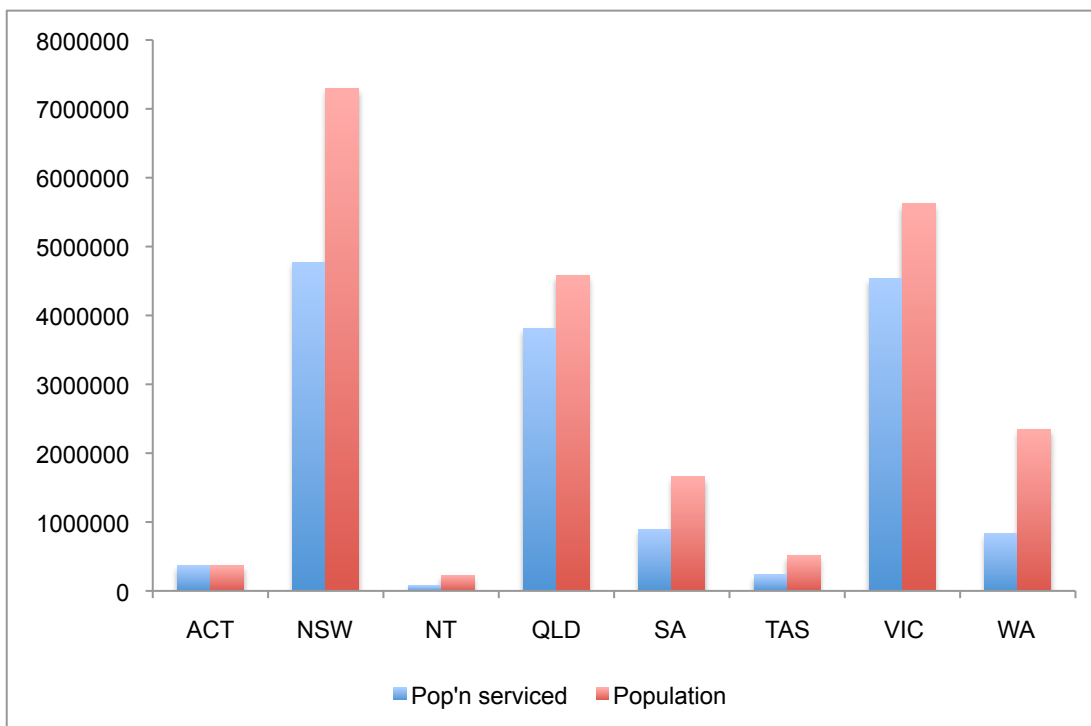


Figure 48: State-by-state population with access to kerbside PS container recycling services (blue) compared to total population (red).



Figure 49: State-by-state percentage of councils providing kerbside PS container recycling services (blue) compared to the percentage of population with access to these services (red).

Plastic containers – other (#7)

In Australia 30.7% of local councils provide a kerbside recycling service for other plastic containers, and a total of 51.9% of the population has access to these services. Where councils had selected only the 'Plastic containers - all' category in RecyclingNearYou, the relevant population and service information has been incorporated into these figures.

The relationship between total population by state and the proportion of the population with access to kerbside recycling services for other plastic containers is shown in Figure 50. The relationship between the proportion of local councils in each state providing kerbside recycling services for other plastic containers, and the proportion of the population with access to these services, is shown in Figure 51.

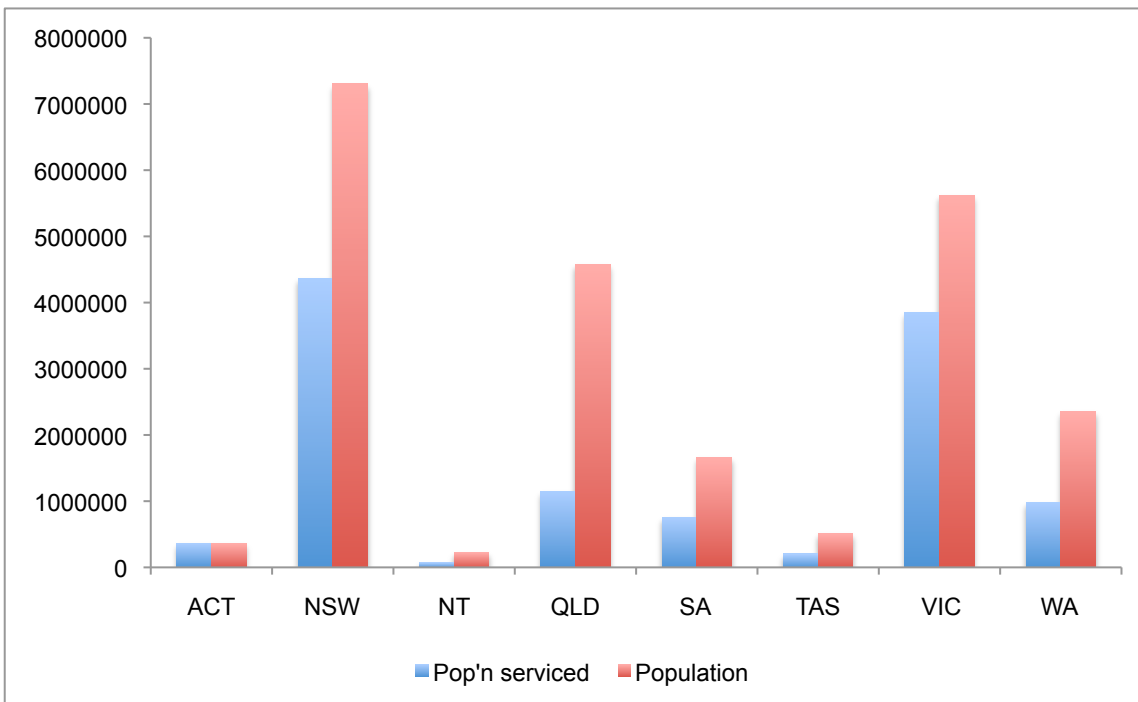


Figure 50: State-by-state population with access to kerbside recycling services for other plastic containers (blue) compared to total population (red).

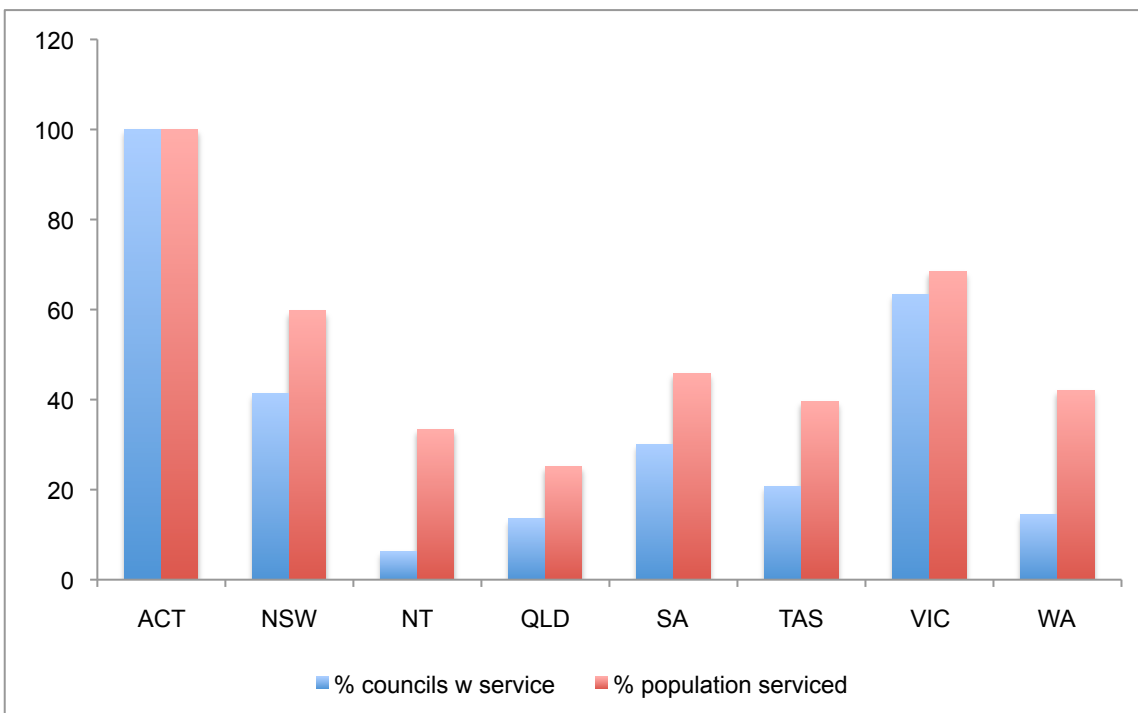


Figure 51: State-by-state percentage of councils providing kerbside recycling services for other plastic containers (blue) compared to the percentage of population with access to these services (red).



Food scraps - food (all)

In Australia 4.5% of local councils provide a kerbside recycling service for all food scraps, and a total of 6.3% of the population has access to these services.

The relationship between total population by state and the proportion of the population with access to kerbside recycling services for all food scraps is shown in Figure 52. The relationship between the proportion of local councils in each state providing kerbside recycling services for all food scraps, and the proportion of the population with access to these services, is shown in Figure 53.

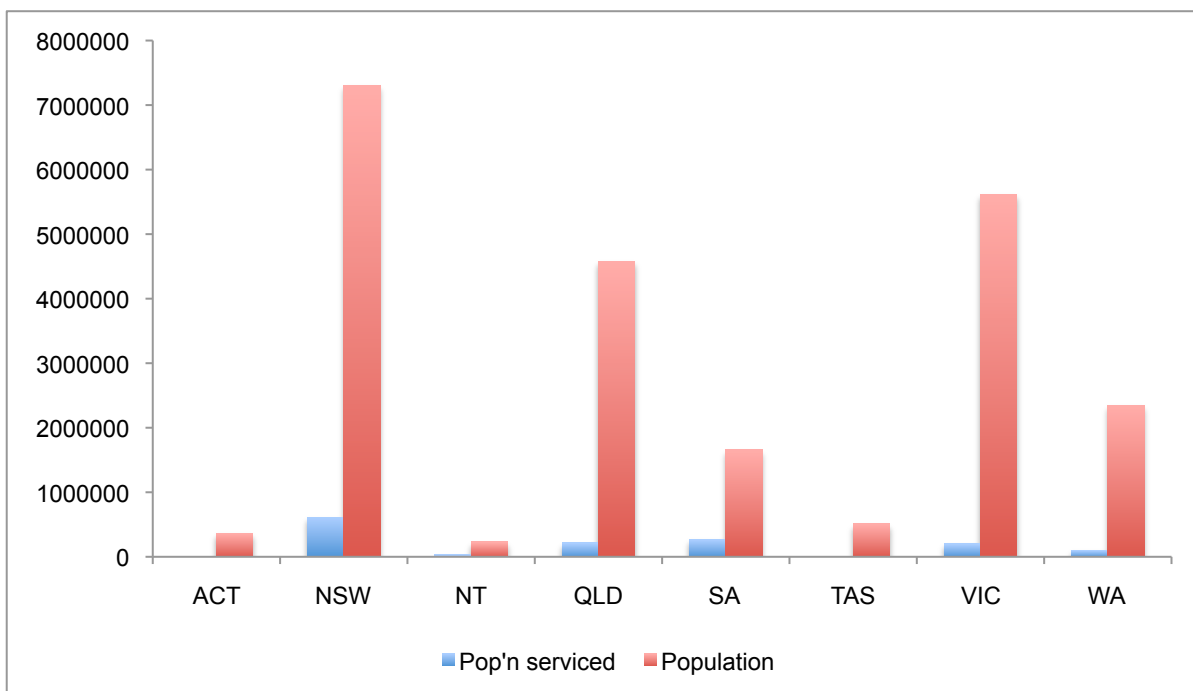


Figure 52: State-by-state population with access to kerbside recycling services for all food scraps (blue) compared to total population (red).

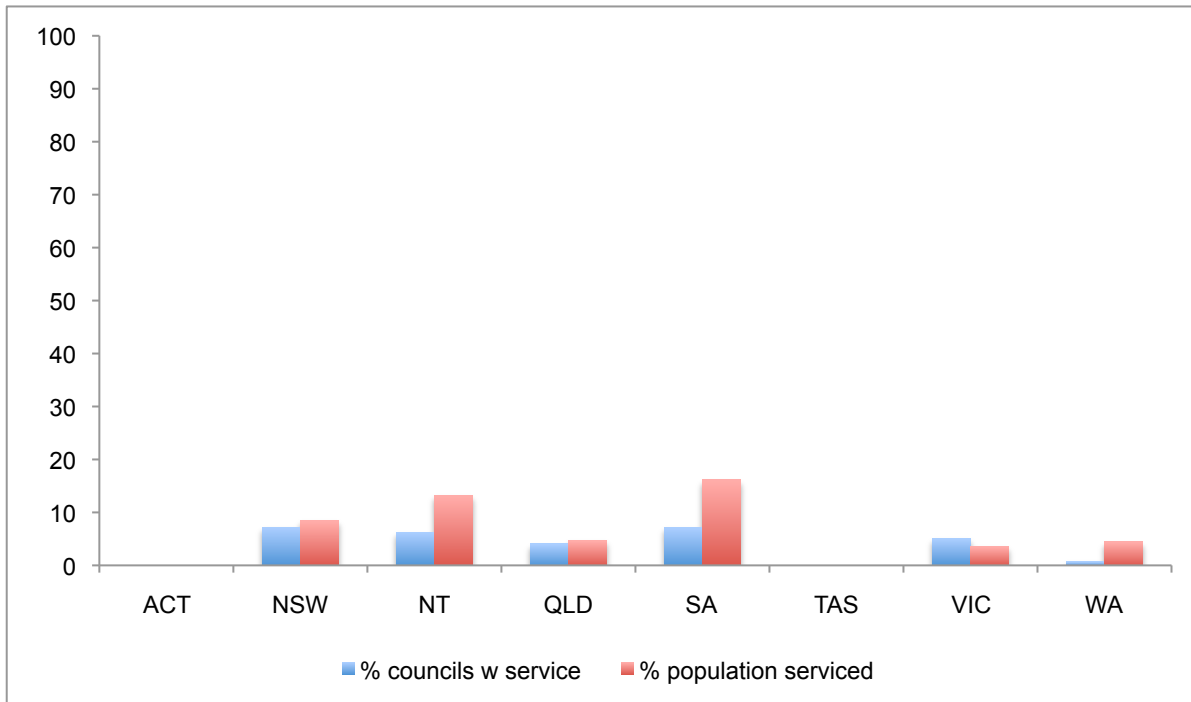


Figure 53: State-by-state percentage of councils providing kerbside recycling services for all food scraps (blue) compared to the percentage of population with access to these services (red).

Food scraps – food

In Australia 6.8% of local councils provide a kerbside recycling service for food, and a total of 10.3% of the population has access to these services. This category captures the full range of food-related kerbside services provided by councils across Australia.

The relationship between total population by state and the proportion of the population with access to kerbside food recycling services is shown in Figure 54. The relationship between the proportion of local councils in each state providing kerbside food recycling services, and the proportion of the population with access to these services, is shown in Figure 55.

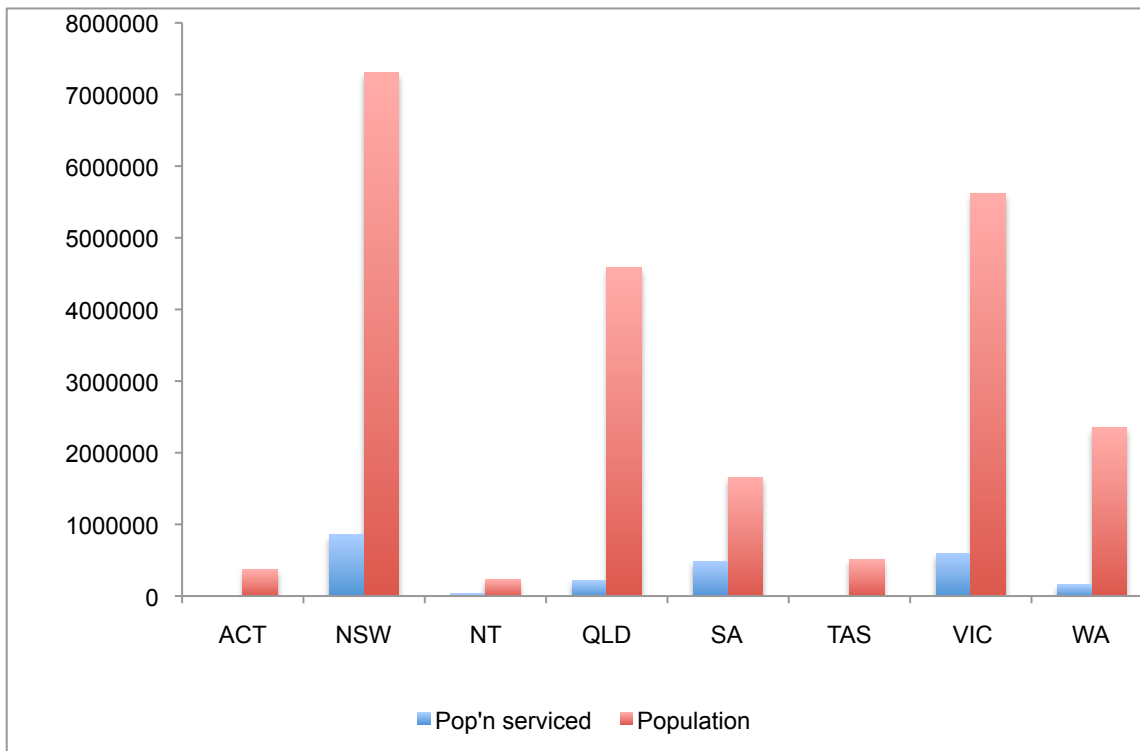


Figure 54: State-by-state population with access to kerbside food recycling services (blue) compared to total population (red).

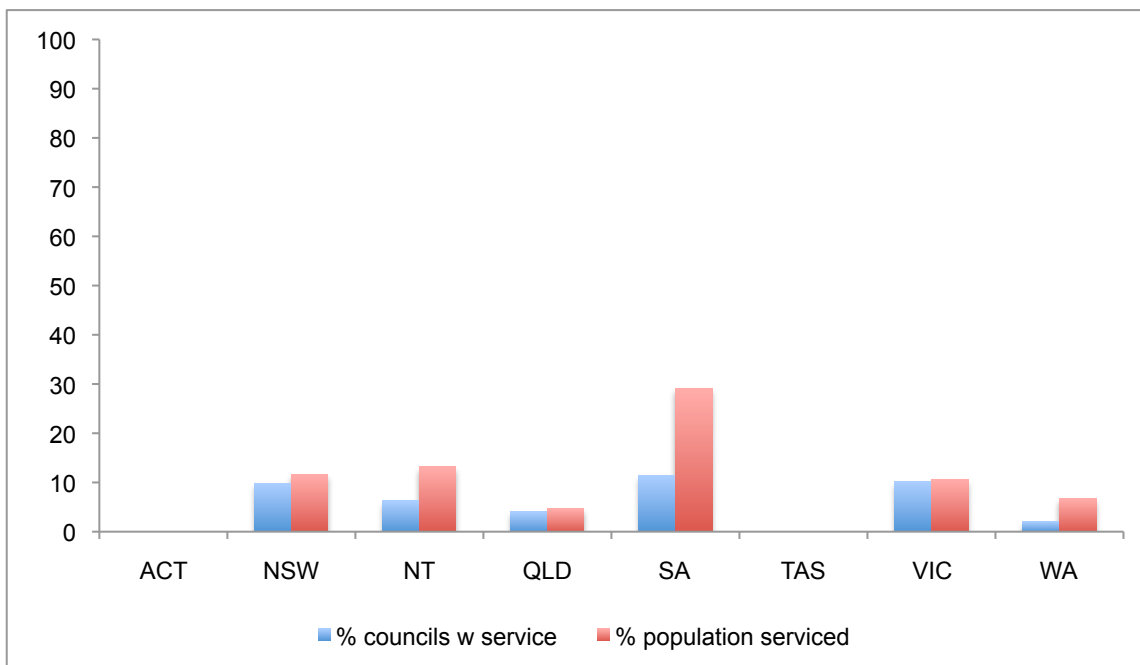


Figure 55: State-by-state percentage of councils providing kerbside food recycling services (blue) compared to the percentage of population with access to these services (red).

Food scraps - fruit

In Australia 6.1% of local councils provide a kerbside recycling service for fruit, and a total of 9.3% of the population has access to these services.

The relationship between total population by state and the proportion of the population with access to kerbside fruit recycling services is shown in Figure 56. The relationship between the proportion of local councils in each state providing kerbside fruit recycling services, and the proportion of the population with access to these services, is shown in Figure 57.

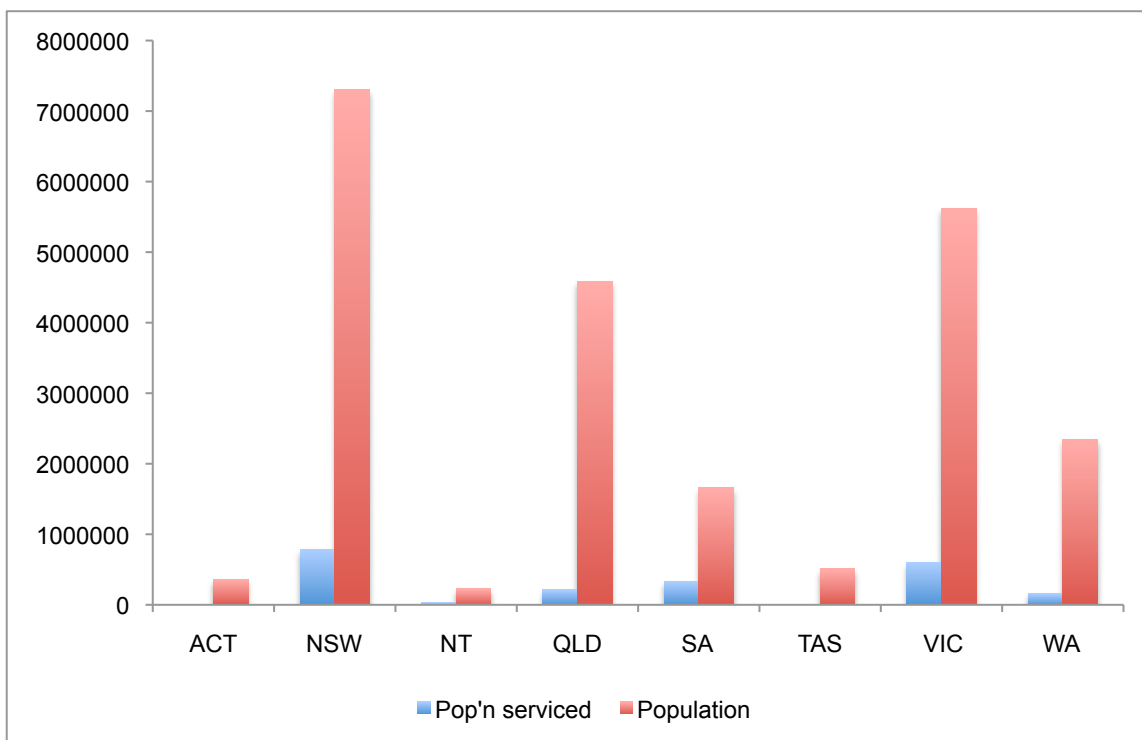


Figure 56: State-by-state population with access to kerbside fruit recycling services (blue) compared to total population (red).

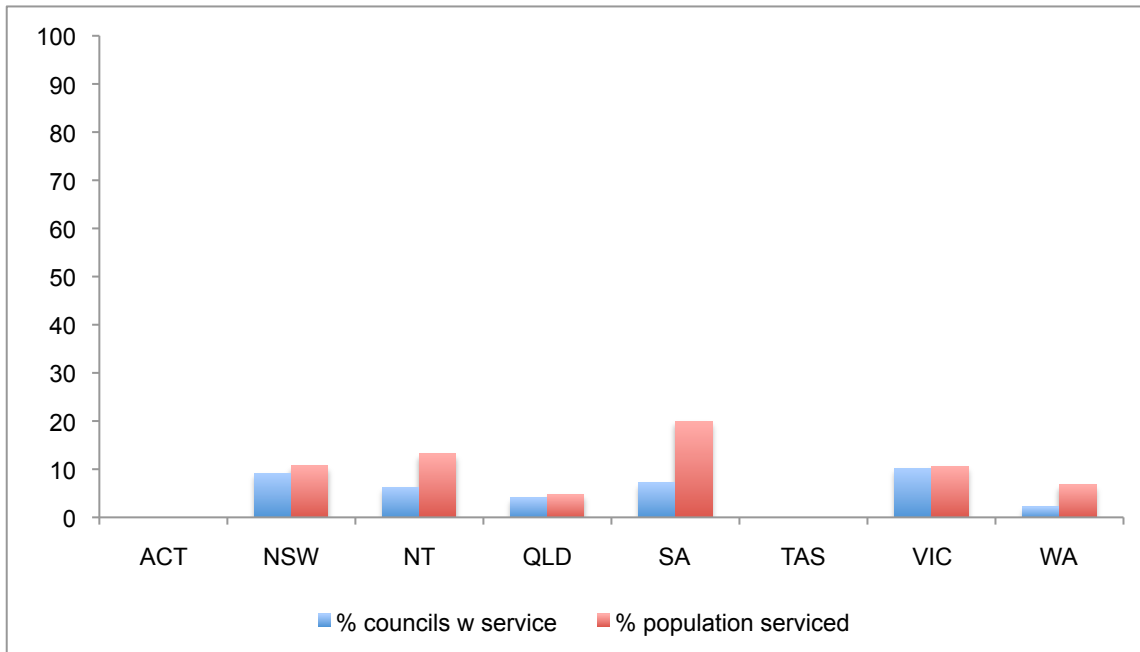


Figure 57: State-by-state percentage of councils providing kerbside fruit recycling services (blue) compared to the percentage of population with access to these services (red).

Food scraps - vegetables

In Australia 5.9% of local councils provide a kerbside recycling service for vegetables, and a total of 9.3% of the population has access to these services.

The relationship between total population by state and the proportion of the population with access to kerbside vegetable recycling services is shown in Figure 58. The relationship between the proportion of local councils in each state providing kerbside vegetable recycling services, and the proportion of the population with access to these services, is shown in Figure 59.

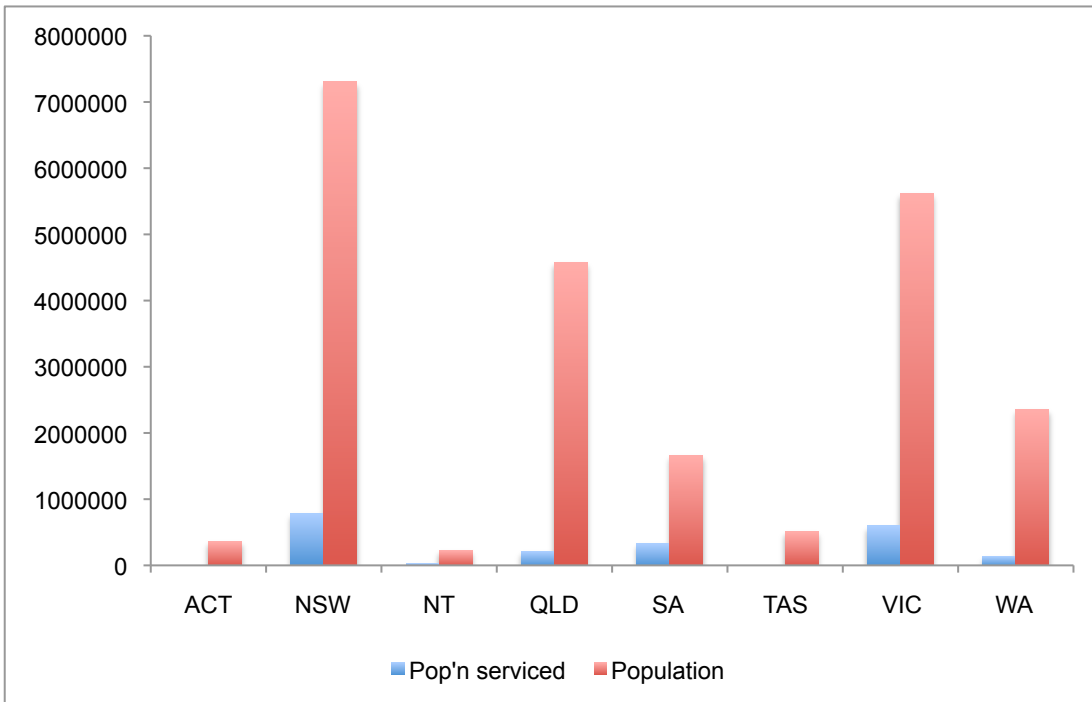


Figure 58: State-by-state population with access to kerbside vegetable recycling services (blue) compared to total population (red).

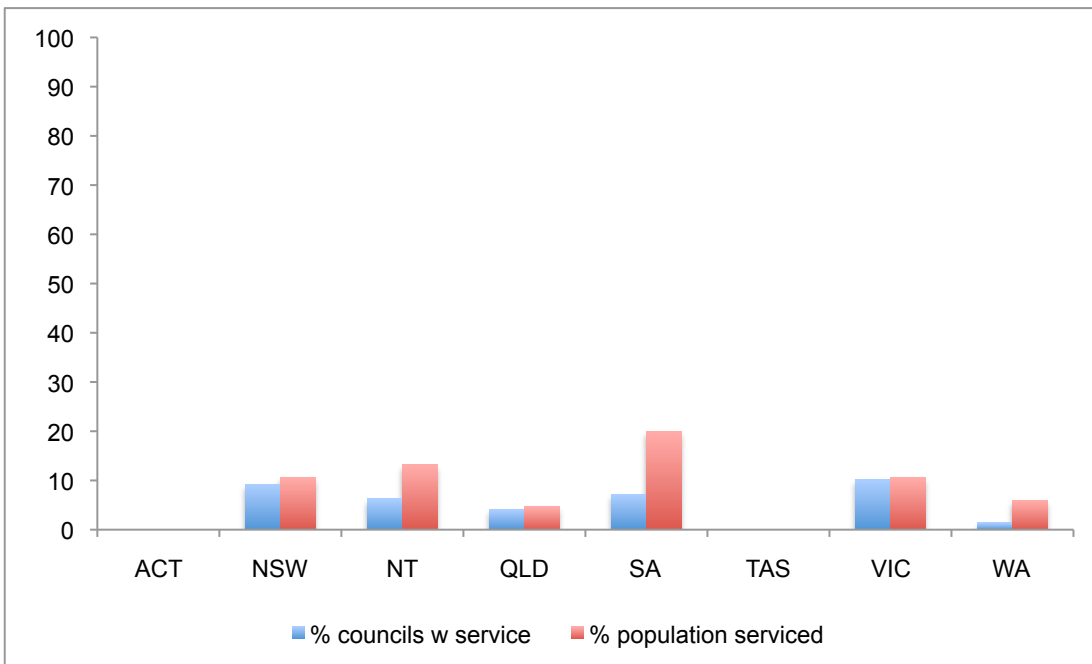


Figure 59: State-by-state percentage of councils providing kerbside vegetable recycling services (blue) compared to the percentage of population with access to these services (red).



Discussion and Recommendations

The results clearly demonstrate that in the case of most materials, the proportion of councils providing recycling/collection services is not an ideal indicator of relative kerbside recycling service availability in the Australian context. The relationship between proportion of councils providing services and proportion of population with access to these services, decreases as the population with access increases.

Planet Ark therefore recommends that population with access to kerbside recycling services is adopted as the method for determining relative accessibility of recycling services, and any recyclability thresholds.

The 'Labeling for Recycling' programs operating in the UK and the USA use proportion of councils providing services and proportion of population with access to these services, respectively. Within each scheme exists 3 categories within which each packaging material type may fall, based on its relative recyclability in that country. These categories correspond to 'widely recyclable', 'check locally' and 'not currently recyclable'.

In the UK the 'widely recyclable' category indicates that more than 70% of councils accept that material for recycling. In the US 'widely recyclable' indicates that 60% of the population has access to the relevant service. Under the definition used in the UK, there are no materials that are currently recyclable in Australia. The category 'check locally' indicates 20-70% of local councils accept that material for recycling in the UK, and means 20-60% of the population has access to a recycling service for that material type in the USA. The category 'not currently recyclable' indicates 0-20% of local councils accept that material for recycling in the UK, and means 0-20% of the population has access to a recycling service for that material type in the USA. The relationship between each of these thresholds and the current recyclability of materials within Australia is shown in Figure 60.

Planet Ark recommends that a future 'Labeling for Recycling' program should be based on the lower thresholds used in the UK and the USA schemes, and on a conservative upper threshold to indicate widespread recyclability. Specifically, the indicators should be based on population, and the recommended thresholds for adoption are 85% for 'widely recyclable', 20-85% for 'check locally', and 0-20% for 'not currently recyclable'. The proposed thresholds, and their relationship to the existing UK and USA schemes, are shown in Table 3.

Table 3: The relationship between proposed recyclability thresholds for Australia compared to the thresholds adopted by existing schemes.

Country	Widely recycled	Check locally	Not recycled
UK	70% councils	20-70% councils	0-20% councils
USA	60% population	20-60% population	0-20% population
Proposed Aust	85% population	20-85% population	0-20% population

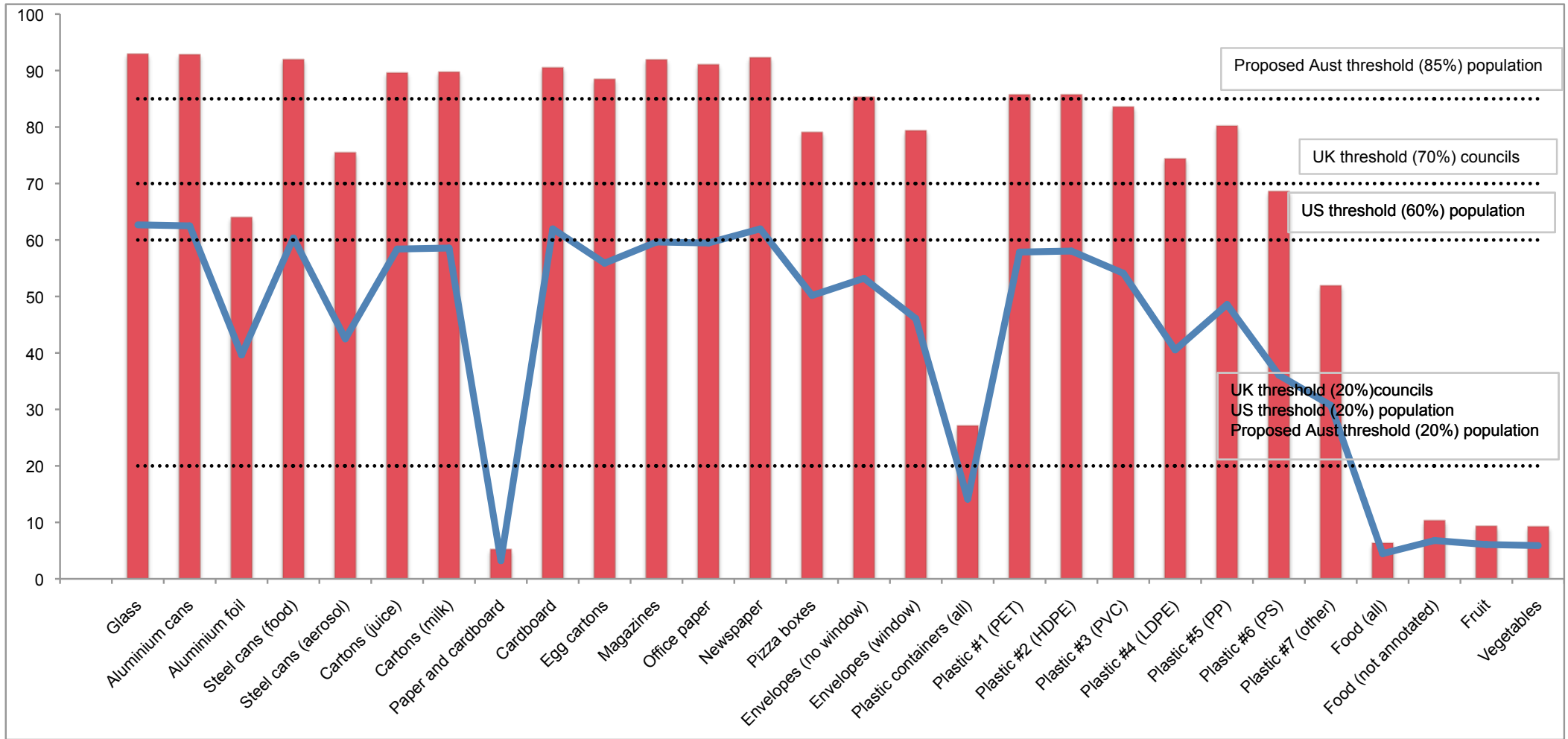


Figure 60: Councils providing (line), and population with access to (column), kerbside recycling services for each material type.



Under these proposed thresholds of recyclability, the materials analysed in this report would fall within the categories shown in Table 4.

Table 4: The relative recyclability of material types, according to proposed thresholds.

Widely recycled	Check locally	Not recycled
Glass	Aluminium foil	Paper and cardboard*
Aluminium cans	Steel cans (aerosol)	Food (all)
Steel cans (food)	Pizza boxes	Food (not annotated)
Cartons (juice)	Envelopes (window)	Fruit
Cartons (milk)	Plastic containers (all)	Vegetables
Cardboard	Plastic #3 (PVC)	
Egg cartons	Plastic #4 (LDPE)	
Magazines	Plastic #5 (PP)	
Office paper	Plastic #6 (PS)	
Newspaper	Plastic #7 (other)	
Envelopes (no window)		
Plastic #1 (PET)		
Plastic #2 (HDPE)		

* Note comment about 'grouped categories' on page 7 of this report.

Prior to the development of any 'Labeling for Recycling' scheme it will be necessary to gather more specific information about packaging material including all component parts (e.g. trays, lids, sleeves etc) as per the existing schemes in the UK and USA (see Figure 1 for a full overview of the packaging material component types addressed within the UK scheme).

However, Planet Ark has confidence in recommending the use of the above thresholds in the development of a proposed 'Labeling for Recycling' scheme in Australia. The material types analysed in this report are relatively broad, and many specific packaging component types will fall broadly within the material categories investigated in this analysis.